

CAPITAL UNIVERSITY OF SCIENCE AND
TECHNOLOGY, ISLAMABAD



**Impact of Ownership Structure
on Corporate Debt Maturity: An
Empirical Study of Non-Financial
Sector of Pakistan**

by

Ijaz Rasool

A thesis submitted in partial fulfillment for the
degree of Master of Science

in the

Faculty of Management & Social Sciences

Department of Management Sciences

2020

Copyright © 2020 by Ijaz Rasool

All rights reserved. No part of this thesis may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, by any information storage and retrieval system without the prior written permission of the author.

This work is dedicated to my beloved parents, family who have encouraged me to achieve this milestone and to my respected supervisor Dr. Ahmed Fraz, who has been a constant source of inspiration.



CERTIFICATE OF APPROVAL

Impact of Ownership Structure on Corporate Debt Maturity: An Empirical Study of Non-Financial Sector of Pakistan

by

Ijaz Rasool

(MMS163009)

THESIS EXAMINING COMMITTEE

S. No.	Examiner	Name	Organization
(a)	External Examiner	Dr. Sumayya Fatima	IIU, Islamabad
(b)	Internal Examiner	Dr. Arshad Hasan	CUST, Islamabad
(c)	Supervisor	Dr. Ahmed Fraz	CUST, Islamabad

Dr. Ahmed Fraz

Thesis Supervisor

July, 2020

Dr. Mueen Aizaz Zafar

Head

Dept. of Management Sciences

July, 2020

Dr. Arshad Hassan

Dean

Faculty of Management & Social Sciences

July, 2020

Author's Declaration

I, **Ijaz Rasool** hereby state that my MS thesis titled “**Impact of Ownership Structure on Corporate Debt Maturity: An Empirical Study of Non-Financial Sector of Pakistan**” is my own work and has not been submitted previously by me for taking any degree from Capital University of Science and Technology, Islamabad or anywhere else in the country/abroad.

At any time if my statement is found to be incorrect even after my graduation, the University has the right to withdraw my MS Degree.

(Ijaz Rasool)

Registration No: MMS163009

Plagiarism Undertaking

I solemnly declare that research work presented in this thesis titled “**Impact of Ownership Structure on Corporate Debt Maturity: An Empirical Study of Non-Financial Sector of Pakistan**” is solely my research work with no significant contribution from any other person. Small contribution/help wherever taken has been duly acknowledged and that complete thesis has been written by me.

I understand the zero tolerance policy of the HEC and Capital University of Science and Technology towards plagiarism. Therefore, I as an author of the above titled thesis declare that no portion of my thesis has been plagiarized and any material used as reference is properly referred/cited.

I undertake that if I am found guilty of any formal plagiarism in the above titled thesis even after award of MS Degree, the University reserves the right to withdraw/revoke my MS degree and that HEC and the University have the right to publish my name on the HEC/University website on which names of students are placed who submitted plagiarized work.

(Ijaz Rasool)

Registration No: MMS163009

Acknowledgements

All praises for Allah Almighty whose uniqueness and oneness is unchallengeable. All respects for Holy Prophet Hazrat Muhammad (S.A.W.W.) who recognizes us our creator Allah. Most humbly I am thankful to Allah Almighty the merciful and eternal that makes me able to complete my research thesis successfully.

I would like to add a few heartfelt words for the people who were part of this work and helped me in numerous ways. Some of them gave me unending support right from beginning especially my thesis supervisor **Dr. Ahmad Fraz**. He helped me a lot to complete my research thesis.

I wish to acknowledge and show my deep gratitude to my respected parents who supported me in every step of life. Moreover I would also acknowledge to my friends and fellows in Pakistan who helped me to complete this task.

(Ijaz Rasool)

Registration No: MMS163009

Abstract

This study examines the impact of ownership structure on corporate debt maturity. Debt maturity of a listed organization has experienced a significant decline (demand and supply) over the last few years. The study also investigate the reason of such decline, whether the demand side factors firms own characteristics are responsible for this decline, and it may be because of supply-side factors, market pressure. The current study employs sample of 78 firms listed in Pakistan Stock Exchange (PSX) over the time period of 13 years from 2004 to 2016. Panel data analysis has been used for statistical analysis. The findings of the study suggest that assets maturity, firm size, working capital, leverage and foreign ownership have significant and positive impact on debt maturity. The study further suggests that the supply side factors are more responsible for decline in debt maturity. This study helps corporate managers and policy makers regarding decision making about financing.

Keywords: Demand Side Factors, Supply-side Factors, Market Pressure, and Loan Granted.

Contents

Author’s Declaration	iv
Plagiarism Undertaking	v
Acknowledgements	vi
Abstract	vii
List of Tables	x
List of Abbreviations	xi
1 Introduction	1
1.1 Background of the Study	1
1.2 Theoretical Background	4
1.2.1 Maturity Matching	4
1.2.2 Agency Theory	4
1.2.3 Trade-off Theory	5
1.3 Research Gap	8
1.4 Problem Statement	9
1.5 Research Questions	9
1.6 Objectives of the Study	9
1.7 Significance of the Study	10
1.8 Plan of the Study	11
2 Literature Review	12
2.1 Hypothesis	41
3 Research Methodology	42
3.1 Data Description and Methodology	42
3.2 Estimation Model	42
3.3 Econometric Model	44
3.3.1 Demand-side Regressions	45
3.3.2 Supply-side Regressions	45
3.4 Explanation of Variables	45

3.4.1	Dependent Variable	45
3.4.1.1	Debt Maturity	45
3.4.2	Independent Variables	46
3.4.2.1	Firm Size	46
3.4.2.2	Dividend Payout	46
3.4.2.3	Leverage	47
3.4.2.4	Asset Maturity	47
3.4.2.5	Individuals Shareholding	48
3.4.2.6	Investment Companies	48
3.4.2.7	Foreign Companies Investment	48
3.4.2.8	Net Working Capital	48
4	Results and Discussions	50
4.1	Descriptive Statistics	50
4.2	Correlation Analysis	52
4.3	Demand Side Regression Analysis	54
4.3.1	Redundant Fixed Effects-Likelihood Test	54
4.3.2	Random Effects Hausman Test	54
4.4	Explanation of Fixed Effect Model (Demand Side)	55
4.5	Supply Side Regression Analysis	57
4.5.1	Redundant Fixed Effects-Likelihood Test	57
4.5.2	Hausman Test	57
4.6	Explanation of Fixed Effect Model (Supply Side)	58
5	Conclusion and Recommendations	59
5.1	Conclusion	59
5.2	Recommendations and Future Direction	61
	Bibliography	62

