CORPORATE GOVERNANCE, OWNERSHIP STRUCTURE AND CAPITAL STRUCTURE: AN EMPIRICAL STUDY ON NON-FINANCIAL FIRMS LISTED IN PAKISTAN

By

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List of Acronyms

CCG : Code of Corporate Governance

CEO : Chief Executive Officer

CFO : Chief Financial Officer

CO : Companies Ordinance

CS : Company Secretary

ECGI : European Corporate Governance Institute

IAC : Internal Audit Committee

ICAP : Institute of Chartered Accountant Pakistan

IFC : International Finance Corporation

ISE : Islamabad Stock Exchange

KSE : Karachi Stock Exchange

LSE : Lahore Stock Exchange

OECD : Organization of Economic Co-operation and Development

PICG : Pakistan Institute of Corporate Governance

SECP : Securities and Exchange Commission of Pakistan

SBP : State Bank of Pakistan

SEO : Securities Exchange Ordinance

Abstract

The collapse of corporations, corporate scandals and financial crises certainly prove that corporate governance is a highly relevant topic in the field of corporate finance. These factors made market regulators, policy makers and governments around the globe establish and reform the principles of corporate governance. For the enhancement of the corporate governance mechanism, countries around the globe have introduced the Code of Corporate Governance (CCG). Similarly, as a part of financial liberalization and market reforms, the Securities and Exchange Commission of Pakistan (SECP) implemented the first CCG in 2002 and revised it in 2012. It is evident that SECP adopted the OECD Principles of Corporate Governance to the Pakistani CCG and its revision.

Nevertheless, SECP may have naively adopted the OECD Principles without adequate consideration of *de facto* realities of the unique practices of corporate finance in Pakistan. How should the SECP have done it? The OECD expects the policy makers in each country to improve and enhance the corporate governance mechanism through issuance and revision of CCG under a regulatory framework, where active cooperation between corporations and stakeholders in creating wealth, jobs and the sustainability of financially sound enterprises are encouraged (OECD 2004). However, the separation of ownership and control of financing in modern corporations makes it very difficult for us to identify the balanced role of stakeholders in corporate governance. Therefore, this study aims to explore the unique features of corporate finance which should be reflected in the CCG. Such as, (i) the firm-specific factors that affect the capital structure choices of firms, which are influenced by the availability of financing sources; (ii) the impact of ownership patterns, under the separation of ownership and control mechanism

on capital structure, specifically by analyzing the effects of managerial ownership, institutional shareholdings, and block-holders on capital structure decisions; and (iii) the impact of internal attributes of corporate governance on the selection of capital structure.

The empirical findings show that the firm-specific factors affect the debt ratios in the similar way to those in developed economies; however, with some anomalies. It further show that that the overall leverage level for Pakistani firms has declined. However, the proportion of short-term debt has slightly increased and suggest that many Pakistani firms rely on short-term debt, which is the drain of long-term capital for investment. In fact, their reliance on short-term borrowings has ironically become even more intense. This may predict that many Pakistani firms are exposed to higher liquidity risk even though they are reducing the overall leveraging. Moreover, the heavy reliance upon short-term debt is partly due to the under development of capital markets in the country.

The investigation result on the effects of ownership structure patterns on capitals structure indicates that managerial ownership and block-holders tend to encourage leveraging. This phenomenon predicts the exploitation of minority groups or other external stakeholders and signals the less prudent corporate governance mechanism. Furthermore, the results suggest prudent monitoring by institutional shareholders to reduce agency conflicts by diminishing managerial opportunism. However, contrary to this, the limited role of institutional shareholders in CCG reveals the limitations of CCG, and suggests an improvement and enhancement of the code with the active participation of other relevant stakeholders.

The study on effects of internal attributes of corporate governance on the selection of capital structure suggests that certain internal attributes have the explanatory power to affect a firms' capital structure. For example, things such as board size, independent/outside directors,

CEO duality, managerial equity ownership and block-holders are positively related to leverage. Moreover, excess reliance on board size, board composition and CEO duality for the enhancement of governance mechanism would be futile without the participation of other stakeholders.

Based on the findings related to the firms' financing sources and ownership patterns, the shortcomings which this dissertation found in the evolution of CCG in Pakistan include: (i) the failure by the CCG to take into account unique financing features, i.e. the heavy reliance of Pakistani firms on short-term debt, that is, the drain of capital for long-term investment; (ii) the ownership patterns suggest that the prudent monitors' role of institutional shareholders, which is expected to minimize the agency conflict in firms' choice of capital structure and corporate governance; (iii) the limited guidance in the current code, which does not adequately take into consideration the unique nexus in the Pakistani firms' selection of capital structure to mitigate the agency conflict. This dissertation provides empirical grounds for further discussions on the improvement of the current CCG by establishing an adequate *ex post* evaluation and governance mechanism.

Key words: Corporate governance, Capital structure; Ownership structure; Code of corporate governance; Non-financial firms; Karachi Stock Exchange; Pakistan.

Chapter 1

Introduction

1.1 Research background / Economic Realities

Corporate governance is an area that has attracted the attention of corporate managers, investors, academics, regulators and policy makers in the last two decades. The collapse of corporations, corporate scandals, and financial crises certainly prove that corporate governance is a highly relevant topic in the field of corporate finance. These factors made the market regulators, policy makers and governments around the globe to establish and reform the principles of corporate governance for fair and transparent corporate practices. For the enhancement of corporate governance mechanism, countries have introduced the Code of Corporate Governance (CCG) using rule based or principle based implementation protocols (see Tariq and Abbas, 2013). Rule-based regulation prescribes how to behave in detail, whereas in principle based regulation, norms are formulated as guidelines and the exact implementation is left to the subject of the norm (Burgemeestre *et al*., 2009). According to Reddy *et al*. (2010), every country follows one of these regulatory frame works. For instance, an example of rule-based code would be the "one size fit for all" in US, i.e. Sarbanes-Oxley Act (2002), while an example of principle-based regulation would be the "comply or explain" code in the UK, New Zealand and Australia. According to the information on European Corporate Governance Institute (ECGI)[1], there are 97 countries and several international organizations e.g. OECD, World Bank, United Nations etc. that have issued one or more than one CCG.

In order to meet the international standards of market reforms of financial liberalization, Pakistan opened it secondary markets for foreign investors in 1991. Subsequently, in order to

[1] http://www.ecgi.org/codes/all_codes.php (As on November, 20th 2015).

meet the demands of international investors, the Pakistani government has introduced various reforms in capital markets. As a part of these reforms the Securities and Exchange Commission of Pakistan (SECP) implemented the first CCG in 2002 and revised it in 2012 following the rule-based regulatory framework where compliance to the CCG is mandatory. It is evident that SECP adopted the OECD Principles of Corporate Governance to the Pakistani CCG and its revision. The OECD Principles include; (1) Ensuring the basis for an effective corporate governance framework; (2) Supporting the rights of shareholders and key ownership functions; (3) Maintaining the equitable treatment of shareholders; (4) Clarifying the role of stakeholders in corporate governance; (5) Promoting disclosure and transparency; and (6) Establishing the responsibilities of the board (OECD, 2004). At the same time, the OECD notes that a particular set of principles is by nature not applicable to all the countries, since each country has its unique background and conditions in the practice of corporate finance.

Corporate governance is concerned with the ways by which suppliers of capital to the firms assure themselves of getting returns on their investment (Shleifer and Vishny 1997). Thus, sound corporate governance practices are essential for raising funds from investors. The primary purpose of OECD's Principles is to help policy makers in each country improve and evaluate frameworks for the promotion of fair corporate practices. This is to enhance the firms' performance and sense of security to investors by improving the transparency and disclosure to unlock various sources of capital through the development of capital markets. However, the Pakistani CCG seems to fail to promote prudent practices of corporate governance which results in general inefficiency and high opportunity costs in Pakistani firms, and hinders the development of capital markets in Pakistan.

Theoretically, it is assumed that improved governance practices will lead to better

performance by increasing expected cash flows accrued to investors and reducing the cost of capital (Reddy *et al*., 2010, pp.90). Similarly, the OECD (2004) Principles of corporate governance state that a credible corporate governance framework, through effective enforcement and supervision mechanisms, can help to improve the confidence of investors, reduce the cost of capital, and underpin the functioning of financial markets, which in turn can result in the establishment of stable sources of financing. However, failure to formulate and enforce the prudent governance mechanism can result in various opportunity costs in the economy, such as a higher costs of capital for firms, reduced access to limited sources of capital, and the underdevelopment of capital markets. These factors play a significant role in an emerging economy like Pakistan. For instance, less developed capital markets means limited access to the capital for real investments. In such case, due to insufficient funding, firms have two options, those being to either give up their investment opportunities, even with positive net-present value (NPV), or to not borrow at a high cost of capital, which may result in higher transaction costs, moral hazards, and adverse selection problems. The transaction costs of investment, such as time, money, and efforts, determine the willingness of the investors. These higher costs hamper the investors' confidence and the economic growth of the country as well.

By considering the multiple objectives to be accomplished, CCG development and implementation plays a strategic role at the policy making level in the economy of Pakistan. As a part of regulatory framework to bring the transparency and accountability in the corporate sector, it will help the firms to attract local and foreign investors. Also, this will further contribute to the economic performance of the firms, the development of capital markets, and the economy as a whole. However, the weaknesses and imperfections of regulatory practices can have an important impact on capital markets, ownership structure and control patterns, and firm

productivity, which can lead to poor development in economic institutions (Rais and Saeed, 2005, pp.1).

1.2 Research Questions

The OECD expects the policy makers in each country to improve and enhance the corporate governance mechanism through the issuance and revision of CCG under a regulatory framework. Active cooperation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises are encouraged (OECD 2004). The structures of corporate ownership and the financial system are the main factors that determine the country's system of corporate governance (Davies and Schlitzer 2008). This study aims to explore the unique practices of Pakistani corporate finance which should be reflected in the CCG. We suggest how naively the SECP may have adopted the OECD Principles without adequate consideration on the unique practices of corporate finance in Pakistan. This study also addresses a number of important policy questions.

1. *How did the SECP adopt the OECD Principles of Corporate Governance?*

A capital market is expected to play a role in mobilizing financial resources to the corporate sector by attracting investors to invest in firms with better corporate governance and encouraging the firms to tap on various sources of capital through a prudent corporate governance framework. We should ask: under the limited capacity of capital markets in Pakistan, how feasible is the SECP as an organization to implement and enforce the CCG?

2. *What are the unique practices of Pakistani corporate finance?*

The revision of CCG in 2012 highlights the limitations and continuous improvement of the corporate governance mechanism in the country. Javed and Iqbal (2010) state that ultimately it is

the financial markets that reward good governance firms and punish bad ones. If that is the case, the firms with good governance have access to the long term borrowing through capital markets. We should ask: what are the unique practices of Pakistani corporate finance after the enforcement of CCG 2002? Besides, the separation of ownership and control in modern corporations makes it very difficult for us to identify the balanced role of stakeholders in corporate governance. We should ask: how do managerial ownership, institutional shareholding, and block shareholding work as prudent monitors of the corporate governance framework in Pakistan?

3. *How should the SECP have adopted the CCG?*

We draw several implications from this study to improve the Pakistani CCG.

1.3 Research Objectives and Methodology

To answer the first research question, this study overviews the history of introducing and revising the CCG in Pakistan upon the OECD Principles of Corporate Governance.

To answer the second question, this study draws on the long-lasting and widely recognized debate on the relationship between corporate ownership and capital structure to identify the features of corporate finance in Pakistan. First, we review the long-standing debate on the relationship between corporate ownership and capital structure (Modigliani and Miller, 1958; 1963; Groth and Anderson, 1997; Myers, 2001), followed by the debate on separation of control and ownership of corporations (Adam Smith, 1776; Berle and Means, 1932; Jensen and Meckling, 1976). Trade-off Theory, Pecking Order Theory, The Free-cash Flow Hypothesis, Agency Theory, and Market Timing Theory are contemplated to see which theory is most applicable for explaining the unique features of corporate governance that currently hinder the

optimal capital structure in Pakistani firms.

Additionally, this study aims to explore the following three major aspects; (i) the firm-specific factors that affect the capital structure choices of non-financial listed firms in Pakistan, which are influenced by the availability of financing sources; (ii) the impact of ownership patterns, under the separation of ownership and control mechanisms on capital structure, specifically by analyzing the effects of managerial ownership, institutional shareholdings, and block-holders on capital structure decisions; and (iii) the impact of internal attributes of corporate governance on the selection of capital structure (see the following "Data and Research Methods Specifications for the details).

In order to answer the third question, this study aims to compare the practices of corporate finance in Pakistan with those in the other developed and developing countries. Also by comparing the results of this study with earlier studies, we shed analytical light on recent changes in the unique feature of corporate finance and the unique barrier to access of financial resources in Pakistan. Based upon the interpretations and implications from the results, we propose how the current version of CCG should be improved.

Data and Research Methods Specifications

This study uses a secondary data set for empirical analysis. The data sample was compiled from the financial statements of non-financial companies listed on Karachi Stock Exchange (KSE). The data sample is composed of data across firms over time, therefore this study employs the panel data procedure for empirical estimation. The use of panel data procedure is suitable to analyze the dynamics of change.

The investigation concerning the determinants of capital structure was done using data

gathered from 101 firms between the years of 2005-2012. In order to test for multi-collinearity among the variables, the study constructs a pair-wise correlation matrix. The investigation on the effect of explanatory variables on dependent variables (i.e. proxy of leverage) was done using the three panel econometric techniques, i.e. the pooled *OLS*, the fixed effects, and the random effects. The Hausman (1978) test was performed to choose the appropriate estimation model results for discussion, and the results of the test presented (see table 5.6) reject the null hypothesis and suggest the use of a fixed effects estimation result. Moreover, the adjusted R^2 for the fixed effects model is higher than the *OLS* and random effects model, which further supports it over other estimation models.

The investigation on the impact of ownership patterns and corporate governance on capital structure was done by employing the data of 101 firms listed on KSE during the period of 2004-2012. This study uses cross-sectional data, and employs panel data procedures for empirical analysis. It also uses the pooled *OLS* econometric technique to explore the effect of explanatory variables on dependent variables. Pooled *OLS* is more appropriate for cases where there is no firm, and no time specific effect. As such, the three dependent variables of total debt, long-term debt, and short-term debt were regressed against the explanatory variables as proxies of capital structure using the pooled *OLS* regression technique.

Finally, the CCG was scrutinized in light of empirical results of the study, particularly to examine the unique features of Pakistani corporate finance practices and their reflection in the development of CCG. Additionally, the significance of CCG 2002 is evaluated and critically analyzed using the revised clauses of CCG 2012 in order to articulate a proposal for future recommendations and continuous improvements.

1.4 Significance and Practical Implications of the Study

This study challenges the established but still controversial debate on the relationship between corporate ownership and capital structure in order to identify the features of corporate finance in Pakistan. The market imperfections highlighted in the analysis of corporate governance and capital structure suggest that the formulation and development of institutional settings can minimize the shortcomings of the governance mechanism. These institutional settings can play an effective role in the proper implementation and monitoring of governance mechanisms along-with education, training and protection of investors.

In accordance with the implementation of Pakistani CCG, it appears that the overall leverage level for Pakistani firms has declined. However, the proportion of short-term debt has slightly increased, and as such we suggest that many Pakistani firms rely on short-term debt. In fact, their reliance on short-term borrowings has actually increased. We should note that many Pakistani firms are exposed to higher liquidity risk even though they are reducing overall leveraging.

These empirical results suggest that managerial ownership and block holding might have ill-affected the governance in corporate finance, given the special context of Pakistan, which has encouraged higher leveraging. On the other hand, the results on the impact of internal attributes of corporate governance suggest the CCG 2012 guidelines, which encourage the expansion of directorial boards, the assignment of independent directors, and CEO duality, may have contributed less to prudent practices of corporate finance in Pakistani firms than expected.

The empirical results illuminate the role of institutional shareholders to mitigate principal-agent conflicts, although the correlation between institutional ownership and capital structure is not significant in our study. Findings on ownership concentration and block-holders

cast doubt on the protection of minority shareholders' interests. Even in CCG 2012, only one sub-clause highlights the issue of minority shareholders. In general, findings endorse the predictions of theoretical framework, but point out the less prudent enforcement and implementation of the corporate governance framework. This suggests further improvement of CCG is inevitable.

In general, it is anticipated that the outcomes of this study will be of great use for corporate managers in order to understand the effects of firm specific factors, ownership structure, and corporate governance on features of corporate finance in Pakistan., In order to minimize agency conflicts related to the separation of ownership and control, block-holders, institutional shareholders, and other stakeholders should be involved in active monitoring, particularly in terms of financing choices. Moreover, creditors should also monitor the opportunistic behavior of managers by keeping an eye on their investment activities. Furthermore, this study will contribute to the existing literature by illuminating significant links between capital structure, ownership structure and corporate governance for firms in the developing country like Pakistan. Finally, the findings will lend a hand to policy makers and the SECP to formulate an effective regulatory mechanism in future revisions and modifications of the CCG by considering the unique characteristics of the local corporate environment. These characteristics include financing features and ownership patterns of the firms, the expanded role of other stakeholders, institutional shareholders as prudent monitors, and so forth.

1.5 Scope and uniqueness of the study

Empirically, only a few studies have explored the effects of ownership structure and corporate governance on capital structure and firm performance in Pakistan. For instance, Sheikh *et al.*

(2013) on corporate governance and firm performance; Sheikh and Wang (2013) on capital structure and firm performance; Tariq and Abbas (2013) on compliance of CCG and firm performance; Javed and Iqbal (2010) on ownership structure and firm performance, and Hasan and Butt (2009) on the impact of ownership structure and corporate governance on capital structure. They have all agreed upon the significance of corporate governance and ownership structure on various firms' performance and financing structures.

The primary focus of this study is to examine the limitation of CCG's framework on the improvement of firms' access to capital by reducing the cost of capital through the development of capital markets in the country. However, due to the constraints related to the data availability and other relevant issues, the study has not analyzed all of the relevant aspects of CCG. The variables used in the study are adopted from existing literature, and empirical investigation shows sufficient support for the argument raised in the study. Moreover, the following points highlight the uniqueness of the study.

1. Only a couple of studies such and Shiekh *et al.* (2013); Javed and Iqbal (2010) and Hasan and Butt (2009) have examine the impact of corporate governance on firms' performance and ownership structure on limited data. However, to the author's best knowledge, no prior study has evaluated the CCG 2002 and 2012 in order to analyze it in terms of corporate finance, ownership and governance as this study has.
2. A few important studies have included the data of Pakistani firms to explore the factors affecting the capital structure. Notably, there have been the studies done by Getzman *et al.* (2014); Jong *et al.* (2008); Booth *et al*. (2001); and Demirguc-Kunt (1992), but their findings were based on the data of very few firms. However, this study analyzes a larger data sample consisting of various industrial sectors.

3. A small number of studies (Brailsford *et al.*, 2002; Short *et al.*, 2002) have explored the impact of ownership structure on capital structure and firms' performance on Australian and UK firms respectively. Studies done by Berger *et al.* (1997); Firth (1995); Jensen *et al.* (1992); Friend and Lang (1998); Kim and Sorenson (1986) and Grossman and Hart (1982) examined the relationship of managerial equity ownership to firm's leverage. In the case of emerging economies, only Wahba (2013); Ruan *et al.* (2011) and Hasan and Buut (2009) explored the impacts of managerial equity ownership on capital structure decisions, which affect firm performance. However, no prior study exists that has explored the influence of different ownership patterns on capital structure. This study unveils the significance of managerial ownership, institutional shareholdings and large shareholders' (block-holders') roles on financing decisions of Pakistani firms.
4. Above all, this dissertation provides an evaluation of CCG by presenting empirical evidence of non-financial firms listed in Pakistan. Moreover, it also makes comparisons between existing empirical studies, either on developed or developing economies, in terms of firm-specific characteristics in order to influence the choices of capital under separation of ownership and control through effective corporate governance mechanisms.

1.6 The Organization of the Dissertation

The dissertation is composed of 7 chapters. The organization of the remaining parts of the dissertation is as follows:

Chapter 2 presents the introduction, development, revision and implementation of the Code of Corporate Governance (CCG) in Pakistan. It also briefly introduces financial markets. It explains the historical development of CCG 2002, and the subsequently revised CCG 2012. The

purpose is to review the current position and historical development of capital markets, in the background of CCG. Moreover, it explains the capital raising mechanism of non-financial firms in security and non-security markets, as these markets play a significant role in providing a platform for the short-term and long-term financing needs of the firms.

Chapter 3 gives a review of existing literature. To begin, it provides a survey of theories and empirical explanations relevant to the factors that affect the capital structure. It then provides an explanation of different ownership patterns along with a summary of existing empirical findings. Finally, it presents a survey of corporate governance theories and its relevant empirical literature.

Chapter 4 presents the empirical part of the study, which explains the data, variables, hypotheses, and research methods in order to (i) explore the significant firm specific factors that affect the capital structure; (ii) examine the influence of ownership patterns on capital structure; (iii) examine the effects of internal attributes of corporate governance on capital structure.

Chapter 5 explains the empirical results of (i) factors affecting the capital structure (ii) the effects of ownership patterns on choices of financial structure (iii) the effects of internal attributes of corporate governance on capital structure.

Chapter 6 provides a discussion on regression results relevant to (i) factors affecting the capital structure (ii) the effects of ownership structure patterns on choices of financial structure (iii) the effects of internal attributes of corporate governance on capital structure.

Finally, chapter 7 describes the summary and conclusions of the study. It provides the policy proposals for the improvement of CCG based on the empirical findings. It also interprets the empirical results found in Chapter 5 in order to analyze future developments of firms financing sources and future access to the low-cost capital with the improvement of ownership

structure and governance mechanism. Lastly, it highlights the limitations of the study and provides recommendations for further research.

Chapter 2

Financial markets and Code of Corporate Governance

2.1 Introduction

In modern day economy, effective and fair corporate governance framework is considered as an important factor in the sustainable development of an economy. This can be achieved through the performance of companies and their access to various external capital sources. According to OECD (1999) corporate governance is a key element in microeconomic efficiency, enhancement of capital market functionality, and resource allocation among market players. In this respect, the corporate governance mechanism constitutes a broad range of principles, institutions, and regulatory framework including the accounting standards, financial disclosures and so forth. At policy making level the corporate governance framework has gained greater importance in both developed and emerging markets. In a broader perspective it has contributed to the economic, social, and legal environments that safeguard the corporate owner's interests. Therefore, in Pakistan, an emerging market, it is vital for the sound development of capital markets, the protection of property rights, the reduction of transactions cost, and the cost of capital for firms operating within the economy.

With the passage of time, the persistent demand for corporate accountability and transparency has led to a legal compulsion for corporations to "comply or explain" the mechanism about fair corporate practices. To enforce standards of accountability and transparency, national governments and independent international organizations have enacted various guidelines on corporate governance. These include the Cadbury Report (1992) in the UK, the Organization of Economic Co-operation and Development (OECD) principles of corporate

governance (1999) and the Sarbanes-Oxley Act (2002) in the US.

2.2 Debate on Code of Corporate Governance

Businesses around the globe require investment from investors in order to expand their operations in local and global markets. Investors make sure that the business of a certain company is sound before providing the capital for such investments, and will continue like that in the future so that they may get a proper return on their investment. Effective and fair corporate governance practices address the investors' expectations by establishing a transparent and accountable framework by protecting their interest. The growing importance and emphasis on corporate governance in last two decades has urged countries to take several formal and non-formal initiatives for the improvement of governance mechanism with in the country. In this regard, several countries have issued the CCG as one of their regulatory frameworks to enhance the accountability, transparency, internal control, disclosure of information, responsibilities, evaluation, and compensation from the board of directors and so forth.

According to Mallin (2007), the development of corporate governance is taking place at a global level, and is a complex area having impact on ownership structure, investors' protection through legal system, capital markets, and so forth. To achieve the mentioned objectives, countries across the globe have introduced various codes for the enhancement of their corporate governance mechanism. Aguilera and Cuervo-Cazurra (2004, pp. 417) defined the CCG by stating that "Codes of good governance are a set of 'best practice' recommendations regarding the behavior and structure of the board of directors of a firm. They have been designed to address deficiencies in the corporate governance system by recommending a comprehensive set of norms on the role and composition of the board of directors, relationships with shareholders and top

management, auditing and information disclosure, and the selection, remuneration, and dismissal of directors and top managers." They further state that the CCG is important for the improvement of quality within the companies' boards, requiring accountability between the companies and shareholders while maximizing the return to shareholders or stakeholders. The ultimate objective of this mechanism through development and improvement of CCG is to improve the institutional, legal and regulatory framework in the economy.

OECD published its initial set of principles of corporate governance, in 1999 and revised them is 2004 and 2015. OECD (2004) highlights that corporate governance is only part of the larger economic context in which firms operate and it is one of the important element for the enhancement of investor's confidence, economic efficiency, and growth. It further emphasizes that an effective corporate governance system within a company and across the economy as a whole contributes to the investors' confidence for the proper functioning of market economy. This lowers the cost of capital for firms and encourages the efficient use of resources which will result to the growth in the economy. The OECD identifies that its single set of principles is not fit for all, meaning that a single model of corporate governance is not applicable to all countries due to the unique characteristics of each country. However, Aguilera and Cuervo-Cazurra (2004) state that the principles issued by OECD as a transnational institute have wider applicability and address the important issues related to global corporate governance. The OECD principles do not promote any corporate governance model, but it aids developing economies in understanding how to improve the corporate governance mechanisms in their country. In this perspective it can be assumed that these principles provide standardized guidelines for developing economies to enhance their local governance mechanism. Table 2.1 highlights a few important points of the OECD principles of corporate governance revised in 2004, as quoted in Mallin (2007).

Table 2.1: OECD principles of corporate governance

Principle	Narrative
1. Ensuring the basis for an effective corporate governance framework	The corporate governance framework should promote transparent and efficient markets, be consistent with the rule of law, and clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities.
2. The rights of shareholders and key ownership functions	The corporate governance framework should protect and facilitate the exercise of shareholders right
3. The equitable treatment of shareholders	The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights.
4. The role of stakeholders in corporate governance	The corporate governance framework should recognize the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs and the sustainability of financially sound enterprises.
5.Disclosure and transparency	The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership and governance of the company.
6. The responsibilities of the board	The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and shareholders.

Source: OECD Principles of Corporate Governance (2004) quoted in Mallin (pp. 32, 2007)

2.3 Importance and development of CCG in Pakistan

The role of corporate governance is necessary for the allocation of resources, specifically financing the needs of the firm, improving the investors' confidence to attract more investment, and enhancing capital markets. Particularly in the case of capital markets, instilling confidence in the investors and protecting their interests are the primary roles of the corporate governance mechanism. As confirmed by La Porta *et al.* (1997), countries that have poor or weaker investor protection mechanisms have smaller capital markets. Efficient and well developed capital markets intermediate the availability of capital funds for a firm's investment opportunities. This availability of the capital also results to the lower cost of capital. Moreover, Shleifer and Vishny (1997) also suggests that strong investors' protection encourages firms to provide their funds for financing activities. In modern corporations, the corporate governance mechanism protects the investors' interests and arises due to the separation of ownership and control. Based on these arguments the role of an effective and standardized Code of Corporate Governance (CCG) is important for the development of capital markets, for firms and easy access to capital that can ultimately contribute to the economic progress of the economy.

The historical development of principles of corporate governance was started with the establishment of the Securities and Exchange Commission of Pakistan (SECP) in 1999[2]. SECP was established in light of the 1969 Securities and Exchange Ordinance (SEO), the Company Ordinance (CO) of 1984 and SECP act 1997. SECP enacted first CCG in March 2002 as a regulatory body of non-bank financial sectors including capital markets and corporate sectors. In response to the market concerns and the continuously evolving environment surrounding it, the CCG (2002) was revised and modified into the CCG (2012).

[2] Information is take from the survey of corporate governance practices, 2007;http://www.picg.org.pk/knowledge-base/reports/Survey.pdf

2.3.1 Code of Corporate Governance 2002

The SECP first introduced the CCG in March 2002 as a major reform for corporate governance practices in the country. The initial reforms included in the code were reforms enacted to address the issue of protecting minority shareholders. It further emphasized better information disclosure while recommending the improvement of internal and external audits and the establishment of internal audit committees for effective internal financial control. The SECP has made CCG (2002) as a part of listing stock exchange regulations.

The following section highlights the few clauses of CCG (2002) relevant to the scope of this study.

2.3.1.1 Independent directors

[3]Clause (i) addresses the issue of independent board members. It states that all listed companies shall encourage effective representation of independent, non-executive directors, including those representing minority interests, on their boards of directors so that the Board as a group includes core competencies considered relevant in the context of each listed company.

1. The board of directors of each listed company includes at least one independent director representing the institutional equity interest of a banking company, the development of financial institutions, a non-banking financial institution (including a modaraba, leasing company, or investment bank), a mutual fund, or an insurance company.

Explanation

For the purpose of this clause, the expression independent director, means a director who is not connected with the listed company or its promoters or directors on the basis of a family

[3] Content has been copied as quoted in the code;http://www.secp.gov.pk/CG/CodeofCorporateGovernance_2002.pdf

relationship and who does not have any other relationship, whether pecuniary or otherwise, with the listed company, its associated companies, directors, executives or related parties. The test of independence primarily stems from the whether such person can be reasonably perceived as being able to exercise independent business judgment without being subservient to any apparent form of interference.

Any person nominated as a director under sections 182 and 183 of the Companies Ordinance of 1984 shall not be taken to be an independent director for the above-said purposes. The independent director representing an institutional investor shall be selected by such investor through a resolution of its board of directors and the policy with regard to selection of such person for election on the board of directors of the investee company shall be disclosed in the Directors' Report of the investor company.

2.3.1.2 Directors

The clauses (iii) through (vi) of the Code of Corporate Governance (2002) describe the qualification and eligibility criteria for a person to act as a director for a listed company.

(iii) No listed company shall have as a director a person who is serving as a director of ten other listed companies.

(iv) No person shall be elected or nominated as a director of a listed company if: his name is not borne on the register of National Tax Payers, except where such person is a non-resident and he has been convicted by a court of competent jurisdiction as a defaulter in payment of any loan to a banking company, a Development Financial Institution or a Non-Banking Financial Institution; or he, being a member of a stock exchange, has been declared as a defaulter by such the stock exchange.

(v) A listed company shall endeavor that no person is elected or nominated as a director if he or his spouse is engaged in the business of stock brokerage (unless specifically exempted by the Securities and Exchange Commission of Pakistan).

(vi) The tenure of office of Directors shall be three years. Any casual vacancy in the Board of Directors of a listed company shall be filled up by the directors within 30 days thereof.

2.3.1.3 Other important clauses of code

Clauses (vii) to (xiii) explain the responsibilities, power and functions of the board of directors, board meetings, and significant issues related to board of directors' decision. The other remaining clauses of CCG describe the other important factors, like the role of the Chief Financial Officer (CFO), financial reporting, disclosures, audits, etc. The last three clauses deal with the compliance of the CCG:

(xlv) All listed companies shall publish and circulate a statement along with their annual reports to set out the status of their compliance with the best practices of corporate governance set out above.

(xlvi) All listed companies shall ensure that the statement of compliance with the best practices of corporate governance is reviewed and certified by statutory auditors, where such compliance can be objectively verified, before publication by listed companies.

(xlvii) Where the Securities and Exchange Commission of Pakistan is satisfied that it is not practicable to comply with any of the best practices of corporate governance in a particular case, the Commission may, for reasons to be recorded, relax the same subject to such conditions as it may deem fit.

2.3.2 Summary of the Code Corporate Governance 2002

[4]This section summarizes the CCG 2002. The code highlights the following main points for the improvement of corporate governance practices in the country, such as:

1. The role, responsibilities, composition, eligibility, selection and removal criteria for the board of directors.
2. The appointment, qualification, selection, and responsibilities of the Chief Financial Officer (CFO) and the company secretary.
3. Corporate and financial reporting, director's reports on financial and internal control, frequency and compliance of reporting, and independence of auditors.
4. Corporate ownership, issuance of new shares, and takeovers.
5. The selection, meeting, and duties of audit committees.
6. Internal auditing guidelines.
7. Criteria for external auditors.
8. Reports on compliance of corporate governance.

The Code emphasizes the representation of non-executive independent directors on the board. At least 25% of board members must be non-executive directors and independent directors must represent the interest of institutional equity ownership. However, it does not emphasize the role of independent directors to protect the interest of minority shareholders (see Clause (i) sub section (b)). One member can hold a maximum of ten board-ship positions while tenure of the board is stipulated for three years. It is the duty of board of directors to implement an effective internal control system, and the board should carry out their fiduciary duties in the best interest of their shareholders. This clause also requires the board to hold at least four board

[4] http://www.secp.gov.pk/CG/CodeofCorporateGovernance_2002.pdf

meetings to discuss the performance of the company. The board of directors is also responsible for issuing reports on ethics and fair business practices.

The CEO is able to appoint or remove the CFO with the approval of board of directors. Both the CFO and the company secretary must have the membership of recognized professional bodies. The code also sets a minimum educational and professional criterion for the selection of both positions. It also specifies that the CFO and secretary must attend all board meetings.

The code stipulates that unaudited quarterly financial reports must be issued with the approval of the CFO, the CEO, and the board of directors. The reports must comply with the guidelines issued by Institute of Charted Accountants of Pakistan (ICAP) and SECP. Moreover, the company must issue the final annual audited financial report within the last four months of each fiscal year.

Companies should issue their shares in compliance with stock exchange requirements with the approvals of SECP. In cases of corporate takeover, the code provides the following guidance. The board of directors must approve the operation of divestiture in the case that 75% of outstanding shares higher than the market value are taken, and minority shareholders must receive the same share price. If it is lower than the market price, it must be done by the approval of the SECP.

The code also provides guidelines to directorial boards for the formation of audit committees. Any one committee should contain at least three members, preferably members who are non-executive directors, including the chairman. It further recommends a framework for audit committee meetings. Audit committees have to work under the terms of references issued by the board of directors to ensure the compliance of internal reporting and governance standards. They must forward interim reports to the board of directors and the CFO through the company's

secretary.

To address the issues of internal financial malpractices, the code recommends the establishment of an internal audit committee for effective internal control. The head of the internal committee should have access to the chair of the audit committee. The internal audit committee should also present its reports to the external audit committee in order to ensure that the financial information is sound.

The external auditors must be an independent organization having no other relation to the auditing firm except a professional one. The code also suggests the rotation of external auditors after every five years.

Finally every listed company must circulate a report of compliance with the code of corporate governance and submit it along with the annual report to the SECP. The compliance reports must be certified by statutory auditors.

2.3.3 Code of Corporate Governance 2012

Several studies have highlighted the importance of CCG's development and improvement for the enhancement of corporate governance mechanisms in various countries (see Aguilera and Cuervo-Cazurra, 2004; Zattoni and Cuomo, 2008). The study by Aguilera and Cuervo-Cazurra (2004) concluded that the adoption of the CCG as practice improved the corporate governance system in the country. They further argued that improvements to the code were responses to exogenous and endogenous pressure that arose due to the deficiencies in the code. Several studies as well as the OECD highlight the CCG as an evolving mechanism to address the changing environment of businesses surroundings. In this vein, the OECD has revised the 1999 principles of corporate governance in both 2004 and 2014 respectively.