List of Tables

4.1	Descriptive Statistics	50
4.2	Correlation Analysis	52
4.3	Impact of Demand Side Variables on Debt Maturity	54
4.4	Impact of Supply Side Factors on Debt Maturity	57

List of Abbreviations

DM	Debt Maturity
DPO	Dividends Payouts
FS	Firm Size
FW	Foreign Ownership
LGPS	Loan Granted to Private Sector
LTD	Long Term Debt
NWC	Net Working Capital
PSX	Pakistan Stock Exchange
SBP	State Bank of Pakistan

Chapter 1

Introduction

1.1 Background of the Study

Debt maturity is the time in which a transaction of debt is completed or debt instrument is matured. Debt maturity is defined as the ratio of liabilities maturing in more than one year to total debt (Shah and Khan, 2009). The maturity of debt may generally define as the composition of short term and long term debt in firms capital structure. The impartial relationship between debt instruments varying with maturity in debt capital structure is called debt maturity (Venugoplan and Madhu, 2013). Firms use a various source of finance to meet their financial needs. Firms can use equity source of financing that is a permanent and long-term source of financing. Equity holders are basically owners of the company and have a residual claim on assets of the organization after all other liabilities of the organization. As equity holders bear the whole risk of a firm so they demand more compensation in form of dividend and capital gain. Other sources of finance include preferred stock and debt source of financing. Preferred stockholders have some preference over common stockholders. Preferred stockholders mostly paid with a fixed dividend. The third source of financing of firms is debt financing in debt financing the funds are taken on fixed terms of payment of interest and principal amount. Debt providers have preferences over preferred stockholders as well as on equity holders in case of liquidation. Debt providers are paid a fixed amount irrespective

of the performance of the organization; weather firms earn a profit or sustain loss they are paid with the agreed compensation. As debt providers have a minimum risk as compare to other sources of finance so they demand less compensation for providing finance. Different sources of finance have a different cost for the firm, as financing cost varies by using different source financing so the value of the firm is affected by the decision about the sources of financing.

Different debt maturities affect the cost of financing which has a direct effect on firms value. In corporate finance, there are the two important decisions about financing the firm in an optimal way to maximize the firm value. Capital structure is a decision that how much equity and how much debt are financed by the organization, different types of equity and different compensation of debt and equity are used to finance assets to increase the overall value of the firms (Modigliani and Miller, 1963). Besides, the decision of debt versus equity, it is an equally important decision to maximize the firm value that what should be the maturity of debt (Brick and Palmon, 1992); (Nam et al. 2004).

Firms ownership structure and control refers to the shareholders roles and responsibilities, the functions performed by the shareholders in firm and structure of shareholders in a firm. In numerous numbers of countries mostly in Europe ownership is not fundamentally sequent to control supervisors or classify suitable to continue existence of firms ownership for all sides substitute election, appointment alliance and alignment, shares with individual who is chairman and chief executive officer. Firm ownership is usually defined as the ownership of capital inflow and outflow, constitutional privileges while power and management concerning to the ownership of appointment privileges and rights.

According to Modigliani and Miller (1958) in a perfect market, the firms value is irrelevant to debt maturity. Their assumption about the market perfection are tax-free economy, no truncation cost, no agency cost, homogeneous expectation about future investment, all individuals have equal information and information is easily and freely available to all participants of the market. After Modigliani and Miller, (1963) Stiglitz (1974) also proves that the irrelevance of firms value to corporate debt maturity he gives some assumptions to prove that. He assumed

there is perfect market for bonds, no bankruptcy all real decisions are company dependent and there is an existence of general equilibrium.

Due to a composition of different sources of finance, the cost of financing of the firm is affected but also different maturities of debt affect the cost of financing for a firm (Brick. and Palmon, 1992). By debt maturity, we mean the life of loan after which that loan can be paid back with interest. On maturity basis debts are alienated into two categories; shorter maturity debt and longer maturity debt. Leaders demand special compensations for these two types of debt financing due to which the decision about long and short maturity debts are affects the financing costs. (Nam et al. 2004). There are different approaches regarding the debt maturity and the cost of debt, called the term structure of interest rate theories. According to one approach, peoples are unbiased about the interest rate of debt having different maturities they demands the same interest rate for both categories of loans. According to the second approach, companies give preference to fleeting debt because lenders demand high-interest rate on long term debt as the risk associated with longer maturity debt is high than the debt with a shorter maturity. In short-term debt different factors can be predicted with more accuracy as compared to long-term debt, and also funds are tied up for a longer time period in this type of debt, that is also the reason why lenders demand high interest rate on long-term debt. Another approach, regarding term structure of interest rate states that debt providers neither prefer shorter maturity nor they are unbiased about the debt maturity but they have their own preferences about the debt maturity based on their refinancing and reinvestment risk.

Boubaker, F. Z. (2018) examines the impact of ownership structure on stock market performance of acquire organizations. They use the sample size of 85 acquire undertaken firm during the time period of 2009 to 2013. To find out short term performance they utilized the methodology while they anticipated the CAR and BHAR to concentrate long as three years. The outcomes of study show a curved relationship between the mangers and performance of stock market. They give evidence that increase the administrative possession up to 16% negatively affects a firm performance. Furthermore, the division among ownership and control doesn't

appear to influence the performance of initiators organization because of an absence of essentialness of the coefficients recommending the absence of expropriation of minority investors. At last, they found the significant and positive relationship between family ownership and institutional shareholders.

1.2 Theoretical Background

1.2.1 Maturity Matching

A theoretical study about the maturity matching concept has been first introduced by Grove (1974). Firms match the maturity of debt with the life of its assets to reduce the risk of refinancing and the risk of reinvestment. Firms have to pay debt out of cash generated by assets, as use accrual basis accounting so the profits are not actual representation of cash availability because we charge depreciation on assets and the depreciation is non cash expense due to which actual cash inflows should be greater with the amount equal to depreciation amounts, which in term could be used to pay back the debt. If the debt maturity is greater than the life of assets than the risk from cash flows by assets might be utilized somewhere else and will not be available for repayment of debt.

1.2.2 Agency Theory

Agency problem also influences the maturity of the debt. The conflicts of interest between two parties in the case of agency cost of debt there are two parties are involved; one is debt holders and second is stakeholders. According to Myers (1977) underinvestment problem occurs due to agency cost of debt. Stakeholders are reluctant to invest in the projects which give small returns, whose returns are expected to serve the creditors only; in this way, they forego the growing opportunities which ultimately reduce the market capitalization of the company because the market capitalization is determined by the present value of its assets. To minimize this problem Myers (1977) purposes different ways, i.e. firms need

to use shorter maturity debt. Agency hypothesis is also linked with organizations leverage; agency cost is high in highly levered firms as compared to the firms with low leverage (Custodio et al., 2013). As per the argument of Myers, the maturity of debt should be reduced when growing opportunities exist so that debt may be matured before the expiration of growing opportunities. Hence, the growth opportunities have an impact on the maturity of debt due to underinvestment problem.

1.2.3 Trade-off Theory

According to trade-off theory the optimum level of debt maturity for creating market value of firms is dynamic trade-off of bankruptcy cost associated with debt and tax advantage of debt. Tax advantage further depends on rate of taxes and yield curve rate, bankruptcy depends on volatility of firm. So term yield curve is an important factor that determines the debt maturity. Debt maturity depends upon interest rate because the choice of debt maturity depends on floatation cost. When the floatation cost is upraised, companies prefer to use long term loan to avoid for high floatation cost but when the tax rate is high and the tax benefit is also high then firm use short term debt because the floatation cost can be easily compensated by tax shield and if the tax rate is lower than floatation cost is not recovered by tax shield of debt and firms prefer to issue debt with longer maturity , So there is positive theoretical and most of empirical relationship between interest rate and debt maturity (Newberry and Novack, 2001) ; (Gordan, Roger and Lee, 2007).

Theoretically and empirically literature focuses that debt maturity choice has a significant impact of firms value. According to Nam et al. (2004) using net present value technique to explore the importance of maturity structure of debt, NPV is a capital budgeting technique to evaluate the projects, NPV is the difference of present value of net returns less present value of outflows related to the projects. By using optimal debt maturities net present value of the projects can be maximized and hence the value of the firm can be increased, and to find the optimal debt maturity positive relationship is found among maturity of debt and rate of

taxes and inverse relationship among interest rate and maturity of debt. In developed market there are fewer constraints for the availability of all types of debt because of developed banking sector and developed capital markets. Hence, the firm in developed countries can easily adjust their capital structure but the firms in developing countries face a problem to adjust their debt to equity ratio due to lack of developed capital markets.

According to tax based hypothesis there exists a relation among yield curve of interest rate and maturity of debt, when yield curve is aloft sloping the market capitalization of company can also increasing by issuing long term loan as by doing so the present value tax benefit is increased as compare to short term debt because the tax benefit are accelerated by issuing longer maturity debt. Bricks and Ravid (1985) prove the same association among them. They also report the inverse relationship among life of asset and maturity of debt because when there is less volatility in firm value representing that there is a less asset variance the firm tend to less needs of rebalance its capital structure because the firm has less chances of bankruptcy due to less assets variance and low level of volatility.

Theoretically and empirically the most important determinants of debt maturity recognized are; firms size, assets life, growth opportunities, and leverage. There are many decisions regarding financing for firms such as when and why they have use different types of financing? When to use bounds debt, bank debt or leasing? What decisions they should take regarding maturity of debt? And the most important question is whether these firms are actual decision makers or they take decisions that are forced by some external factors such as banks and market conditions. The purpose of this research is to explore the important instruments of debt maturity choice of the non-financial organizations listed in PSX and to know whether there is same relationship of different determinants of debt maturity as have been found in developed economies.

Hovakimian and Tehranian (2014) explored that the significance of stock returns in study of corporate financing decisions is distinct to level of leverage and is probably due to relationship between's Market time behavior hypothesis and Pecking order theory. Furthermore, study found that profitability have no impact on the target

of leverage. Because of accumulated loss firm can use excess leverage in case of non profitable firms. Therefore, these studies support the idea that organizations have required capital structure. Nevertheless, inclination for insider funds and the desire to time the market by selling new importance of equity, when price of shares moderately high, intervene with the propensity to keep up the company's debt ratio near to its objective.

Vishny, Porta and Lopez (2000) reported that the attributes of ownership structure the enhancement in stock market, the type of decisions taken by the Government of the country staying within rules and regulation concerning the extension and development which influences the organizations and these structures are moderately different crosswise over nations. Spread ownership structure is more frequent in US and UK listed firms, as compare with Europe, where major ownership style is controlled ownership. In addition these studies also reported that ownership structures varies country to country and firms to firms and that have may also effect from agency conflicts.

Cai et al. (2008) explore the determinants of debt maturity structure and locate that Chinese firms with high value use a higher extent of long term obligation. They pointed out that this contradicts the signaling theory and most part of pragmatic literature infers that transient obligation may not indictor of firms high quality in China. Additionally, an intermediary used for company's development prospects and discover vague outcome with respect to its effect on debt maturity structure. Consequently, they locate indeterminate help for agency theory, identifying with the control of administrative incentives to over and under interest in firms activities. On the other hand, in a material exclusion from their study, they do not separate firms that are state possessed with privately owned firms.

Wiggins (2001) argued that firms with higher assets risk are liable to issue shorter maturity debt to rebalance its capital structure in effort to reduce its chances of bankruptcy. Kane et al. (1985) argued that less volatility in firm value motivates the managers to have no need to rebalance their structure to avoid more transaction cost, so these firms use longer maturity debt to avoid potential risk of bankruptcy. Furthermore, highly levered firms have more exposure to the risk of

bankruptcy, to avoid the risk they tend to issue more long term loan. Leland and Toft (1966) shows the positive connection among leverage and maturity of debt, while Dennis et al. (2000) argued that high levered firm uses the debt of shorter maturity to evade the agency costs. Interest is the compensation paid or received for the use of debt source of financing. A debt provider having funds available for long term will prefer long term debt while landing those funds to avoid refinancing risk, and a debt provider having funds available for short term will prefer short term debt.

Firm size is the most important determinant of debt maturity because it is a portion that represents liquidity risk hypothesis, agency cost hypothesis and signaling hypothesis (Jalilvand and Harris, 1994). Agency cost hypothesis predicts that smaller firms have more growth options and be likely to use short term loan, also smaller firms faces the problem of information asymmetry due to which it is not easy for small firm to issue long term debt. Furthermore, smaller firms cannot bear the flotation cost associated with long term debt. Their small size are also problem for getting long term loan because the small firms could not provide enough assets as collateral and debt providers do not easily issue longer maturity debt, theoretically we expect optimistic relationship between size of firm and maturity of debt.