Similarly, in response to endogenous and exogenous factors, the SECP revised their own CCG in 2012. Following the implementation of the CCG (2002) the SECP has taken various steps to address the market imperfections, such as establishing new institutions like the Pakistan Institute of Corporate Governance (PICG). It plays a role in reviewing the code and is involved in the training and awareness of different players in the market. The PICG with International Finance Corporation (IFC) put forth a survey on corporate governance in 2007[5]. This survey found that the majority of the companies did indeed follow the CCG, as it was mandatory. However, the desired results still had yet to be achieved, and the primary reason was a lack of awareness for the implementation of code among relevant parties. The survey emphasized the role of company boards for the implementation of the CCG and the improvement of corporate governance. It further highlighted the importance of independent directors on corporate boards and audit committees. More importantly, the survey concluded that regulatory requirements related to the protection of minority shareholders need full implementation and strong monitoring.

As stated by the chairman of the SECP in his message on the implementation of a modified CCG (2012), corporate governance standards are dynamic and need to be reviewed in order to meet international standards of the governance. Therefore, in order to catch up with evolving corporate sector and financial markets, the CCG was revised again in 2012. The following section of the study highlights the important clauses relevant to the internal attributes of corporate governance that were revised in the CCG (2012).

The currently effective CCG (2012)[6] in Pakistan has been in place since April, 2012. In contrast to the CCG (2002) which contained 47 clauses, the revised code comprises of 42 clauses that are

[5] http://www.picg.org.pk/knowledge-base/reports/Survey.pdf

[6] http://www.secp.gov.pk/CG/CodeOfCorporateGovernance_2012_AmendedJuly2014.pdf

further divided to sub-clauses as well. Each clause addresses a single issue that is considered vital for fair corporate practices in Pakistan's business environment. Several important clauses that address the composition of board members, the CEO, and outside board directors are as follows.

2.3.3.1 Independent directors

In CCG (2012), clause (i) provides the guidelines for directorial boards. The sub section (b) of this clause states that,

The board of directors of each listed company shall have at least one and preferably one third of the total members of the board as independent directors. The board shall state in the annual report the names of the non-executive, executive and independent director(s).

In CCG (2002) it was optional to have independent directors; however, now it has become mandatory to have at least one present on any company's board of directors. The clauses (ii) to (v) highlight the roles, duties, and obligations of elected members of the board. They include that an individual may be a board member for a maximum of seven companies, compared to the ten companies stated in the previous version. It was also made mandatory for board members to evaluate their performance and provide guidelines for directorial training as well.

2.3.3.2 CEO Duality

Clause (vi) of the CCG (2012) defines the roles and selection criteria for the CEO. It states,

The Chairman and the Chief Executive Officer (CEO), by whatever name called, shall not be the same person except where provided for under any other law. The Chairman shall be elected from among the non-executive directors of the listed company.

It further explains that board members must clearly define the duties of the CEO and the board chairman.

This clause distinctly prohibits CEO duality, unlike CCG (2002) which made it voluntary to have separation between the CEO and the chairman. In summary, the CCG (2012) makes it mandatory for all the listed firms to submit a declaration of compliance to the code of corporate governance in their annual financial statements. Moreover, it also requires that this disclosure must be reviewed by the auditor of the financial statement. Good corporate governance ensures the accountability of the management and the board in use of such capital. According to its stipulations, the board of directors will also ensure legal compliance and their decisions will not be based on the consideration of political or public relations.

2.3.4 Comparison of Codes of Corporate Governance

This section highlights the clauses that have been modified or added to the CCG 2012[7].

1. The CCG (2012) made it compulsory to have at least one independent director on board, compared to the CCG (2002) where it was optional. It further provided expanded criteria for the assessment of independence of the director.
2. The new code made it mandatory that no more than 33% of board members should be executive directors, including the CEO, where in the CCG (2002) this proportion was 75%.
3. The CCG (2012) limits the board membership of a director to a maximum of seven companies. This means that one member can be on the board of directors of seven different companies, which were ten companies in the previous code.
4. The CCG (2012) implemented an annual performance evaluation criterion of board

[7] Detailed presented in official version is provided in the appendix.

members. It states that after 2 years of the implementation of the CCG (2012) companies must establish the performance evaluation criteria of all board members.

5. In CCG (2002) it was optional to have the separation between the CEO and board chairman, but in CCG 2012 it is mandatory to separate the CEO and board chairperson.
6. In contrast to the CCG (2002), where the CEO was responsible for the appointment, remuneration, and removal of the Chief Financial Officer (CFO) and Company Secretary (CS), in the new code, boards are responsible for these actions, including the appointment of an Internal Audit Committee (IAC) head.
7. The CCG (2012) introduced the qualification, appointment, and removal criteria for IAC head.
8. Following the standardized international criteria of the CCG (2012) it enforced the disclosure of directorial remuneration in annual reports.
9. In the new code it is now mandatory that separate individuals should hold the position of the head of the IAC and the head of the board of directors. Moreover, it states that CFO and CS positions must not be held by the same person.
10. In the recommendations of the new code, company can outsource internal audit functions. In that case, companies must hire on a full time employee as head of internal audit as a coordinator between the service-providing firm and the board.

2. 4 Financial markets

In developing economies, firms tend to have greater need of external capital to sustain growth, but these economies typically are unable to provide adequate protection for investors through a developed and well-functioning financial market. In underdeveloped financial and capital

markets, there is a greater probability of moral hazard and adverse selection, and investors are frequently exposed to risk (Jang, 2001, pp.79)[8].

According to Isaksson and Celik (2013), "the quality of corporate governance plays a critical role at every stage of the investment process, including corporate access to equity, the allocation of equity among competing ends, and the continuous monitoring of corporate practices and performance." They further argue that with the changes in the market, policy makers need to establish rules and regulations that contribute to the enhancement of the corporate governance mechanism and its impact on the functioning of the equity market. Therefore, this section will evaluate the role of the CCG in the case of Pakistan to achieve the above mentioned objective. It briefly summarizes the money market and capital markets, as facilitators of the flow of funds in the economy, as important components of financial markets in the country.

2.4.1 Money market in Pakistan

Money markets as parts of larger financial markets[9] deal with short-term conventional and Islamic securities with high liquidity. Short term securities are defined as the securities that have maturities of less than one year and are classified as highly marketable. Therefore, money markets target the participants who want to be involved in short term borrowing and lending. The individual investors have limited access to these securities, due to their large trade value. However, small investors have easy access to money market funds. Firms access money markets to finance their working capital needs. Moreover, the money market supplies funds for speculative buying of different commodities and securities. A well-developed money market is

[8] Jang, H.S (pp. 73-118, 2001); http://elibrary.worldbank.org/doi/abs/10.1596/0-8213-4862-0

[9] Information about financial markets has been taken from the websites of the Karachi Stock Exchange (Limited) and the Economic survey of Pakistan, 2013 by Ministry of Finance Pakistan. Websites are (http://www.kse.com.pk/ and http://www.finance.gov.pk/survey/chapters_13/06-Capital%20Markets.pdf)

required for channeling the funds to the most demanding sectors in the economy.

In Pakistan, the money market provides a system through which the banking system makes maximum profit out of its available resources before approaching the last resort of lending, i.e. the State Bank of Pakistan (SBP). The money market is mostly an inter-bank mechanism where banks act as lenders and other participants as borrowers. Other financial institutions can also lend their surplus funds on call in the money market. These transactions are held in the city of Karachi, the financial hub of Pakistan where the head offices of most major banks are located. Bank branches from various parts of the country send their surplus funds to head offices in Karachi for investment and borrow from the head office in the times of need. Apart from domestic banks, foreign banks also participate in the money market. Banks use discounting bills as lending instruments to reputable parties.

In order to develop the discounting bill, the SBP operated a Bill Discounting Scheme in 1960s, where it used exchange bills that arose out of commercial or trade transactions to provide credit facilities. In a practical situation, scheduled banks lend money to borrowers against the issuance of promissory notes within 90 days. Then banks then uses these promissory notes to borrow from the SBP. Historically, the SBP[10] issued three month treasury bills (TBs) in 1948-49 with the idea of providing banks with short-term investment opportunities in order to resolve the seasonal fluctuation in interest rates rather than simply raising finance for the government. This service was suspended during 1959-60 due to a decline in the money market. After that, in 1980 the SBP again started to issue treasury bills to raise the funds for the government. It flourished after 1991 through switching to a market based monetary policy. From 1992, public debt was auctioned and the rates of returns were decided in the market. Moreover, the money supply

[10] More information about money market and capital market in Pakistan it obtained from "Money and Banking in Pakistan" by S.A Meenai, revised and expanded by Javed A. Ansari. Oxford University Press, 2001.

management system was introduced in 1995 through auctioning off public debt instruments of different maturities in the open market.

2.4.2 Capital markets in Pakistan

Capital market plays an important role in the economy by mobilizing idle savings from households in order to allocate funds for capital formation in the economy, which in turn contributes to the existing capital stock. It is considered the backbone of the economy for its role in channeling funds for investment. More precisely, capital markets bring in household savings for productive use through investors. They create investment opportunities in the form of equities, medium and long term bonds, mutual funds, insurance policies, and so forth. This is contrary to money markets, which constitute short-term investment opportunities. Capital markets provide various platforms to the investors to diversify their investments to reduce the financial risk. Capital markets provide the platform for businesses to finance their medium and long term investments.

In modern economics the role of capital markets in economic growth and development of economies is inevitable. It is assumed that countries with well-developed capital markets are more prone to robust long term economic growth. Efficiently operative capital markets are not only for the source of financing private sector, but they also meet the demand of government borrowings. However, it can be assumed that Pakistani capital markets are underperforming. For instance, the market capitalization to GDP ratio given in table 2.2 shows that Pakistani stock markets are undervalued and are lowest among all the countries mentioned in the table.

2.4.3 Securities market

In Pakistan securities are traded in two sub markets of security markets known as the primary

market and the secondary market. The primary market provides the platform for the newly issued securities for long-term capital procurement. To issue these securities to investors, investment banks act as underwriters on behalf of a security issuing company. The issuing company then uses the investment banks services because it is less costly to sell new securities than to sell securities to each investor individually.

Table 2.2: Market capitalization comparison

Country	GDP (2010) (USD Billions, PPP)	Market Capitalization (USD millions)	Market CAP/GDP (nominal)	Number of all listed companies
Bangladesh	244.33	46999	47%	302
China	10085.71	4762836	81%	2063
India	4198.60	3228455	210%	6586
Indonesia	1029.79	360388	51%	520
Korea	1417.54	1089216	108%	1798
Malaysia	414.43	410534	172%	956
Pakistan	464.20	38168	21.8%	644
Philippines	367.43	157320	78%	253
Singapore	291.94	647226	291%	778
Thailand	586.82	277731	87%	541

Source: Quoted from Reform priorities in Asia taking corporate governance to a higher level OECD (p. 8, 2011) (World Bank Data Base http://siteresources.worldbank.org/DATASTATISTICS/Resources/GDP_PPP.pdf and World Federation of Stock Exchanges.)

The investments banks generally issue securities to all investors at a set price; in this way company can procure a fixed amount of capital from all new securities. Contrary to the primary

market, the secondary market provides a platform for the trading of previously issued securities. Unless issuing company purchase back their issued securities, they will not affect the outstanding amount of the securities. In general, they only transfer the ownership to new investor from previous owner.

As a part of financial liberalization, Pakistan opened its secondary markets to foreign investors in 1991. Meanwhile, the government initiative of privatization resulted in the rapid growth of capital markets. Under the privatization policy, the Pakistani government opened the doors of public companies to domestic and foreign investors. Under this policy, the government opened the door for the private sector to invest in commercial banks, general insurance companies, mutual funds, and so forth. The financial liberalization prophecy encourages the government to deregulate the national economy. Under this majority, the sectors were liberalized by the government, barring a few strategic sectors, and this resulted in increased foreign investments in Pakistan[11].

There are three stock exchanges in the country, these being the Karachi Stock Exchange (KSE), the Lahore Stock Exchange (LSE), and the Islamabad Stock Exchange (ISE). These stock exchanges provide a platform for the trading of previously-issued securities such as debt, equity, and hybrid securities through brokers.

[12]KSE is the most liquid and largest stock exchange in the country. The KSE was established soon after the independence of Pakistan on the 18th September 1947. It was incorporated as a guarantee limited company on 10th March, 1949. On August 27th, 2012 it was demutualized as the Karachi Stock Exchange Limited (KSEL). In the demutualization process, 40% of stakes with management control were sold to strategic investors, 40% were retained by

[11] Information about financial liberalization of secondary market liberalization is taken from annual dairy, published by Karachi Stock Exchange Limited Pakistan.
[12] General information about Karachi Stock Exchange is available at (www.kse.com.pk)

ex-members/now-shareholders, and 20% were offered to the general public. In the beginning, the KSE started its operation with five companies and paid up capital of 37 million rupees (Rs) with 50-shares index. The growth of market size with the passage of time resulted in the introduction of the KSE-100 index on November 1, 1991. To date, this index is considered as a generally accepted benchmark of the exchange. KSE-100 represents the 80% market capitalization and consists of 100 companies listed on the exchange. Furthermore in order to have a benchmark with which the stock price performance can be compared over a period of time, exchange is done using the KSE-30 index. Using global free-float methodology, the KSE-30 index shows the free-float market value of 30 companies in relation to the base period. Following the same method, the KSE introduced the KMI-30 (KSE Meezan Index) with the cooperation of the Al-Meezan Investment Bank. The objective of this index was to scrutinize the performance of Shariah compliant equity investments. It is also calculated by the free float methodology. Since 2002 KSE has introduced computerized trading system named Karachi Automated Trading System (KATS).

Historically, the KSE has achieved remarkable achievements, it being the most liquid stock exchange of the country. For instance, in 2002, the KSE was declared the best performing stock market in the world. As of September 4th 2015, 560 companies are listed on KSE with a total listed capital of Rs. 1,256,920.65 million, and a total market capitalization of Rs. 7,342,914.88 million. The KSE-100 index closed on the same day with a total of 33891.08 points.

Apart from the KSE two other stock exchanges are functioning as a part of security markets in Pakistan. The LSE stands second to the KSE in term of trading and exchange. It was established in October 1970. It currently serves companies functioning in various cities of the Punjab province. ISE is the newest among three exchanges in the country. It was established in

January of 1992.

2.4.4 Non-securities markets

The non-securities market comprises of development financial institutes (DFIs), commercial banks, and specialized banks/institutions for industry, small enterprises, housing, and agriculture. In contrast to securities market, the non-security market is dominant in Pakistan. It provides medium and long term financing/debt funds through bank and non-bank financial institutions to industries, businesses, and other users. The major products of the market include leases, mortgages, loans, and so forth. There are also non-banking financial institutes that are part of this market and provide financing to the households, such as house building finance corporation of Pakistan.

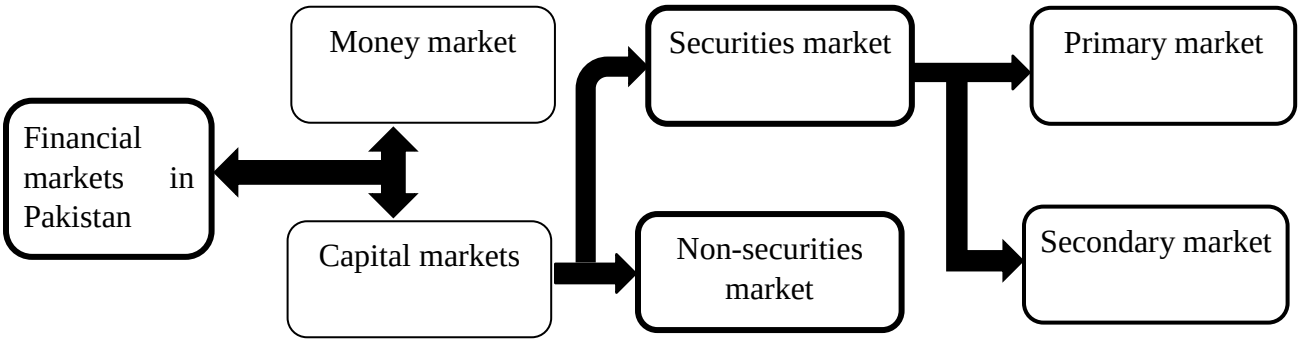

Figure 2.1: Financial markets structure in Pakistan

2.5 Summary

This chapter provides a review of the debate on the CCG. Initially it highlights the significance of the CCG by summarizing the OECD principles of corporate governance, followed by the importance of the CCG for a developing economy, such as in Pakistan. In line with the objectives of the study, this section specifies the historical development of the CCG (2002) along with a summary of most relevant clauses. Following this, it summarizes the CCG (2012),

especially, highlighting the revisions and modifications made to the initial CCG by providing a summary of the comparisons between CCG (2002) and (2012).

One of the objectives of the study is to examine the role of the CCG in the development of capital markets in the country. Therefore, second part of the chapter reviews the financial markets of Pakistan. It primarily covers the historical development of the financial markets in the country. The final section provides the summary of money, capital, securities, and non-security markets in the country.

Chapter 3

Theoretical background and literature review

3.1 Debate of theories

The significance of corporate ownership structure on capital structure choices has been argued in literature. The debate on separation of control and ownership of corporations, goes back at least to times of Adam Smith (1776) in reference to joint-stock companies. However, concept of current modern publicly held large corporation was put forwarded by Berle and Means (1932). The separation of ownership and control, especially in large corporations refers to, where shareholders as owners (residual claimants) provide the finances required to run the business. Managers control the firm and its resources on behalf of its owners, i.e. shareholders. Jensen and Meckling (1976) in their seminal work on the principal-agent problem, defined the agency costs that occurred in relation to separation of ownership and control.

The separation of ownership and control has become one of the most discussed topics in the study of corporate governance and corporate finance, particularly after the corporate scandals of Enron and WorldCom since the start of this century. These failures certainly prove the importance of efficient governance mechanism even in the developed economies where they have well developed capital markets, organized institutional frameworks, effective regulatory framework etc. In literature corporate governance is described as a mechanism to minimize the agency conflicts of principal-agent in relation to separation of ownership and control in modern corporations. On the other hand, corporate finance theories deal with the strategic decisions of firms financing choices, in terms of cost of capital. Several scholars, point out the existence of agency cost related to suppliers of capital, i.e. shareholders (residual claimants), debt holders

(creditors) and managers that control the usage of supplied capital. On the basis of this argument, corporate scholars point out the agency cost as one of the determinants of capital structure, and propose the corporate governance mechanism to alleviate the agency cost.

The debate on capital structure starts with pioneering work of Modigliani and Miller (1958; here after MM theorem) famous irrelevance theorem. MM theorem (1958) proposes the irrelevance of choices between debt or equity n capital structure decisions in frictionless markets. Later on in response to criticisms by scholars, Modigliani and Miller (1963) argue the use of debt to avail debt-related tax benefits. Since then literature has evaluated the firm's capital structure in terms of taxes, asymmetry of information, imperfect markets, etc. and developed new theories such as Trade-off theory, Pecking Order Theory, Free cash flow hypothesis, Signaling model, and Market timing theory. Jensen and Meckling (1976) in their seminal work, first time evaluated the ownership and capital structure under agency theory framework. Hart (1995, pp. 147) explains that "why agency theory perspective is important, and in particular, why the conflict of interest between a company's managers and its investors is crucial for an understanding of capital structure." He further states that in contrast to other theories, agency theory has an advantage, i.e. it explains why firm issue debt and why failure to make debt payments has a penalty in the form of bankruptcy. It concludes that though, agency approach is not the whole story, along with other mentioned factors, it can help to develop a complete capital structure theory (see Hart, 1993).

In contrary to this, several scholars see the profound involvement of corporate finance and governance with the capital structure. Williamson (1987) study states this relationship in following words, i.e. "debt and equity are not mainly as financial instrument, but also as alternative governance mechanisms". In existing literature several eminent scholars laminate the

relationship among corporate governance, capital structure, and separation of ownership and control, etc. under the lens of agency theory and transaction cost economics (see Hart, 1993; Williamson, 1987; Jensen and Meckling, 1976; Coase, 1937).

In summary, in order to evaluate the CCG, 2012 by exploring the unique financing feature of the non-financial firms section 3.2 reviews the mainstream capital structure theories followed by the section 3.3 that provides the review of empirical literature on determinants of capital structure. Afterwards, section 3.4 reviews the empirical debate on impact of ownership patterns such as managerial ownership, institutional shareholdings and presence of bloc-holders on capital structures. Finally, section 3.5 and 3.6 review the corporate governance theories and empirical literature on impact of corporate governance attributes on capital structure respectively.

3.2 The capital structure theories

Capital structure refers to mix of debt and equity securities to finance the real time investments. There is no single universal capital structure; however, literature does highlight the different conditional optimal capital structure theories. These theories of capital structure are based on assumptions of, tax benefits, information asymmetry, agency costs, and market imperfection and so on. Agency costs in context of real markets contrary to MM theorem (1958) discussed in literature are transaction cost; monitoring cost; bankruptcy cost; moral hazard; adverse selection and other information related agency costs. In the line with objectives of this dissertation, firstly, we will review the mainstream capital structure, governance and ownership structure theories respectively followed by the review of empirical studies based on these mainstream theories' assumptions.

3.2.1 Trade-off theory

The origin of the trade-off theory (static) goes back to the study of Modigliani and Miller (1963) which in response to the criticism on MM theorem (1958) they suggested the use of debt as a financing tool based on debt-related tax benefits. To address the issue Kraus and Litzenberger (1973) state that "firm should trade-off bankruptcy cost with the tax benefits (tax shield) of debt to arrive at an optimal capital structure." Their model concludes the taxation on corporate profits, and the existences of bankruptcy are market frictions contrary to MM theorem (1958) assumptions. The present value of gains resulting from debt financing (tax shields), contributes to the value maximization of the firm. To get the tax benefits, this theory supports the maximum use of debt. However, there exists an offsetting cost of debt, i.e. bankruptcy, increase in debt increases the financial distress. Haugen and Senbet (1978) divide the financial distress cost into direct and indirect cost. Direct cost includes the legal and administrative cost of bankruptcy, cost of reorganization, higher agency costs such as monitoring cost, moral hazard, etc. and higher cost of debt or equity due to the loss of creditworthiness even in case if default is avoided. Indirect costs include loss of trust by other stakeholders such as employees, suppliers, customers, etc.

Trade-off model predicts the adjustment of the debt ratio by a firm to an optimal debt level. So what is the optimal debt ratio; firm's optimal debt ratio is usually viewed as determined by a trade-off of the costs and benefits of borrowing, holding the firm's assets and investment plans constant (Myers, 1984). More precisely, where the benefits from extra dollar of a debt equal to the cost incur with the probability of financial distress (see Myers, 2001). Trade-off model is categorized into two models, i.e. static and dynamic trade-off model. The static trade-off theory is a single period trade-off between the tax benefits of the debt and the deadweight cost of bankruptcy as well as the agency cost of debt and equity (Baker and Martin, 2011, pp.19).

In dynamic Trade-off model debt ratios deviate from an optimal ratio for most of the firms. Fischer *et al.* (1989) conclude the firms even in trade-off setting with a fixed cost of issuing equity, firms may adjust the leverage only when it drives further than the extreme level, in their capital structure. Despite the advantages and disadvantages of the debt financing empirical literature lack consensus on an optimal debt level, and either firm should move toward adjusted debt target or adjust it periodically.

Several researchers tested the trade-off model hypothesis but couldn't find conclusive support for the theory. For instance, Myers (1977) finds out that debt financing maximizes the market value of the firms, due to tax deductible interest expenses while ignoring the bankruptcy cost. In contrast Fama and French, (1998) found no support for the tax shield contribution to the firm's market value. Kim (1982) explores in the presence of significant leverage related bankruptcy and agency costs and untaxed income from equity, then the marginal bondholder's rate will be lower than the corporate rate, finally debt financing will have a positive tax advantage. Similarly, MacKie-Mason (1990) provides evidence of tax effects on the choices between debt and equity. It states that companies with the low marginal tax rates are more likely to choose equity over debt as compared to the profitable firms facing the full legal tax rate. These findings endorse the trade-off theory predictions by suggesting that taxpaying firms favor debt over equity. However, it is difficult to infer from the MacKie-Mason (1990) study that different tax rate or debt contributes to the market value of the firm or not (see Myers, 2001; Fama and French, 1998; Graham, 1996).

In sum, even though there are some discrepancies in trade-off theory, however, its predictions on optimal capital structure choices have strong practical appeal. It rationalizes the use of debt in capital structure decisions, particularly for firms with high tangible assets and

positive future cash in-flow. This will help the firm to take more advantage on the tax shield compared to the firms with fewer tangible assets.

3.2.2 Pecking Order Theory

Pecking Order Theory unlike the trade-off model considers debt as a secondary source of financing. Myers (1984) predicts an order to follow for financing sources, it states firms better utilize internally generated sources (retained earnings) first, then go for debt and equity respectively. This financing order was based on the adverse selection model of Myers and Majluf (1984) which states that outside investors are less informed than managers, which may affect negatively the market price of equity (further see Akerlof, 1970, markets for lemons). Because of this mispricing of equity in the market due to information asymmetry, new shareholders will purchase the equity at low price, and eventually this loss will be higher than the net present value (NPV) of the project. This will result in net loss for the existing shareholders. In this case, managers will not invest in the project even with positive NPV. In order to finance, investment theory predicts when investment exceeds from earnings debt financing will increase or vice-e-versa. To avoid this kind of underinvestment, Myers (1984) suggests managers to follow pecking order, i.e. to use the internal sources (retained earnings), debt and equity as a last source of capital in order to cope with information asymmetry, transaction cost and adverse selection problems. Krasker (1986) endorses the adverse selection problem highlighted by Myer and Majluf (1984) in relation to the issuance of risky security either in the form of debt or equity.

A strict interpretation of Pecking Order model suggests that firms do not aim at any target debt ratio; instead, the debt ratio is just the cumulative result of hierarchical financing over time. Firms that face a financial deficit will first resort to debt, and will be observed later at higher

debt ratios (Shyam-Sunder and Myers, p. 223, 1998). Therefore, it can be assumed that the optimal choices of capital structure under pecking order hypothesis are continuously evolving.

Similar to other capital structure theories' empirical literature on Pecking Order Theory provides mix findings. Shyam-Sunder and Myers (1999, pp. 242) state that "pecking order is the perfect first-order descriptor of corporate financing choices." Frank and Goyal's (2003) study on data of US firms, supports the pecking order in larger firms. Critics of theory suggest that pecking order suggests, it may work well in case of issuing securities (debt or equity) for initial financing, however, may not work well in case of deficit financing. Lemmon and Zender (2004) conclude that debt rated firms use debt over equity in contrast small firms with high growth and no debt rating issues equity. They further argue that these small firms rely on equity due to their limited debt capacity. Their results are consistent with the findings of Frank and Goyal (2003); and Fama and French (2002). However, Frank and Goyal's explanation argues that these small firms are more prone to information asymmetry, and issue equity under the Pecking Order Hypothesis. Moreover, Agca and Mozumdar (2005) explore no support of Pecking Order Theory in their financial structure decisions of small firms. Finally studies of Leary and Roberts (2010) and Chirinko and Singha (2000) report no support for Pecking Order Theory.

The general assumption of Pecking Order Theory is that high-profit generating firms are less dependent on debt compared to firm with lower profitability. Empirical studies on exploring the determinants of capital structure under Pecking Order Theory hypothesize negative relationship between profitability and leverage, studies such as (Khan, 2014; Sheikh and Wang, 2011; Jong *et al*., 2008; Viviani, 2008; Zou and Xiao, 2006; Bauer, 2004; Chen, 2004; Booth et al., 2001; Wald, 1999; Rajan and Zingales, 1995 and Titman and Wessels, 1988) endorse the Pecking Order Hypothesis. Based on these findings, one cannot conclude that absoluteness of

Pecking Order Theory; however, it can be endorsed as it helps us to understand the financing choices of firms.

Additionally, critics of this theory point out when and how much debt a firm should go for followed by equity or firm should only rely on debt as an external source of financing? "Debt capacity" limits the use of debt with in Pecking order, and existing literature lacks evidence to define the proper debt capacity (see Frank and Goyal, 2007). In response to adverse selection point of view in Pecking Order Theory, Korajczyk *et al.* (1991) states with the varying adverse selection for new equity, firms issue the equity when markets are more informed about the firm's quality. This argument is further elaborated and endorsed in Baker and Wurgler (2002) market timing theory. In sum, pecking order does explain why the major portion of the external financing comes from debt. It also explains why profitable firms with sufficient internal funds should not rely on debt but unlike trade-off theory, it does not predict any target debt ratio for a firm.

According to Korajczyk *et al.* (1991, pp. 686) due to asymmetries of information, insiders with superior information about the firm have an incentive to issue shares when the firm is overvalued. Consequently, outsiders lower their evaluation of the issuing firm's quality. This creates a "lemons market" [Akerlof (1970) and Myers and Majluf (1984)] in new equity issues. They further argue that it is assumed that a firm can issue risky securities when the market is most informed, because there will be lower impact on equity prices due to lower information asymmetries. Therefore, as of the firm's discretion in the timing of issues of risky securities, we should expect to see these issues clustered after information disclosures such as annual reports or quarterly earnings releases (Korajczyk *et al.* 1991).

Moreover, in order to avoid the adverse selection and information asymmetry pecking

order theory predicts the hierarchal financing order. However, market timing theory predicts that low-leverage firms tend to be those that raised funds when their valuations were high, and conversely high-leverage firms tend to be those that raised funds when their valuations were low (Baker, 2002, pp.29).

3.2.3 Agency theory

Berle and Means (1932) proposed the separation of ownership and control in modern corporations. As quoted in Berle and Means revised version (1967, p. 66) that "Ownership of wealth without appreciable control and control of wealth without appreciable ownership appears to be a logical outcome of corporate development." Since then extensive literature analyzed the phenomenon of ownership and control under the corporate governance mechanism. Jensen and Meckling's (1976) work expanded the scope of the agency theory framework to corporate finance literature. Agency theory is built in the context of principal-agent relationship to address the agency conflicts in the agency (firm). Agency relationship is defined "as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf, which involves delegating some decision-making authority to the agent" (Jensen and Meckling 1976). They define agency cost as sum of,

1. *The monitoring expenditures by the principal*
2. *The bonding expenditure by the agent*
3. *The residual loss*

Unlike, MM theorem (1958) irrelevance proposition which assumes no agency cost and suggests that choice between debt, and equity has no material effect on firm performance in perfect capital markets. Agency theory suggests that there is a material effect of choice between

debt and equity even in frictionless markets and no taxes. Its assumptions are based on the agency costs of debt and equity. According to Jensen and Meckling (1976) agency cost arises as a conflict of interest between the principal and agent, and recognizes potential agency conflicts between shareholders and debt holders (principals), and managers (agent). They strongly support that agency cost is not independent of capital or ownership structure and proposes that an optimal capital structure can be achieved by offsetting the agency cost of debt to the benefits of debt.

The conflicts of interest between managers and shareholders result in various agency problems such as *shirking, entrenchment*, which refers to the misuse of firm's resources under the discretion of managers. Most of the literature uses agency theory to address the mentioned conflicts. However, limited literature uses the agency theory to analyze the corporate capital structure. In fact, since MM theorem (1958) the literature has tended to focus on the role of taxes, information asymmetry, or imperfect markets as the explanation of capital structure decisions but has not included the agency problems (Hart, 1995, p.147). A part from these factors he highlights the importance agency theory to understand the conflict of interest between providers of finances and controllers of finances in its relation to capital structure decisions. Hart (1993) argues that agency approach has more advantages over other theories of capital structure, as it clearly explains why the firm issues senior debt (long term) and why firm's failure to meet debt obligations leads to bankruptcy as a penalty. This study further expands the argument of agency theory by highlighting the conflict of interest between shareholders and debt holders, which has been missing in the agency theory.

In modern large corporations, shareholders (residual claimants) delegate the control of their finances to managers (non-residual claimants), as managers hold less than 100% residual

loss that results in conflict of interest between the two parties. On the other hand, conflict between debt holders and shareholders arises because debt encourages the shareholders to invest sub optimally. Through which shareholders gain the benefits on the creditor's money, but if investment fails, the creditors have to bear the consequences. This phenomenon is known as "asset substation effect" an agency cost of debt (see Muradoglu and Sivaprasad, 2011).

Jensen and Meckling (1976) introduced "alignment of interest" hypothesis, i.e. equity ownership for managers to solve the principal-agent interest conflict. After that several scholars shed the light on the agency conflicts related to managerial behavior, such as, shirking, managerial opportunism, managerial entrenchment and proposed different hypothesis to overcome these conflicts, e.g. active monitoring hypothesis, creditors' monitoring hypothesis, managerial incentives and so forth (see Shliefer and Vishny, 1986; Grossman and Hart 1982; Alchian and Demsetz, 1972). As mentioned by Hart (1993) that very limited empirical research has been done to explore the capital structure of a firm in agency theory framework, particularly in terms of its role in significance of ownership structure on financing choices. Few studies like (Brailsford *et al.,* 2002; Short *et al.,* 2002; Ruan *et al.,* 2011; Wahba, 2014) have explored the relation of insider and outsider ownership patterns on financing choices and its ultimate impact on firm's performance. They explored the variance in debt financing with the changing managerial equity ownership. Empirical evidence fails to establish a consensus on the relationship between ownership structure patterns and capital structure. Due to lack of consistent findings, agency theory approach may not cover the complete understandings of optimal capital structure, but it does provide useful insight to explain the tendency of managers and shareholders towards the debt.

3.2.4 Free cash flow theory

Similar to other capital structure theories, free cash flow theory conditionally advocates the optimal capital structure. In financing decisions, free cash flow hypothesis supports the use of debt even in the presence of its agency cost. It claims, in spite of financial distress, debt can contribute to firm value (Myers, 2001). Free cash flow is cash flow in excess of that required to fund all projects that have positive net present value when discounted at the relevant cost of capital (Jensen, 1986). The free cash flow inflates the conflict between managers and shareholders on the issue of pay out when a firm generates excessive cash flow. Free cash flow hypothesis claims to resolve the problem of motivating the managers to disgorge the cash instead of using it in organization inefficiencies or investing it at below the cost of capital.

Jensen (1986) states that agency cost of debt has been discussed extensively in literature. However, using of debt as a motivation tool for managers has been ignored. He named it "control hypothesis," which states that managers by issuing debt show their commitment for future cash outflow, instead of dividend payout. Debt-related commitments reduce the availability of free cash flow under managers' discretion, which ultimately minimizes the agency cost of free cash flow. Jensen (1986) called this control effect of debt as a potential determinant of capital structure. Similar to this in an earlier study Grossman and Hart (1982) postulate the debt issuers monitoring as a mechanism to bind the managers to reduce their perquisites and minimize the possibility of bankruptcy.

In contrast to Jensen (1986) and DeAngelo and DeAngelo (2006) points out that firm can control agency cost by using low leverage, substantial dividend payouts and holding moderate cash, while preserving the financial flexibility. Critics of free cash flow do endorse the use of leverage to mitigate the agency conflicts, however, point out that high leverage reduces the

firm's financial flexibility. In sum, Jensen (1986) himself points out that control hypothesis does not mean that debt can always have positive control effects. However, despite debt's agency costs and related risks it has potential to maximize the firm value by putting the firm on a diet deal.

3.2.5 Signaling model

This model also highlights the importance of information quality for financial structure decisions. Primary assumption of this model is that inside managers pose more reliable information about the firm. Signaling model predicts how managers can use this information to send the signal to the market through their financing choices. More precisely, capital structure serves as a signal of private information (Ross 1977). This model postulates that when manager feel that markets under value the equity of their firms, they issue debt. Issuance of debt is perceived as a signal in the market, investors assume it as a sign of positive cash inflows to the firm to meet the debt related future obligations. Miglo (2010) states that signaling model lacks empirical evidence for its core assumption, i.e. prediction of positive reaction by market on issuance of debt. However, there exists some empirical support for negative reaction of market the leverage decreasing transactions or a positive market reaction for leverage increasing transactions except debt (see Masulis, 1980).

On the positive, side signaling model explores the other discussions, such as how a firm after issuing an equity shortly after the issuance of debt can improve its performance or contrary to the main prediction, why high-profit firms may not issue the equity as a signal to market (see Brick *et al.*, 1998; Noe, 1988). Additionally, the adversaries questioned the model on the odds of debt such as financial distress and associated agency costs. Despite these flaws, Ross (1977) was

the first who introduced the signaling mechanism to address the information asymmetry between insiders and outsiders.

3.2.6 Market timing theory

The idea of market timing is not new, Korajczyk *et al.* (1991) in response to adverse selection point of view in Pecking Order Theory, states, with the varying adverse selection for new equity; firms issue the equity when markets are more informed about the firm's quality (also see Lucas and McDonald, 1992 and Lucas and McDonald, 1991). However, this idea appears as a main-stream capital structure theory named "market timing" in the work of Baker and Wurgler (2002). This theory presents two versions of market timings one addresses to the information asymmetry issue highlighted in Pecking Order Theory, Myers and Majluf (1984) and other is adverse selection in equity financing proposed by Korajczyk *et al.* (1991).

Market timing theory primarily postulates that capital structure evolves as the cumulative outcome of past attempts to time the equity market (Baker and Wurgler, 2002). They further claim that capital structure theory is not the quest to maintain a target capital structure, it is the result of equity market timing. Such as, firm issue the equity when its share prices are high, and issue debt when share prices are low. In their study, they concluded that high leveraged firms are those who at the time of need of capital for real investment went for debt finances when their share prices were low in the market. On the contrary, low leveraged firms are those firms, which choose equity financing due to higher share price value in the market.

Unlike other theories of capital structure, this theory lacks of empirical evidence. However, Baker and Wurgler (2002) support their argument with the findings of Graham and Harvey (2001) survey of chief financial officers (CFO). Their survey concludes that two-thirds

of responding CFOs claim that market share prices influenced their financing decisions. Frank and Goyal (2007) state that market timing theory as a competitor to conventional theories is not yet established.

3.2.7 Corporate control and Product cost theories

A part from the mainstream capital structure some scholars have evaluated the capital structure under corporate control theories and product cost theories. The work of Harris and Raviv (1988) and Stulz (1988) on capital and ownership structure and future corporate control proposed the theory of corporate control and capital structure. This theory states that the capital structure choices through voting control between managers, and outside investors affect the outcome of takeovers. The basic idea here is that managers choose a capital structure and ownership structure that favors them in future takeover battles. A higher fraction of equity held by management decreases the probability of takeover (Stulz, 1988). Israel (1992) uses debt as a mechanism that enables the incumbent management to obtain the maximum value from the rival, and his prediction was based on the assumption that management knows the characteristics of the rival with certainty. However, there is no evidence of value maximization from rivals with uncertain characteristics.

Brander and Lewis (1986) argue that product markets, and financial decisions will normally be related and have proved that for a particular industry structure, financial structure decisions and product market decisions follow in sequence. In another study Singh *et al.* (2003) explore that leverage has a positive relation across product lines but has a negative relationship with geographic diversification. Norton (1995) argues that role of debt sustained by franchisee is a potential screening device in franchising, and concludes franchising as a capital structure issue.

Several studies explore the association between characteristics of products or marketing strategy and capital structure and find the evidence to support this relationship (see Kale and Shahur, 2007; Stomper and Zulehner, 2004; Campello, 2003& 2006). Like most of the other theories, this theory also needs support from empirical evidence to validate the existing research.

3.2.8 Testing the Trade-off vs Pecking Order Theory

After reviewing all the theories of capital structure it is important to test that, among all, which theory has the most explanatory power. Majority of the studies empirically examine the trade-off and Pecking Order Theory; therefore, it is useful to explore the prominent time series variables of these theories. Proponents of trade-off theory predict an optimal level of the debt ratio and firm gradually adjusts towards it. The target cannot be observed directly, but proxies can be calculated (Myers, 2001). On the other hand, Pecking Order Theory arose from corporate practices and addresses the information asymmetry which was ignored by trade-off model.

According to Baskin (1989) during the last fifty years, statistical studies conducted in five countries provide strong support for the Pecking Order Hypothesis. Shyam-Sunnder and Myers (1999) study on the data of 157 firms from 1971 to 1989, which tested time series variance predictions, concludes that Pecking Order Theory has more time-series explanatory power than trade-off model. In contrast, Chirinko and Singha (2000) concluded that they could not find any support for either of the two theories. Frank and Goyal (2003) find a mean reversion in leverage but do not offer support for the pecking order. Fama and French (2002) find that debt ratios contain a mean reversion at slow speed, but conclude their study with the support for both theories. Booth *et al.* (2001) concludes that both theories have strong explanatory powers and argue that variables used for examination of a hypothesis of one theory can be classified as

variables of the other theory. Most of the factors that are frequently used in empirical literature are tangibility, firm size, growth opportunities, profitability and volatility. Frank and Goyal (2009) denote most of these factors as "core model of leverage" In sum, empirical evidence on both theories explores various factors and variables, and had potentially contributed to the understanding of capital structure, thus, neither of the two main theories can be rejected.

Table 3.1: Predictions of trade-off theory and Pecking Order Theory

Factor	**Trade-off theory**	**Pecking Order Theory**
Tangibility	Positive	Negative
Firm size	Positive	Negative
Growth opportunities	Negative	Positive/Negative
Profitability	Positive	Negative
Volatility	Negative	Negative

Source: Bessler et al. (2011, pp.23)

In summary, since the MM theorem (1958) several scholars conducted research to explore the optimal capital structure theory to understand the financing behavior of the firm. However, it still lacks of consensus, and is in need of further research. There is no single universal theory of debt-equity choice and no reason to expect one. However, there are several conditional theories of capital structure with their different relative emphasis. Such as, trade-off stresses on tax, pecking order emphasizes on information asymmetry, agency theory on

principal-agent conflict, free cash flow theory on agency cost and market timing theory on market conditions at the time of financing. Table 3.1 presents the central predictions of pecking order and trade-off theories regarding the relationship between selected factors of capital structure and leverage**.**

Table 3.2: Summary of capital structure theories

Theory	Summary
Trade-off theory	This theory postulates that firms offset the tax benefits from debt against the probable cost of debt, such as, financial distress, in their financing decisions. Firms choose the target capital structure to improve their performance. Firms with tangible assets and higher taxable income prefer to follow this model to gain the tax shield benefits. On the contrary, low profitable firms with less tangible assets primarily rely on equity financing.
Pecking Order Theory	In order to solve the asymmetry of information this theory proposes a hierarchy among three financing sources i.e. internal funds (retained earnings), debt and equity. It suggests that when available, firms should utilize internally available funds, and if required choose debt over equity in case of external financing Unlike trade-off model this theory does not predict the targeted capital structure. According to this theory less profitable firms rely on debt after exhausting the internal funds, not because of high target debt ratio.
Agency theory	This theory is centered on principal-agent conflicts. It states that the agency costs are related to monitoring of management to assure that they work within the firm's contractual arrangements with shareholders and creditors. An optimal capital structure can be determined by off-setting the agency cost of debt against the benefits of debt (Jensen and Meckling, 1976). Unlike the MM theorem's (1958) irrelevance of choice between debt and equity in perfect markets, agency theory states that even in frictionless markets without taxes choice between equity and debt does affect the financing structure.
Free cash flow theory	Free cash flow hypothesis states that despite possibility of financial distress high risk debt can enhance the firm performance. However, it also argues that it does not mean that debt can always have a positive effect. This hypothesis fits for mature firms that are disposed to overinvestment.

Signaling model	This model suggests that managers have more quality information about the firm compared to outside investors. Managers use capital structure choices to serves as a signal of private information (Ross 1977). This model postulates that when manager feel that markets under value the equity of their firms, they issue debt.
Market timing theory	According to market timing hypothesis firms adjust their capital structure in responses to the changes in the market. For instance firms prefer to issue equity when market prices of their shares are high, and prefer debt when share prices are low.
Corporate control and Product cost theory	Corporate control theory states that the capital structure choices through voting control between managers and outside investors affect the outcome of takeovers. The basic idea is that managers choose a capital structure and ownership structure that favors them in future takeover battles. According to product cost theories, industry structure, financial structure decisions and product market decisions are related to each other.

Source: Author's compilation based on existing literature

3.3 Determinants of capital structure

Existing literature has produced numerous firm specific factors as determinants of capital structures that are influential on corporate leverage and ultimately on financing choices of the firm. The lack of consensus on one full fledge theory of capital structure makes it more difficult to fully rely on these factors. As Myers (2001) expresses that "there is no universal theory of debt-equity choice, and no reason to expect one". However, there are conditional theories of capital structure that so explain the roles of these firms factors as determinants of capital structure. According to Harris and Raviv (1991) the consensus is that firm's leverage decreases with profitability, earnings volatility, probability of bankruptcy and uniqueness of product. While leverage increases with firm size, liquidity, non-debt tax shields, growth opportunities. Therefore, study reviews the following factors that affect the capital structure choices. Such as, profitability,

firm size, liquidity, tangibility, earnings volatility, growth opportunities and firm's age.

3.3.1 Profitability

Trade-off theory predicts a positive relationship between leverage and profitability. This assumption is based on the argument that more profitable firms expect to face low cost of financial distress and more tax shield benefits. However, more profit means more cash, this free cash under management discretion contributes to cash payout conflict between managers and shareholders. The free cash flow theory suggests the use of debt to discipline the managers and disgorge the free cash. Hence predicts a high leverage for more profitable firms. Alternatively, pecking order suggests that more profitable should initially use internal funds over external for financing and predicts high profitable firms as low leveraged. Most of the empirical findings reported negative relationship of profitability with leverage. This negative relationship is consistent with Pecking Order Hypothesis and in contradiction to trade-off model. Following studies explored the negative relationship, Alipour *et al.* (2015); Hossain and Hossain (2015); Getzmann *et al.* (2014); Koksal and Orman (2014); Khan 2014; Sheikh and Wang (2011); Cespedes *et al.* (2010); Karadeniz *et al.* (2009); Qureshi (2009); Serrasqueiro and Rogao (2009); Jong *et al*. (2008); Huang and Song (2006); Zou and Xiao (2006); Tong and Green (2005); Bauer (2004); Chen (2004); Pandey (2004); Fama and French (2002); Booth *et al*. (2001); Wald (1999); Rajan and Zingales (1995); Baskin (1989); Titman and Wessels (1988) and Myers (1984).

3.3.2 Firm size

Firm size is highlighted as an essential determinant of capital structure in existing empirical

literature. The survey study by Harris and Raviv (1991) states that there is consensus on increase in leverage with the size of firm. In agreement with this Rajan and Zingales (1995, pp.1451) states that larger firms tend to be diversified and fails less often, so size may be an inverse proxy for the probability of bankruptcy. If so, size should have a positive impact on supply of debt. However, size may also be the proxy for the information outside investors have, which should increase their preference for equity relative to debt. And in their study on G7 countries they found size is positively correlated with debt except Germany where it is negatively related. The findings of positive relation of size to leverage are consistent with the trade-off theory. While, negative relationship endorses the Pecking Order Theory, under the assumptions that the problems of information asymmetry and adverse selection are relatively less in large corporations. As a result large firms should be more competent to issue information sensitive securities like equity compared to debt in contrast to smaller firms. Agency theory in extension to trade-off model suggests the lower agency cost of debt for large firms and predicts a positive relation of size to leverage. These firms have comparatively low monitoring cost because of low volatile cash flow and easy access to capital markets.

Empirical studies report mixed results. Poyry and Maury (2010) explored the negative relationship between size and leverage in Russian state owned companies. Wald (1999) explored the positive relationship between size and leverage for firms in Japan, UK and US, while reported negative and positive but insignificant for firms in Germany and France respectively. Alipour *et al*. (2015) and Chen (2004) finds negative relationship between firm size and leverage in Iranian and Chinese firms respectively. In contrast, following empirical studies reported positive relation between firm size and firm leverage, Getzmann *et al.* (2014); Khan 2014; Sheikh and Wang (2011); Sbeiti, (2010); Poyry and Maury (2010); Frank and Goyal (2009);

Qureshi (2009); Serrasqueiro and Rogao (2009); Jong *et al*. (2008); Eriotis *et al*. (2007); Huang and Song (2006); Zou and Xiao (2006); Bauer (2004); Deesomsak *et al.* (2004); Fama and French (2002); Bennett and Donnelly (1993) and Marsh (1982).

3.3.3 Liquidity

In general liquidity refers to the possession of cash or assets easily convertible into cash. Trade-off theory argues that firms with more liquid assets should use leverage in their capital structure, due to its ability to meet their contractual obligations on time. In contrast to trade-off theory which predicts positive relationship between liquidity and leverage, Pecking Order Theory projects a negative relation. It assumes that firms with higher liquidities prefer to use the internally available funds as a primary source of financing and borrow less. Jong *et al.* (pp.1964, 2008) states that the most of the negative significant coefficients between liquidity and leverage belong to advanced economies. And the corporate sector's condition in developed economies is likely to meet the predictions of traditional theories of capital structure. Some other studies also endorse the Pecking Order Hypothesis such as, Alipour *et al.* (2015); Sheikh and Wang (2011); Sbeiti (2010); Viviani (2008); Mazur (2007) and Deesomsak *et al.* (2004).

3.3.4 Tangibility

Tangibility refers to the availability of tangible assets, such as plant, machinery, equipment and so forth. Existing literature also treats tangibility ad a proxy for agency costs .For outside investors it is easy to evaluate the tangible assets compared to intangible assets such as, good will, brand value etc. According to Myers and Majluf (1984) there are some costs related to the issuance of securities, and managers have better information about it compared to external

shareholders. Hence, issuing the debt backed by assets minimizes these costs and protects the debt holders from managerial opportunistic behavior. Jensen and Meckling (1976) and Myers (1977) state that shareholders of high leveraged firms have an incentive to invest sub optimally to increase return on their investments from creditor's wealth. Therefore, in order to protect themselves from shareholders exploitation, bondholders issue asset backed loan because the collateralized debt can be used for specific project only. Moreover, the presence of more tangible assets means that firm has a greater ability to issue secured debt, and is not bound to release more information to the market about their profits. Like other determinants of capital structure, findings on relationship between tangibility and leverage report mixed results. Some empirical studies explored the positive relationship between leverage and tangibility. These include, Getzmann *et al*. (2014); Ramjee and Gwatidzo (2012); Cespedes *et al*. (2010); Frank and Goyal (2009); Serrasqueiro and Rogao (2009); Jong *et al*. (2008); Huang and Song (2006); Zou and Xiao (2006) and Chen (2004).

On the other hand, Titman and Wessels (1988, pp.3) state that "the tendency of managers to consume more than the optimal level of perquisites may produce the opposite relation between collateralizable capital and deb levels". Grossman and Hart (1982) suggest that higher level debt diminish this tendency because of the threat of bankruptcy. Therefore, firms with less tangible assets may prefer high debt level to limit the perquisites of their managers. This agency explanation suggests a negative relationship between tangibility and leverage. Booth *et al.* (2001) investigates the capital structure of ten developing countries. They explores that with total debt ratio tangibility is associated with decreases in the debt ratio, but with long term debt ratio it is associated with increases in debt ratio. These findings imply that firms with tangible assets will use long term debt, but that the overall debt ratio will go down. Amongst ten developing

countries there exists a negative relationship between tangibility and leverage for firms in Brazil, India, Pakistan and Turkey (see Booth *et al.*, 2001). Several other studies also endorse this relationship such as, Alipour *et al*. (2015); Khan (2014); Sheikh and Wang (2011); Poyry and Maury (2010); Sbeiti (2010); Bokpin and Arko (2009); Karadeniz *et al.* (2009); Mazur (2007) and Bauer (2004).

3.3.5 Earnings volatility

Earning volatility is a measure of earnings risk (business risk), in capital structure it used as a proxy for probability of financial distress and is supposed to have a negative relationship with leverage. Bradley *et al.* (1984, pp. 877) states that earnings volatility helps to explain both inter and intra industry variations in firm's leverage. They explored earning volatility as an important, inverse function of firms leverage. Empirical findings report mixed results on this relationship. For instance, Hsia (1981) states that earning volatility (business risk) is positively related to firm leverage. Similarly Kim and Sorensen (1986) argue that high operating risk firms use more debt instead of relying less on debt. Booth *et al.* (2001) through his study on ten developing economies explored that business risk is negatively related to leverage in six economies and positively in four economies. Most of the existing empirical literature reports the negative relationship between the mentioned variables, such as, Alipour *et al*. (2015); Sheikh and Wang (2011); Jong *et al.* (2008); Huang (2006); Fama and French (2002); Booth *et al*. (2001); Wald (1999); Chaplinsky and Niehaus (1993) and Titman and Wessels (1988).

3.3.6 Growth

As quoted in Rajan and Zingales (1995, pp.1451) high levered firms are more likely to pass up

profitable investment opportunities (Myers, 1977). Therefore, they suggest the use of equity financing for firms with high future growth opportunities. Growth opportunities are highlighted as intangible assets for a firm. Trade-off theory suggests that, as these intangible assets cannot be used as collateral and do not generate taxable income, such kind of firms should borrow less. However, firms having growth opportunities hold more options for future investments than firms with lesser opportunities. They have more to lose and the debt-overhang is no problem for a firm lacking valuable investment opportunities (Myers, 2001). Thus, it predicts a negative relationship between growth and leverage. Empirical studies produced mixed results, for instance Titman and Wessels (1998) found no support for increase in debt-ration with future growth opportunities. According to Harris and Raviv (1991, pp. 334) the available studies generally agree that leverage increases with growth opportunities. Similarly, Ramjee and Gwatidzo (2012); and Cespedes *et al*. (2010) reports a positive and significant relationship between leverage and growth in their studies on firms of South African and Latin America respectively. However, several empirical studies also reported negative relationship between leverage and growth opportunities, such as, Alipour *et al*. (2015); Hossain and Hossain (2015); Chakraborty (2010); Frank and Goyal (2009); Eriotis *et al.* (2007); Zou and Xiao (2006); Deesomsak *et al.* (2004); Wald (1999) and Kim and Sorensen (1986).

3.3.7 Firm Age

Since the MM theorem (1958) was based on the perfect market's assumption. However, in capital markets, firms' debt policies may reflect imperfect or incomplete capital markets (Myers, 1977, pp. 148). In such context, firm age is highlighted as a market imperfections in terms of firms' financing choices. Trade-off model assumes that older firm on the basis of their historical

reputation may choose or have an access to higher leverage in order to gain benefits from tax shield. Trade-off model predicts a positive relationship of firm age to leverage. Contrary to this, Pecking order predicts a negative relationship between firms' age and leverage. It hypothesize that older firms with sufficient sources will rely on internal funds in financing to avoid the problem of information asymmetry. According to Audretsch and Elston (1997) firm age is also an important factor in accessing debt finance, because it may be costly for smaller or relatively new firm to tackle the asymmetric information problems with their creditors. Hence these firms may have access to lesser debt or a debt with higher cost (see Baas and Schrooten 2006; Cassar 2004). The debt capacity (see Myers, 1977) is for relatively new firms may also be low compared to older firms due to the risk factor of these firms. As suggested by Bolton and Freixas (2000) that firm risk or firm age can be alternative for proxies of debt capacity. Most of the empirical findings supports the prophecy of Pecking Order Theory. For instance, Kramer (2015); Khan (2014); Mac an Bhaird and Luce (2010) and Peterson and Rajan (1994) reported a negative relationship between firm age and leverage.

3.4 Ownership structure and capital structure

Since MM theorem (1958) the literature has opted to emphasize on the various factors to investigate the capital structure, but very limited studies comprises the agency problems in the study of optimal capital structure. The agency theory has power to illuminate the conflict of interest between providers of finances (owners) and controllers of finances (managers) in its relation to capital structure decisions (Hart, 1995, p.151). According to Hart (1993) despite limited empirical evidence, agency approach have more advantage on other theories of capital structure, as it clearly explains why the firm issue senior debt (long term) and why firm failure to

meet debt obligations leads to bankruptcy as a penalty.

How the principal-agent relation in perspective of ownership structure does affects the capital structure in corporate finance? Hart (1995, p.151) states that "although the agency approach may not be the whole story, it would seem to be an essential part of any fully developed theory of capital structure." He further argues that great deal of empirical work on capitals structure theories have produced, what he called "stylized fact". For stylized facts he refers to, high profitable firms have low debt, more tangible assets firms have high debt, debt for equity-swaps rise the share prices and so forth (see Hart, 1995, p. 141,). However, how much these stylized facts remains valid under different ownership patterns are yet to be explore. Despite the insufficient empirical evidence on ownership structure and capital structure under the agency approach, Hart (1995) argues that the strong potential of agency theory to recognize the agency cost of debt and equity in capital structure choices.

In an agency framework a part from agency theory different other studies proposes different assumptions to tackle the agency conflicts rise due to the separation of ownership and control. The classical work by Jensen and Meckling (1976) proposes "interest alignment hypothesis" through manager's equity ownership; debt-holders monitoring by Grossman and Hart (1982); free cash flow hypothesis Jensen (1986); and Shliefer and Vishny (1986) propose the "active monitoring hypothesis" stating that external block-holders can reduce the managerial *opportunism* caused by the principal-agent relation. Opportunistic behaviors of managers include consuming excessive amount of perks, shirking of their responsibilities, and investing in negative net present value (NPV) projects that prioritize managers' personal benefits instead of shareholders or firms (also see Fosberg, 2004). Moreover, Berger *et al.* (1997) study the relationship between *managerial entrenchment* and firms' capital structure, and conclude that

entrench managers may not choose optimal capital structure. They define entrenchment as "the extent to which managers fail to experience discipline from the full range of corporate governance and control mechanisms".

According to La Porta *et al.* (2000) that change in the capital structure of the firms changes the allocation of power between the "insiders" and "outside" investors, which ultimately change the firm's investment policy. Hence, the internal and external ownership has a significant influence on financing choices of firm. In existing literature very few studies have explored the ownership structure pattern that can influence the choices of capital structure. Because, the ownership structure pattern resulted from the equity distribution between managers and shareholders may have significant relationship with the leverage. Existing empirical have used either managerial equity ownership or large shareholders (block-holders) or both as attributes of ownership structure that influence the choices of leverage (Wahba, 2014; Ruan *et al.*, 2011; Brailsford *et al.*, 2002; and Short *et al.*, 2002). These attributes of ownership and their association to capital structure choices are discussed below.

3.4.1 Managerial equity ownership

Jensen and Meckling (1976) suggest the equity ownership for managers in order to minimize the agency conflict that arises due to the separation of ownership and control. They name it "interest alignment hypothesis" and some studies highlighted it as convergence of interest hypothesis. The bonding of agents as residual claimants can enhance the firm performance by reducing their discretion to consume perquisites and expropriate the shareholders' wealth. However, this raises the question of optimal level of managerial equity ownership. Because, the increase in equity ownership will transfer the control power of external shareholders to the managers. Hence, at

high levels of managerial share ownership there are incentives to decrease debt levels than would otherwise be the case (Brailsford *et al.*, 2002, pp.3). It seems logical that managers with higher equity stake may become risk averse and less likely to rely on debt financing in order to avoid the agency cost of debt. On the other hand, it is more likely for managers to involve in shirking or opportunism, due to weaker control limitations from other shareholders. In order to cop up with such kind of situation, Grossman and Hart (1982) supports the usage of debt as a monitoring tool.

However, if managers with high equity stake assume to decrease the debt financing. In extreme case in the absence of debt, no pressure of creditors' monitoring and no threat of bankruptcy. This will result to another problem i.e. it may spoil managers to free-ride on their internally-vested individual interest, losing incentives to maximize the returns for all the shareholders. Moreover, Jensen (1986) free cash flow hypothesis also support the use of debt to minimize the agency cost of free cash, by decreasing the free cash under manager's discretion and perquisites. In sum, lack of theoretical consensus is supported by mixed empirical findings as well. For instance, Wahba (2014) study on Egyptian firms reported negative relationship between managerial ownership and capital structure while examining the firm performance. Ruan *et al.* (2011) concluded a non-linear relationship between managerial ownership (MO) and leverage in Chinese private firms. They reports a positive relation if MO is more that 18% or less than 46%, and a negative relationship if MO is less than 18% or more than 46%. Findings of Ruan *et al*. (2011) are consistent with the findings of Brailsford *et al*. (2002) study on Australian firm which also concluded a non-linear relationship. Firth (1995); Bathala *et al.* (1994); and Friend and Lang (1988) studies on US firms data reported a negative relationship between insider ownership and debt. Contrary to this, Sun *et al.* (2015); Khan and Suzuki (2015); Short *et*

al. (2002); Berger *et al.* (1997) and Kim and Sorensen (1986) reported a positive relationship.

3.4.2 Institutional shareholders

Agency literature proposes various options to minimize the agency conflicts related to the separation of ownership and control. This includes both the internal and external mechanism. Internal includes of managerial ownership through the convergence of interest (see Jensen and Meckling, 1976). External mechanism includes of creditors monitoring, active large shareholders (block-holders) monitoring and institutional shareholders monitoring (see Grossman and Hart, 1982; Brailsford *et al*., 2002; Pound, 1988). According to Pound (1988), efficient monitoring hypothesis, institutional investors have greater expertise and which can help them to monitor managers' activities at lower cost compared to individual shareholders. Moreover, they can also exert pressure on management through their voting power, to restrain the managers' opportunistic behavior, while protecting their interests. McConnell and Servaes (1990) also endorse the Pound (1988) efficient monitoring hypothesis, i.e. positive role of institutional shareholders as effective monitors to improve the firm performance.

In perspective of capital structure Chaganti and Damanpour (1991) explores that the size of institutional shareholdings is significantly related to capital structure. They further conclude that institutional shareholders have the effect of lowering the long-term debt to capital ratio (Chaganti and Damanpour, 1991, pp. 489). This relation can be seen as that institutional shareholder less rely on debt due to agency cost of debt i.e. financial distress. They may behave conservatively, because in case of bankruptcy, their institution's performance is also at stake. However, proponents of institutional shareholders relate them and effective external monitoring. For instance, institutional investors have the opportunity, resources and ability to monitor,

discipline and influence managers of firms (Monks and Minow, 1995). Which can ultimately contributes to resolve the agency problems. Moreover, the institutional ownership and outside blockholder ownership are negatively related to agency cost, suggesting the independent outside monitoring of management is effective (Morellec *et al*., 2012, pp. 831). They further argue that as institutional ownership have an impact on agency conflicts so it can also impact on firm financing decisions as well.

A handful of studies have explore the role of institutional shareholding on ownership, but is still lack of consensus. Chaganti and Damanpour (1991) explores an inverse relation between institutional ownership and debt. Additionally Morellec *et al*. (2012) only highlights the significance of institutional shareholdings on financial structure. Moreover, Hussainey and Aljifri (2012); Huang *et al.* (2011) reported a negative relationship between institutional ownership and firm's leverage.

3.4.3 Large shareholders

According to Stiglitz (1985) the concentrated ownership (block-holders / large shareholders) have enough incentives to control and monitor the managers due to their ample stake in the firm. It predicts that they should bear higher monitoring costs due to their "limited diversification". This higher monitoring cost results from collecting adequate and effective information. Block-holders have incentives to bear such cost, that can prevent the managerial opportunism and excessive perquisites, which can contribute to shareholders wealth. However, in such case minority shareholders may "free-ride" on block-holders expenses. Similarly, where corporation have large non-managerial investors, management may not be able to adjust debt ratio by its own interests, and the debt ratio would be expected to be higher than where such investor do not exist

and may be closer to the optimal level from the viewpoint of diversified investors (Friend and Lang, 1988, pp.272). Moreover, block-holders also prefer to employ debt as a disciplining mechanism to use the creditors monitoring on managers. In this way block-holders can decrease their monitoring cost as highlighted by Stiglitz (1985). On the other hand, Shliefer and Vishny (1986) state that the absence of block-holders may results to weaker shareholders monitoring and control, which may encourage managers to exploit the corporate sources for their individual perks and privileges.

Stiglitz (1985) assumption predicts a positive relationship between block-holders and leverage. Similarly, Grossman and Hart (1982) predicts that debt related obligations reduce the potential perquisites under managers' discretion. Contrary to this Jensen and Meckling (1976) optimal ownership hypothesis predicts a negative relationship between external block-holders and leverage in optimal ownership structure. In line with the theoretical assumptions empirical findings also provides mix findings. For instance, Sun *et al*. (2015); Brailsford *et al.* (2002); Berger *et al*. (1997); Firth (1995); and Friend and Lang (1988) reported a positive relationship between block-holders and firm's leverage. However, studies such as, Short *et al*. (2002); Bathala *et al*. (1994); Grier and Zychowicz (1994); Chaganti and Damanpour (1991) and Zeckhauser and Pound (1990) reported a negative relationship between block-holders and leverage.

3.5 Theories of corporate governance

Corporate governance is an area that has grown rapidly in the last few years. The failures of Enron and WorldCom certainly prove that corporate governance is still a highly relevant and timely topic, even for a capital market in a developed or developing country. Businesses around

the world need to be able to attract funding from investors in order to expand and grow. Before deciding to invest their money in particular business investors want to be as sure as they can be that the business is financially sound and will continue to be so in near future. Investors, therefore, need to have confidence that the business is being well managed and will continue to be profitable. In order to have this assurance, investors look at the published annual reports and accounts of the business and other information released by the company. Although, the annual report may give a reasonably accurate picture of the business activities and financial position at that point in time, there are many facets of the business that are not effectively reflected in the annual report and accounts.

There have been a number of high profile corporate collapses that have arisen despite the fact that the annual reports and accounts depicted otherwise. These corporate collapses have had an adverse effect on stakeholders like shareholders, employees, and suppliers etc. In essence, corporate collapses affect us all. Why have such collapses occurred? What might be done to prevent such collapses happening again? How an investor's confidence can be restored? The answers to all these questions are linked to corporate governance because a lack of effective corporate governance mean that such collapses would occur.

3.5.1 Definition of corporate governance

The basic agency problem suggests a possible definition of corporate governance as addressing the conflict of interest, information asymmetry, adverse selection and a moral hazard problem. A good governance structure is then one that selects the most responsible managers and makes them accountable to investors. This phenomenon can be described as "the ways in which the suppliers of finance to the corporations assure themselves of getting a return on their investment

(Shleifer and Vishny, 1997).

The Organization for Economic Cooperation and Development (OECD)[13] provides another perspective on its Principles of Corporate Governance by addressing five areas: (i) the rights and responsibilities of shareholders (ii) the role of the stakeholders (iii) the equitable treatment of shareholders (iv) disclosure and transparency (v) the duties and responsibilities of the board. It defines corporate governance as, the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the Board, managers, shareholders and other stakeholders, and spells out the rules and procedure for making decisions on corporate affairs. By doing this, it also provides the structures through which the company objectives are set, and the means of attaining those objectives and monitoring performance.

Corporate governance is rather a newer field in number of disciplines such as, finance, economics, accounting, management, organization behavior and so forth. Therefore, it is affected by the theories of this discipline. The main theory that has influenced most for the development of governance mechanism and provides theoretical framework to address the governance related issues is the agency theory. The other theories mostly highlighted in literature are, transaction cost economics (TCE), stakeholder theory, stewardship theory, resource dependency theory.

3.5.2 Agency theory

The debate on separation of control and ownership of corporations at least goes back to Adam Smith (1776) in reference to joint stock companies. As quoted by Jensen and Meckling (p. 305;

[13] http://dx.doi.org/10.1787/9789264173705-en ; (OECD 1999, corporate governance principles, online library)

1976) in their work by referring to Adam Smith (1776) citing from, Adam Smith, The Wealth of Nations (1776) Cannan edition (Modern Library, New York, 1937, p.700);

"The directors of such (joint-stock) companies, however being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention of small matter as not for their master's honour, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company".

The concept of agency problem as highlighted by Smith has been resulted to extensive research, because it is the inherent relationship between the providers and controllers of the capital. In contrast the concept of current modern publicly held large corporations and prescribed role of ownership and control in these corporations was put forwarded by Berle and Means (1932). The separation of ownership and control especially in large corporations' i.e. corporate governance refers to how the shareholders as owners (residual claimants) can monitor the hired managers who run the firm and manage its resources on behalf of the owners. Since Berle and Means (1932) studies on corporate governance have explored the adverse consequences of separation of control and ownership. The conflict of interest which occurs due to the split-up between shareholders and management, inflates when ownership becomes dispersed. This fragmentation of ownership neutralizes the power of shareholders. On the other hand, the fact that most holdings are relatively small enables the shareholders to sell their holdings when unsatisfied. But, the inability of large shareholders to hold the board of directors accountable

puts the agency problem firmly on the corporate governance program.

Jensen and Meckling (1976) in their seminal work on the principal-agent problem, defined the agency costs that occurred in relation to the separation of ownership and control. They elaborated the mechanism of causing agency costs in light of the ownership claims held by *insiders* (managers) and *outsiders* (investors with no direct role in management of firm), respectively. They highlighted two types of conflicts i.e. conflict between shareholders and managers, and conflict between shareholders and creditors. They argue that the agency cost may vary in accordance with the shirking activities by the agent, pointing out the importance of close monitoring by the principal to prevent the agent's shirking. In order to minimize the interest conflicts, they propose equity ownerships by managers (managerial ownership) to reduce the agency costs and potential shirking actions by aligning the agent's interest with principal to share the residual. In summary, existing literature has highlighted following agency conflicts between principal-agent, such as, shirking, managerial entrenchment, managerial opportunism and so forth Berger *et al.* (1997); Shleifer and Vishny (1986); Gorssman and Hart (1982); Jensen and Meckling (1976); Alchian and Demsetz (1972). Additionally, information economics has contributed to analyze the other agency costs due to information asymmetry such as moral hazard and adverse selection effects (see Greenwald and Stiglitz, 1990; Jensen and Meckling, 1976; Alchian and Demsetz, 1972; and Akerlof, 1970).

The principal-agent conflict has several other dimensions as well e.g. the agent misusing his power for pecuniary or other advantage, and the agent may not take appropriate risk in pursuance of principal's interests because the agent may not get benefit from this risk compared to the principal's benefit. This may also be due principals or agents different attitude to risk. The information asymmetry is also one the problem between principal and agent; this is due to access

to different level of information by principal and agent i.e. the agent has more precise and most recent information compared to the principal.

Apart from conflict of interest between managers and shareholders, the conflicts between shareholders and debt holders only arise with the risk of default. There is a default risk related with debt therefore debt-holders are interested in firm's value or risk. But, if there is a chance of default, then shareholders can gain at the expense of creditors. As equity is a residual claim, so shareholders gain when the value of existing debt falls, even when the value of the firm is constant (Myers, 2001). Risk shifting as an agency problem was firstly highlighted by Jensen and Meckling (1976) in which firstly managers invest in riskier assets. Where high risk increases the upside for shareholders, but the creditors absorb the downside. Secondly, managers working for the interest of shareholders can increase the payout to shareholders by borrowing from creditors. In this case even the overall value of the firm remains same, but the market value of the existing debt decline. The payout cash to shareholders offset the decrease in their shares value. Finally managers by taking the advantage of insider information can cut back the equity investment or can postpone immediate bankruptcy or restructuring by hiding the information related to financial problems from the creditors.