1.3 Research Gap

Investigating the transient flow of debt maturity structure of Non-financial organizations is generally an unexplored area. There are a small number of studies that explore general determinants of corporate debt maturity in Pakistan (e.g., Shah and Khan, 2004; Shah and Hijazi 2009). These studies do not focus on the influence of ownership structure on corporate debt maturity. Corporate debt maturity of Non-financial organizations turns down in last few years. Recently such decline is in accordance with the global confirmation; for instance, Laureano, Custodio and Ferreira (2013) examine that US companies encountered a serious decline in maturity of debt. In current study, we explore the impact of ownership structure

on corporate debt maturity and also investigate that which factors are responsible for such decline in debt maturity in case of Pakistani firms.

1.4 Problem Statement

Debt maturity structure is an important area of research in finance. Number of studies has been done to explore the factors affecting debt maturity structure. After numerous studies on debt maturity, it is still debated that which attributes of the firm determines the debt maturity structure. Financing decision is one of the important strategic decisions. So, this study is an attempt to investigate the role of ownership structure on debt maturity. Study analyzing the impact of ownership structure on corporate debt maturity (demand and supply side factors). The center of attention of the study is whether the impact of ownership structure on debt maturity structure to define the financing decision or not.

1.5 Research Questions

The study has the following research questions:

1. Does the ownership structure affect the decision of the debt maturity structure?
2. Whether firm size influences the decision of the debt maturity structure?
3. What is the impact of leverage on debt maturity structure?
4. Is there any effect of dividend payouts on debt maturity structure?
5. What is the impact of net working capital on debt maturity Structure?

1.6 Objectives of the Study

Following are the objectives of study.

1. To examine the impact of firm specific variables on debt maturity structure (demand and supply side).
2. To investigate the impact of ownership structure on corporate debt maturity structure (demand and supply side).
3. To explore that the effect of debt maturity structure is same for demand and supply side.

1.7 Significance of the Study

This study contributes to the available body of literature in the area of ownership structure and corporate debt maturity for Non-Financial sector of Pakistan in numerous ways, from a theoretical perspective and it imagines conveying a more comprehensive point of view in the area of financing decision through ownership structure. It provides the additional information to the researches to take the decisions in this regard. The research also benefits the shareholders as they equally get the returns on their made investment. In addition, the results of this study are of priceless importance to management of Pakistani companies in their choice process as well as their struggle to optimize their firms worth from a practical point of view. This study also investigates the role of foreign shareholding and investment companies shareholding in financing and investing decisions of the firms. Findings of this study are helpful for corporate managers and decisions makers regarding financing decision, investment decisions and other decisions. It will likewise be valuable for future researchers in the area of ownership structure and capital structure.

Board structure and firm ownership is likes through issues, whenever the agency problem is lesser among the shareholders and managers in the firm then the managers automatically focus on the goals of the company which is to maximize the wealth of the shareholders and to improve market share price of the company. According to Jensen and Meckling (1976) the best way to align the interest of

the managers and shareholders is to give at least some portion of ownership and shares to the managers.

1.8 Plan of the Study

The study is organized in five chapters. Chapter No. 1 is introduction, theoretical background, problem statement, research question, research objective and significance of the study. Chapter No. 2 focuses on literature review. Chapter No.3 explain the data description and methodology use in this study. Chapter No. 4 presents the results and discussion of findings. Chapter No. 5 is conclusion, recommendation and future directions.

Chapter 2

Literature Review

Numerous studies have investigated that the corporate debt maturity is an essential instrument to look at corporate insiders. Short term debt helps lenders to monitor borrowers through more standard refinancing and renegotiations of agreement terms (Demirg-Kunt and Maksimovic, 1999).

Akhlaghi and Hajiha (2012) have revealed that there is a constructive relation among real assets and size of firm. Azad and Arian (2012) have led an exploration on capital structure and liquidity of assets they found positive relationship among capital structure of the firms and liquidity of its assets. Consequently to rise financial leverage firms can increase high liquidity assets. Firms with high liquidity resources can easily pay back their debt obligations.

Block and Liao (2013) reported that due to information asymmetry companies having surplus cash flow do not utilize long term debt. Authors also clarified that maturity of debt diminishes the cost of information asymmetry amongst investors and management. Additionally, there is discouraging association among firms cash flow volatility and maturity of debt and the organizations having uncertain cash flows may expelled from secondary market. This outcome is parallel toward Custodio and Johnson (2013).

Almeida, Campello, Weisbenner and Laranjeira (2011) examines that the corporate debt maturity is the element of company's policy that affect real corporate conduct significantly in the existence of credit and liquidity stuns. Companies

use shorter maturity debt to faces consistent renegotiations with debt provider as contrast with firm that utilize more debt having longer maturity consequently these organizations will probably be influenced by a credit supply shocks and to confront monetary limitations. Debt maturity structures have notable impacts for industrial firms amid the time of financial crisis 2007 2008.

Fairchild (2010) examines that signaling hypothesis declares that dividends are an apparatus for directors to signal investors about the future execution and cash flows of organizations. In addition, it is noticed that dividends may likewise give deluding signal to the investors. Shareholders may get a signal that dividends are rise due to increase in income or it take a negative signal that firm have no growth opportunity in near future. Michaely and Allen (2003) expressed that to avoid taxes firms can start repurchasing of the shares instead to give dividends to their shareholders.

Cai et al. (2008) explore the determinants of debt maturity structure and locate that Chinese firms with high value use a higher extent of long term obligation. They pointed out that this contradicts the signaling theory and most part of pragmatic literature infers that transient obligation may not indicator of firms high quality in China. Additionally, an intermediary used for company's development prospects and discover vague outcome with respect to its effect on debt maturity structure. Consequently, they locate indeterminate help for agency theory, identifying with the control of administrative incentives to over and under interest in firms activities. On the other hand, in a material exclusion from their study, they do not separate firms that are state possessed with privately owned firms.

Rajan and Winton (1995) reported that debt having short term fixed maturities give investors more important flexibility to adequately supervise insiders by demanding continuous reimbursement of credit. Stulz (2001) contend that short-term debt can be intense instrument for observing corporate insiders. Short term obligation make it troublesome for debt holders to deceive loan providers since it gives lenders to fluctuate term of financing before this demonstration of borrowers. Datta et al. (2005) point out that shorter maturity loan subject's managers toward successive monitoring by outsiders who minimize the agency costs among directors

and investors. Authors demonstrate that more ingrained insiders incline toward long term loan, to keep away themselves from regular external monitoring. Short term loan restricted agency costs. (Barnea et al.1980).