In the discussion of agency theory above, the importance of separation of ownership and control of firm was emphasized. As firms have grown in size, whether caused by the desire to achieve economies of scale, by technological advances, or by the fact that natural monopolies have evolved, they have increasingly required more capital, which has needed to be raised from capital markets and a wider shareholder base has been established. The problems of the separation of ownership and control and the resultant corporate governance issues have thus arisen.

3.5.3 Transaction cost economics

Transaction cost economics (TCE) as expounded by the work of Williamson (1975; 1984) is often viewed as a closely related to agency theory. TCE views the firms as a governance structure whereas agency theory views the firms as a nexus of contracts. Basically, the latter means that there is a connected group or series of contracts amongst the various players, arising because it is seemingly impossible to have a contract that perfectly aligns the interests of principal and agent in a corporate control situation. The incomplete contracts in real world expose the related parties to different hazards which incurs various agency cost to them (see Williamson, 1995, 1985, 1975; Grossman and Hart, 1988; Klein *et al.*, 1978; and Alchian and Demsetz, 1972). The basic insight of TCE is that transactions must be governed ad well as designed, carried out, and that certain institutional arrangements affect this governance better than others (Shelanski and Klein, 1995, pp.336).

The classical article by Coase (1937) opens a puzzle of transaction cost, examines the rationale for firms' existence in the context of a framework of the efficiencies of internal, as opposed to external, contracting. He drew attention to transaction cost economizing as the hitherto missing factor for explaining why markets were used in some cases as hierarchy in other cases averred. It concludes that there are certain economic benefits to the firm itself to undertake transactions internally rather than externally (see Coase, 1937). Williamson (1984) builds on the earlier work of Coase, and provides a justification for the growth of large firms and conglomerates, which essentially provide their own internal capital market. He states that the cost of any misaligned action may be reduced by judicious choice of governance structure rather than merely realigning incentives and pricing them out.

Hart (1995) states that there are a number of costs to writing a contract between principal

and agent, which include the cost of thinking about and providing for all the different eventualities that may occur during the course of the contract, the cost of negotiating with others, and the costs of writing the contract in an appropriate way so that it is, for example, legally enforceable. He further indicates that, in a world of incomplete contracts (where agency problems are also present), governance structure does have a role.

Governance structure can be seen as a mechanism for making decisions that have not been specified in the initial contract. This can result in various costs highlighted by TCE e.g. for each contract there is *ex ante* cost i.e. screening cost and *post ante* cost such as monitoring cost to address the issues like, moral hazard, adverse selection and so forth. Such kind of cost inflates the conflicts among stakeholders in the agency framework, and corporate governance mechanism endeavors to minimize these conflicts. Stiles and Taylor (2001) point out that both theories (TCE and agency theory) are concerned with managerial discretion, and both assume that managers are given to opportunism (self-interest seeking) and moral hazard and that, managers operate under bounded rationality. Both agency theory and TCE regard the board of directors as an instrument of control. Therefore managers try to satisfy board by maximizing the firm's profit.

3.5.4 Stakeholder theory

Stakeholder theory takes account of a wider group of constituents rather than focusing on shareholders. A consequence of focusing on shareholders is that the maintenance or enhancement of shareholder value is significant, whereas when a wider stakeholder group, such as employees, providers of credit, customers, suppliers, government, and the local community, is taken into account, the overriding focus on shareholder value becomes less self-evident. Nevertheless, many companies do strive to maximize shareholder value whilst at the same time

trying to take into account the interests of the wider stakeholder group. One rationale of giving privilege to shareholders over other stakeholders is that they are the recipients of the residual free cash flow. This can be perceived as that shareholders will not be the only beneficiaries but it will also contribute to the society as well. In sum stakeholder theory intends to broaden the role of each stakeholder, such as broadening the role of management from only profit maximization to consider the claims and interests of other stakeholders (see Mitchell *et al.*, 1997).

Shareholders and stakeholders may favor different corporate governance structures and monitoring mechanisms. Such as, one can observe the differences in the corporate governance structures and monitoring mechanisms of Anglo-American model, with its emphasis on shareholder value and a board comprised totally of executive and non-executive directors elected by shareholders, compared to the German model, where by certain stakeholder groups such as employees, have a right that their representatives should sit on the supervisory board alongside the directors.

An interesting development that is put forward by Jensen (2001) who states that traditional stakeholder theory argues that managers of a firm should take account of the interests of all stakeholders in firm but, because the theorists refuse to say how the trade-off against the interests of each of these stakeholder groups might be made. There are no defined measureable objectives and this leaves managers unaccountable for their actions. Jensen therefore advocates enlightened value maximization, which he says is identical to enlightened stakeholder theory. Enlightened value maximization, utilizes much of the structure of stakeholder theory but accepts maximization of the long-run value of the firm as the criterion for making the requisite trade-offs among its stakeholders, and therefore solves the problem that arises from multiple objectives that accompany traditional stakeholder theory.

3.5.5 Stewardship theory

Stewardship theory draws on the assumptions underlying agency theory and TCE. The work of Donaldson and Davis (1991) as an alternative to agency theory introduced a new approach to corporate governance i.e. stewardship theory. In agency theory principal-agent model framework, the shareholders are the principal and managers are agents, and managers are assumed as self-centered opportunistic agents. In contrast stewardship model argues a view of managerial motivation by considering the managers as a steward of the firm. The executive manager, under theory, far from being opportunistic shirker, essentially wants to do a good job, to be a good steward of the corporate assets (Donaldson and Davis, 1991, pp.51). Moreover, it supports the re-allocation of control from owners to professional managers and predicts its positive impact on managing the complexity of modern corporations. Empowered managers with control steward the corporate assets and use them for the profit maximization of the firm. It also supports the insider board of directors with more knowledge, expertise, information about the businesses and commitment to the firm. On the basis of this assumption it predicts that shareholders will have maximum return on their investment as well.

According to Donaldson and Davis (1991) in contrary to agency theory that supports the separation of CEO and board's chairmanship to minimize the managerial opportunism, stewardship theory stresses the beneficial consequences on shareholder returns of facilitative authority structures which unify command by having roles of CEO and chair held by the same person. The safeguarding of returns to shareholders may be along the track, not of placing management under greater control by owners, but of empowering managers to take autonomous executive action. However, opponents of stewardship model questions its validity in relation to the possibility of manager's opportunistic self-serving behavior.

3.5.6 Resource dependence theory

Resource dependence theory is based on the idea that organizations attempt to exert control by co-opting the resources needed to survive. The concept of co-optation has important implications for the role of the board and its structure. It emphasizes on the role of directors as supporters of resources for the enhancement of firm performance. Proponents of this theory emphasize the broader role for board members in addition to their monitoring duties (see Johnson *et al.*, 1996; Zahra and Pearce, 1989). According to Pfeffer and Salancik (1978) in resource dependence model, the purpose of an organization to hire a director, apart from the traditional role is who from his own expertise and network will come to support the organization. This support will increase the firm performance and ultimately will increase the returns to shareholders. Moreover, they view corporate financial interlocks as mechanisms by which corporate managers coopt sources of environmental uncertainty (Burt, 1983). In literature financial interlocks have been explored as a governance mechanism. For instance, the presence of a representative of a financial institution on a firm's board increases the financial institution ability to monitor the firm's behavior, and willing to lend more to firms where their representatives are member at board of directors (Stearns and Mizruchi, 1993, pp.615). Hence, board members with high level links to external environment could contribute to company's access to various resources, thus contributing to the corporate governance and firm's performance.

3.5.7 Other relevant theories

Managerial hegemony[14]: It refers to the circumstances when professional managers of the firm are more powerful and influential on strategic decisions than of corporate governing boards.

[14] Summarized from, pp. 12; Mallin, C. A. (2007). "Corporate Governance", Oxford University Press.

Table 3.3: Summary of corporate governance theories

Theory	Summary
Agency theory	Agency theory highlights the conflicts of interest between principal and agent that arise due to the separation of ownership and control. Jensen and Meckling (1976) propose alignment of interest hypothesis i.e. managerial equity ownership. Through which managers also become the residual claimants and are assumed to work for the value maximization of the firm.
Transaction cost economics	The work of new institutional economists, states that incomplete contracts in real world expose the related parties to different hazards, which results to various agency costs. TCE views the firm itself as a governance structure, and try to minimize the agency cost through the selection of an appropriate governance structure.
Stakeholders theory	This theory insists on the interests of a large group of constituents rather than solely focusing on shareholders. And suggests the direct representation of each stakeholder in the governance structure.
Stewardship theory	This theory considers the directors as the stewards of the firm and assumes that they work in the best interest of firm by utilizing the assets for value maximization of the firm instead of using for their personal benefits.
Resource dependence theory	It suggests that qualified boards with experience, expertise and high level of link with external environment would help the firm to acquire sufficient resources required for value maximization.

Source: Author's compilation from literature with reference from Mallin (2007)

Proponents of managerial hegemony support the role of managers based on their knowledge of day to day operations of the firm. Mace (1971) that managers may take the control from managers through various means such as, information asymmetry and elite networks.

Class hegemony: According to Mallin (2004) the directors of the firm consider themselves as

elite or to a higher class at the top of company. In the process of new recruitment or promotion of new directors, they take in to account about the fitting of new members to their elite class.

Path dependence theory: This theory is based on the work of Bebchuk and Roe (1999) addressing to variations of corporate structures among different economies. They identified two sources of path dependence; structure driven and rule driven. "Initial ownership structures can affect both the identity of the rules that would be efficient and the interest group politics that can determine which rules would actually be chosen" (Bebchuk and Roe, 1999).

Political theory: Roe (2003) identify that different ownership and governance structures are deeply influenced by the political theory. It further states that the political and social bases are one of the factors for the establishment and development of large firm.

Network governance: Pirson and Turnbull (2011) proposed network-oriented governance structure, as an alternative and more humanistic paradigm in contrast to traditional governance structure. They propose the multilevel boards for different stakeholders for division of labor and power, which can help to manage the risk in firm.

3.6 Corporate governance and capital structure

The agency relationship between shareholders and managers has a significant impact on firm value and leverage due to their role in decision making process. Empirical studies have explored the association between ownership structure, capital structure and firm value within the framework of internal and external attributes of corporate governance. The attributes of corporate governance such as board size, board composition, ownership concentration (blockholder), managerial ownership, CEO duality, influence the firm capital structure choices (see Sheikh *et al.*, 2013; Sheikh and Wang, 2011; Abor, 2006; Anderson *et al.*, 2004; Wen *et al.*, 2002; Berger *et al.*, 1997 and Lipton and Lorsch, 1992).

On the other hand, very few studies have explored the ownership structure pattern that can influence the choices of capital structure. The ownership structure pattern resulted from the equity distribution between managers and shareholders may have significant relationship with the leverage. Existing empirical studies have used either managerial equity ownership or large shareholders (block-holders) or both as attributes of ownership structure that influence the leverage Wahba (2014); Ruan *et al.* (2011); Braislford *et al.* (2002); and Short *et al.* (2002). These attributes of corporate governance and ownership are discussed below.

3.6.1 Board of directors

Economic theory suggests that the board of directors is an important part of the governance structure of large business corporations (Fama and Jensen, 1983; Williamson, 1984). The boards of directors, which has the power to hire, fire, and compensate senior management teams, serves to resolve conflicts of interest among decision makers and residual claimants. This economizes the transaction (agency) cost associated with the separation (specialization) of ownership and control and facilitates the survival of the open corporation as an organizational form (Baysinger and Butler, 1985). However, Demsetz (1983) argued that the board of directors can do very little to improve on the powerful incentives that presently guide management to serve the interests of shareholders.

The resource dependency approach, developed by Pfeffer (1972) emphasizes that non-executive directors enhance the ability of a firm to shield itself against the external environment, decrease uncertainty, or designate resources that increase the firm's ability to raise funds or increase its status and recognition. Firms attempt to reduce the uncertainty of outside influences to ensure the accessibility of resources necessary to their survival and development. The board is

hence seen as one of a number of instruments that may facilitate access to resources critical to company success. Pfeffer and Salancik (1978) asserted that there are four primary types of broadly defined resources provided by board of directors' i.e.

1. Advice, counsel, and know-how
2. Legitimacy and reputation
3. Channels for communicating information between external organizations and the firm
4. Preferential access to commitments or support from important actors outside the firm.

3.6.2 Board size

Board members are empowered to make important strategic decisions for firm's growth and maximize the return to shareholders. Existing literature highlights boards as effective monitors, qualified expertise with access to resources and an important factor to address the agency conflicts in corporate governance, ownership and capital structure decisions. The economic theory suggests that the board of directors is an important part of the governance structure of large business corporations (Fama and Jensen, 1983; Williamson, 1984). However, it fails to address the matters concerning the size, composition, compensation, place, time and frequency of meetings (Baysinger and Butler, 1985, pp.101). Alternatively, Lipton and Lorsch (1992) in comparison of board size, states that small boards are more effective than larger boards, by arguing that in large boards some members may free-ride on the endeavors of other members.

In contrast, Adams and Mehran (2003) findings support the larger board size, they suggest that larger board can provide its expertise and can effectively monitor the management activities as well. Empirical studies report mixed findings on the impact of board size of capital structure. Empirical studies such and Anderson *et al.* (2004) portrays a negative relationship between board size and cost of debt financing i.e. larger the board size lower will be the cost of

debt. These results suggest that bondholders are concerned with governance mechanism that limits managerial opportunism and improve the financial accounting process (Anderson *et al.*, 2004, pp.319). This argument also supports the finding of Yermack (1997) larger board positively contribute to the firm value. In another perspective i.e. the presence of entrenched managers Berger *et al.* (1997) explores a negative relationship between board size and firm's leverage. Pearce and Zahra (1992) explored a positive relationship between board size and leverage. Recent studies also endorse these finding such as, Ali *et al.* (2013) and Sheikh and Wang (2012) explore a positive relationship between board size and leverage. Moreover, Bopkin and Arko (2009) and Abor (2007) studies on Ghanaian firms, Wen *et al*. (2002) study on Chinese firm reported positive relationship between board size and leverage. The resource dependence model predicts the positive contribution by large board, however there is insufficient empirical literature to support not only board size but also on optimal board size.

3.6.3 Board composition

The composition of the board refers to proportion of outsider members and insiders on company's board. The participation of outside directors is intended to enhance the ability of the firm to protect itself against threats from the environment and align the firm's resources to achieve competitiveness. These outside directors are believed to provide professional benefits to the firm due to their independence, knowledge, broad vision and expertise. Corporate governance literature supports the presence of outside board member as an independent monitor to closely observe the management activities. Pfeffer (1972) points out that board of directors especially, board size and composition as an instrument to deal with organization's external environment not a random phenomenon. Additionally, as a component of firm's governance

structure, the board should have a mix of outsiders and insiders (Baysinger and Butler, 1985). Weisbach (1988) states that board of directors comprised of more independent or outside directors vigorously monitor the management.

According to the hegemony theory, the board of directors is argued to be incapable of fulfilling its overseeing role and of protecting shareholders' interest. In order to support this argument few scholars have skeptical view about the effect of outside directors on firm performance. Herman (1981) and Mace (1986) argued that outside directors are valued for their ability to advice, to solidify business and personal relationships and to send a signal that the company is doing well, in spite of their ability to monitor. Mace (1986) further argued that in selecting outside directors, the title and reputation of the candidates are the prime consideration. Further, he maintains that the CEOs dominate the director selection process therefore, control the board. Vancil (1987) and Waldo (1985) are also skeptical about the ability of outside directors to make independent judgment on firm performance due to the dominant role played by CEOs in their selection.

Empirical findings report mixed results concerning the role of board composition and leverage. For instance, Berger *et al*. (1997) explores significantly low leverage in a firm with lower fraction of outside directors. Study by Wen *et al*. (2002) states that presence of outside directors through strong governance mechanism to improve the performance encourages the managers to choose lower leverage, and explored the negative relationship between leverage and outside director. Anderson *et al*. (2004, pp. 317) reported that board independence is related with lower cost of debt financing. These results indicate that bondholders view board independence as an important element in pricing the firm's debt, suggesting that creditors are sensitive to board attributes that affect reporting validity. In contrast, Sheikh and Wang (2012); Bopkin and Arko

(2009) and Abor (2007) explored positive relationship.

3.6.4 CEO duality

Chief executive officer (CEO) duality exists when the same person holds, both the CEO and board chairperson positions in a corporation (Rechner and Dalton, 1991). In essence, CEO is empowered with executive authority and has the responsibility to manage and run the firm's operations. Chairman refers to the chairperson of board of directors and has the responsibility to handle the board's affairs. According to Brickley *et al*. (1997) there is no single optimal leadership structure because both perspectives i.e. duality and separation, have related agency cost. Jensen and Fama (1983) recommend the segregation of responsibilities of CEO and board as a solution to the control related agency conflicts. They highlighted that CEO is responsible for "decision management" while, board directors as stockholders representative and in-charge for "decision control". Thus, decision management (CEO) involves in initiating and execution of firm's strategic plan, and decision control (board), authorized to approve and monitor these plans. Thus, separation of board chair and CEO is highly recommended in agency theory framework and assumes that the firm will choose optimal amount of debt in financing decisions compared to the firms having CEO duality (see Fosberg, 2004).

Similarly, since the board is also accountable for overseeing the process of hiring, firing, evaluating, and compensating the CEO, and thus the chairperson should preferably not be the same person whose performance is being assessed; otherwise, one is self-evaluating (Jensen, 1993, pp.36). The agency theory would propose that the combination of CEO and chairman position would weaken board control and negatively affect firm performance (Boyd, 1995). In addition to this Eisenhardt (1989) argued that CEO duality increases information asymmetry

between the CEO and the board, which may become a primary source of agency problems.

Contrary to agency framework, resource dependence theory and stewardship theory support the CEO duality. These argue that qualified, expert individual holding both CEO and board chairmanship can enhance the firm performance, through quick decision making and implementation. Empirical studies report mixed findings. For instance, Sheikh and Wang (2012) and Fosberg (2004) reported a negative but less significant relationship between CEO duality and debt. In contrary to this, Abor (2007) study on Ghanaian firms found a positive and significant relationship between CEO duality and capital structure. Moreover, Bopkin and Arko (2009) found a positive but insignificant association between CEO duality and financial leverage and choice of shore term debt over equity but a negative relationship with debt ratio, suggesting that entrenched managers choose debt over equity in capital structure mix.

3.7 Summary

The chapter starts with the debate on capital structure theories. In the first section, study reviews the mainstream theories of capital structure. Such as, trade-off theory, Pecking Order Theory, agency theory, free cash flow theory, signaling model, market-timing theory, corporate control and product cost theory have been revised in the section. Moreover, the based on the existing literature study provide the brief comparison of trade-off model and pecking order model. To support the argument of the study on determinants of capital structure, mostly discussed variables in the existing empirical literature has been reviewed. The variables such as, profitability, firm size, liquidity, tangibility, earning volatility, growth and firm age have been evaluated under the different theoretical framework under the existing empirical findings.

The next section, provides the literature review related to the impact of ownership structure on firm's financing choices. Ownership patterns and financing choice of the firms is reviewed within the agency theory framework. Mostly the studies, Hart (1995 and 1993); Grossman and Hart (1982) focusing the agency theory and Jensen and Meckling (1976) focusing on agency theory and theory of the firm have been reviewed in the context of ownership and capital structure. Most of the existing literature recommends the managerial, institutional and large shareholding ownership patterns to resolve the agency conflicts, such as, managerial opportunism and entrenchment. In this regard, study provides the review of empirical literature on, managerial equity ownership, institutional shareholding and block-holders or large shareholders.

The last section, of this chapter provides the definitions and background of corporate governance. Afterward, it summarizes the corporate governance theories, such as, agency theory, transaction cost economics, stakeholder theory, stewardship theory, resource dependence theory and brief introduction of other relevant theories discussed in the relevant literature. For empirical analysis in chapter 4, study uses the board size, board composition and CEO duality variables as attributes of internal corporate governance mechanism. This chapter further summarizes the existing empirical literature on internal attributes of corporate governance.

Chapter 4

Data, variables and research model specifications

4.1 Determinants of capitals structure

Capital structure discusses the mix of debt, equity and other related securities in firms' financing structure. Several theories have been developed to understand the phenomenon of firm financing decisions. Based on various theoretical frameworks, empirical research has shown several factors that affect the capital choices of the firms. Most of the empirical research has originated from the data taken from several developed economies that already have well developed capital markets and several institutional similarities. For instance, the research done by Frank and Goyal (2009); Fama and French (2002); Wald (1999); Rajan and Zingales (1995); Titman and Wessels (1988); Bradley *et al*. (1984); and Myers (1977). Do the determinants of capital structure introduced by these studies have general applicability? In their survey of capital structure Harris and Raviv (1991, pp.299) conclude that, "the models surveyed identified a large number of potential determinants of capital structure. The empirical work so far has not, however, sorted out which of these are important in various contexts". Moreover, Myers (2001) point out that there is no single universal theory of capital structure and don't expect to have one. Thus, it can be argued that studies on developed economies have failed to reach on a consensus and still there is a room for improvement.

On the other hand, much less attention has been given to understand the financing behavior of developing countries firms (see Cespedes *et al*., 2010; Mazu, 2007; Huang and Song, 2006; Bauer, and 2004; Booth *et al.,* 2001). In particular, very little empirical evidence is available concerning the financing behavior of Pakistani firms (see Khan, 2013; Sheikh and Wang, 2011; and Qureshi, 2009). On top of this, only a few international studies have explored

the phenomenon in other developing countries, such as those done by Jong *et al.* (2008) which includes 42 countries; Booth *et al*. (2001) which includes 10, and Demirguc-Kunt (1992) which includes 9. Among other countries they also include Pakistani firms, though their numbers are very small. Hence, due to the size of data used in the study it is difficult to understand the overall financing structure choices of non-financial Pakistani listed firms. As mentioned above even in developed economies there are lack of consensus on significant firm-specific factors of financing choices. Thus, insufficient research and a lack of consensus on the determinants of capital structure are among a few reasons that have brought about the need for this study. This dissertation aims to fill a gap in the existing literature by testing current theoretical assumptions in order to ascertain the determinants of capital structure.

4.1.1 Data sample

In order to investigate the most significant firm-specific determinants of capital structure, this study uses the data of non-financial firms listed on Karachi Stock Exchange (KSE). We examined relevant data taken during the period of 2005-2012. The firm specific determinants are variables or factors that were most suitable to be determined by the distinctive characteristics of the firm. The study used the data of only non-financial firms. These firms are regulated by the Securities Exchange Commission of Pakistan (SECP); however, financial firms are regulated by the State Bank of Pakistan (SBP). Certain financial firms were excluded from this study on the basis of having different regulatory frameworks. This data was taken from the annual financial statements of each company. It is mandatory for each publicly listed company to prepare its financial statements in accordance with the International Financial Reporting Standards (IFRS) issued by International Accounting Standard Board (IASB). The IFRS are approved and notified

in Companies Ordinance of Pakistan, 1984, for the preparation of financial statements.

Initially, the data period comprised of 9 years; however, one year's worth of data was lost because earning volatility is measured as one year variation in operating profit before taxes. Moreover, the observations that did not have a complete record of the relevant variables used in research model were deleted. The final data set includes 101 firms for the period of 8 years. The final data sample includes the representation of firms that belongs to different economic groups such as, textile, cement, engineering, chemical, fuel & energy, engineering, sugar & allied, paper & board and miscellaneous. Miscellaneous groups include the firms from transport & communication, jute, tobacco, hospitals, hotels and so on.

4.1.2 Variables

In order to achieve an effective comparison with existing empirical evidence on developed and developing economies, the dependent and independent (explanatory) variables and their computation are largely adopted from existing empirical studies on determinants of capital structure. The dependent variables used in the study are total debt ratio, long term debt ratio and short term debt ratio as the measures of capital structure. In their study of capital structure, Booth et *al.* (pp. 91, 2001) states that there is a difference between total-book debt and long-term debt ratio, and this difference is more prominent in developing countries than it is in developed countries. Therefore, we also use the short-term debt as a dependent variable to explore its impact on capital structure choices. The variables are computed by using the book values. Majority of the empirical studies used the book values instead of market values. Theories of capital structure suggest the use of market values; however, empirical studies have concluded that book values are more objective. The explanatory variables used in the study are profitability,

firm size, liquidity, tangibility, earnings volatility, growth opportunities, and firm's age. These variables are the firms' specific characteristics and highlighted in literature as more influential factors on firms' choices of financing (see Booth *et al*., 2001 and Rajan and Zingales, 1995). Explanatory variables are also computed on using the values published in annual financial statements of the companies. On the basis of research objectives, variables (dependent and explanatory) used in this study and their definitions are largely adopted from existing literature and reported in Table 4.1.

Table 4.1: Definition of variables

Variables	**Definition**
Dependent variables	
Total debt ratio (TDR_{it})	Ratio of total liabilities to total assets
Long term debt ratio ($LTDR_{it}$)	Ratio of long term debt to total assets
Short term debt ratio ($STDR_{it}$)	Ratio of short term debt to total assets
Explanatory variables	
Profitability ($PROF_{it}$)	Ratio of profit before taxes to total assets
Firm Size (SZ_{it})	Natural logarithm of total assets
Liquidity (LIQ_{it})	Ratio of current assets to current liabilities
Tangibility ($TANG_{it}$)	Ratio of fixed assets to total assets
Earning Volatility ($EVOL_{it}$)	Profit before taxes$_t$ –profit before taxes$_{t-1}$ to profit before taxes$_{t-1}$
Growth opportunities ($GROW_{it}$)	The ratio of market price per share to book value per share. Market price per share is computed by taking the sum of high and low price share divided by 2.
Firm age (AGE_{it})	Log of age

4.1.3 Hypotheses

This study proposes the following hypothesis regarding the firm-specific factors that effects the financing structure in the light of theories of capital structure reviewed in chapter 2 of this dissertation. Rajan and Zingales (1995) states that the theories of capital structure suggest how some of the factors might be correlated with leverage. By extending this argument, Booth *et al*. (2001) asserts that the variables explaining the capital structure of firms arises from Trade-off Theory, the Pecking Order Theory and Agency Theory. Pecking Order Theory postulates a hierarchal order for financing an investment in the firm i.e. first with internal funds (retained earnings), then with debt and finally by issuing equity. This model suggests the use of equity as a last resort particularly when a firm runs out of debt capacity. Therefore, firms with sufficient internal funds will not be in need of outside money to finance the investment. These explanations suggests a negative relationship between firm's profitability and leverage. Moreover, accumulated cash from revenue and other liquid assets is considered an internal financing source instead of debt. This explanation predicts a negative relationship between liquidity and leverage. The availability of more tangible assets can be used as a collateralized debt. In order to minimize the information asymmetry, firms can rely on debt rather than equity, which is more demanding for information disclosure. These arguments predict a positive relation between leverage and tangibility.

Hypothesis 4.1.3.1: Profitability is negatively related to firm leverage.

Hypothesis 4.1.3.2: Liquidity is negatively related to firm leverage.

Hypothesis 4.1.3.3: Tangibility is negatively related to firm leverage.

The Trade-off theoretical framework assumes that the capital structure of a firm moves toward a targeted debt ratio. To achieve the debt ratio, target firms involve themselves in the

trade-off between financial distress costs and debt related tax shield advantages. Financial distress costs are supposed to have an adverse impact on firm's value. In the light of this argument, it is expected that large firms are more capable of diversifying the risk and to face lower bankruptcy costs compared to smaller firms. Hence, the larger firms tend to borrow more compared to smaller firms. Therefore, a positive relationship between the size of a firm and its leverage is expected.

Hypothesis 4.1.3.4: Firm size has a positive effect on firm leverage.

Additionally, stable cash inflow encourages the firm to choose debt as a financing source. However, firms with higher earnings volatility tend to borrow less due to the probability of failure to meet their contractual obligations. Therefore, this suggests a negative relationship between earnings volatility and a firm's leverage.

Hypothesis 4.1.3.5: The relationship between earning volatility and leverage is negative.

The phenomenon of asset substitution and underinvestment results in various agency conflicts between firm's shareholders and debt-holders. Firms with future growth opportunities seek for equity financing for new project's investment in order to minimize the mentioned agency conflicts. This proposes a negative relationship between a firm's growth opportunities and its leverage.

Hypothesis 4.1.3.6: Growth opportunities of a firm have a negative effect on leverage.

Harris and Raviv (1991) state that there is a consensus that "leverage has a positive relationship with fixed assets, investment opportunities, and firm size and has a negative relationship with earnings volatility, the probability of bankruptcy, profitability and uniqueness of product". However, there are conflicting theoretical assumptions. For instance, Pecking Order predicts a decrease in leverage against profitability but, free cash hypothesis predicts the increase

in leverage. Thus, based on the above mentioned hypothesis, this thesis will identify the most appropriate theory that explains the financing behavior of non-financial Pakistani firms.

4.1.4 Methodology specifications

The sample is composed of data across firms over time, so panel data procedures were employed in this study. The use of panel data procedures is suitable to study the dynamics of change. In order to find the effect of explanatory variables on dependent variables (i.e. proxy of leverage), three panel econometric estimations (i.e. pooled *OLS*, the fixed effects, and the random effects) have been used. Pooled *OLS* is more appropriate for simple case where there are no firm and time specific effects. However, the fixed effects estimation allows the intercept for each firm to vary, but restricts the slope parameter to be constant across all firms and time periods. Unlike the fixed effect model, the random effects model implies that variations across entities are supposed to be random and uncorrelated with independent variables. In order to find out which estimation model explains our estimation best, the study used the Hausman (1978) specification test. Hence, the basic regression is expressed as:

$$y_{it} = \alpha + X_{it}\beta + \mu_{it}$$

i= 1…….101; t= 1.....8

Where i stands for the ith cross-sectional unit and t for tth time period. y_{it} is one of the three measures of leverage for the ith firm at time t, and α is the intercept. X_{it} is a 1 x K vector of observations on K explanatory variables for the ith firm in the tth period, β is a K x 1 vector of parameters, μ_{it} is a disturbance term and is defined as

$$\mu_{it} = \mu_i + \nu_{it}$$

Where μ_i denotes the unobservable individual effects and ν_{it} denotes the remainder disturbance.

The specification of the three estimation models, i.e. the pooled *OLS*, the fixed effects and the random effects with respect to dependent and explanatory variables used in this study is given below.

$$TDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \varepsilon_{it} \quad (1)$$

$$TDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \mu_{it} \quad (2)$$

$$TDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \nu_i . + \omega_{it} \quad (3)$$

$$LTDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \varepsilon_{it} \quad (4)$$

$$LTDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \mu_{it} \quad (5)$$

$$LTDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SZ_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \nu_i . + \omega_{it} \quad (6)$$

$$STDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \varepsilon_{it} \quad (7)$$

$$STDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \mu_{it} \quad (8)$$

$$STDR_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + v_i . + \omega_{it} \quad \text{.....(9)}$$

Where TDR_{it} is the total debt ratio for the *i*th firm at time *t*, $LTDR_{it}$ is the long-term debt ratio for the *i*th firm at time *t*, $STDR_{it}$ is the short-term debt ratio for the *i*th firm at time *t*, $PROF_{it}$ is profitability of *i*th firm at time *t*, $SIZE_{it}$ is the size of *i*th firm at time *t*, LIQ_{it} is liquidity of the *i*th firm at time *t*, $TANG_{it}$ is the assets tangibility for the *i*th firm at time *t*, $EVOL_{it}$ is the earnings volatility of the *i*th firm at time *t*, $GROW_{it}$ is the growth opportunities of the *i*th firm at time *t*, AGE_{it} is the age of the *i*th firm at time *t*, β_0 common *y*-intercept, ε_{it} is the error term for the *i*th firm at time *t*, β_{0i} = is the *y*-intercept of firm *i*, μ_{it} is the error term of firm *i* at time *t*, v_i is the cross sectional error component, and ω_{it} is the error term for the *i*th firm at time *t*.

The methodology and variables along with their definitions applied in the study are largely adopted from existing literature. However, robustness test is performed to compatibility of the model and its result. In the literature, it is common to find claims that the crucial results are robust to alternative leverage definitions (Frank and Goyal, 2009, pp. 3). Similarly, the impacts of the explanatory variables is estimated against the another proxy of leverage i.e. debt to equity ratio (computed as total liabilities over total equity) as dependent variable instead of debt ratio to check the robustness of the model. The estimation model is as given below;

$$D/E_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 SIZE_{it} + \beta_3 LIQ_{it} + \beta_4 TANG_{it} + \beta_5 EVOL_{it} + \beta_6 GROW_{it} + \beta_7 AGE_{it} + \mu_{it} \quad \text{.....(10)}$$

4.2 Ownership and capital structure

Ever since MM Theorem was thought up in 1958 the literature has tended to focus on the role of taxes, information asymmetry, or imperfect markets as explanation of capital structure decisions while not including agency problems (Hart, 1995, p. 147). Existing literature fails to shed enough light on agency theory's role to understand the conflict of interest between providers of finances and controllers of finances in their relation to capital structure decisions. Hart (1993) argues that agency approaches have more advantage on other theories of capital structure, as it clearly explains why firms issue senior debt (long-term) and why firm failure to meet debt obligations leads to bankruptcy as a penalty.

Most of the previous studies have been done to investigate the relationship between ownership and capital structure of the firms in developed economies (see Brailsford *et al.*, 2002; Berger *et al.*, 1997*;* Firth, 1995; Jensen *et al*., 1992; and Friend and Lang, 1988). These studies were addressed to examine the relation of debt either with managerial ownership or with large shareholders. However, studies such as Brailsford *et al.* (2002); Short *et al*. (2002); Firth (1995) have investigated the relation of debt to both managerial ownership and large shareholders. Most of the mentioned studies used the data of developed economies such as Australia, UK and US. This study aims to look at the Pakistani non-financial firms as the case of a developing economy, in order to contribute to analyses of the relationship between managerial, institutional and block-holders ownership. Particularly under the interest alignment hypothesis, managerial entrenchment, large shareholders and the capital structure in order to determine universal applicability of the optimal debt-equity mix.

4.2.1 Data sample

In order to investigate the effect of ownership structure patterns on firms' choices of debt of non-financial Pakistani firms, this study used the data of firms listed on KSE. The data sample includes the period of 2004 to 2012. The ownership structure patterns include a proportion of equity owned by managers, various institutions, and majority/large shareholders (block-holders). Under the Company Ordinance (1984), non-financial firms are regulated by SECP. For listing regulations, listed firms' are also regulated by their respective listing's stock exchange as well. Moreover, financial firms are also regulated by SBP. Financial firms are excluded from this study on the basis that they use a different regulatory framework. The data is taken from the audited financial statements of the companies.

The final data sample includes 101 firms over a period of 9 years. The sample includes the representation of firms that belongs to different economic groups such as textile, cement, engineering, chemical, fuel & energy, engineering, sugar & allied, paper & board and miscellaneous. Miscellaneous groups include firms from transport & communication, jute, tobacco, hospitals, hotels and so forth.

4.2.2 Variables

In order to explore the empirical relationship between ownership and capital structure variables, we used the similar empirical model used by Brailsford *et al.* (2002) and Short *et al.* (2002). In order to have an effective comparison with the findings of existing studies most of the variables are adopted from existing literature. This is also helpful to compare the findings of this study with the findings of other studies done on developed and developing economies. The dependent variables as proxies of capital structure used in this study are total and long-term debt. Several studies have used these debt measures as proxies of leverage. Managerial equity ownership,

institutional ownership and large shareholders (block-holders) are used as explanatory variables. This study empirically explores the effect of these ownership variables on the choice of debt.

Table4.2: Summary of variables with definitions

Variables	Definition
Dependent variables	
Total debt ratio (TDR_{it})	Ratio of total liabilities to total assets
Long-term debt ratio ($LTDR_{it}$)	Ratio of long-term debt to total assets
Explanatory variables	
Managerial equity ownership (MEO_{it})	Proportion of executives and non-executives share ownership to outstanding shares
Institutional shareholding ($INST_{it}$)	Proportion of shares owned by institutional shareholders to total outstanding shares
Large shareholders (Blockholders) ($LARG_{it}$)	Proportion of shares owned by five largest shareholders to total outstanding shares
Profitability ($PROF_{it}$)	Ratio of profit before taxes to total assets
Firm Size ($SIZE_{it}$)	Natural logarithm of total assets
Growth ($GROW_{it}$)	Ratio of market price per share to book value per share. Market price per share is computed by taking the sum of high and low price share divided by 2.

In order to control firm specific characteristics that may influence the choice of debt, study also includes few control variables, such as, profitability, firm size and growth (see Brailsford *et al*., 2002; Short *et al*., 2002). Variables that are used in the study to achieve the study objectives, are presented in table 4.2 with their computation definitions.

4.2.3 Hypotheses

Based on the literature review presented in section 2 of this dissertation, the study proposes the following hypothesis that agency theory addresses the agency conflicts of principal-agents. In separation of ownership and control literature, most discussed conflicts between owners and managers are situations of managerial opportunism, managerial entrenchment, shirking and so forth. In their seminal work, Jensen and Meckling (1976) propose managerial equity ownership under the interest alignment hypothesis. They argue that a manager's shirking behavior inflates their agency costs, in the absence of active monitoring by principal. They predict that equity ownership by managers will result in the convergence of managers' interest with residual claimants that will minimize their shirking behavior. The primary interest of the shareholders is to maximize the return on investment through capital gains, dividends etc. Based on this assumption and the use of debt as a tool to increase the return on equity (ROE), managers with residual claims will choose debt as a financing tool. Therefore, these argument predicts a positive relationship between managerial equity ownership and leverage.

Hypothesis 4.2.3.1: Managerial equity has a positive effect on debt.

Grossman and Hart (1982) propose the use of debt as a monitoring tool to mitigate agency conflicts related to managers' behavior. In literature, these kind of monitoring including institutional monitoring restrained the managers' opportunistic behavior. In a similar vein, the

literature indicates that institutions are important monitoring agents and exercise an active role consistent with protecting their significant stake in the firm (Bathala *et al.*, 1994, pp. 38). In their findings, Bathala *et al*. (1994) found an inverse relationship between institutional ownership to debt and managerial ownership. Based on these arguments we assume a negative relation of institutional equity ownership on debt.

Hypothesis 4.2.3.2: Institutional ownership has a negative relation to debt

Contrary to this, Stiglitz (1985) argue that larger shareholders with undiversified portfolios need strict monitoring on managers to increase return on their investment. Therefore, they have to bear an extra monitoring cost to monitor the managers' activities. One option can be the use of debt, as highlighted by Grossman and Hart (1982) i.e. monitoring done by creditors. Similarly, Shliefer and Vishny (1986) propose the "active monitoring hypothesis," stating that external block-holders can reduce the managerial *opportunism* caused by the principal-agent relation. Moreover, active large shareholders can use their voting power to exert control on managers and support more debt in order to keep their majority. Therefore, a positive relationship between block-holders and leverage is expected.

Hypothesis 4.2.3.3: Large shareholders (block-holders) are positively related to debt.

To my knowledge, very few preceding studies in existing literature have explored the effect of ownership patterns on capital structure. For instance, Brailsford *et al*. (2002) and Short *et al.* (2002) on Australian and UK firms respectively, directly explore the impact of large shareholders and managerial equity ownership on firms' capital structure. Similarly, this study examines the hypotheses by employing the data of Pakistani non-financial firms.

4.2.4 Research model specifications

The study uses cross sectional data and employs panel data procedures for empirical analysis. The pooled *OLS* econometric technique is used to explore the effect of explanatory variables on leverage. The basic estimation model of the study is as follow;

$$y_{it} = \alpha + X_{it}\beta + \varepsilon_{it}$$

i= 1…….101; t= 1.....9

Where i stands for the ith cross-sectional unit and t for tth time period. y_{it} is one of the three measures of leverage for the ith firm at time t, and α is the intercept. X_{it} is a 1 x K vector of observations on K explanatory variables for the ith firm in the tth period, β is a K x 1 vector of parameters, ε_{it} is an error term.

The specifications of the estimations model, pooled *OLS* regression used by the study, with respect to dependent and explanatory variables are given below.

$$TDR_{it} = \beta_0 + \beta_1 MEO_{it} + \beta_2 PROF_{it} + \beta_3 SIZE_{it} + \beta_4 GROW_{it} + \varepsilon_{it} \quad (1)$$

$$TDR_{it} = \beta_0 + \beta_1 INST_{it} + \beta_2 PROF_{it} + \beta_3 SIZE_{it} + \beta_4 GROW_{it} + \varepsilon_{it} \quad (2)$$

$$TDR_{it} = \beta_0 + \beta_1 LARG_{it} + \beta_2 PROF_{it} + \beta_3 SIZE_{it} + \beta_4 GROW_{it} + \varepsilon_{it} \quad (3)$$

$$TDR_{it} = \beta_0 + \beta_1 MEO_{it} + \beta_2 INST_{it} + \beta_3 LARG_{it} + \beta_4 PROF_{it} + \beta_5 SIZE_{it} + \beta_6 GROW_{it} + \varepsilon_{it} \quad (4)$$

$$LTDR_{it} = \beta_0 + \beta_1 MEO_{it} + \beta_2 PROF_{it} + \beta_3 SIZE_{it} + \beta_4 GROW_{it} + \varepsilon_{it} \quad (5)$$

$$LTDR_{it} = \beta_0 + \beta_1 INST_{it} + \beta_2 PROF_{it} + \beta_3 SIZE_{it} + \beta_4 GROW_{it} + \varepsilon_{it} \quad (6)$$

$$LTDR_{it} = \beta_0 + \beta_1 LARG_{it} + \beta_2 PROF_{it} + \beta_3 SIZE_{it} + \beta_4 GROW_{it} + \varepsilon_{it} \quad (7)$$

$$LTDR_{it} = \beta_0 + \beta_1 MEO_{it} + \beta_2 INST_{it} + \beta_3 LARG_{it} + \beta_4 PROF_{it} + \beta_5 SIZE_{it} + \beta_6 GROW_{it} + \varepsilon_{it} \quad \text{....(8)}$$

Where TDR_{it} is the total debt ratio for the *i*th firm at time *t*, $LTDR_{it}$ is the long-term debt ratio for the *i*th firm at time *t*, MEO_{it} is the managerial equity ownership for the *i*th firm at time *t*, $INST_{it}$ is the institutional shareholding of *i*th firm at time *t*, $LARG_{it}$ is the large shareholders (blockholders) *i*th firm at time *t*, $PROF_{it}$ is profitability of *i*th firm at time *t*, $SIZE_{it}$ is the size of *i*th firm at time *t*, $GROW_{it}$ is the growth of the *i*th firm at time *t*, β_0 common *y*-intercept, ε_{it} is the error term for the *i*th firm at time *t*, β_{0i} = is the *y*-intercept of firm *i*, at time *t*.

The methodology and variables along with their definitions applied in the study are largely adopted from existing literature. However, robustness test is performed to compatibility of the model and its result. In the literature, it is common to find claims that the crucial results are robust to alternative leverage definitions (Frank and Goyal, 2009, pp. 3). Similarly, the impacts of the explanatory variables is estimated against the another proxy of leverage i.e. debt to equity ratio (computed as total liabilities over total equity) as dependent variable instead of debt ratio to check the robustness of the model.

$$D/E_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 CD_{it} + \beta_4 MEO_{it} + \beta_5 INST_{it} + \beta_6 LARG_{it} + \beta_7 PROF_{it} + \beta_8 SIZE_{it} + \beta_9 LIQ_{it} + \varepsilon_{it} \quad \text{.....(9)}$$

4.3 Corporate governance and capital structure

The corporate governance and capital structure are important dimensions of modern corporate finance. In literature, there exist various definitions of corporate governance. However, the most relevant definition that precisely describes the importance of corporate governance in finance is put forward by the Shleifer and Vishny (1997). They define it as "the ways in which the suppliers of finance to the corporations assure themselves of getting a return on their investment" (Shleifer and Vishny, 1997). Fair corporate practices and governance mechanisms are essential for the establishment and growth of a sound corporate sector. Moreover, good corporate governance not only maximize the shareholders wealth by enhancing the firm's financial performance, but also builds the investors' trust and helps the firm procure funds at low cost. Based on this argument, it is not wrong to say that corporate governance plays an important role in the sustainable growth of a country's corporate sector, which ultimately contributes to the economy.

Most the empirical literature has highlighted the role of internal attributes, such as board size, board composition, CEO duality and internal ownership, for efficient corporate governance. However, a majority of the empirical findings are based on the data of firms functioning in developed economies. For instance, Anderson *et al.* (2004); Berger *et al.* (1997); Friend and Lang (1988); Kim and Sorensen (1986) etc. Developed economies have well developed capital markets where similar institutional settings have investors' protection within a regulatory framework (see La Porta *et al*., 1998). However, little attention has been given to the data of firms' functioning in developing economies. Moreover, limited attention has been paid to the importance of corporate governance in regulatory framework of these countries, where they have different institutional settings and weaker investors' protection (see e.g. Sheikh *et al*., 2013;

Bopkin and Arko, 2009; Abor, 2006; and Wen *et al*., 2002).

Even though the empirical findings on the data of both developed and developing economies emphasizes the effect of corporate governance on capital structure there is still a lack of consensus on the internal attributes of corporate governance that affects the capital structure. Additionally, very little has been done to explore the effects of the above-mentioned internal attributes of corporate governance on the choices of financing sources of non-financial Pakistani listed firms. Therefore, mixed findings in existing literature, limited research and different institutional settings in Pakistan compared to other countries are among some of the reasons that call for the need for this empirical study.

4.3.1 Data sample

The data used in this study to explore the relationship between internal attributes of corporate governance and capital structure has been taken from the annual financial reports of the firms included in data sample. Information about the board size, board composition, and CEO duality is taken from the report on compliance of code in corporate governance. Moreover, information related to managerial shareholding, institutional shareholdings and block-holders has been taken from the section on shareholder patterns within the financial statement. The complexities of obtaining data due to some unavoidable reasons, the data of more than 180 companies were collected. However, final sample includes of 101 firms balanced data for the period 2004-2012. Observations with missing information have been omitted from final sample. The data sample has the presentation of major industrial sectors of Pakistan. Such as, Sugar, Cement, Chemical, Paper and Board, Fuel and Energy, Textile, Transportation and so forth.

4.3.2 Definition of Variables

The leverage ratios (total debt ratio, long-term debt ratio and short-term debt ratio) as proxies for capital structure are taken as dependent variables from the available data. The internal attributes of corporate governance, such as board size, board composition, CEO duality, managerial equity ownership, institutional shareholders and large shareholders (block-holders), are used as explanatory variables. Moreover, the control variables are also adopted from the literature in order to neutralize the effect of other factors that may affect the financing choices of the firm. For instance, profitability, firm size and liquidity are used as control variables. In order to have a meaningful comparison with existing literature, the definitions of dependent, explanatory and control variables are adopted from existing empirical studies. The variables are calculated from the data of financial statements; therefore, measurement of the variables is based on book-values. The variables along with their definitions are presented in Table 4.3.

4.3.3 Hypotheses

The literature review of the variables used in the study is presented in the section 2 of this dissertation. Based on the relevant literature review, the study proposes the hypothesis mentioned below. Existing studies report mixed empirical findings on relation of board size and leverage. For example, Sheikh and Wang (2012); and Jensen (1986) found that leverage is positively related to board size. In contrast, Booth *et al*. (1997) found an inverse relationship between leverage and board size. Proponents of large board size argue that a large board can be more resourceful for the firm. Adams and Mehran (2003) state that more members on the board can effectively monitor management actions and can provide expertise as well. The resource dependence model also supports a large board size in order to obtain more resources for the firm

from external environment. These explanations predict a positive relationship of board size to leverage.

Table 4.3: Summary of variables with definitions

Variables	Definition
Dependent variables	
Total debt ratio (TDR_{it})	Ratio of total liabilities to total assets
Long-term debt ratio ($LTDR_{it}$)	Ratio of long-term debt to total assets
Short-term debt ratio ($STDR_{it}$)	Ratio of short-term debt to total assets
Explanatory variables	
Board size (BS_{it})	Logarithm of board size (total number of board members)
Board composition (BC_{it})	Ratio of outside/independent directors to total board members
CEO duality (CD_{it})	A dummy variable when CEO is also board's chairman =1, otherwise = 0
Managerial equity ownership (MEO_{it})	Proportion of executives and non-executives share ownership to outstanding shares
Institutional shareholding ($INST_{it}$)	Proportion of shares owned by institutional shareholders to total outstanding shares
Large shareholders (Blockholders) ($LARG_{it}$)	Proportion of shares owned by five largest shareholders to total outstanding shares
Profitability ($PROF_{it}$)	Ratio of profit before taxes to total assets
Firm Size ($SIZE_{it}$)	Natural logarithm of total assets
Liquidity (LIQ_{it})	Ratio of current assets to current liabilities

Hypothesis 4.3.3.1: Board size is positively related to leverage

Effective corporate governance framework supports the presence of outside directors on company's board. According to Pfeffer (1972), board composition (proportion of outside directors to total board members) and board size are not random or independent factors, but are rather rational organizational responses to the external environment. For example, firms with frequent access to the capital market would be expected to have a higher proportion of outside directors. Weisbach (1988) states that top managers face more vigorous monitoring when board under the control of outside or independent directors. In a resource dependence model, Pfeffer (1972) reports a positive relationship between the proportion of outside or independent director members representing the financial institutes and leverage. The findings of such studies as Sheikh and Wang (2012); Abor (2007); Anderson *et al*. (2004) have reported a positive relationship between outside directors and leverage. Thus a positive correlation is expected between these two variables.

Hypothesis 4.3.3.2: Proportion of outside/independent directors on company's board has a positive relation to leverage.

Jensen and Meckling (1976) under agency theory framework suggests managerial equity ownership to alleviate the agency conflict between managers and shareholders. Agency conflicts arise when managers behave opportunistically by consuming the firms' resources for their personal benefits, perks and building of their empire. The primary thesis of agency conflicts predicts that managers are not the residual claimants, therefore they bear fewer consequences of their wrong decisions compared to the shareholders. Therefore, Jensen and Meckling (1976) propose the interest alignment hypothesis, through which managers also become the residual claimants. Thus, the agency cost of equity is assumed to be reduced by increasing managerial

ownership. In contrast, proponents of agency theory also support the use of debt to minimize the agency conflicts. For instance, Grossman and Hart (1982) suggest that debt can be used as a monitoring tool through which debt related commitments force the managers to behave more responsibly and consume fewer perks. Similarly, Jensen (1986) theorized a free cash hypothesis which also supports the use of debt to minimize agency conflicts. It states that future debt related payments reduce the availability of free cash under managers' discretion which they can use for unproductive activities. Empirical literature concludes a non-linear relationship between managerial ownership and leverage. For example, Khan and Suzuki (2014); Ruan *et al.* (2011); and Brailsford *et al.* (2002) find that a low level of managerial ownership is positively related to leverage, while high level managerial ownership is negatively related to leverage. Hence, based on the existing work this study predicts a non-linear relationship.

Hypothesis 4.3.3.3: A non-linear relationship of managerial equity ownership with leverage.

According to Chung and Wang (2014), the role of institutional investors to influence a firm's management has gradually become more important, which can be witnessed from the increase of institutional ownership over the past few decades. Proponents of institutional ownership suggest that institutional shareholders can actively monitor management activity. Through their ownership and activism they can replace the creditors monitoring, predicting an inverse relationship of institutional ownership with debt. In contrast, La Porta *et al.* (2000) state that institutional shareholders can exert pressure on management through their voting power in order to make dividend payouts, which likely leads to the need for future debt financing. Empirical studies report mixed results on the relationship between institutional ownership and firm leverage. If institutional investors proceed with effective monitoring, the relation is supposed to be negative. If not the case will be otherwise.

Hypothesis 4.3.3.4: Institutional shareholding is negatively related to firm leverage.

The presence of larger/majority shareholders (block-holders) is also seen as a mechanism which may mitigate the principal-agent conflict. In general, shareholders exert pressure on management through their voting power. They can more effectively endorse or oppose the management decisions if they have higher voting power, which comes through higher shareholding. As a block-holder they can oppose the decisions that may not contribute to shareholders wealth maximization. In capital structure choices they may support debt as a financing choice due to lower cost of debt capital compared to the issuance of new equity. They may also do so since the issuance of new equity will dilute their voting power and control; therefore, in order to maintain their majority they prefer the usage of debt. Similarly, Stiglitz (1985) argues that the majority of shareholders with undiversified portfolios may encourage the managers to use debt to increase the return on their investments and performance related managerial compensation as well. Therefore, these arguments suggest a positive relation of block-holders to debt.

Hypothesis: 4.3.3.5: Large shareholders (block-shareholders) have a positive effect on leverage.

A CEO has the authority to implement the strategic decisions of the firm and plays an important role in corporate governance mechanism. Proponents of agency theory suggest the separation of CEO duties and board chairman responsibilities. In contrast, the resource dependence model recommends that the same person be both chairman and CEO in order to ensure quick and efficient decision making. Existing studies have explored the role of CEO duality in corporate governance mechanism, but have not predicted any relation of CEO duality to firm capital structure. Therefore, this study does not predict any effect of CEO duality on firms financing choices.

4.3.4 Research model

As the data sample is a panel data set, it consists of multi-dimensions i.e. firms as one dimension and time period as the other. In the panel estimation, pooled *OLS* is used to explore the relationship between dependent and explanatory variables. An explanation of the basic regression model is as follow:

$$y_{it} = \alpha + X_{it}\beta + \varepsilon_{it}$$

i= 1…….101; t= 1.....9

Where i stands for the ith cross-sectional unit and t for tth time period. y_{it} is one of the three measures of leverage for the ith firm at time t, and α is the intercept. X_{it} is a 1 x K vector of observations on K explanatory variables for the ith firm in the tth period, β is a K x 1 vector of parameters, ε_{it} is an error term.

The estimation models, for regression of each dependent variable with explanatory variables are presented below:

$$TDR_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 CD_{it} + \beta_4 MEO_{it} + \beta_5 INST_{it} + \beta_6 LARG_{it} + \beta_7 PROF_{it} + \beta_8 SIZE_{it} + \beta_9 LIQ_{it} + \varepsilon_{it} \quad (1)$$

$$LTDR_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 CD_{it} + \beta_4 MEO_{it} + \beta_5 INST_{it} + \beta_6 LARG_{it} + \beta_7 PROF_{it} + \beta_8 SIZE_{it} + \beta_9 LIQ_{it} + \varepsilon_{it} \quad (2)$$

$$STDR_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 CD_{it} + \beta_4 MEO_{it} + \beta_5 INST_{it} + \beta_6 LARG_{it} + \beta_7 PROF_{it} + \beta_8 SIZE_{it} + \beta_9 LIQ_{it} + \varepsilon_{it} \quad (3)$$

Where TDR_{it} is the total debt ratio for the ith firm at time t, $LTDR_{it}$ is the long-term debt ratio for the ith firm at time t, $STDR_{it}$ is the short-term debt ratio for the ith firm at time t,

BS_{it} is the board size of the *i*th firm at time *t*, BC_{it} is the board composition for the *i*th firm at time *t*, CD_{it} is the CEO-duality for the *i*th firm at time *t*, MEO_{it} is the managerial equity ownership for the *i*th firm at time *t*, $INST_{it}$ is the institutional shareholding of *i*th firm at time *t*, $LARG_{it}$ is the large shareholders (blockholders) *i*th firm at time *t*, $PROF_{it}$ is profitability of *i*th firm at time *t*, $SIZE_{it}$ is the size of *i*th firm at time *t*, LIQ_{it} is liquidity of the *i*th firm at time *t*, β_0 common *y*-intercept, ε_{it} is the error term for the *i*th firm at time *t*, β_{0i} = is the *y*-intercept of firm *i*, at time *t*.

The methodology and variables along with their definitions applied in the study are largely adopted from existing literature. However, robustness test is performed to compatibility of the model and its result. In the literature, it is common to find claims that the crucial results are robust to alternative leverage definitions (Frank and Goyal, 2009, pp. 3). Similarly, the impacts of the explanatory variables is estimated against the another proxy of leverage i.e. debt to equity ratio (computed as total liabilities over total equity) as dependent variable instead of debt ratio to check the robustness of the model.

$$D/E_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BC_{it} + \beta_3 CD_{it} + \beta_4 MEO_{it} + \beta_5 INST_{it} + \beta_6 LARG_{it} + \beta_7 PROF_{it} + \beta_8 SIZE_{it} + \beta_9 LIQ_{it} + \varepsilon_{it} \quad \text{.....(4)}$$

4.4 Summary

This chapter presents the source of data, including secondary data from the financial statements of the firms that have been used for the study. It further provides the definition and explanation of the variables used in the study, which are adopted from existing literature. Moreover, it

describes the econometric models that are used to achieve the objectives of the study. The first section consists of data explanation, variables' definition, hypotheses, and model specification for the exploration of determinants for the capital structure of non-financial Pakistani listed firms.

Similarly, the second section provides details about the data sample, a summary of the variables, the study's hypotheses, and research models used by the study to explore the effects of ownership structure patterns on the capital structures of firms. Finally, the third section of the chapter explains the data, summary of variables, hypotheses, and research methods used to determine the impact of internal attributes of corporate governance on capital structure.

Chapter 5

Empirical estimation results

5.1 Determinants of capital structure

5.1.1 Descriptive statistics and correlations of variables

The descriptive statistical summary of the variables used are given in table 5.1. The mean value of total debt ratio implies that 55 percent of a firm's assets are financed with total debt. Whereas, 33.65 percent of these assets are financed with long-term debt and 66.35 percent are financed with short-term debt. This indicates that Pakistani firms mostly rely on short-term debt. In their study on study on capital structure of developing economies, Booth *et al.* (2001) concludes that the ratio of difference between book value of total debt and long term debt is much higher in developing countries than in developed countries. These observations are also consistent with the results of Demirguc-Kunt and Maksimovic (1999), which state that developing countries have lower amounts of long-term debt compared to developed countries. To the extent that the theories of capital structure explain the capital structure of firms in developed countries (e.g., we assume well developed legal systems), this difference, in long versus short-term debt, might limit their explanatory power in developing countries (Booth *et al.*, 2001, pp. 91).

Moreover, the data sample was tested for multicollinearity before estimating the coefficients of explanatory variables on dependent variables. Result shows that the pair-wise correlations generally do not appear. This indicates that a multicollinearity problem does not exist in estimating the regression of variables. These results are presented in table 5.2.

5.1.2 Regression results

In the analysis process a total of nine equations were estimated in order to analyze the

relationship between the firm-specific factors and capital structure. Empirical results under pooled *OLS* estimation of dependent variable total debt ratio and explanatory variables are shown in the table 5.3. These result shows that profitability, liquidity, tangibility, and firm age are negatively related to total debt ratio, and these relations are statistically significant. Firm size and earning volatility are statistically significant and positively related to total debt ratio. Moreover, growth opportunities are also positively related to total debt but statistically insignificant.

The results under fixed effects estimation model are presented in table 5.4. Profitability, liquidity and firm age are statistically significant and negatively related to total debt ratio. Moreover, tangibility, growth opportunities, and firm size are negatively related to total debt ratio, but this relation is statistically insignificant. Only earnings volatility shows positive and signification relation to total debt ratio. The results under the random effects model are shown in table 5.5, results under the random effects model are similar to the results of found with the fixed effects model. Additionally, all three regressions show an acceptable adjusted R^2, which appears to be able to explain most of the cross-sectional variation in the total debt ratio.

In order to choose the regression that best explains this study estimation among three models, the Hausman (1978) specification test was performed. The test indicates that we may better use the fixed effects model. The adjusted R^2 for the fixed effects model is higher than the *OLS* and random effects model, which means the omitted variables exist in the model. The test result from Hausman (1978) presented in table 5.6 rejects the null hypothesis and suggests the use of fixed effects estimation result.

The empirical results of long-term debt as dependent variables are presented in tables, 5.7, 5.8, and 5.9. The pooled *OLS* model results in table 5.7 show that profitability and firm age are

negatively related to long-term debt and that the relationship is statistically significant. Firm size, liquidity, and tangibility are statistically significant and are positively related to long-term debt. Growth is negatively related to long term debt while earnings volatility is positively related to it, but their relationship is insignificant.

The fixed effects model results are shown in table 5.8. In this model's findings, profitability and firm age show a significant negative relationship with long-term debt. Growth also shows a negative but insignificant relationship with the dependent variable. Firm size and tangibility have a significant positive relationship with long-term debt. Liquidity and earnings volatility's relationship to long-term debt is also positive, but statistically insignificant. Table 5.9 presents the results of the random effects model, which are similar to the results of fixed effects model. Additionally, all three regressions—i.e. the pooled *OLS*, fixed effects, and random effects models—show an acceptable adjusted R^2, which appears to be able to explain most of the cross-sectional variation in the long-term debt ratio.

The Hausmen test was performed to choose the appropriate model among three models. The test indicates that we may better use the fixed effects model. In the fixed effects model, the adjusted R^2 is higher than the *OLS* and random effects model, which means that the omitted variables exist in the model. The test results are presented in table 5.10. They reject the null hypothesis and predict that we may use fixed effects model.

The estimation results of dependent variable short-term debt and explanatory variables are shown in table 5.11 (the pooled *OLS*), table 5.12 (the fixed effects model), and table 5.13 (the random effects model). The pooled *OLS* regression results in table 5.11 show that profitability, liquidity, tangibility, and age have a negative and significant relation with short-term debt. Firm size is also negatively related to short-term debt but the relationship is statistically insignificant.

Earnings volatility has a positive and significant relationship to short-term debt. Growth opportunities have a positive but insignificant relationship. The fixed effects model result (table 5.12) indicates a negative and significant relationship between profitability, size, liquidity, and tangibility with the dependent variable. Growth opportunities and firm age also showed a negative but statistically insignificant relationship. In contrast, earnings volatility has a positive and significant relationship with short-term debt. The regression results under the random effects model (5.13) shows similar results as of fixed effects model.

Table 5.14 shows the result of Hausman (1978) test. The test indicates that we may better use the fixed effects model. The adjusted R^2 for the fixed effects model is higher than the *OLS* and random effects model, which means the omitted variables exist in the model. The Hausman (1978) test results show a rejection of the null hypothesis, therefore we better use the result of fixed effects estimation.

Moreover, the model is tested for robustness to ensure the compatibility of the model and findings. The explanatory variables of determinants of capital structure, ownership structure and corporate governance are regressed against debt to equity ratio. For determinants of capital structure, the effect of explanatory variables on debt to equity ratio is given in the table below. In comparison with the results of total debt given in table 5.3, all the factors show almost similar signs and significance of the relation to the both the proxies of debt. However, only earnings volatility shows contradictory relationship. The similar sign and significance justify the robustness of the model employed by the study.

In summary, profitability and firm age shows a negative and significant relationship with all of the dependent variables, i.e. total debt, long-term debt, and short-term debt. Moreover, tangibility and liquidity show a negative and significant relationship with the total debt ratio and

short-term debt, and a positive significant relationship with long-term debt. Firm size shows a positive and significant relationship with total and long-term debt. Firms' size is negatively related to short-term debt, but the relationship is insignificant. Earnings volatility is positively related to total debt, long-term debt, and short-term debt. However, this positive relation is insignificant with long-term debt, and significant with total and short-term debt. Growth opportunities are positively related to total debt and short-term debt, but negatively related to long-term debt. However, both these positive and negative relations are statistically insignificant.

Table 5.1: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Minimum	Maximum
TDR_{it}	808	0.5535	0.1926	0.0004	0.9939
$LTDR_{it}$	808	0.1863	0.1506	0	0.6813
$STDR_{it}$	808	0.3671	0.1715	0.0002	0.9215
$PROF_{it}$	808	0.0787	0.1062	-0.5207	0.4970
$SIZE_{it}$	808	18.926	3.4070	11.974	25.568
LIQ_{it}	808	2.3241	22.931	0.0840	651.15
$TANG_{it}$	808	0.5556	0.1988	0.0073	0.9990
$EVOL_{it}$	808	-0.0761	6.1436	-98.079	73.215
$GROW_{it}$	808	401.94	779.90	0	6933.3
AGE_{it}	808	1.3557	0.1928	0.9542	1.7708

Note: TDR_{it} = total book debt over book value of total assets; $LTDR_{it}$ = long-term book debt over

book value of total assets; $STDR_{it}$ = short-term book debt over book value of total assets; $PROF_{it}$ = profit before taxes over book value of total assets; $SIZE_{it}$ = natural logarithm of total assets; LIQ_{it} = book value of current assets over book value of current liabilities; $TANG_{it}$ = book value of fixed assets over book value of total assets; $EVOL_{it}$ = profit before $taxes_t$ – profit before $taxes_{t-1}$ to profit before $taxes_{t-1}$; $GROW_{it}$ = market price per share to book value per share; AGE_{it} = log of age (age is found by taking difference between current year and listing year).

Table 5.2: Pearson Correlation Matrix

Variable	TDR_{it}	$LTDR_{it}$	$STDR_{it}$	$PROF_{it}$	$SIZE_{it}$	LIQ_{it}	$TANG_{it}$	$EVOL_{it}$	$GROW_{it}$	AGE_{it}
TDR_{it}	1									
$LTDR_{it}$	0.523^{***}	1								
$STDR_{it}$	0.663^{***}	-0.290^{***}	1							
$PROF_{it}$	-0.494^{***}	-0.300^{***}	-0.290^{***}	1						
$SIZE_{it}$	0.069^{**}	0.197^{***}	-0.095^{***}	0.040	1					
LIQ_{it}	-0.041	0.065^{*}	-0.104^{***}	-0.347	0.014	1				
$TANG_{it}$	0.105^{***}	0.629^{***}	-0.434^{***}	-0.365^{***}	0.084^{***}	0.019	1			
$EVOL_{it}$	-0.002	-0.012	0.007	0.136^{***}	0.051	0.0016	-0.027	1		
$GROW_{it}$	-0.140^{***}	-0.203^{***}	0.020	0.193^{***}	-0.501^{***}	0.003	-0-146	-0.010	1	
AGE_{it}	-0.228^{***}	-0.284^{***}	-0.007	0.063^{*}	-0.120^{***}	-0.005	-0.155	-0.015	0.182^{***}	1

***, **, *, Significant at 1%, 5% and 10% level respectively

Note: TDR_{it} = total debt ratio; $LTDR_{it}$ = long-term debt ratio; $STDR_{it}$ = short-term debt ratio; $PROF_{it}$ = profitability; $SIZE_{it}$ = size; LIQ_{it} = liquidity; $TANG_{it}$ = tangibility; $EVOL_{it}$ = earnings volatility; $GROW_{it}$ = growth opportunities; AGE_{it} = firm's age.