El Ghouli et al. (2017) and Khurana and Wang (2015) examines the impact of exceptional reviews and accounting conservatism to substitute debt to maturity in to reduce transaction and agency costs. Ghouli et al. (2016) finds that the portion of long term loan in firms' capital structures ascend with the help of a three senior auditors while, Khurana and Wang (2015) locate that debt having shorter maturity is negatively related with accounting conservatism. Finally, Cutillas and Snchez (2014) record direct proof on the job of short term debt in alleviating overinvestment and underinvestment by analyzing the effect of transient debt on efficiency of investment.

Jiraporn and Kitsabunnarat (2007) emphasize that insiders of organization with feeble investor privileges dispose toward longer maturity debt to shorter maturity debt, to protect themselves from monitoring by the debt market. In addition Penas and Ortiz-molina, (2008) gives indication that shorter maturity debts lighten the problem of information asymmetry that may happen in self-regulating lending companies. Since the fundamental work of Miller and Modigliani (1958) and Stiglitz (1974), who propose that in a developed market, firm value are not affected by leverage and debt maturity a number of researchers have tended to this issue, essentially by endeavoring to clarify firm-level leverage and debt maturity decisions by distinguished market imperfections (e.g., Miller and Modigliani, 1963; Kane, McDonald and Marcus, 1985).

Jun and jen (2003) reported that fiscally solid companies are fewer influenced by renegotiating and the interest rate risk. Financial potency gives firms to be influenced by less default premiums since they have bring down the prospect of bankruptcy and these organizations meet less trouble in renegotiating their advances. Moreover, financial potency enables firms to hold out interest rate risk associated with utilization of shorter maturity debt.

Myers (1977) argues that risky debt that will repay in future lead to underinvestment today. The insight is that portion of the cash flows generated by the funds that goes to loan holder at the time of its repayment, and unfortunately the equity holders who settle on the venture choice won't disguise this favorable position. The truncation of cash flows can distort incentives of investment. Myers (1977) in this way proposes the solution of short term debt to debt hang over issue, in light of the fact that if all debts matures before the venture opportunity, the firm can settle on the investment choice as though an all-equity firm. He proposes another solution to resolve under-investment issue. He proposes to organize the debt maturity toward firms possessions. The maturity matching guarantees that payments of loan relate to reduce in the benefit of existing resources. It implies that maturity of firms assets ought to be synchronized with debt maturity.

Correia et al. (2016) investigated the effect of firm level factor just as the institutional condition on debt maturity structure. They take 3,406 firms as a sample from 13 European nations for the time period of 2011 using different regression techniques among all firms factors, size of the firm, leverage, and finds that these factors are positively related to debt maturity. Moreover, when debt maturity decreases the value of the firm and firm quality increases. All the factors aside from growth of the firm and viable tax rate are found in concurrence with the prior hypothetical expectations. Result further recommends that the type of legitimate framework substantially affects maturity of debt and the more prominent the dimension of financial structure in the countrys economy.

Stohs and Mauer (1996) support the idea of Myers (1977). A finding of the study is companies go with the debt maturity with the life of assets to avoid the risk of refinancing and reinvestment of debt. If firm own a debt that has maturity less than the maturity of assets it faces a risk not being able to produce sufficient cash inflows to return debt and interest on debt. On the other hand, if firm own a debt having maturity more than the maturity of assets it faces the problem of reinvestment because when the assets are matured and funds are not being used to generate further return then firm has two options either to repay the debt or use these funds for new investment but firm may not have further investment

opportunities. Debt maturity has inverse relationship with earnings surprise and effective tax rate. He concluded this inverse relationship with earnings surprise that risky firms are unable to get long term loan and positive relationship with effective tax rate that when tax rate is high the amount of tax shield is enough to meet the floatation cost of longer maturity loan. He initiate that companies having very low and very high bond rating are not able to get longer maturity loan because organizations having lesser bond rating are not able to get longer maturity loan and firms by means of towering bond rating issue shorter maturity debt to give an indication to market, also they have less problems of refinancing. They found positive connection among maturity of debt and size of firm and inverse relationship in the midst of growth opportunities. Van Auken and Holman (1995) and Stowe et al. (1980) gave the same idea in their studies.

Richard et al (2008) reported that there is no positive association among maturity of debt and liquidity so while to demonstrate later than the study of that organizations. In view of the fact that overconfident managers misjudge potential venture profitability and benefit, they may utilize short term debt to equity ratios. Consequently in light of theoretical standards, it is expected there is a pessimistic connection among ratio of debt in overconfidence firms. Barclay and Smith (1995) draw a theory where managers utilize short term loan to demonstrate organizations' excellence to equity markets. Firms with high quality will pay the higher transaction costs, present to more consistent checking, and acknowledge the risk that short term debt may not be moved over.

Orman and Koksal (2017) conducting a study on Turkish non financial firms they used sample size of 12,687 companies during the time phase of 2005 to 2015 and tasted fixed effect model. The study found that agency theory and liquidity theories are consistent, particularly in case of small and big publicly traded firms. Signaling theories are relevant when only the sample of Govt. owned firm can used. Results of the study also suggest that highly levered firms have ;long debt maturity, but small size, credit quality and maturity of assets are significant and there result are different thats depends on the nature of the organization. They

also found debt maturity decisions are also influenced by economic condition, inflation and volatile interest rate.

Shah and Khan (2009) reported that the relationship among size of firm and maturity of debt is significant. Similar association is suggested by asymmetry theory. Additionally, small firms faces difficulties to access capital market due to fixed flotation costs of long-term loan that again suggest an optimistic connection among them.

Gul et al. (2015) conducting a study on banking sector they used a sample size of 22 banks listed in Karachi Stock Exchange during the time period of 2005-2011 to explore different determinants of debt maturity and finds that long term debt increases when assets maturity increase, whereas it decreases with size of the company and firm operating cycle. Firm size, firm quality and leverage are found insignificant in this study. Tax rate have major effect on debt maturity structure while using pooled model and found insignificantly related to debt maturity when fixed effect model is used.

Marchica (2008) conducted a study on UK firms to examine the relationship between ownership structure and maturity structure of debt and revealed the impact of insider's holding and large external holding on debt maturity and finds that there is no positive relationship between them. The study of Karan and Arslan (2006) support the finding of Marchica the pessimistic link among ownership structure and maturity of debt for studying Turkish firms.