Table 5.3: The effect of explanatory variables on total debt ratio (TDR_{it}) under pooled *OLS* method

Variable	Coefficient	Std. Error	*t*-statistic	Prob.
C	0.883606	0.060605	14.57967	0.0000
$PROF_{it}$	-0.992218	0.059406	-16.70243	0.0000
$SIZE_{it}$	0.005089	0.001954	2.604831	0.0094
LIQ_{it}	-0.000510	0.000247	-2.062492	0.0395
$TANG_{it}$	-0.123090	0.031048	-3.964538	0.0001
$EVOL_{it}$	0.001913	0.000931	2.054081	0.0403
$GROW_{it}$	7.43E-06	8.73E-06	0.850487	0.3953
AGE_{it}	-0.207660	0.030144	-6.889026	0.0000
R^2	0.308971	Mean dependent variable		0.553545
Adjusted R^2	0.302925	*F*-statistic		51.09923
S.E. of regression	0.160816	Prob. (*F*-statistic)		0.000000

Table 5.4: The effect of explanatory variables on total debt ratio (TDR_{it}) using the fixed effects estimation model

Variable	Coefficient	Std. Error	*t*-statistic	Prob.
C	1.281510	0.156621	8.182237	0.0000
$PROF_{it}$	-0.534977	0.048672	-10.99138	0.0000
$SIZE_{it}$	-0.002314	0.001843	-1.255631	0.2097

LIQ_{it}	-0.000596	0.000152	-3.918233	0.0001
$TANG_{it}$	-0.043288	0.041607	-1.040405	0.2985
$EVOL_{it}$	0.001171	0.000579	2.021602	0.0436
$GROW_{it}$	-4.61E-06	6.74E-06	-0.684716	0.4938
AGE_{it}	-0.453369	0.094005	-4.822842	0.0000
R^2	0.799018	Mean dependent variable		0.553545
Adjusted R^2	0.768296	*F*-statistic		26.00834
S.E. of regression	0.092716	Prob. (*F*-statistic)		0.000000

Table 5.5: The effect of explanatory variables on the debt ratio (TDR_{it}) using the random effects estimation model

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	1.014811	0.096702	10.49426	0.0000
$PROF_{it}$	-0.589143	0.046956	-12.54668	0.0000
$SIZE_{it}$	8.54E-05	0.001532	0.055739	0.9556
LIQ_{it}	-0.000595	0.000151	-3.930009	0.0001
$TANG_{it}$	-0.049743	0.036470	-1.363926	0.1730
$EVOL_{it}$	0.001194	0.000575	2.076580	0.0382
$GROW_{it}$	-4.53E-06	6.53E-06	-0.693298	0.4883
AGE_{it}	-0.284393	0.055492	-5.124907	0.0000
R^2	0.204564	Mean dependent variable		.140075

Adjusted R^2	0.197604	*F*-statistic	29.39103
S.E. of regression	0.094110	Prob. (*F*-statistic)	0.000000

Table 5.6: Hausman specification test fixed and random effects comparison

Variable	Fixed effects	Random effects	Var. (Difference)	Prob.
$PROF_{it}$	-0.534977	-0.589143	0.000164	0.0000
$SIZE_{it}$	-0.002314	0.000085	0.000001	0.0192
LIQ_{it}	-0.000596	-0.000595	0.000000	0.9483
$TANG_{it}$	-0.043288	-0.049743	0.000401	0.7472
$EVOL_{it}$	0.001171	0.001194	0.000000	0.7524
$GROW_{it}$	-0.000005	-0.000005	0.000000	0.9601
AGE_{it}	-0.453369	-0.284393	0.005757	0.0260
Wald χ^2 (7df)	7			
Prob. (χ^2)	0.0001			

Table 5.7: The effect of explanatory variables on long term debt ratio ($LTDR_{it}$) under pooled *OLS* method

Variable	Coefficient	Std. Error	*t*-statistic	Prob.
C	0.039518	0.042021	0.940437	0.3473
$PROF_{it}$	-0.125242	0.041189	-3.040683	0.0024

$SIZE_{it}$	0.005628	0.001355	4.154936	0.0000
LIQ_{it}	0.000322	0.000171	1.877224	0.0609
$TANG_{it}$	0.422527	0.021527	19.62786	0.0000
$EVOL_{it}$	0.000148	0.000646	0.229387	0.8186
$GROW_{it}$	-1.71E-06	6.06E-06	-0.282669	0.7775
AGE_{it}	-0.136194	0.020900	-6.516459	0.0000
R^2	0.457221	Mean dependent variable		0.186352
Adjusted R^2	0.452472	*F*-statistic		96.27095
S.E. of regression	0.111501	Prob. (*F*-statistic)		0.000000

Table 5.8: The effect of explanatory variables on long term debt ratio ($LTDR_{it}$) using the fixed effects estimation model

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.486722	0.130309	3.735147	0.0002
$PROF_{it}$	-0.079909	0.040495	-1.973289	0.0489
$SIZE_{it}$	0.003648	0.001534	2.378684	0.0176
LIQ_{it}	0.000155	0.000127	1.226528	0.2204
$TANG_{it}$	0.392531	0.034617	11.33938	0.0000
$EVOL_{it}$	0.000278	0.000482	0.576341	0.5646
$GROW_{it}$	-1.25E-06	5.60E-06	-0.222177	0.8242
AGE_{it}	-0.428580	0.078212	-5.479743	0.0000

R^2	0.772684	Mean dependent variable	0.186352
Adjusted R^2	0.737937	*F*-statistic	22.23745
S.E. of regression	0.077140	Prob. (*F*-statistic)	0.000000

Table 5.9: The effect of explanatory variables on the long term debt ratio ($LTDR_{it}$) using the random effects estimation model

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.126489	0.069228	1.827146	0.0681
$PROF_{it}$	-0.087019	0.038294	-2.272396	0.0233
$SIZE_{it}$	0.006255	0.001222	5.117741	0.0000
LIQ_{it}	0.000169	0.000126	1.346591	0.1785
$TANG_{it}$	0.408547	0.028450	14.36016	0.0000
$EVOL_{it}$	0.000178	0.000477	0.373933	0.7086
$GROW_{it}$	-1.37E-06	5.35E-06	-0.256747	0.7974
AGE_{it}	-0.205422	0.039150	-5.246987	0.0000
R^2	0.332645	Mean dependent variable		0.059729
Adjusted R^2	0.326806	*F*-statistic		56.96602
S.E. of regression	0.077632	Prob. (*F*-statistic)		0.000000

Table 5.10: Hausman specification test Fixed and random effects comparison for long term debt ratio

Variable	Fixed effects	Random effects	Var. (Difference)	Prob.
$PROF_{it}$	-0.079909	-0.087019	0.000173	0.5893
$SIZE_{it}$	0.003648	0.006255	0.000001	0.0049
LIQ_{it}	0.000155	0.000169	0.000000	0.3593
$TANG_{it}$	0.392531	0.408547	0.000389	0.4167
$EVOL_{it}$	0.000278	0.000178	0.000000	0.1659
$GROW_{it}$	-0.000001	-0.000001	0.000000	0.9393
AGE_{it}	-0.428580	-0.205422	0.004584	0.0010
Wald χ^2 (7df)	7			
Prob. (χ^2)	0.0159			

Table 5.11: The effect of explanatory variables on short term debt ratio ($STDR_{it}$) under pooled *OLS* method

Variable	Coefficient	Std. Error	*t*-statistic	Prob.
C	0.844089	0.048349	17.45819	0.0000
$PROF_{it}$	-0.866977	0.047392	-18.29372	0.0000
$SIZE_{it}$	-0.000539	0.001559	-0.345936	0.7295
LIQ_{it}	-0.000831	0.000197	-4.216827	0.0000
$TANG_{it}$	-0.545617	0.024769	-22.02820	0.0000
$EVOL_{it}$	0.001765	0.000743	2.375418	0.0178

$GROW_{it}$	9.14E-06	6.97E-06	1.311749	0.1900
AGE_{it}	-0.071466	0.024048	-2.971864	0.0030
R^2	0.445497	Mean dependent variable		0.3671
Adjusted R^2	0.440646	*F*-statistic		91.81924
S.E. of regression	0.128294	Prob. (*F*-statistic)		0.000000

Table 5.12: The effect of explanatory variables short term debt ratio ($STDR_{it}$) using the fixed effects estimation model

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.794788	0.129205	6.151386	0.0000
$PROF_{it}$	-0.455068	0.040152	-11.33352	0.0000
$SIZE_{it}$	-0.005962	0.001521	-3.921071	0.0001
LIQ_{it}	-0.000751	0.000126	-5.986658	0.0000
$TANG_{it}$	-0.435819	0.034323	-12.69742	0.0000
$EVOL_{it}$	0.000893	0.000478	1.869306	0.0620
$GROW_{it}$	-3.37E-06	5.56E-06	-0.605932	0.5448
AGE_{it}	-0.024789	0.077549	-0.319655	0.7493
R^2	0.827548	Mean dependent variable		0.367193
Adjusted R^2	0.801188	*F*-statistic		31.39355
S.E. of regression	0.076487	Prob. (*F*-statistic)		0.000000

Table 5.13: The effect of explanatory variables on the short term debt ratio ($STDR_{it}$) using the random effects estimation model

Variable	Coefficient	Std. Error	*t*-statistic	Prob.
C	0.844634	0.075657	11.16403	0.0000
$PROF_{it}$	-0.513821	0.038490	-13.34942	0.0000
$SIZE_{it}$	-0.005833	0.001245	-4.686313	0.0000
LIQ_{it}	-0.000759	0.000125	-6.080276	0.0000
$TANG_{it}$	-0.457690	0.029457	-15.53756	0.0000
$EVOL_{it}$	0.001023	0.000474	2.159183	0.0311
$GROW_{it}$	-3.27E-06	5.36E-06	-0.609202	0.5426
AGE_{it}	-0.050994	0.043209	-1.180177	0.2383
R^2	0.327431	Mean dependent variable		0.101324
Adjusted R^2	0.321547	*F*-statistic		55.63856
S.E. of regression	0.078085	Prob. (*F*-statistic)		0.000000

Table 5.14: Hausman specification test Fixed and random effects comparison for short term debt ratio

Variable	Fixed effects	Random effects	Var. (Difference)	Prob.
$PROF_{it}$	-0.455068	-0.513821	0.000131	0.0000
$SIZE_{it}$	-0.005962	-0.005833	0.000001	0.8823
LIQ_{it}	-0.000751	-0.000759	0.000000	0.5594

$TANG_{it}$	-0.435819	-0.457690	0.000310	0.2144
$EVOL_{it}$	0.000893	0.001023	0.000000	0.0409
$GROW_{it}$	-0.000003	-0.000003	0.000000	0.9451
AGE_{it}	-0.024789	-0.050994	0.004147	0.6841
Wald χ^2 (7df)	40.784660			
Prob. (χ^2)	0.0000			

5.2 Ownership and capital structure

5.2.1 Descriptive statistics and correlation of variables

The summary statistics of both dependent and explanatory variables used in the study are presented in table 5.15. The mean value of the total debt ratio for the sample is 55.4% and that for long-term debt is 18.9%. From the perspective of capital structure, these values show that 55.4% of total assets of the non-financial Pakistani firms included in the sample are financed with total debt, while the 18.9% of total assets are financed with long-term debt. Before performing the regression of estimations, variables are checked for multi-collinearity. The results of the pair-wise correlation are presented in table 5.16. The correlation matrix shows that multi-collinearity does not exist among the variables.

Table 5.15: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Minimum	Maximum
TDR_{it}	909	0.5549	0.1897	0.0004	0.99939
$LTDR_{it}$	909	0.1899	0.1535	0	0.7828
MEO_{it}	909	0.2632	0.2456	5.07e-09	0.9842
$INST_{it}$	909	0.1376	0.1256	0	0.7138
$LARG_{it}$	909	0.5794	0.1794	0.0542	0.9972
$PROF_{it}$	909	0.0819	0.1082	-0.5207	0.7967
$SIZE_{it}$	909	19.185	3.3196	11.974	25.568
$GROW_{it}$	909	357.45	745.95	0	6933.2

Note: TDR_{it} = total book debt over book value of total assets; $LTDR_{it}$ = long-term book debt over book value of total assets; MEO_{it} = Managerial equity ownership, ratio of sharers owned by managers and directors to total outstanding shares; $INST_{it}$ = ratio of institutional share ownership to total outstanding shares; $LARG_{it}$ = ratio of five largest shareholders to total outstanding shares (blockholders); $PROF_{it}$ = profit before taxes over book value of total assets; $SIZE_{it}$ = natural logarithm of total assets; $GROW_{it}$ = market price per share to book value per share.

Table 5.16: Pearson correlation matrix

Variables	TDR_{it}	$LTDR_{it}$	MEO_{it}	$INST_{it}$	$LARG_{it}$	$PROF_{it}$	$SIZE_{it}$	$GROW_{it}$
TDR_{it}	1							
$LTDR_{it}$	0.536***	1						
MEO_{it}	0.184***	0.079***	1					
$INST_{it}$	-0.069**	-0.120***	-0.344***	1				
$LARG_{it}$	0.069**	0.014	0.099***	-0.118***	1			
$PROF_{it}$	-0.475***	-0.301***	-0.174***	0.394***	0.120***	1		
$SIZE_{it}$	0.068**	0.196***	-0.116***	0.135***	-0.005	0.054*	1	
$GROW_{it}$	-0.136***	-0.196***	-0.092***	-0.105***	0.159***	0.162***	-0.51***	1

***, **, *, Significant at 1%, 5% and 10% level respectively

Note: TDR_{it} = total debt ratio; $LTDR_{it}$ = long-term debt ratio; MEO_{it} = Managerial equity ownership; $INST_{it}$ = institutional ownership; $LARG_{it}$ = large shareholders (blockholders); $PROF_{it}$ = profitability; $SIZE_{it}$ = size; $GROW_{it}$ = growth opportunities.

5.2.2 Empirical results

The regression result of managerial equity ownership, to total debt ratio is presented in table 5.17. The result shows that the managerial ownership is positively related to total debt and the relationship is significant. Contrary to this, institutional ownership is negatively related to total debt, but association is insignificant. The result of this regression are shown in table 5.18. The

result of total debt and block-holders is presented in table 5.19. Block-holders have a positive and statistically significant relation with total debt. Finally, the relationship of all the proxies of ownership structure are regressed against total debt and results are presented in table 5.20. Managerial equity ownership and block-holders shows a positive and significant association with total debt. Institutional ownership also shows a positive but insignificant relationship with total debt. Moreover, total debt demonstrates a positive significant association to all other control variables, except growth, which has an insignificant relationship.

The results of managerial ownership as explanatory variable of long-term debt are given in table 5.21. The relationship is positive but insignificant. In contrary, the regression results presented in table 5.22, shows that institutional shareholders has negative and significant relation with long-term debt. Table 5.23 presents the relationship of block-holders with long-term debt. The association is statistically positive and significant. In last, all the measures of ownership are regressed against the long-term debt. Results of the regression are shown in table 5.24. In combine regression the block-holders show a positive and significant relation with long-term debt. However, institutional and managerial shareholdings shows a negative, significant and insignificant relationship respectively. Moreover, long-term is positively associated to profitability, firm size and growth.

Additionally, the model is checked for robustness by employing the debt to equity ratio as a dependent variables. The impact of explanatory variables including the different ownership patterns show significant relationship endorsing the assumption that ownership structure do impact the financing choices of the firms.

In summary, block-holders show a positive, significant relationship with total debt and a positive but insignificant one with long-term debt. This association is consistent in single, as well

as in combined regression which includes managerial ownership and institutional shareholders. Managerial equity ownership shows a positive and significant association with total debt, but negative and significant relationship with long-term debt. Moreover, institutional shareholders demonstrate a positive, insignificant relation with total debt, and a negative and significant association with long-term debt.

Table 5.17: The effect of explanatory variable (*MEO*$_{it}$) on total debt ratio (TDR_{it}) under pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.475020	0.041331	11.49312	0.0000
MEO_{it}	0.090320	0.023014	3.924498	0.0001
$PROF_{it}$	-0.810713	0.052392	-15.47386	0.0000
$SIZE_{it}$	0.006353	0.001979	3.210783	0.0014
$GROW_{it}$	1.78E-06	8.88E-06	0.199967	0.8416
R^2	0.248341	Mean dependent variable		0.554909
Adjusted R^2	0.245015	*F*-statistic		74.66806
S.E. of regression	0.164913	Prob. (*F*-statistic)		0.000000

Table 5.18: The effect of explanatory variable (*INST*$_{it}$) on total debt ratio (TDR_{it}) using pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.532207	0.039441	13.49385	0.0000
$INST_{it}$	-0.058962	0.044544	-1.323681	0.1859

$PROF_{it}$	-0.831604	0.052563	-15.82118	0.0000
$SIZE_{it}$	0.005233	0.001970	2.655902	0.0080
$GROW_{it}$	-4.10E-06	8.86E-06	-0.462766	0.6436
R^2	0.237013	Mean dependent variable		0.554909
Adjusted R^2	0.233637	*F*-statistic		70.20430
S.E. of regression	0.166151	Prob. (*F*-statistic)		0.000000

Table 5.19: The effect of explanatory variable (*LARG*$_{it}$) on the debt ratio (TDR_{it}) using the pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.461981	0.041449	11.14567	0.0000
$LARG_{it}$	0.144010	0.031032	4.640700	0.0000
$PROF_{it}$	-0.859036	0.051925	-16.54369	0.0000
$SIZE_{it}$	0.004347	0.001949	2.230778	0.0259
$GROW_{it}$	-9.95E-06	8.87E-06	-1.122796	0.2618
R^2	0.253322	Mean dependent variable		0.554909
Adjusted R^2	0.250019	*F*-statistic		76.67417
S.E. of regression	0.164365	Prob. (*F*-statistic)		0.000000

Table 5.20: The effect of explanatory variables, (*MEO*$_{it}$); (*INST*$_{it}$) and (*LARG*$_{it}$) on total debt ratio (TDR_{it}) under pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**

C	0.421413	0.043725	9.637707	0.0000
MEO_{it}	0.078574	0.024421	3.217513	0.0013
$INST_{it}$	0.014563	0.046735	0.311605	0.7554
$LARG_{it}$	0.129353	0.031324	4.129533	0.0000
$PROF_{it}$	-0.834445	0.052363	-15.93579	0.0000
$SIZE_{it}$	0.005518	0.001973	2.796407	0.0053
$GROW_{it}$	-4.63E-06	9.00E-06	-0.514656	0.6069
R^2	0.262288	Mean dependent variable		0.554909
Adjusted R^2	0.257380	*F*-statistic		53.44978
S.E. of regression	0.163557	Prob. (*F*-statistic)		0.000000

Table 5.21: The effect of explanatory variable (MEO_{it}) on long-term debt ratio ($LTDR_{it}$) under pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.046236	0.035767	1.292702	0.1964
MEO_{it}	0.028861	0.019916	1.449125	0.1476
$PROF_{it}$	-0.420992	0.045339	-9.285388	0.0000
$SIZE_{it}$	0.009059	0.001712	5.290730	0.0000
$GROW_{it}$	-8.91E-06	7.68E-06	-1.159459	0.2466
R^2	0.140136	Mean dependent variable		0.189964

Adjusted R^2	0.136331	*F*-statistic	36.83217
S.E. of regression	0.142712	Prob. (*F*-statistic)	0.000000

Table 5.22: The effect of explanatory variable ($INST_{it}$) on long-term debt ratio ($LTDR_{it}$) under pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.073468	0.033611	2.185854	0.0291
$INST_{it}$	-0.154156	0.037960	-4.061059	0.0001
$PROF_{it}$	-0.411706	0.044793	-9.191258	0.0000
$SIZE_{it}$	0.009168	0.001679	5.460360	0.0000
$GROW_{it}$	-1.25E-05	7.55E-06	-1.653189	0.0986
R^2	0.153580	Mean dependent variable		0.189964
Adjusted R^2	0.149835	*F*-statistic		41.00692
S.E. of regression	0.141592	Prob. (*F*-statistic)		0.000000

Table 5.23: The effect of explanatory variable ($LARG_{it}$) on long-term debt ratio ($LTDR_{it}$) under pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.038426	0.035951	1.068856	0.2854
$LARG_{it}$	0.053927	0.026915	2.003587	0.0454
$PROF_{it}$	-0.437557	0.045037	-9.715511	0.0000
$SIZE_{it}$	0.008380	0.001690	4.958305	0.0000

$GROW_{it}$	-1.30E-05	7.69E-06	-1.692853	0.0908
R^2	0.141949	Mean dependent variable		0.189964
Adjusted R^2	0.138152	*F*-statistic		37.38747
S.E. of regression	0.142561	Prob. (*F*-statistic)		0.000000

Table 5.24: The effect of explanatory variables, (MEO_{it}); ($INST_{it}$) and ($LARG_{it}$) on long-term debt ratio ($LTDR_{it}$) under pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.055014	0.037846	1.453630	0.1464
MEO_{it}	-0.001828	0.021137	-0.086479	0.9311
$INST_{it}$	-0.148134	0.040451	-3.662055	0.0003
$LARG_{it}$	0.041547	0.027112	1.532449	0.1258
$PROF_{it}$	-0.418888	0.045322	-9.242518	0.0000
$SIZE_{it}$	0.008924	0.001708	5.225298	0.0000
$GROW_{it}$	-1.44E-05	7.79E-06	-1.850633	0.0645
R^2	0.155786	Mean dependent variable		0.189964
Adjusted R^2	0.150170	*F*-statistic		27.74154
S.E. of regression	0.141564	Prob. (*F*-statistic)		0.000000

5.3 Corporate governance and capital structure

5.3.1 Descriptive statistics and correlations of variables

The descriptive statistics and pair-wise correlation of the variables used in this study are given in table 5.25 and table 5.26 respectively. The mean value of the different debt ratios of the firms used in the sample shows a significant difference. The mean value of total debt is 55.4% while short-term debt is 36.4 %. These values indicate that the assets financed with short-term debt are 36.3% and those financed with long-term debt are 18.9%. The difference between short-term and long-term debt is quite high as compared to the average of developed economies. The variables were tested for multi-collinearity before regression. The results show no sign of collinearity among the variables.

5.3.2 Empirical results

In order to explore the effect of corporate governance attributes on capital structure, estimations were performed for three proxies of capital structure i.e. total debt, long-term debt, and short term debt. The findings of total debt and attributes of corporate governance are shown in table 5.27. Managerial ownership and block-holders have positive and significant relationships with total debt. Other measures such as board size, board composition, and CEO duality are also positively related to total debt, but the relation is insignificant. Similarly, board composition, managerial ownership, and block-holders show a positive but in significant association with long-term debt, as shown in table 5.28. However, institutional shareholders have a significant, negative association with long-term debt, while board size and CEO duality have an insignificant association. The results for short-term debt are presented in table 5.29. The results show that short-term debt is positively related to board size, board composition, and CEO duality. However,

the relationship is insignificant compared to managerial equity, institutional shareholdings, and block-holders.

In model employ for robustness check, the attributes of the corporate governance shows the similar significance with debt to equity ratio as a proxy of leverage. This also suggests the significant impact of internal governance mechanism on selection of optimal capital structure of non-financial firms listed in Pakistan and endorse the compatibility of the model employed in the study.

In summary, board size has a positive but insignificant association with total, long-term and short-term debt. Moreover, total debt, long-term debt, and short-term debt show positive and significant relationships with managerial ownership and block-holders. On the other hand institutional ownership is insignificant and negatively associated with total and long-term debt. Apart from profitability, firm size and liquidity are also positively related to all measures of debt.

5.4 Summary

The findings of the study based on empirical estimations are presented in this chapter. The results concerning the determinants of capital structure, ownership and capital structure, and corporate governance and capital structure are provided in the three sub-sections of this chapter. The first sub-section provides the summary statistics of the variables used to explore the determinants of capital structure. The data sample was tested for multicollinearity, and results show that pair-wise correlations generally do not appear. The following part provides the results of three dependent variables regressed against explanatory variables under pooled *OLS*, fixed, and random effects estimation models. The Hausman (1978) test has been performed to select the more appropriate estimation model, and the test supports the fixed effect estimation model.

The second sub-section provides the statistical findings of the impact of ownership structure on capital structure. It provides descriptive statistics, pair-wise correlations, and estimations respectively. Finally, the last section provides the summary statistics, pair-wise correlation, and estimation results related to the impact of corporate governance attributes on capital structure.

Table 5.25: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Minimum	Maximum
TDR_{it}	909	0.5549	0.1897	0.0004	0.99939
$LTDR_{it}$	909	0.1899	0.1535	0	0.7828
$STDR_{it}$	909	0.3649	0.1683	0.0002	0.9251
BS_{it}	909	0.8931	0.0633	0.8450	1.1461
BC_{it}	909	0.0718	0.1059	0	0.6
CD_{it}	909	0.1826	0.3865	0	1
MEO_{it}	909	0.2632	0.2456	5.07e-09	0.9842
$INST_{it}$	909	0.1376	0.1256	0	0.7138
$LARG_{it}$	909	0.5794	0.1794	0.0542	0.9972
$PROF_{it}$	909	0.0819	0.1082	-0.5207	0.7967
$SIZE_{it}$	909	19.185	3.3196	11.974	25.568
LIQ_{it}	909	2.2274	21.622	0.0840	651.15

Note: TDR_{it} = total book debt over book value of total assets; $LTDR_{it}$ = long-term book debt over book

value of total assets; STDR_{it} = Short-term book debt over book value of total assets; BS_{it} = Log of board size (total number of directors) ;BC_{it} = ratio of outside directors to total number of board members; CD_{it} = if CEO is also the chairperson of board i.e (CEO duality); MEO_{it} = Managerial equity ownership, ratio of sharers owned by managers and directors to total outstanding shares; $INST_{it}$ = ratio of institutional share ownership to total outstanding shares; $LARG_{it}$ = ratio of five largest shareholders to total outstanding shares (blockholders); $PROF_{it}$ = profit before taxes over book value of total assets; $SIZE_{it}$ = natural logarithm of total assets; LIQ_{it} = book value of current assets over book value of current liabilities.

Table 5.26: Pearson correlation

	TDR_{it}	$LTDR_{it}$	$STDR_{it}$	BS_{it}	BC_{it}	CD_{it}	MEO_{it}	$INST_{it}$	$LARG_{it}$	$PROF_{it}$	$SIZE_{it}$	LIQ_{it}
TDR_{it}	1											
$LTDR_{it}$	0.53***	1										
$STDR_{it}$	0.63***	-0.30***	1									
BS_{it}	-0.05*	-0.06**	-0.007	1								
BC_{it}	0.039	-0.004	0.04	0.14	1							
CD_{it}	0.08**	0.046	0.048	-0.08***	-0.01	1						
MEO_{it}	0.18***	0.07**	0.13***	-0.18***	-0.08***	0.20***	1					
$INST_{it}$	-0.06**	-0.12***	0.03	0.24***	0.39***	-0.16***	-0.34***	1				
$LARG_{it}$	0.06**	0.01	0.06**	-0.03	-0.07**	-0.006	0.09***	-0.11***	1			
$PROF_{it}$	-0.47***	-0.30***	-0.26***	0.14***	-0.02	-0.09***	-0.17***	0.09***	0.12***	1		
$SIZE_{it}$	0.06**	0.19***	-0.10***	0.13***	0.01	-0.002	-0.11***	0.13***	-0.005	0.05*	1	
LIQ_{it}	-0.04	0.05*	-0.10***	-0.01	-0.02	0.06**	0.009	-0.02	0.03	-0.03	0.01	1

***, **, *, Significant at 1%, 5% and 10% level respectively

Note: TDR_{it} = total debt ratio; $LTDR_{it}$ = long-term debt ratio; $STDR_{it}$ = short-term debt ratio; BS_{it} = board size; BC_{it} = board composition; CD_{it} = CEO duality; MEO_{it} = Managerial equity ownership; $INST_{it}$ = institutional ownership; $LARG_{it}$ = large shareholders (blockholders); $PROF_{it}$ = profitability; $SIZE_{it}$ = size; LIQ_{it} = liquidity.

Table 5.27: The effect of explanatory variables on total debt ratio (TDR_{it}) using pooled *OLS* method

Variable	Coefficient	Std. Error	*t*-statistic	Prob.
C	0.356356	0.085304	4.177493	0.0000
BS_{it}	0.056293	0.089995	0.625515	0.5318

BC_{it}	0.075660	0.056128	1.347987	0.1780
CD_{it}	0.010750	0.014466	0.743087	0.4576
MEO_{it}	0.077592	0.024300	3.193061	0.0015
$INST_{it}$	-0.014101	0.051233	-0.275243	0.7832
$LARG_{it}$	0.131238	0.030823	4.257748	0.0000
$PROF_{it}$	-0.841133	0.051883	-16.21198	0.0000
$SIZE_{it}$	0.006073	0.001662	3.654375	0.0003
LIQ_{it}	-0.000570	0.000251	-2.268662	0.0235
R^2	0.268623	Mean dependent variable		0.554909
Adjusted R^2	0.261302	*F*-statistic		36.68767
S.E. of regression	0.163124	Prob. (*F*-statistic)		0.000000

Table 5.28: The effect of explanatory variables on total debt ratio ($LTDR_{it}$) using pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.060866	0.074137	0.820992	0.4119
BS_{it}	-0.050854	0.078214	-0.650190	0.5157
BC_{it}	0.062575	0.048781	1.282781	0.1999
CD_{it}	-0.002756	0.012573	-0.219196	0.8265
MEO_{it}	0.004203	0.021119	0.198999	0.8423

$INST_{it}$	-0.157231	0.044526	-3.531194	0.0004
$LARG_{it}$	0.031778	0.026788	1.186254	0.2358
$PROF_{it}$	-0.425770	0.045092	-9.442301	0.0000
$SIZE_{it}$	0.010782	0.001444	7.465250	0.0000
LIQ_{it}	0.000298	0.000218	1.365455	0.1725
R^2	0.156128	Mean dependent variable		0.189964
Adjusted R^2	0.147680	F-statistic		18.48079
S.E. of regression	0.141771	Prob. (F-statistic)		0.000000

Table 5.29: The effect of explanatory variables on total debt ratio ($STDR_{it}$) using pooled *OLS* method

Variable	**Coefficient**	**Std. Error**	***t*-statistic**	**Prob.**
C	0.295490	0.083154	3.553505	0.0004
BS_{it}	0.107147	0.087727	1.221366	0.2223
BC_{it}	0.013085	0.054714	0.239152	0.8110
CD_{it}	0.013506	0.014102	0.957720	0.3385
MEO_{it}	0.073389	0.023688	3.098173	0.0020
$INST_{it}$	0.143129	0.049942	2.865917	0.0043
$LARG_{it}$	0.099460	0.030047	3.310181	0.0010
$PROF_{it}$	-0.415363	0.050576	-8.212628	0.0000
$SIZE_{it}$	-0.004709	0.001620	-2.906895	0.0037

LIQ_{it}	-0.000868	0.000245	-3.544687	0.0004
R^2	0.116967	Mean dependent variable		0.364946
Adjusted R^2	0.108127	F-statistic		13.23134
S.E. of regression	0.159014	Prob. (F-statistic)		0.000000

Chapter 6

Discussion on empirical findings

6.1 Determinants of capital structure

6.1.1 Financing patterns of Pakistani firms

This section discusses the empirical findings of the study in comparison with prior studies and analyzes them under different theoretical frameworks. Figure 6.1 shows that a non-financial firms' capital structure on average constitutes 58% of the total debt. However, there is a remarkable difference between total debt ratio of firms and the long-term debt ratio. The share of long-term debt in debt financing is 33.64% and short term debt is 66.36% of total debt. In simple terms, a major portion of debt financing comes from short-term borrowings as opposed to long-term. These findings are in line with the findings of other studies like Koksal and Orman (2014); Sheikh and Wang (2011) and Hasan and Butt (2009). Higher ratio of short-term debt suggests that Pakistani non-financial firms rely more heavily on short-term borrowing than long-term. Economist suggests that this phenomenon is not desirable for economic efficiency and financial stability of an economy.

In the case of Pakistan it may suggest the underdevelopment of securities markets have caused long-term loans to be more costly than short term loans. As discussed earlier in section 2.4.4, non-security markets are more developed than securities markets in Pakistan. Hence, like other developing economies, banks are main source of external financing. The non-security markets consists of commercial banks, development financial institutes (DFI), specialized banks and institutes such as agriculture banks, house building finance corporations, and so forth. These non-security market institutions provide medium and long term loans to businesses and other

users. In general, firms in developing countries have limited access to long-term borrowing, therefore, Pakistani firms face the same difficulty. It is probable that limited long-term lending also results from political and economic instability and uncertainty. Thus, in certain cases the only option for firms is to finance their long-term investment with short term borrowings.

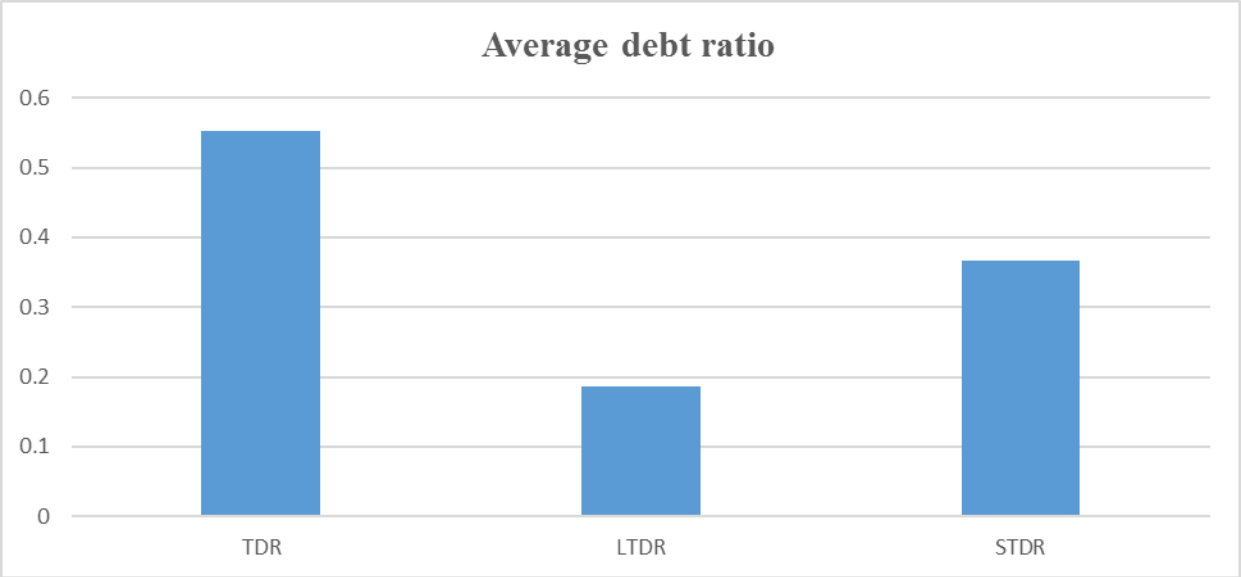

Figure 6.1: Average of firms debt ratios included in sample

Note: TDR = total book debt ratio; *LTDR* = Long-term debt ratio; *STDR* = Short-term debt ratio

Source: Compiled by author based on data used for analysis.

6.1.2 Comparison of debt ratios

The comparison between average leverage ratios (i.e. total book debt ratio, long-term book debt ratio and the short-term book debt ratio) is presented in table 6.1. These debt ratios are compared against the values of G-7 countries reported by Rajan and Zingales (1995) and developing countries values were taken from different studies among the existing literature. The values in table 6.1 show that (i) leverage level varies among countries regardless of the development level, and (ii) Firms in the G-7 countries have more access to the long-term borrowing compared to the

developing countries' firms. However, even though leverage level varies across the firms, the trends in developing economies reveal more reliance of short-term borrowings. This finding endorses the argument about the limited access to long-term borrowing in developing countries' firms. Presumably, the firms in developing countries have the limited access to capital markets as well.

In developing countries based on total liabilities, the total debt ratio varies from a low of 27.2% in Turkey to a high 72.5 % in Iran. The average percentage of long-term borrowing in total debt financing in this study is 33.64% which has fallen from 39.36% from the values reported by Booth *et al.* (2001) between 1980-1987. In comparison with developed economies, the total average debt ratio of Pakistani firms is lower than in the US, Japan, Canada, France, Italy, and Germany, while higher than the total debt ratio of UK firms. Among developing economies, the average total debt ratio of Pakistani firms is lower than the averages in Bangladesh, Iran, South Africa, and South Korean firms. Meanwhile, the average total debt ratio of Pakistani firms is higher than the firms in India, Thailand, Malaysia, and Turkey.

The average long-term debt ratio (i.e. 33.6% of total leverage) of Pakistan is much lower than the ratio of all G-7 countries. In comparison of developing countries we found that Thai firms have highest long-term debt ratio i.e. 29.3% while Turkish firms have the lowest of 6.8%. In the case of Pakistan, Booth *et al.* (2001) reports that the average of long-term borrowing to total debt is 39.64% for the period of 1980-1987; this has fallen to 33.64% of total leverage for the time during 2005-2012. In contrast, the average of short-term borrowing has increased from 60.36% from between 1980-1987 to 66.35% during 2005-2012. This indicates that short-term borrowing, rather than long-term, dominates Pakistani firms' leverage. Short-term borrowing has increased over this period even though total leverage has decreased over the time. This

phenomenon can be observed in Booth *et al.* (2001) where average total debt is 65.6% during 1980-1987 and it average 55.3% during the period of 2005-2012 (see table 6.1).

Table 6.1: Leverage ratios in developed and developing countries

Country	No. of firms	Period	Total debt average	Long-term average	Short-term average
Pakistan[a]	101	2005-2012	55.3	18.6(33.64%)[15]	36.7 (66.36%)
Pakistan[b]	96	1980-1987	65.6	26.0 (39.63%)	39.6 (60.37%)
G-7 countries[c]					
US	2580	1991	58	37	N/A
Japan	514	1991	69	53	N/A
Germany	191	1991	73	38	N/A
France	225	1991	71	48	N/A
Italy	118	1991	70	47	N/A
UK	608	1991	54	28	N/A
Canada	318	1991	56	39	N/A
Developing countries[d]					
Thailand	144	2000-2011	47.5	29.3(61.68%)	18.2(38.32%)
Malaysia	20	1995-2009	44.1	14.2(32.19%)	29.9(57.81%)
Bangladesh	74	2002-2011	60.8	15.8(25.98%)	44.9(73.92%)
Iran	327	2003-2007	72.5	11.2(15.44%)	61.2(84.56%)
South Africa	178	1998-2008	58.6	9.4(16.04%)	49.2(83.96%)
Turkey[e]	9000	1996-2009	27.2	6.8(25%)	20.3(75%)
India[f]	1169	1995-2008	35.5	22.2[*]	N/A
South Korea	43	2000-2010	60.8	16.4(26.97%)	44.4(73.03%)
Sri Lanka	158	2005-2010	N/A	14.5	N/A
Oman	42	1998-2005	49.7	N/A	N/A
Saudi Arabia	41	1998-2005	28.5	N/A	N/A

[15] Values in parenthesis presents the percentage of short-term and long term debt in total debt ratio.

Kuwait	59	1998-2005	34.4	N/A	N/A

Source:
a. Own findings.
b. Findings taken from Booth *et al.* (2001, pp.90).
c. G-7 countries, findings taken from Rajan and Zingales (1995, pp. 1430).
d. Developing countries data taken from descriptive statistics from following country wise studies; Iran, Alipour *et al.* (2015); Bangladesh, Hossain and Hossain (2015); Thailand, Thippayana (2014); Malaysia, Getzmann *et al.* (2014); Turkey, Koksal and Orman (2014); South Korea, Choi *et al*. (2014); Sri Lanka, Wellalage and Locke (2014); South Africa, Ramjee and Gwatidzo (2012); India, Chakraborty (2010); and GCC countries (Oman, Saudi Arabia, Kuwait), Sbeiti (2010).
e. Turkey, Koksal and Orman (2014) this study includes listed and non-listed firms.
f .Long-term debt ratio for India and South Korea are taken from Jong *et al*. (pp.1957,2008).
N/A = Not applicable.

Among other developing economies, the reliance on short-term debt ratio in Pakistan is higher than in Thailand, Malaysia, and Turkey. Moreover, the average short-term debt ratio in Pakistan is lower than in Iran, South Africa, and Korea. Historical patterns of different ratio averages, such as the average of total book debt ratio, long-term debt ratio, and short-term debt ratio in Pakistani non-financial firms, are presented in figure 6.2. The total leverage has shown decreasing trend, but short term borrowing has increased during the period 2005-2012. These trends show that the reliance of Pakistani firms' on short-term debt is possibly due to their limited access to the capital markets or short-term financing drains on capital for long term borrowing. Secondly, due to possible liquidity issues, Pakistani firms rely on short-term borrowing. According to Myers (1977) short-term debt can be useful to control the agency conflict between shareholders and bondholders, i.e. suboptimal investment to expropriate wealth from bondholders. Short term debt has lower agency cost such as bankruptcy cost compared to long term debt. More over low cost and less restrictive covenants of short-term debt firms finance their long term investments on short-term borrowing rather than long-term.

6.1.3 Discussion on explanatory variables

Our empirical findings show that profitability as a factor of capital structure is negatively related to all leverage ratios (i.e. total book debt, long-term debt, and short-term debt ratios) in Pakistan.

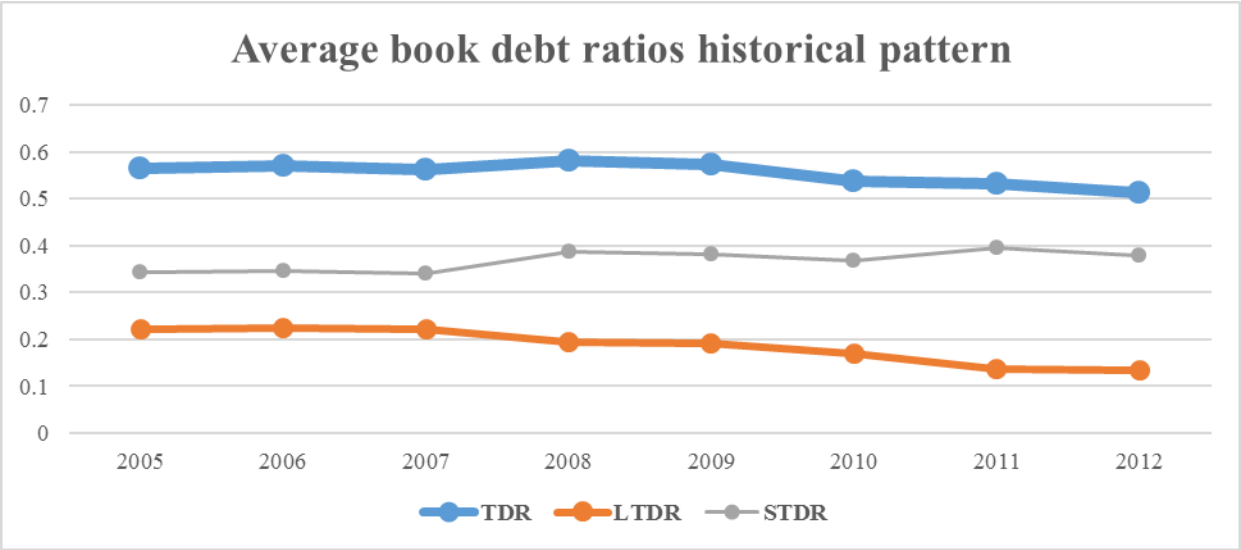

Figure 6.2: Year wise trend of different book value debt ratios

Note: TDR = Total book debt ratio; *LTDR* = Long-term book debt ratio; *STDR* = Short-term book debt ratio. Period (2005-2012)
Source: Compiled by author based on data used for analysis.

These results are in line with the Pecking Order Hypothesis prediction that profitable firms use internally available resources first and borrow less. In contrast, less profitable firms lack internally available funds for investments, thus they issue debt in order to finance these investments. They also follow the pecking-order of issuing debt in case of insufficient internally available funds. Moreover, the limited access to the equity markets may also force the firms in Pakistan to rely on internal funds as source of financing. This may make the managers handle operations in such a way that minimizes the need of debt as external financing.

Empirical results show that firm size has a positive and significant relationship with total debt and long- term debt ratios. The positive significant relationship in Pakistan is congruent

with the trade-off theory predictions, suggesting that larger firms borrow more due to their ability to diversify risk and to gain benefits from tax shield. It is also in the line with the argument that larger firms have higher debt capacity than smaller firms. These results also support the firm size as an inverse proxy for probability of bankruptcy (also see Rajan and Zingales, 1995, pp.1456). The significant negative relation of firm size with short-term borrowing endorses the pecking order, i.e. larger firms may have more internally available funds. They use internal capital to finance short term investments instead of external finances. Contrary to this, if larger firms are facing liquidation problems, they can request banks or lenders to reschedule or extend borrowings.

The liquidity ratio represents the availability of most liquid assets, including cash or things easily convertible into cash. The Pecking Order Theory recommends the use of accumulated cash and other liquid assets as internal sources of financing instead of external funds, thus predicting a negative relationship between leverage and liquidity. Our findings confirm this relationship by showing a negative and signification relation between liquidity and total debt. However, liquidity shows a positive relationship to long-term debt, which is in contradiction with the Pecking Order Hypothesis, though the relation is insignificant.

Generally, predictions of Trade-off theory and agency theory suggest a positive relationship with tangibility and debt. In the findings from the study, long-term debt shows a significant positive relationship with asset tangibility, endorsing the predictions of Agency Theory and Trade-off Theory. It suggests the use of tangible assets as collateral to borrow more. Collateralized borrowing prevents managers from investing sub optimally and ensures the lenders that their funds will not be misused by managers. According to Trade-off model predictions, firms with more visible assets can borrow more to gain tax shields benefits.

However, findings from the study show a negative, insignificant and significant relation with total debt and long-term debt respectively. These findings are consistent with the findings in the Booth *et al*. (pp.105, 2001) study on ten developing economies. They explored the idea that firms with more tangible assets will use more long-term debt, but their overall debt ratio will go down. Consistent with traditional matching reasoning, it implies that firms' should finance long-term assets with long-term liabilities, with the observation that less can be borrowed against long-term assets than from short-term assets (see Booth *et al*., 2001, pp.112).

Moreover, the information asymmetry argument of the Pecking Order Theory predicts a negative relationship between tangibility and leverage. The tangibility of assets is predicted to be negatively related to leverage because the low information asymmetry associated with tangible assets makes equity issuance more attractive (Getzmann *et al.*, 2014, pp.8). The findings of this study also show a significant difference between the long term and short-term borrowings. Moreover, they show that a negative significant relation of tangibility and short-term debt further endorses the Pecking Order Hypothesis, which prefers the use of internal sources of finance rather than external. If this is true, then it can be argued that Pakistani firms have sufficient internal funds available, so they rely on these funds instead of external borrowings. Alternatively, this behavior may predict that banks and other financial institutions are not willing to extend long-term loans due to uncertainty in the market, and prefer short-term lending. Consequently, failure to access long term borrowing may force firms to give up investment opportunities with positive future returns.

Earnings volatility refers to the unstable cash inflow of a firm through its operational activities; in literature it is also considered a proxy for business or operational risk. Generally, there is a prediction of a negative relationship between earnings volatility and firm leverage.

However, the results of the study show the opposite of what is expected. Long-term debt also shows a positive but insignificant relation with earnings volatility. Traditionally, it is assumed that firms with high business risk have low credit-worthiness, and lower debt capacity. The findings are contradictory with this traditional notion; however, they are consistent with the results of existing empirical studies. For instance, Kim and Sorensen (1986) and Hsia (1981) both state that firms with higher business risks or earnings volatility are more dependent on debt instead of less. Similarly, Booth *et al*. (2001) found in their study on ten developing countries that in six economies leverage is negatively related to business risk and in four economies it is positively related.

According to Myers (1984), "Firms holding valuable intangible assets or growth opportunities tend to borrow less than firms holding mostly tangible assets." Similarly, Titman and Wessels (pp.4, 1988) state that " it should also be noted that growth opportunities are capital assets that add value to a firm but cannot be collateralized and don not generate current taxable income." According to the Trade-off Model Hypothesis intangible assets cannot be collateralized to borrow more in order to get the tax shield benefits. Thus, the Hypothesis predicts a negative relationship of growth to leverage. The study findings also show a negative relationship with all measures of leverage. However, the relationship is insignificant in all measures. Moreover, Myers (1977) argues that it is probable that a leveraged firm is more likely to pass up profitable investment opportunities, thus suggesting that growing firms use more equity rather than debt. The findings are consistent with the findings in Alipour *et al.* (2015) and Sheikh and Wang (2011). Moreover, Alipour *et al.* (2015) found a negative but significant relationship of growth opportunities with total debt and long-term debt in their study on Iranian firms in a developing context. Kim and Sorensen (1986) also agree that firms with higher growth opportunities borrow

less.

According to Bolton and Freixas (2000), firm risk and firm age can be used as a proxies for debt capacity. The proponents of the Pecking Order Hypothesis suggest a negative relationship between firm age and leverage. Their argument is based on the notion that older firms may have enough internal resources to finance their investments rather than going for external finance.

One argument can be that the lower probability of bankruptcy in older firms is due to their ability to use internal sources rather than choosing external ones due to agency cost i.e. financial distress. The Thornhill and Amit (2003) study on Canadian corporate bankruptcies suggests that failure among young firms may be attributed to a lack of managerial knowledge and financial management abilities within the firm.

The findings of the study show a negative relationship between firm age and leverage. The relationship is insignificant with short-term debt, but significant with total debt and long-term debt. These results support the prediction of the Pecking Order Theory. These findings also fit the country-specific environment of Pakistan, where less developed bond markets and an uncertain political and economic environment may hinders the firms' access to long-term borrowings. In order to tackle this kind of scenario, firms' may keep a certain amount of capital for their future investment activities. The findings of this study are consistent with the results of Khan (2013); Mac an Bhaird and Luce (2010) and Peterson and Rajan (1994).

In summary, the findings of the study endorse the established argument in the existing literature that MM theorem cannot be held due to various imperfections in the market. For instance the findings of the study explore that profitability, firm size, liquidity, earnings volatility and growth opportunities have significant impact on financing choices of non-financial firms in

Pakistan. And capital structure ultimately effects the firm performance (Sheikh and Wang, 2013 and Abor, 2007). Hence, we can argue that our results are incongruent with the MM theorem propositions. Moreover, results are also similar to the stylized fact explored by earlier empirical studies both on developing and developed economies. The empirical result endorse the hypothesis of conditional theories of capital structure, such as Trade-off, Pecking Order and Agency theory. In general study report mixed findings on determinants of capital structure of non-financial firms functioning in Pakistan. However, the findings strongly suggest that the capital structure models established in the developed countries do have predictive power. Moreover, these models are useful in understanding the financing behavior of developing economies' firms.

The debt ratios of Pakistani firms follow the somehow similar significance pattern of developed economies firms with different explanatory variables. However, some of the results of the coefficients particularly liquidity, tangibility, earnings volatility, and firm age are opposite of what we would assume. One reason for the variation could be the difference of respective economic environments surrounding each firm. For instance, a higher proportion of short-term borrowing signals the lessened development of security markets in Pakistan, and firms have to rely on short-term borrowings by banks to meet their financing target. From this perspective, managers have to be vigilant with long-term investment due to the utilization of sources for the settlement of short-term debt. Moreover, this finding is not unique in case of current study. One can observe the same phenomenon in the findings of studies on other developing economies, as shown in table 6.1. The findings of the study predict that even though Pecking Order Theory assumptions are not stable in the case of Pakistan, compared to other theories, it is more likely to explain the several financing features of non-financial firms listed in Pakistan.

This study didn't include industry classification as a factor of capital structure, as included by several studies such as Harris and Raviv (1991) and Bradley *et al*. (1984). However, figure 6.3, and 6.4 presents the industry wise average long-term debt ratio and short-term debt ratios respectively. Figure 6.3 shows that cement, sugar, textiles and paper, and board sectors have higher long-term borrowing proportions among various industrial sectors of Pakistan. Cement, paper, and board sectors are also highlighted as higher long-term debt ratio industrial sectors by Harris and Raviv (1991). Moreover, figure 6.4 shows that cement, sugar, and chemicals have lower short-term debt ratio among other industrial sectors, whereas the fuel and energy industries heavily rely on short-term borrowings.

6.1.4 Comparison of empirical results with prior studies

The finding of this study were compared with results from existing empirical literature in order to provide a clearer and more meaningful understanding of the factors affecting capital structure. The purpose is to understand whether the variables that affect the financing choices of Pakistani non-financial firms are similar to those that are identified in developed and other developing economies. The comparison of the empirical findings along with the theoretical predictions of Trade-off theory and Pecking Order Theory are presented in table 6.2. The results of this study are compared with the finding of G-7 countries reported by Rajan and Zingales (1995). Results from developed countries were taken from various studies on developed economies data, including Bessler *et al*. (2011); Frank and Goyal (2009); Deesomsak *et al*. (2004); Fama and French (2002); Wald (1999); Titman and Wessels (1988); Kim and Sorensen (1986); and Bradley *et al*. (1984). Results taken from developing economies are adopted from the findings of Booth *et al*. (2001) on ten developing countries included in their study. Moreover, findings of

different developing economies are taken from Bangladesh, Hossain and Hossain (2015); Iran, Alipour *et al.* (2015); South Korea, Choi *et al*. (2014); Sri Lanka, Wellalage and Locke (2014); Thailand, Thippayana (2014); Malaysia, Thailand, Australia and Singapore from, Getzmann *et al.* (2014); Turkey, Koksal and Orman (2014); South Africa, Ramjee and Gwatidzo (2012); India, Chakraborty (2010) and GCC countries (Oman, Saudi Arabia and Kuwait), and Sbeiti (2010).

The comparison presented in table 6.2 shows that most of the factors' show the same results as reported by other studies on developing and developed economies, thus suggesting that these factors have strong explanatory powers to understand the capital structure of the firms.

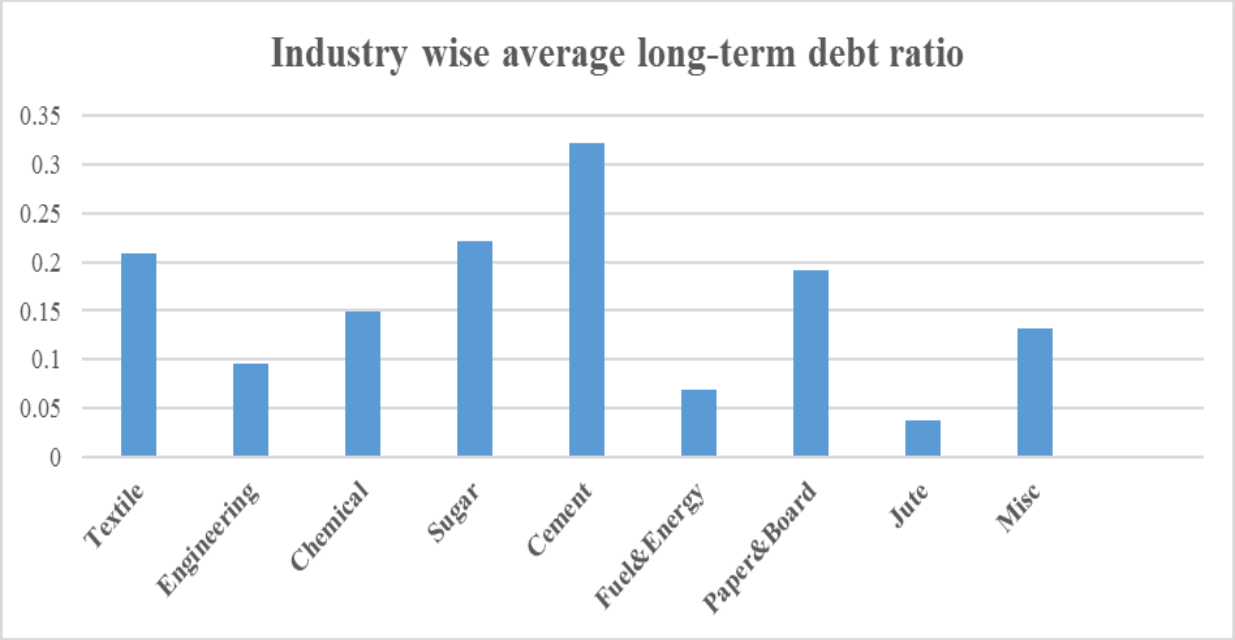

Figure 6.3: Industry wise average long-term debt ratio of data sample

Source: Compiled by author based on data used for analysis.

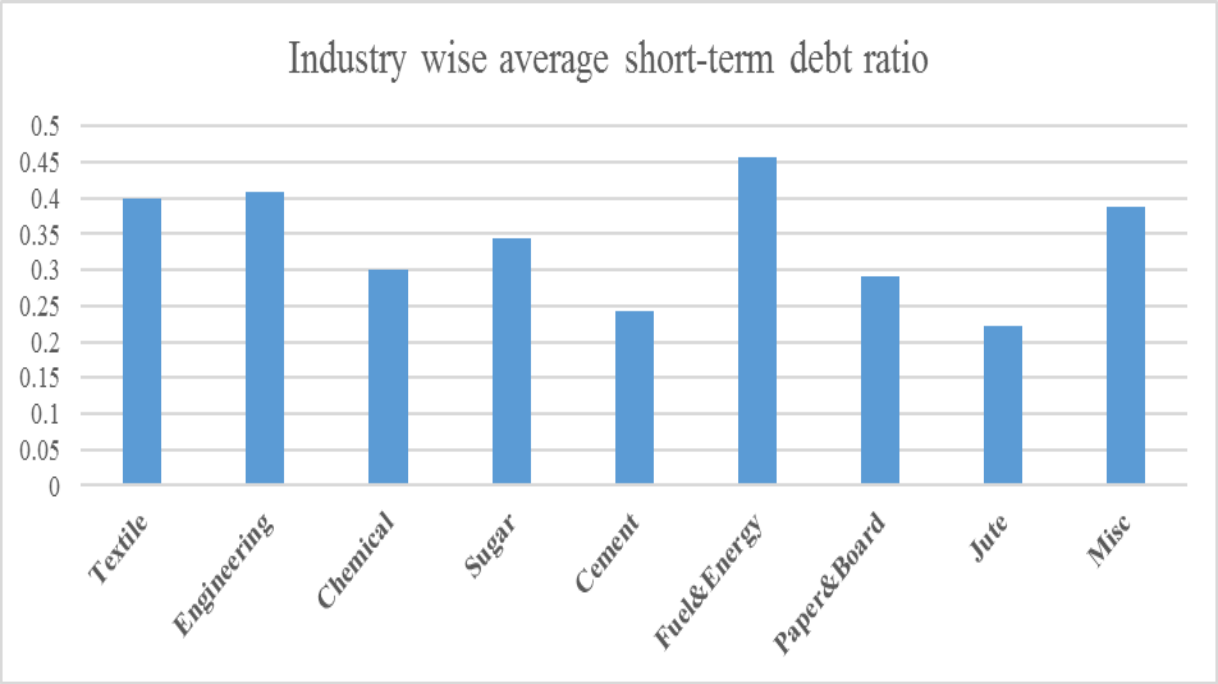

Figure 6.4: Industry wise average short-term debt ratio of data sample

Source: Compiled by author based on data used for analysis.

Table 6.2: Comparison of findings with existing studies

Factors	Trade-off theory	Pecking order theory	G-7 countries	Developed countries	Developing countries	Pakistan
Profitability	Positive	Negative	Negative	Negative	Negative	Negative
Firm size	Positive	Negative	Positive/ Negative	Positive	Positive/ Negative	Positive
Liquidity	Positive	Negative	N/A	Negative	Negative	Negative
Tangibility	Positive	Negative	Positive	Positive	Negative / Positive	Negative
Earnings volatility	Negative	Negative	N/A	Negative/ Positive	Positive / Negative	Positive
Growth opportunities	Negative	Negative/ Positive	Negative	Negative / Positive	Positive/ Negative	Positive
Firm age	Positive	Negative	N/A	N/A	N/A	Negative

Note: 1. Trade-off and pecking order theory predictions about factors of capital structure, except

firm age are taken from, *Bessler et al. (pp.23, 2011).*

2. G-7 countries findings are taken from Rajan and Zingales (1995). They used the data of US, UK, Japan, Germany, Italy, France and Canadian firms. Most of the findings have significant relationship with leverage, as mentioned in the table, with some exceptions. Such as, Profitability is positively related to leverage in German firms but relationship is insignificant. Only French firms have negative relation and insignificant relation between profitability and leverage, compared to other countries. Firm size has negative significant relationship with leverage, only in German firms. Firms in France and Italy have a positive but insignificant relation of firm size with leverage. Moreover, Italian firms shows a positive but insignificant relation of leverage with tangibility. Finally, Japanese firms show a negative but insignificant relationship between growth and leverage.

3. Results related to developed countries are taken from different sources. Such as Frank and Goyal, (2009); Deesomsak *et al*., (2004); Fama and French, (2002); Wald, (1999); Titman and Wessels, (1988) Kim and Sorensen (1986); and Bradley *et al*. (1984).

4. Findings of developing countries are taken from Booth *et al.* (2001). Their findings were based on the data of Brazil, Mexico, India, South Korea, Jordan, Malaysia, Pakistan, Thailand, Turkey and Zimbabwe. Moreover, results of individual countries are also taken from following studies. Bangladesh, Hossain and Hossain (2015); Iran, Alipour *et al.* (2015); South Korea, Choi *et al*. (2014); Sri Lanka, Wellalage and Locke (2014); Thailand, Thippayana (2014); Malaysia Thailand, Australia and Singapore from, Getzmann *et al.* (2014); Turkey, Koksal and Orman (2014); South Africa, Ramjee and Gwatidzo (2012); India, Chakraborty (2010) and GCC countries (Oman, Saudi Arabia and Kuwait), Sbeiti (2010) .

5. The study also acknowledge that different studies used different proxies of leverage with different computations. The purpose of comparison is to explore the overall behavior of the firms in different countries.

6. In case of Pakistan results are the findings of this study.

7. N/A = Not Applicable

6.2 Ownership structure and capital structure

The complexity of the ownership structure and various agency conflicts has been highlighted in several dimensions of corporate finance. Similarly, the role of owners and their relation to control and future financing for investment in the firms has been in the spotlight and provides mixed findings. However, the literature supports the significance of the ownership structure on various sources of finances. As additional evidence to the argument, this section discusses the empirical finding related to the role of ownership structure on capital structure of non-financial firms listed in Pakistan. First, this section provides the year-wise average proportion of three ownership variables for total data sample, which are presented in figure 6.5. It shows that the managerial ownership proportion has slightly increased from 2004 to 2012. In contrast the institutional ownership proportion shows a declining effect. Finally the presence of block-holders shows uniformity throughout the aforementioned period. Moreover, the sector-wise average proportion of three ownership holdings in the total data sample is given in figure 6.6.

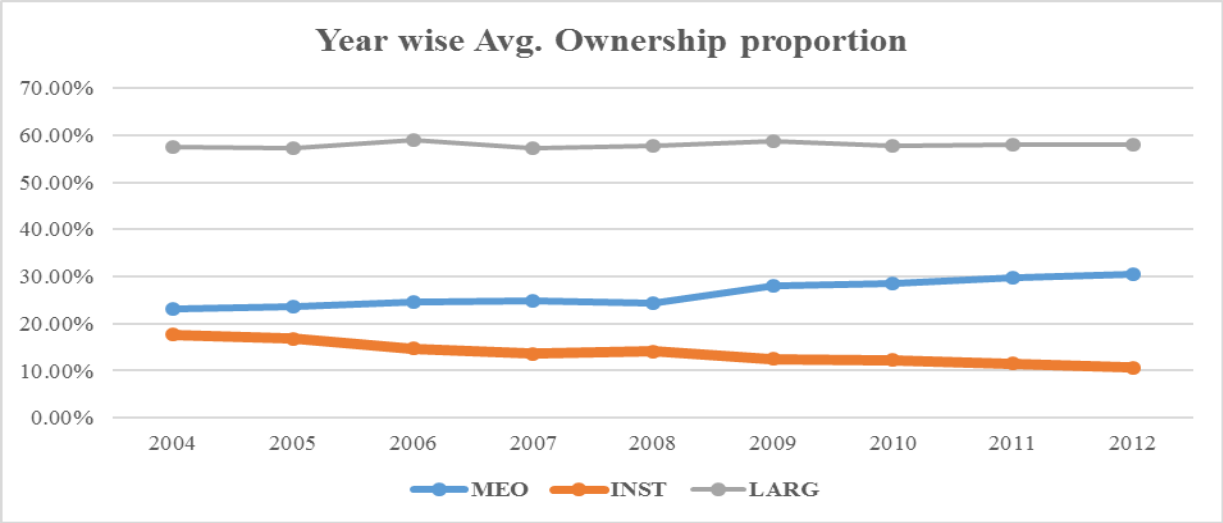

Figure 6.5: Year wise average proportion of MEO, INST and LARG.

Source: Compiled by author based on data used for analysis.

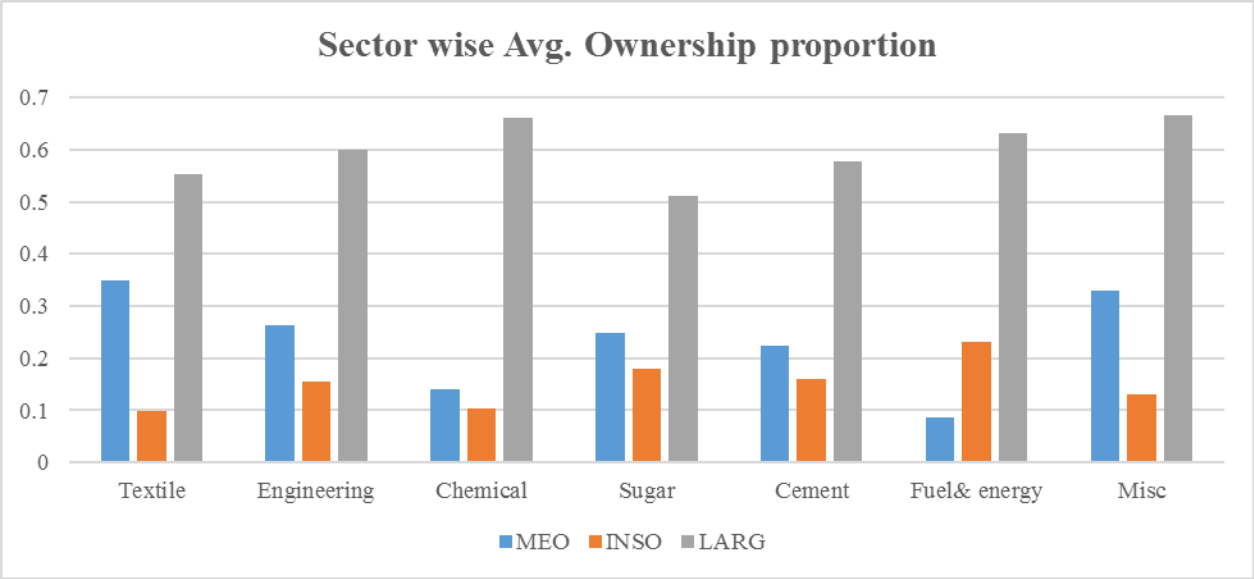

Figure 6.6: Sector wise average proportion of MEO, INST and LARG.

Source: Compiled by author based on data used for analysis.

The sector wise average shows that managerial equity ownership is lowest in fuel and energy sector, and highest in textile sector while institutional shareholdings is lowest in textile and highest in fuel and energy sector. Finally, in all sectors, the five largest shareholders on average own at least 50% shares.

6.2.1 Comparison of ownership proportion

The proportion of the managerial equity ownership, institutional shareholdings, and block-holders (a proportion of the five largest shareholders) are the mean values of each proportion, taken from the aforementioned studies (see sources of table, 6.3). The primary purpose is to compare the proportion of Pakistani firms with other countries, particularly developing economies. Table 6.3, shows that on average the manager and director own 26% of outstanding shares of the firms used in this study. Institutional shareholders on average own 13% shares and 57% are owned by block-holders (the five largest shareholders). In comparison with other

countries, the equity ownership by various players is random. For instance, Bangladeshi firms have higher proportion of managerial equity and institutional shareholdings than Pakistani firms. In comparison with these specific studies, in a majority of countries the proportion of managerial ownership is higher than the proportion of institutional shareholder ownership, except in Iran and Egypt. The comparison also shows that ownership concentration is higher in Pakistani firms. This phenomenon endorses the Shleifer and Vishny (1996) argument that ownership concentration is more likely to occur when small investors do not have legal rights to secure a return on their investment.

Table 6.3: Ownership proportion comparison with other countries

Country	Period of study	No. of firms	Managerial equity	Institutional ownership	Blockholders
Pakistan*	2004-2012	101	26.32	13.76	57.94
Bangladesh	2001-2011	110	40.2	18.3	N/A
Iran	2006-2010	140	N/A	54.25	N/A
Egypt	2000-2004	92	11.4	35.6	N/A
Korea	2000-2003	301	36.60	31.34	40.84
Zimbabwe	2000-2005	257	3.2	N/A	42.2
China	2001	548	40	27.92	20.42
Australia	1989-1995	49	10.65	N/A	43.28
Singapore	1995-1996	147	22	N/A	62

Note: Average percentage managerial ownership, institutional shareholdings and blockholders are the mean values of these variables taken from the descriptive statistics of following studies. The purpose is only to compare the proportion and trend of shareholdings in different countries. These values doesn't present the general applicability, these measures are representation of each

specific period of individual study, based on the same measurements that are similar to this study. *Pakistan (own study; Bangladesh, Rashid (2015); Iran, Emamgholipour *et al*. (2013); Egypt; Elsayed and Wahba (2013); Korea South, Choi et al. (2012); Zimbabwe, Managena *et al*. (2012); China, Choi *et al*. (2011); Brailsford *et al*. (2002); Singapore, Mak and Li (2001).

6.2.2 Debate on explanatory variables

The effects of each explanatory variable have been regressed against each proxy of leverage i.e. total and long-term debt ratio. Managerial equity ownership has a positive relationship with both proxies of leverage; however this is only significant concerning the total debt ratio. Moreover, managerial equity ownership shows a significant relationship with total debt ratio. Institutional shareholdings show a negative relationship with total debt and long-term debt; however, the relationship is only significant with long-term debt. In the presence of other explanatory variables, institutional shareholdings show a positive insignificant relationship with total debt and a negative significant relationship with long-term debt. Finally, block-holders i.e. ownership concentration show a positive and significant relation with both the proxies of leverage, individually and with other explanatory variables as well.

Based on the literature review presented in chapter 3 of this study, table 6.4 summarizes the possible effects of managerial ownership, institutional shareholdings, and ownership concentration patterns on the choices of capital mix. In general, the Principal-Agent Theory explores a positive relationship between managerial shareholdings, concentrated ownership, and debt. Alternatively, it predicts a negative relationship between institutional shareholders and debt against managerial opportunism and entrenchment (see Brailsford *et al*., 2002; Berger *et al*., 1997; Firth, 1995; Friend and Lang, 1988 and Jensen and Meckling, 1976)).

The positive relationship between the managerial equity ownership with leverage suggests a decrease in agency cost that undermines the interest alignment of the hypothesis of

Jensen and Meckling (1976). This means that managerial opportunism decreases when agents becomes the residual claimants.

Table 6.4: Relationship between ownership, control and leverage

Control	*Managerial shareholdings*	*Institutional shareholdings*	*Blockholders (Ownership concentration)*
Strong	**I.** There is no *a priori* mechanism to endorse that managerial shareholding may reduce or fuel "*managerial opportunism*". Also there is no clear-cut explanation how it encourages or discourages managers to prefer debt (leverage) or equity (to avoid the risk of bankruptcy).	**II.** Institutional shareholders may not support the use of higher debt, due to agency costs (bankruptcy) of debt. As it will affect their performance. In the absence of creditors monitoring managers may behave more opportunistically. There is no a *priori* explanation for it, or effective monitoring by institutional owners.	**III.** While the concentrated ownership may reduce the agency cost, it may encourage the managers to increase ROE through leverage. However, the reduction in managers' shirking would possibly reduce the borrowings (there is no *a priori* mechanism to explain the relationship). Also, there is no clear-cut explanation how the leverage may lead to higher risk of bankruptcy.
Weak	**IV.** Managers with fewer incentives under the diffused ownership structure may involve in severe "shirking" to utilize the corporate sources for their own perks and privileges. But, debt providers can play the role as monitors to reduce the managerial opportunism.	**V.** Institutional shareholders may have to bear extra monitoring cost to control the managerial opportunism. Or they can rely on creditors monitoring and support the use of debt and become the "free riders" while preserving their institutional resources for their own performance.	**VI.** Diffused ownership may encourage the minor shareholders to become "free-riders" on monitoring, resulting in increasing the agency cost. But, debt providers can play the role as monitors to reduce the managerial opportunism.

Source: Author based on the concept explained in (Khan and Suzuki, 2015).

They use the debt to increase the ROE that maximizes their wealth as well as that of other shareholders'. These results are consistent with the empirical findings of Khan and Suzuki

(2015); Short *et al.* (2002); Berger *et al.* (1997) and Kim and Sorensen (1986). Moreover, studies by Ruan *et al.* (2011) and Brailsford *et al.* (2002) explored a positive relationship between low level of managerial equity ownership and firm leverage. The studies of Ruan *et al.* (2011) and Brailsford *et al*. (2002) empirically explore the idea that after certain level of ownership managerial equity shows a negative relationship with leverage. Moreover, Hasan and Butt (2009) find that managerial equity ownership has negative and significant relationship to leverage based on the data of 58 firms listed in Pakistan during the period of 2002-2005.

However, unlike these studies, this study also explores, to what extent agency conflicts between institutional ownership and concentrated ownership affect the capital structure. Both ownership patterns are presumed to be extra monitoring mechanisms to minimize the agency conflicts between principals and agents. The proponents of the Active Monitoring Hypothesis suggest that institutional shareholders use their expertise in order to protect their vested interest and closely monitor the firms' activities (see Jensen, 1986 and Shleifer and Vishny, 1986). This study's findings show that institutional ownership has a positive insignificant relation with total debt and a negative insignificant relationship with other ownership patterns. It also indicates a negative and significant relationship with long-term debt both individually and in group. This negative relationship suggests that active institutional monitoring minimizes agency cost by reducing the number of managers shirking responsibilities. This results in the availability of sufficient internal funds and less reliance on external funds. Secondly, the institutional shareholders are then less likely to support debt financing due to probable bankruptcy. A handful of existing studies have explored this relationship. Our findings are consistent with the findings of Huang *et al.* (2011) but are opposite to the findings of Hasan and Butt (2009) who found a positive but insignificant relationship between institutional shareholders and debt to equity ratios.