Muhtar, Ahmad and Matemilola (2018) employees dynamic model to emphasize the task of institutional factors and firm specific variables on short and long term debt maturity structures. Study found that the choices of different maturity structure are dynamic to adjust the possible debt maturity structure. Moreover, different firm variables are found holdup the contract cost, signaling and maturity matching theories of debt maturity structure. Institutional factors like law, rules and regulation, regulatory authorities are revealed to significantly related to debt maturity structure, thus high quality intuitions have greater approach to long term debt.

Wael Rouatbi (2018) explore that controlling shareholders can bear the cost of principles self interested behavior they uses organization resources for their personal benefits. Such conduct can lead the principles to prefer long term debt, to keep away from regular monitoring by lenders. Study found that multiple large shareholders can use short term debt. Results also suggest that multiple large shareholders can reduce the extraction of personal remuneration by the owners and curb their preference of fever monitoring throughout the uses of longer maturity debt.

Dermot and Federico Galizia (2002) contends that organizations having more capital expenditures are exceptionally more cost-effective as compare to organizations with low capital expenditure and as indicated by the pecking order hypothesis firms do not distribute their revenues as dividends to shareholders but rather they are using their profit to finance capital expenditure.

Diamond (1991, 1993) and Rajan (1992) reported that in countries where legal system is ineffective or more expensive companies likely to use shorter maturity debt rather log term debts. As indicated by the authors, the utilization of short term debt prevents companies to deceive lenders since the lower period. Firms large in size have used long term debts in respect to assets and their debts is of longer maturity in nations having efficient lawful system (Maksimovic and Demirguc-Kunt (1998, 1999).

Fan et al. (2004) argued that maturity of debt is negatively related with dimension of financial sector. The author indicates that a well-developed financial sector leads to increase in short-term debt as short term financing allow financial institutions to use their competitive advantage to monitor debtors. From the microeconomic point of view, the major reason for financial institution to prefer short-term financing concern the possibility of renegotiating the terms of contract.

Saedi and Mahmoodi (2018) are conducting a study to observe the relationship between firms performance and capital structure of the firm using the sample size of 310 listed firms in Tehran Stock exchange during time period 2007 to 2014. Author used ROE, ROA as dependent variables. Result of study revealed that earning

per share, Tobins Q, have significant and positive impact on capital structure and return on assets significantly negatively related to capital structure whereas, capital structure and ROE has insignificant relationship. Pratheepkanth (2014) examine the relationship of capital structure on firms financial performance in Sri Lanka. He found the negative connection among firm performance and capital structure.

Schwarcz, (2016) examines that financial guidelines is focused to attract the investors pulling in the consideration of the executives and financial specialists on the idea that speculators will contradict in more risky business activities. As indicated by Jensen and Meckling, (1976) that agency hypothesis contends that management are more likely to choose for themselves and can't generally act to the interest of managers and stakeholders offered to risky investment may overlook the interest of investors to maintain a strategic distance from capital market penalty. Teodora (2009) expressed that while investors may want firms to face higher risks to enhance the estimation of shareholders, managers are unsafe in making a diversified human capital in a organization.

Short et al. (2016) inspect the impact of ownership structure on the financial system of UK firms. Their result suggest that there exists positive relationship among ownership and leverage ratio while, negative relationship was seen between outside shareholders and financial leverage. Masood and Shah (2014) in Pakistan tasted the relationship among institutional shareholding and capital structure of the organizations listed at KSE. Short et al. (2006) shown that ownership structure has significantly affected to leverage level in UK. Results also demonstrate that significant and positive relationship was seen among the ownership and financial structure though inverse relationship between outside shareholders and financial structure and leverage.

Fama (1985) also reported that financial institutions have a competitive advantage as compare to other investors, because they can better monitor their customers. Financial institution can keep a strong bargaining power and influence the investment strategies of the corporations to reducing the debt maturity. In addition,

Demirguc-Kunt (1999) revealed that in states where the financial sector is developed, firms use long term financing seeing as the responsibility of financial institution in monitoring of contracts allows them to offer higher maturities. Financial institution attain economic of scale in monitoring their creditors (Diamond, 1984).

Jensen and Meckling (1976) reported that ownership structures have significant substance in governance mechanism for the reason that they decide the incentive of management. They additionally demonstrated that deliberation of ownership is favorable toward corporations seeing as large shareholdings in the firm would take into account greater checking of managers. Ownership structure plays a vital role in the firms as entire firm depends on their ownership structure. There is blend ownership structure in developing countries like Pakistan, e.g. individual holding, investment companies holding, institutional holding, and foreign shareholding.

Vishny, La Porta and Lopez (2000) reported that the attributes of ownership structure the enhancement in stock market, the type of decisions taken by the Government of the country staying within rules and regulation concerning the extension and development which influences the organizations and these structures are moderately different crosswise over nations. Spread ownership structure is more frequent in US and UK listed firms, as compare with Europe, where major ownership style is controlled ownership. In addition these studies also reported that ownership structures varies country to country and firms to firms and that have may also effect from agency conflicts.

Fama and Jensen, (1983); Hoskisson and Baysinger (1990) argued that large stakeholders such as mutual funds, investment companies and families possessed firms hold substantial assess to controlling directly and consequently they work by an outline by means of strange marketing leaning directions in favor of revelation managerial incentive.

Rui MS Rita and Jacinto da Silva (2017) investigate the effect of family unit and non family possession on leverage of the firms. They also examine the effect of firms size there location and the financial crisis in 2008 on capital structure of

family owned firms. They find that family ownership structure positively affects when the firm is located in metropolitan areas and when the firm is large in size.

Henrique Castro and Eduardo (2016) conducted a study on ownership deliberation and maturity of debt in Chile and Brazil companies by taking data set 2008 to 2014, and find the positive relationship between them. Moreover, in countries where corporate governance protects debt holders, firms having possession deliberation will use shorter maturity debt to benefit from superior monitoring by borrowers.

Paulo Renato Terra (2017) conducted a study on theories of debt maturity structure in different countries construction to realize country specific constraints using panel data analysis. He finds a considerable vibrant element in fortitude of firms debt maturity, to achieve optimal debt maturity firms faces modest adjustment cost. The determinant of maturity of debt and this outcome is parallel among Latin American countries and the USA. Shah and Khan (2015) conducting a study to inspect the determinants of debt maturity. They used a sample size of 266 companies listed in Karachi Stock Exchange during the time period 2001 to 2005 and used different techniques of panel data model. Results show that maturity of the debt increase when size of the firm increases and vice versa. Moreover, study find that larger and financially strong organization have more access to long term debt and financially weak firms have less access to long term debt.

Barclay and W. Smith, JR.* (1995) empirically explore the consequences of debt maturity, they finds that firms that have growth opportunity in near future be likely to exercise more longer maturity of loan rather than debt of short maturity in their debt to equity portion. Moreover, a firm uses their maturity of debt to send a signal to market. Firms that have high in sequence use shorter maturity debt in their debt to equity ratio. They also found that maturity of debt is not affected by taxes this evidence is also supported by the study of (Lewis 1990).

Diamonds (1991, 1992) assume that firms having positive information about their future cash flows have desire to use shorter maturity debt in their capital structure as compare to longer maturity debt. However, short term debt let out companies to danger of unreasonable liquidity. Banks is hesitant to renegotiate on obligation

if unpleasant information arrive. Due to low renegotiation risk, firms having high credit rating use shorter maturity loan. Lower credit rated organizations are in favor of long term debt and these organization prefer longer maturity debt in order to minimize refinancing risk.

Takanori (2006) examine the relationship among foreign shareholding and debt maturity structure on Japnies companies over the time period of 2005–2008. He finds that firms with higher foreign shareholding have the benefit of longer maturity of debt, and these firms also have high performance. Additionally, companies with more foreign shareholding practiced low cost of debt financing.

Toft and Leland (1996) demonstrate firms deciding on higher leverage additionally pick long term debt. Morris (1992) recommends the organizations with superior debt level in their capital structure favor to use longer maturity debt to keep away for the risk of bankruptcy. Then again, Dennis et al. (2000) contend that highly levered firms ought to survive contrarily linked with cost that is moderated by decreasing influence level of debt and also by reduction in maturity of loan.

Mayers (1977) proposes that underinvestment issues are relieved if development firms utilize shorter maturity debt that lapse earlier than practicing the firms growth choices, in this manner debt holders and lending institutions can negotiate. Essentially, the cost of observing might survive diminished if organizations are assessed infrequently by using shorter maturity debt. Titman (1992) contends that development companies have mutually more noteworthy probability of insolvency and a positive potential perspective, they can advantage to getting shorter maturity debt.

Serrasqueiro and Macas (2001) conducted a study on family and non family ownership structure. He reported that ownership structure take part in an essential role in firms capital structure on the origin of two samples of family ownership and non family ownership. They use panel data analysis to find results. The result of this study suggest that according to trade off theory firm having family ownership are possibility to reach their target debt zone. Moreover, when inside funds is not enough Non family owned companies barrow short term loan that leads to financial

deficit. While family owned corporations tend to use retain earning when internal finance is not enough. Peter Westerheide and Peters (2008) study the conduct of family unit and non family owned organizations towards using of debt taking data of 1418 family business and 1196 Non-family companies in Germany. They find that firm owned by families prefers shorter maturity debt to invest in long term projects. Their result shows that credit rating of family owned firms is higher as compare to Non-family owned organization, and family owned organizations often use short term debt. The main reason might be that family owned firms are independent for external investors.

Abdullah, Shah and Iqbal, (2017) examine the impact of group ownership and family ownership on firms performance taking sample of 156 firms listed in Pakistan Stock Exchange during the time period of 2003–2009. They used 2SLS approach to address the problem. Their result shows that firms controlled by groups have not significant influence on the firms performance and when the group ownership is higher firm performance is poor. In addition results also indicates that big firms and the firms with high sale turnover firm performance is better as compare to firms with low sale turnover and small in size. Highly levered firm show poor performance.

Mok Choi and Park (2019) examine the relationship between firms value and foreign ownership in perspective of organization growth options and dividend pay outs ratios to organization value. They found that when foreign possession change agency costs are also changes negatively which is related to development of future profitability of the organization. Study also finds that there exist a positive relationship among foreign possession and dividend pay outs. Furthermore, DPO are negatively related with earnings of the firm though when foreign possession increases dividend pay outs and organization growth also increase because there is positive link between them. Results show that foreign investor plays a main role in to ensure organization growth.

Angelo et al. (2002) reported that refinancing risk is the risk that continuing to force firms to borrow and it is fairly essential resource to generate risk for the

organizations. A firm which use short term debt is faces more refinancing risk as compare to the firm which have longer maturity.

To reduce or minimize the refinancing risk firms with short maturity of debt have propensity to keep cash in hand.

Ahmad and Shah (2019) investigate the impact of institutions ownership on the performance of the firms listed in PSX during the time period of 2007 to 2011. They applied OLS approach to find the relationship among variables. They found that return on assets have significantly negatively related institution possession whereas, size of firm, growth option significantly positively related to them. Pakistanis listed organizations utilized 57 percent leverage in their capital structure while ownership has 30 percent persuade to take debt.

Maria Teresa Marchica (2005) examine the impact of agency related problems on firms financial decisions. Sample size is taken UK non financial sector over the time period of 1991 to 2001. Their result shows that patiently firms with low level of cash invest more in revenue expenditures and less in capital. Additionally, these firms rely more on fixed assets to financing their investments rather than liquid assets. These firms usually keeping the cash and use it on intangible assets.

Shleifer and Vishny (1986, 1997) proposes to facilitate in the existence of huge investor organization problem can arises, since a corresponding feature for feeble lawful protection of account payable. In view of a organization having frequent amount of dispersed investors a individual shareholder have no incentives to examine the rules and procedures of managers, while the remuneration of carefully watching out management of the organization divided among all investor. On the other hand, big investors have more incentive as compare to other shareholders in the process of monitoring. In addition, Fama and Jensen (1983) reported that bulky investors possible more efficient as compare to diminutive investors in view of the fact that he has important reserve at that level and have voting control to keeping these funds. Moreover, Friend and Lang (1988) demonstrate to facilitate

in existence of big investors in organization send a signal to market that shareholders carefully monitor the managers. Consequently, the existence of big investors in the company does not allow managers to more rely on short term debt.

Singer and Pettit (1985) express the small organizations contain larger amount of data as small firms are profoundly liable to create fewer information about themselves because of economy of scale in generation of information and circulation. Additionally, Warner's and Smith (1979) argue small companies contain superior cost support the hint of Barnea et al. (1980). Moreover, Whited (1992) reported to bigger organization encompass easy entrance in capital market and barrow longer maturity debt in view of their other collateral securities in respect to potential growth options. Thus, firm size is anticipated that would be specifically identified with corporate debt maturity.