However, the CCG fails to articulate the role of institutional shareholders as prudent monitors in the governance mechanism due to the significance of these shareholders on financing choices within the firms.

Finally, the ownership concentration or presence of block-holders emerges as the most effective ownership pattern to minimize principal-agent conflicts. Empirically block-holders show a positive and significant relationship with both the proxies on leverage, individually and with other patterns of ownership. The findings also highlight that block-holders are the most significant ownership mechanism that affect the financing choices of Pakistani firms. These findings are consistent with the argument of Stiglitz (1985) which states that the concentrated ownership (block-holders / large shareholders) have enough incentives to control and monitor the managers due to their ample stake in the firm. It also predicts that they should bear higher monitoring costs due to the "limited diversification" in their portfolio. This higher monitoring cost results from collecting adequate and effective information. Block-holders have incentives to bear such costs, which can prevent the managerial opportunism and excessive perquisites, which in turn can contribute to shareholders wealth. However, in this case minority shareholders can *free ride* on the efforts of large shareholders.

Moreover, this study's results also endorse the La Porta *et al.* (1998) findings related to agency conflict in developing economies. They point out that, in general, developing economies are more prone to agency problems due mainly to weak institutional, legal and regulatory frameworks. Under the alleged patronage-client network, there is an atmosphere of not letting major listed firms go under that is typically observed in developing countries. Large shareholders with political and economic power may insist on leverage to seek higher returns on equity while maintaining their majority in shareholding. The positive relationship between block-holders and

leverage is in line with the findings of studies such as Sun *et al.* (2015); Brailsford *et al.* (2002); Berger *et al*. (1997); Firth (1995) and Friend and Lang (1988).

Finally, in order to have a comparative view, findings of the study are compared with the existing studies. Due to limited research that includes all three ownership patterns, the findings are compared with studies that include either one or two ownership variables. Table 6.5 presents the comparison of these studies. The comparison shows the findings are consistent with the findings of other countries, mostly those with developing economies. For instance, managerial ownership shows a positive relationship with debt. This finding is different than those found in other developing countries, but similar with the UK. However, institutional shareholdings and ownership concentration show a similar pattern with other developing countries' findings. These results suggest that these two ownership patterns are more effective to minimize agency conflicts such as managerial opportunism and managerial entrenchment in Pakistan. Moreover, ownership structure has a significant effect on capital structure choices of non-financial firms up to certain extent.

Table 6.5: Comparison with other studies

Country	Managerial equity ownership	Institutional shareholders	Large/Blockholders
Pakistan	Positive	Negative	Positive
Bangladesh	Negative	N/A	Positive
India	N/A	N/A	Positive
Egypt	Negative	N/A	N/A
China	Negative	Negative	N/A
Australia	Negative	N/A	Positive
U.K	Positive	N/A	Negative

Source: Compiled by author based on the literature review.

6.3 Corporate governance and capital structure

6.3.1 Corporate governance development in Pakistan

The government of Pakistan has taken several steps towards the improvement of corporate governance mechanisms, particularly after the opening of the secondary market to foreign investors on an equal basis with domestic investors in 1991. However, in comparison with developed economies firms, Pakistani firms still struggle with weak internal and external corporate governance mechanisms. In order to make a prominent step to ensure fair corporate practices, the SECP was established as an autonomous regulatory body in 1999. The SECP introduced the first CCG in the country on the 28th of March, 2002. The CCG was established to develop a modern and efficient corporate sector, stable capital markets, and a sound regulatory framework that can contribute to the economic growth of the country. The CCG ensures the implementation of a system that can address the principal-agent agency conflicts by ensuring the control of companies stays within the hands of directors. The directors ensure the compliance of best practices and protect the interests of diversified shareholders.

Based on internationally accepted principles of transparency, openness, and accountability in the listed firms, the SECP has adopted the OECD Principles of Corporate Governance and is continuously working on the improvement of the CCG. The primary provisions are relevant to board size, the representation of outside/independent directors, CEO duality, the qualification of board members, and the quality of financial reporting. In CCG (2002) it was not mandatory for the firms to appoint the outside directors as board members, separate the position of CEO and board chairman, train boards, and so forth. The CCG was revised in 2012 in order to continue improving the system. A part from other basic provisions, the new CCG enacted a mandatory representation of independent/outside directors, separation of

CEO, and provisions for choosing a board chairperson, board training, and evaluative frameworks. It is assumed that the scrutiny of the CCG based on the findings of this study will articulate further recommendations for the prudent practices of corporate governance in Pakistan.

6.3.2 Shareholdings pattern in Pakistan

Table 6.6 presents the year wise average shareholdings of various shareholders for the firms used in this study. The data sample's average shareholdings patterns show that the largest shareholders of the Pakistani non-financial listed firms are individuals from the *general public*, holding on average 32.60% of the shares. CEOs, directors, and their family members emerge as the second largest shareholders with an average share ownership of 29.71%. Other companies are the third largest shareholders with share ownership of an average 23.5% of outstanding shares. Figure 6.7 shows the average shareholdings of Pakistani non-financial firms. Moreover, financial institutes own 13.72% of shares on average in non-financial firms.

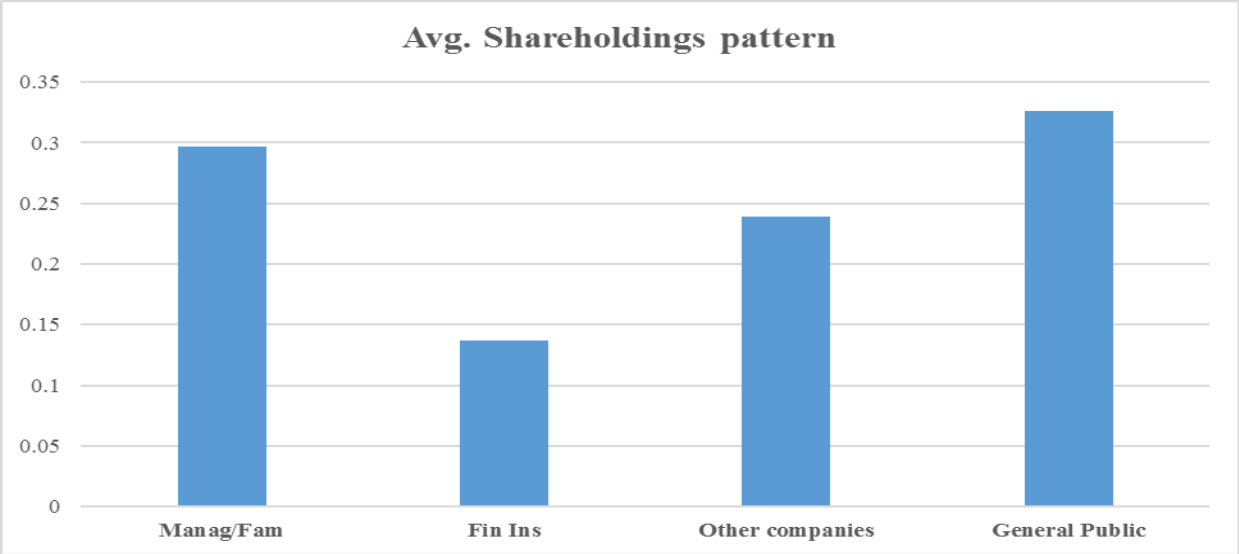

Figure 6.7: Average shareholdings pattern of the firms included in sample

Source: Compiled by author based on data used for analysis.

Table 6.6: Year-wise average shareholdings pattern (N=101)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	Mean N=9
a.**Managers & Directors**	23.13%	23.6%	24.47%	24.73%	24.22%	28.19%	28.66%	29.78%	30.45%	26.35%
b.**Family members**	5.17%	4.73%	4.30%	3.91%	3.69%	2.09%	2.14%	1.96%	2.18%	3.35%
c.**Total (*a*-*b*)**	28.30%	28.33%	28.77%	28.64%	27.91%	30.28%	30.80%	31.74%	32.63%	29.71%
d.**Bank's shares**	8.16%	7.69%	5.55%	4.93%	5.33%	6.28%	6.32%	5.51%	4.30%	6%
f.**Insurance companies**	2%	1.70%	1.70%	1.65%	1.72%	1.60%	1.71%	1.49%	1.33%	1.6%
g.**Modarbah companies**	0.6%	0.6%	0.7%	0.5%	0.6%	0.8%	0.9%	1.24%	2.36%	0.9%
h.**Investment companies**	6.91%	6.83%	6.71%	6.37%	6.36%	3.66%	3.06%	3.22%	2.66%	5.08%
i.**Total (*d*-*h*)**	17.70%	16.83%	14.75%	13.54%	14.07%	12.40%	12.06%	11.48%	10.67%	13.72%
j.**Other companies**	20.76%	21.2%	21.92%	22.40%	23.88%	26.75%	26.75%	25.75%	26.14%	23.95%
k.**General Public**	33.22%	33.6%	34.54%	35.39%	34.11%	30.59%	30.41%	31.04%	30.58%	32.60%
Grand total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Compiled by author based on data used for analysis.

6.3.3 Debate on empirical results

The board size as a proxy for the number of directors on a company's board shows a positive and negative relation to total and long-term debt respectively. However, the relationship is insignificant. This relationship may suggest, up to the time period of this study that board structures and processes in Pakistani listed firms are not working in the manners assumed by the financial theoretical literature in West. The positive relationship endorses the findings of resource dependency theory. The negative relationship with long-term debt is in line with the findings of Lipton and Lorsch (1992) who suggest a smaller board size. However, in the case of Pakistani firms, the relation with different proxies of leverage highlights the characteristics of the surrounding environment. For instance, descriptive statistics in table 5.27 show that a major portion of debt financing speaks more of short-term debt and less of long-term debt. In such a

case, in the light of resource dependence models, the large size of board can help firms to procure resources from their surrounding environments. These findings are consistent with studies such as Sheikh and Wang (2012); Bokpin and Arko (2009) and Abor (2007). Moreover, Kyereboah-Coleman and Biekpe (2006) reported a positive relationship between board size with total and short-term debt. Wen *et al*. (2002) reports a positive but insignificant relationship between board sizes with leverage.

The board composition (the presence of independent/outside directors on the board of a firm) shows a positive relationship with all the proxies of leverage. However, the relationship is less significant. The positive relationship predicts that independent/outside directors can more actively monitor the management of activities. This active monitoring results in the maximization of shareholder wealth. Additionally, the presence of independent and outside directors increases the credibility of firms to borrow more on favorable terms to avail tax savings benefits. In the CCG (2002) the presence of independent board was not mandatory, in the new revised CCG (2012) it is mandatory to have the presence of independent directors on a firm's board. The positive association of board composition with leverage is in line with the results of Sheikh and Wang (2012); Abor (2007); Anderson *et al*. (2004); Berger *et al*. (1997) and Pfeffer (1972).

The CEO has the executive power for managing the business activities of the firm, while the chairman is in charge of the board activities. CEO duality refers to the phenomenon where the CEO of the firm also chairs the board. Proponents of agency theory support dual leadership i.e. separation of CEO position and board chairmanship to minimize the agency conflicts, by separating the decision management and control. CEO duality weakens the board of directors monitoring, control, and accountability. In contrast, the resource dependency model and

stewardship theory support CEO duality. These models predict that CEOs as stewards can take care of firms sources more effectively. In this study, CEO duality show a positive and insignificant relationship with total debt and shows a negative and insignificant relationship with long-term debt. Very few other studies have analyzed the association of CEO duality and capital structure, but those that did reported mixed results. Fosberg (2004) investigated the positive but insignificant relation between dual leadership structure and capital structure in US firms. This study's results are in line with the findings of Bokpin and Arko (2009) who also explored the positive but insignificant relationship of CEO duality with firm leverage. This positive relationship predicts the entrenched behavior of CEOs, who prefer to finance firm investments with debt rather than new equity.

Managerial ownership shows a positive and significant relationship with total debt. On the other hand, it is negatively related to long-term debt. The positive relationship is in line with Jensen and Meckling (1976) and their interest alignment hypothesis. This finding predicts that a certain proportion of ownership level managerial equity ownership in Pakistani firms can be helpful to mitigate the agency conflicts. Moreover, managers will use debt to maximize their shareholders' wealth. Moreover, findings endorse the Grossman and Hart (1982) predictions that a use of debt can minimize manager perquisites. This study's findings are consistent with the results from Khan and Suzuki (2015); Short *et al.* (2002); Berger *et al.* (1997); and Kim and Sorensen (1986). Moreover, the findings of the study are incongruent to the results of Hasan and Butt (2009).

A handful of studies have explored the relation of institutional shareholdings and leverage. It is assumed that institutional shareholders may not support debt financing. The agency cost of debt will have a negative effect on the performance of their own institution or

firm. It is assumed that institutional shareholders, with their expertise and active monitoring, can save internal sources for financing by minimizing managerial opportunism. Similar to the findings of this study, Hussainey and Aljifri (2012) and Huang *et al.* (2011) reported a negative relationship between institutional ownership and firm leverage.

Ownership concentration or the presence of block-holders is positively related to all debt ratios. The relationship is significant, except with long-term debt. The Block-holders mean value, shown in descriptive statistics (table 5.25) shows that the five largest shareholders own about 57% of outstanding shares. These values and regression results predict that Pakistani firms have higher ownership concentration, and block-holders have more power to affect the capital structure decisions. Block-holders prefer debt to minimize managerial opportunism. These findings undermine the La Porta *et al.* (1998) findings, which state that firms in countries with weak investor protection have higher ownership concentration. Similarly, Shliefer and Vishny (1986) support the presence of block-holders for strong shareholders monitoring. They states that the absence of block-holder monitoring may inflate managerial opportunism in the firm. The study's findings are consistent with the findings of Sun *et al*. (2015); Sheikh and Wang (2012); Brailsford *et al.* (2002); Berger *et al*. (1997); Firth (1995) and Friend and Lang (1988).

Profitability shows a negative and significant association with all proxies of leverage. Liquidity also shows a negative and significant relationship with total and short-term debt. However, it is positively related to long-term debt. The relationship between profitability and liquidity endorses the Pecking-order Hypothesis, which recommends the usage of internally available funds for financing rather than externally available ones. Additionally, it can also be assumed that a higher cost of raising funds and relatively less developed equity markets may also encourage firms to rely on internal funding. Empirical results are similar to the findings of

Alipour *et al.* (2015); Khan (2013); Sheikh and Wang (2012); Jong *et al*. (2008); Booth *et al*. (2001) and Rajan and Zingales (1995).

Finally, firm size shows a positive significant relationship with total and long-term debt and a negative relationship with short-term debt. The positive relationship is in line with the expectations of the trade-off model. This result suggests that larger firms with their ability to diversify risk rely on debt as a source of financing. These results are in line with the findings of Alipour *et al.* (2015); Khan (2014); Sheikh and Wang (2012) and Booth *et al.* (2001).

The result of internal attributes of corporate governance suggest that board size, board composition and CEO duality still have a limited impact on the effective governance mechanism in the country. These findings predict the naïve adoption of OECD Principles of corporate governance. The SECP, in following the guidelines of OECD, must consider the unique features of the local environment for the further improvement of the CCG. For instance, the unique financing features of Pakistani firms predicts the effective role of managerial ownership, large shareholders and institutional shareholders on financing choices of the firms, which can also influence the governance mechanism of the firms. Therefore, SECP's reliance on board size, board composition, and CEO duality for the corporate governance mechanism in Pakistan would be futile.

6.3.4 Comparison with prior studies

In order to make a meaningful comparison, the results of the study were compared with the empirical findings reported in existing literature. The purpose is to compare the behavior of different countries' firms in relation to corporate governance with capital structure. Therefore, the computation of leverage and significance of relationship has been ignored. Results from

developed economies' firms have been take from the findings from following studies: Fosberg (2004); Berger *et al*. (1997); Mehran (1992); Friend and Lang (1988) and Kim and Sorenson (1986). The findings from individual countries were taken from the findings of Qadir *et al.* (2015); Gill *et al*. (2012); Kajananathan (2012); Heng and Azrbaijani (2012); Vakilifard *et al*. (2011); and Bokpin and Arko (2009). The comparison is given in table 6.7.

Table 6.7: Comparison with other empirical studies

Countries	Board size	Board composition	CEO duality	Managerial ownership	Institutional shareholdings	Blockholders
Pakistan	Positive	Positive	Positive	Positive	Negative	Positive
Kenya	Positive				Positive	
India	Positive		Positive			
Iran	Negative	Positive	Positive			
Sri Lanka	Positive	Positive				
Malaysia	Negative	Positive	Negative			
Ghana	Positive	Negative	Positive	Positive		
Developed countries	Positive / Negative	Positive	Positive	Positive/ Negative		Positive

Note: Pakistan, Own findings, overall observation will all debt ratios; Kenya, Qadir *et al.* (2015); India, Gill *et al*. (2012); Sri Lanka, Kajananathan (2012); Malaysia, Heng and Azrbaijani (2012); Iran, Vakilifard *et al*. (2011); Ghana, Bokpin and Arko (2009); Developed countries, (Fosberg 2004; Berger *et al*. 1997; Mehran 1992; Friend and Lang 1988 and Kim and Sorenson 1986). The comparison is done to observe the overall behavior, and ignored the proxies of leverage and significance of relationship used in each individual studies.

The empirical results of the study indicate the significance of the internal attributes of corporate governance on capital structure choices of non-financial listed firms in Pakistan. Comparatively, the attributes of corporate governance show similar behavior as reported in other studies, but with lower significance. Data from 2004-2012 has been analyzed after the

introduction of the first CCG in 2002. Managerial equity ownership and block-holders tend to encourage leveraging. These findings suggest that they may exploit minority shareholders to protect their interests. This signals less prudent practices of corporate governance. Moreover, institutional shareholders roles are limited by the guidelines of the CCG, even though they effectively mitigate agency conflicts. The impact of internal attributes on corporate governance such as board size, board composition, and CEO duality are still limited in Pakistan. The less prudent practice of corporate governance and the development and revision of the CCG in Pakistan showcase the naive adoption of OECD principles in the country. Therefore, it is assumed that further improvement and revision of the CCG is required to explore the unique features of corporate finance in Pakistan.

6.4 Summary

The empirical findings of the study along with the comparisons between existing studies have been discussed in this chapter. Initially, the findings of the study show that short-term debt dominates long-term debt in the financing patterns of firms. These patterns are similar to the patterns that exist in other developing economies, but it contrasts with the financing patterns of developed economies' firms where long-term debt dominates short-term debt. The empirical findings show that profitability, liquidity, and tangibility have negative correlations; while firm size, earning volatility, and firm age are positively related to total debt. In contrast, profitability, growth, and firm age are negatively related; whereas size, liquidity, tangibility and earning volatility are positively related to long-term debt. Additionally, these findings have been compared with other studies on developed and developing economies.

The second section discussed and compared the results from the impacts of ownership

structure on capital structure. The results show that the five largest shareholders own more than 50% of outstanding shares of non-financial firms, which is a more or less similar phenomenon in developing countries. Moreover, active larger shareholders are more capable of reducing managerial opportunism. These findings endorse the La Porta *et al*. (1998) argument about weak investor protection in developing economies. Moreover, results indicate that institutional shareholders can also mitigate the principal-agent conflict.

In the third and final section, the findings on the relation of corporate governance and capital structure were explained. Results show that board size, independent directors, CEO duality, managerial equity ownership, and block-holders are positively related to total debt and short-term debt ratio. On the other hand; excluding board size, CEO duality, and institutional shareholdings, all other variables are positively related to long-term debt. The overall result shows that attributes of corporate governance behave according to the theoretical assumption of agency and resource dependence model.

Chapter 7

Conclusion, limitations and future recommendations

7.1 Conclusion

Corporate governance is an area that has attracted the attention of many corporate managers, investors, academics, regulators, and policy makers over the last two decades. The collapse of corporations, corporate scandals, and financial crises certainly prove that corporate governance is a highly relevant topic in the field of corporate finance. These factors force market regulators, policy makers, and governments around the globe to establish and reform the principles of corporate governance for fair and transparent corporate practices. For the enhancement of the corporate governance mechanism, countries around the globe have introduced the CCG using rule based or principle based implementation protocols (see Tariq and Abbas, 2013).

In order to meet the international standards for market reforms of financial liberalization Pakistan opened its secondary markets for foreign investors in 1991. Subsequently, in order to meet the demand of international investors, governments have introduced various reforms in capital markets. As a part of these reforms the SECP implemented the first CCG in 2002 and revised it in 2012, following the rule-based regulatory framework compliance to the CCG is mandatory. It is evident that the SECP adopted the OECD Principles of Corporate Governance in the Pakistani CCG and its revision. The OECD Principles include (1) Ensuring a basis for an effective corporate governance framework; (2) Supporting the rights of shareholders and key ownership functions; (3) Maintaining the equitable treatment of shareholders; (4) Clarifying the role of stakeholders in corporate governance; (5) Promoting disclosure and transparency; and (6) Establishing the responsibilities of the board (OECD, 2004). At the same time, the OECD notes that a particular set of principles, is by nature not applicable to all the countries, since each

country has its unique background and conditions in the practice of corporate finance.

Nevertheless, the SECP may have naively adopted the OECD Principles without adequate consideration of *de facto* realities of the unique practices of corporate finance in Pakistan. CCG (2012) is a rule-based regulatory framework introduced by the SECP. Rule-based regulation prescribes in detail how to behave, and in principle based regulation norms are formulated as guidelines. The exact implementation is left to the subject of the norm (Burgemeestre *et al*., 2009). First of all, the CCG as a rule-based rather than principle-based regulatory framework is questionable, particularly in the case of Pakistan. For instance, the rule-based CCG in Pakistan may not be effective due to weak legal and institutional framework as pointed out by La Porta *et al.* (1997) in the case of developing economies. Moreover, historically, enforcement mechanisms in Pakistan are weak (see Ashraf and Ghani, 2005, pp. 191). In Leuz *et al*. (pp. 516, 2003), a study on legal enforcement among 31 countries, Pakistan scored a 3.7 out of a maximum 10; and a 2.7 out of a maximum of 10 for rule of law in La Porta *et al.* (1997, pp. 1138). Therefore, these findings raise further doubt on an *ex post* monitoring mechanism for rule-based CCG regulatory framework.

Additionally, the weakness and imperfections of the regulatory practices can have an important impact on capital markets, ownership structures and control patterns, and firm productivity, which can lead to poor development of economic institutions (Rais and Saeed, 2005, pp.1). In the light of the aforementioned argument, the findings from the study on unique financing features of non-financial firms in Pakistan further support the claim that the adoption of the OECD Principles, in terms of their compatibility to the local corporate environment, was naïve. Regardless of the compliance or non-compliance to the CCG by individual firms and the subsequent impact on the firms' financing cost, this study has evaluated the role of the CCG for

the development of capital markets by exploring the determinants of firm capital structure. For instance, this study highlights firm size, liquidity, and asset tangibility to show a positive relationship with leverage. However, it can be seen under the traditional argument that large firms with more liquid and tangible assets have more demand and access to external finances compared to the firms with less liquid and tangible assets.

Moreover, the comparison of financing structures in section 6.1 shows that total debt financing has shown a decline contrary to short-term debt financing, which shows the increasing trend during the period. Hence, the reliance of Pakistani firms on short-term debt; that is, the drain of capital for long-term investment suggests an immaturity or lack of development of capital markets in the country. Less developed capital markets mean limited access to capital for real investments. In such cases, due to insufficient funding, firms' have two options: either to give up positive net-present value (NPV) investment opportunities or, secondly, they may or may not be able to borrow, even at higher cost of capital that may result to higher transaction cost, moral hazard and adverse selection problems. These higher costs could further hamper the investors' confidence and ultimately prevent the economic growth of the country.

The findings of the study predict that the code lacks *ex post* monitoring or an evaluation mechanism, especially in terms of firm financing patterns. Javed and Iqbal (2010, pp. 24) state that "it is ultimately the financial market which rewards good governance practices and punishes bad governance." However, our findings suggest that the SECP focuses on an *ex ante* mechanism for the development of the CCG and pays less intention on *ex post* monitoring and evaluative mechanisms. The suggestion is based on the findings on the determinants of capital structure using data taken during 2005-2012, i.e. after the implementation of the CCG (2002). The study finds no relevant recommendations in this perspective for the CCG (2012) as well.

Moreover, results also suggest that financial markets do not provide any clear incentives or punishment apart from listing regulations on the stock exchange.

According the OECD, principles of corporate governance for the role of stakeholders are necessary for the enhancement of the corporate governance framework through the development and implementation of the CCG. However, the separation of ownership and control in modern corporations makes it very difficult for us to identify the balanced role of stakeholders in corporate governance. The complexities of the ownership structure and various agency conflicts have been highlighted in several dimensions of corporate finance. Similarly, the role of owners and their relation to control and future financing for investments among firms has been in the spotlight and has provided mixed findings. The literature supports the significance of the ownership structure on various sources of finance.

In this regard study has evaluated the impact of ownership patterns on capital structure choices of the listed firms during the period 2004-2012. The investigation result on the effects of ownership structure patterns on capitals structure indicates that managerial equity proportion, institutional shareholdings and block-holders are positively related to the total-debt ratio. While block-holders are positively; whereas institutional shareholding and managerial ownership are negatively related to long-term debt. Based on the significance of the ownership patterns, managerial equity and block-holders have positive while institutional shareholdings have negative relationship. Among three ownership patterns, empirical results suggest that block-holders can significantly mitigate the agency conflicts and can influence the capital choices of the non-financial firms in Pakistan.

Furthermore, the findings show that managerial ownership and block-holders tend to encourage leveraging. This phenomenon predicts the exploitation of minorities or other external

stakeholders and signals a less prudent corporate governance mechanism. This supports the stance of La Porta *et al*. (1998) in their argument on weak investor protection and less-developed institutional settings in case of developing economies. Moreover, as argued by La Porat *et al*. (2002) investors will pay more or show more interest in the company when they feel they have better legal protection, since they assume that the profit of the firm will come back to them as dividend or interest rather than it being exploited by the managers who control the firm. Claessens (2003) also supports the prediction of the agency theory that better corporate governance leads to a decrease in the cost of equity. Alternatively, Gompers *et al*. (2003) suggest that poor corporate governance generates various agency costs for the firms in the form of inefficient investment and other capital expenditures.

The results of the study also recommend active monitoring by institutional shareholders to reduce agency conflicts by diminishing managerial opportunism. However, contrary to the findings, the CCG fails to highlight the role of institutional shareholders as prudent monitors for the enhancement of the corporate governance mechanism in the country. The limited role of institutional shareholders also endorses the Hasan and Butt (2009) argument that "the corporate governance practices are still in infancy phase in Pakistan."

The effect of internal attributes of corporate governance on capital structure show that board size, independent/outside directors, CEO duality, managerial equity ownership, and block-holders are positively related to total debt. However, except board size, CEO duality and institutional shareholdings all other are variables are positively related to long-term debt. The overall results show that attributes of corporate governance behave according to the theoretical assumption of agency and resource dependence, but with less significance. This further highlights the limitations of the CCG. This may also suggest the adaption rather than adoption

of a corporate governance theoretical framework and OECD Principles with a *de facto* local corporate environment for the formulation and implementation of CCG.

This study finds that attributes of corporate governance such as board size, board composition, and CEO duality show support for a firm financing structure through transparent and accountable governance practices. In CCG (2002) most of the regulations about these attributes were not mandatory; however, CCG (2012) made several mandatory regulations. Such as the compulsory requirement to have at least one independent director on any board and the requirement that executive members will not make up more than 33% of any total board. Empirically, board composition displays a negative relationship with leverage. These results may occur due to the lower representation of outside directors on board or due to outside directors not being truly independent as assumed in corporate governance philosophy. Hence, more independence and representation of outside directors is suggested to meet the standardized requirements in future developments. The new code also enforces the separation of the roles of CEO and board chairperson and recommends the selection of a CEO from a pool of non-executive directors. Existing studies support either a small board size or large board size for good corporate governance, however in the case of Pakistan the CCG doesn't provide any guidelines on board size.

In summary, based on the findings related to the firms' financing sources and the impact of ownership patterns and corporate governance on capital structure, this thesis names the following shortcomings in the evolution of the CCG in Pakistan. First, the Pakistani CCG should take into account the unique financing features of the firms such as the heavy reliance by Pakistani firms on short-term debt; that is, the drain of capital for long-term investment. Second, the ownership patterns suggest that the effective role of institutional shareholders is expected to

minimize agency conflict in firms' choice of capital structure and corporate governance. Third, the limited guidance in the current code does not adequately consider the unique nexus in Pakistani firms' on selection of capital structure to mitigate agency conflict. This thesis provides empirical grounds for further discussions on the improvement of the current CCG by establishing an adequate *ex post* evaluation and governing mechanism.

The study also finds the significance of institutional shareholdings on the firms' financing choices and their role for effective corporate governance in the firm. However, the CCG does not provide any detailed guidelines for the role of institutional shareholders, particularly in the context of corporate governance. For example, the sub section of clause (35) of the CCG (2012) only has addressed the issue of representation in boards of directors. However, institutional investors can contribute to mitigate the agency conflicts through active monitoring and evaluation of corporate governance practices in the targeted firm due to their professional experience.

Moreover, this study predicts the limited role of capital markets and endorses the ideas on Pakistan's underdeveloped capital markets, as mentioned in the section 2.4. Therefore, the study predicts that capital markets are lacking in a reward or punishment mechanism for the compliance or non-compliance of the CCG. Hence, the findings of the study suggest a broader role for the SECP towards the development of capital markets and the enhancement of the corporate governance mechanism under the scope of the CCG. This possibly means a shift from rule-based to principle-based regulatory frameworks of corporate governance, in which active participation from all stakeholders could result to the improvement of the governance mechanism.

Furthermore, the study highlights that *ex post* monitoring and evaluation of the CCG can

contribute to the availability and accessibility of capital, the efficiency of capital markets, and the active participation of institutional shareholders. Additionally, the study contributes to the literature by highlighting the significance of ownership structure patterns in order to mitigate agency conflicts through capital structure decisions. Moreover, it adds to the literature by exploring the effects of the internal attributes of the corporate governance mechanism on financing choices of the firms. The primary purpose of corporate finance and governance is to maximize shareholders' wealth; hence, the role of capital structure choices is necessary to achieve these objectives.

7.2 Study limitations

The significance of the development of the CCG for the improvement of corporate governance has been evaluated under the dimension of corporate finance, but it is not sufficient to question the overall effectiveness of the CCG. Moreover, data is an important element needed in order to testify to the theoretical assumptions. Unfortunately, no structured database is available for specific data in Pakistan which can be used for empirical study. Due to data and other relevant constraints, the scope of this study is kept limited to investigate the significant factors of financing choice rather than to test the theories of capital structure. Data for the study was manually taken from the financial statements of the listed firms on the KSE. Based on the compilation of data, variables used in the study were measured by the using book value proxies, and are in line with other existing empirical studies. The availability and compilation of the data resulted in the small data sample used in the study. Additionally, most of the empirical studies on developed economies have used market based measures of leverage, but this study is limited to book value measures only.

7.3 Future recommendations

This is the first study that has evaluated CCG development and has revised three issues related to the capital structure of non-financial firms. This has included the determinants of capital structure, specifically the effects of the ownership structure on capital structure and the impact of corporate governance on capitals structure. Future studies are required on the most recent data, especially from 2012 onward i.e. after the implementation of a new CCG. The findings of the study will be useful for more detailed evaluation of capital structure choices of Pakistani firms. However, there is much more that needs to be done using more extensive and detailed data to solve the capital structure puzzles of Pakistani firms.

There is a great need to test the theories of capital structure that are developed in different environments beyond those of developing countries. Moreover, further studies based on the market measures of leverage that explore the impact of external attributes of corporate governance mechanism are required. Additionally, future studies should also include other macro-economic variables, such as GDP, development of stock, and bond markets to evaluate the CCG and explore their impacts on capital structure and corporate governance decisions. Last but not least, the development of a theoretical framework to observe the behavior of developing economies is highly recommended, particularly in the case of Pakistan, where the findings of this dissertation report that short-term debt dominated the total debt, and block-holders dominate the ownership of listed firms.

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Appendix

The SECP provides the following comparison of CCG 2002 and 2012.

No.	Issue	CCG 2002	CCG 2012
1.	Independent Director	Encouraged a minimum of one independent director on the board of a listed company.	One independent director is mandatory while preference is for 1/3rd of the total members of the board to be independent directors.
2.	Criteria for assessment of independence	Very scanty criteria provided	Criteria has been substantially expanded
3.	Executive Directors	Number of Executive Directors not to be more than 75% of elected directors including CEO	Maximum number of Executive Directors cannot be more than 1/3rd of elected directors including CEO.
4.	Number of directorships	A director can be on the board of no more than 10 listed companies at any one time.	A director can be on the board of 7 listed companies at the most at any one time. However, the limit does not include directorship in listed subsidiaries of a listed holding company.
5.	Board evaluation		Within two years of the implementation of the Code 2012, the Board has to put in place a mechanism for undertaking annual evaluation of the performance of the Board.
6.	Office of Chairman and CEO	The Chairman of a listed company shall preferably be elected form among the non-Executive directors of the listed	The Chairman and CEO shall not be the same person, unless specifically provided in any other law.

		company.	The Chairman shall be elected from amongst the non-executive directors of the listed company.
7.	Training of the Board of Directors	It is mandatory for directors of listed companies to attain certification. Initially, the PICG was to provide the training but later it was opened to other institutions, provided they met the criteria specified by the SECP.	It will be mandatory for directors of listed companies to attain certification under any director training program (DTP) offered by any institution (local or foreign), which meets the criteria specified by the SECP. The criteria are available at the websites of the stock exchanges and the SECP.
8.	Appointment and removal and qualification criteria for Chief Financial Officer (CFO) and Company Secretary (CS)	Appointment, remuneration and terms and conditions of employment of CFO and CS determined by CEO and approved by Board. The same mechanism followed for removal.	The appointment, remuneration and terms and conditions of employment of the CFO, CS and the Head of Internal Audit (IA) of listed companies shall be determined by the Board. The removal will also be by the Board for CS and CFO.
9.	The Head of Internal Audit (IA)		Qualification introduced for Head of IA. The removal of Head of IA is with the approval of the Board only upon recommendation of the Chairman of the Audit Committee.
10.	Remuneration of Directors		A formal and transparent procedure to be followed and disclosure of aggregate

			remuneration in the annual report.
11.	Board Committees	<u>Audit Committee:</u> The Chairman of the audit committee shall preferably be a non-executive director. <u>Reporting Procedure:</u> The Audit Committee of a listed company shall appoint a secretary of the Committee.	<u>Audit Committee:</u> The Chairman of the audit committee shall be an independent director, who shall not be the chairman of the board. Audit Committee shall comprise of nonexecutive directors. The secretary of Audit Committee shall either be the Company Secretary or Head of Internal Audit. However, the CFO shall not be appointed as the secretary to the Audit Committee. Human Resources and Remuneration Committee introduced.

12.	Internal Audit	There shall be an internal audit function in every listed company. The head of internal audit shall have access to the chair of the Audit Committee	The internal audit function may be outsourced by a listed company to a professional services firm or be performed by the internal audit staff of the holding company. In the event of outsourcing the internal audit function, the company shall appoint or designate a fulltime employee other than the CFO, as Head of Internal Audit, to act as coordinator between the firm providing internal audit services and the board.