Sarkar (1999) examine the optimal level of debt maturity considering the liquidity risk and project related characteristic. He found inverse relationship among debt maturity and risk of the debt security. By using result of the study he explained the reason of greater maturity for the high rank bonds and less maturity for small rank bonds. He also found that for low risk bonds project duration is the major determinants of debt maturity that is basically the maturity matching of cash inflows of the projects. Interest rate, corporate tax rate, debt burden project growth rate and are the other important determinants of debt maturity found by study. Bankruptcy risk is also an imperative element that affects the corporate debt maturity and there is not a single firm that is free for that risk.

Leland and Toft (1996) examines the optimal debt to equity ratio while considering liquidation endogenous and yield curve of interest rate as a variable of study. Decision about capital structure includes both the composition of debt equity versus equity decision and the decision about the maturity of debt. They also consider the presence of agency cost. They found that by using long term debt firms can get more benefits of tax shield while by using short term debt firm cannot get same level tax benefit due to existence of agency cost. Firm can reach to her optimal capital structure by balancing cost and risk associated to the debt financing. Models of the capital structure determined that different debt

maturities are used by the firms of different risk considering the tax benefits and liquidity risk. They also found leverage is an important component of decision about the maturity of debt.

Modigliani and Miller (1958) in the first study that works on capital structure and this firm including the choices of debt maturity. In this study they concluded the market capitalization of organization is irrelevant to the capital structure and for different debt maturities under the assumption of perfect market hypothesis. Assumption of the perfect market hypothesis are that there are no transactions cost for acquiring different types of financing instruments, there is tax free economy because absence of taxes, firms have no advantage of tax shield due to which author concluded in this study that the decision about the capital structure has no relevance. In the presence of the above discussed assumptions the market capitalization of organization is irrelevant to debt financing versus equity financing, further more author concluded that despite of capital structure the decision about debt maturity choice also has no effect on the firms market value.

Stiglitz (1974) extend the work done by Modigliani and Miller that supported the work of Modigliani and Miller under some assumptions to firms market value is irrelevant to the capital structure and debt maturity choice. In his study he has made four assumptions: the first assumption is that there exist no bankruptcies; second assumption is that there is perfect market for debts of all the maturities; third assumption is that all decisions about the financing are made by the firms and the last assumption that there exists general equilibrium. In the presence of these assumptions Stiglitz proved the existence of general equilibrium in which firm can easily change its capital structure and can replace the existing debts with the debts of different maturities, but still the firms market value remain same.

In the presence of market perfections market values of the firm is irrelevant to different capital structure decisions as well as to the decisions about the debt maturities, so different studies about debt maturity choices and about the determinants of debt maturity structure rare conducted when different types of market imperfections are introduced. When the market imperfections were introduced the

study of Grove (1974), Morris (1976) and Myers (1977) were the first studies that explained the different determinants of debt maturity.

Morris (1976) explained the two components of the decision regarding debt, there are two decision components regarding debt, one is cost of debt and the second is risk about the debt. The main focus of this study was on this risk, risk of not having enough cash inflows at the time of maturity of debt. According to this study these types of risk are minimized by matches the debt maturity with the maturity of goods for which this debt was borrowed. By doing so; the risk of repayment of debt and interest on debt can be minimized. He concluded optimistic connection among the maturity of debt and assets life as considered assets maturity an important component of debt maturity.

Peters and Westerheide (2015) shown that there is clear distinction among the role that different forms of financing are uses in family owned business and other business. Family owned business can issue more bank loan specially to finance funds and innovation and inside financing is the major resource of funds for family owned firms. Econometric techniques are used to study the behavior of the business toward using of debt. They found that family owned business faces stronger monetary constraint but they indicates that family owned organization are be ready bear more financing cost to protect from financial independencies. Macas Nunes et al. (2013) analyzed that the ownership possession is the key element of capital structure related decisions. They used panel data to study the issue and found that family business possibly attain their objective to short or long term loan ratios. While, when inside funds is not enough non family owned organization try to use short term debt and their variation to use such type of loan is a cost of financial deficit.

Shah and Abdullah (2012) examine the impact of family possessions on financial performance of the firms. The used the sample size of 158 companies listed KSE over the time phase of 2003 to 2007. Authors used 2SLS approach to find out the desire result. Result of the study shows that group possession in an organization have not significantly affected the firm performance. Nevertheless, when this type of ownership is higher in organization the organization tends give poor

performance. Furthermore, result of the study show that big companies or companies with high sale turnover and developing organization have better performance as compare to other organizations. Highly levered companies showed poor performance. The sample of 28 family owned companies and 27 non family owned companies is used to compare the performance of these types of companies. Result shows that family firms are efficiently large as compare to other even if the difference is insignificant.

Myers (1977) examined two important components of debt maturity considering agency cost in his study, growth opportunity and assets life are the important elements of debt maturity. Due to agency cost firms face the problem of underinvestment in which the managers forego opportunities with positive net present value when the firm has more debt financing and stockholders have less residual claim on assets of the firm and most of the benefit goes to debt holders, when it forego the opportunities the present value of future economic benefits decline which ultimately reduces the firms market value because the firms market value comes from assets of company and the present value of expected future economic benefits which will come from the available opportunities to the findings of his study are that firm have new expansion choices to uses shorter maturity debt to avoid the difficulty of underinvestment.

Diamond (1991) also found affirmative connection among maturity of debt and assets life. He argued that organizations matching the maturity of debt with life of assets to avoid for liquidity risk. Further he finds that companies uses shorter maturity loan when their private information is not recognized to the debt market and people undervalue the debt security of firm due to this unavailability of information. Firms do so because by using short term loan they become able to renegotiate the terms of debt when market become known to the information about the firm. But by doing so firm has the problem of liquidity in case when market have no proper information about the firm and consider the firm overvalued. According to Diamond debt maturity choice is a trade-off between private information and liquidity risk. High quality firms issue shorter maturity loan as of having negotiating power and low quality organizations uses longer maturity debt

to avoid liquidity risk. Because low quality firms face problem to get debt from the market due to risk associated with low quality firm, creditors undervalue the debt security of low quality firm and these firms no negotiating power to get less costly debt finance. Studies Goswani et al. (1995) and Hart and Moore (1994) also provide explanations about the maturity matching concept of assets and debt maturity. Hart and Moore (1994) in their study found that the companies having slow asset depreciation use long term debts, it concluded that there is optimistic relationship among assets maturity and maturity of debt to avoid reinvestment risk.

Myers and Majluf (1984) conducted study on the issue of agency problem to know about the financing decisions of managers when the managers have more information and investors are not aware about the information which managers have. It is assumed that managers have more information than potential investors and investors make their decision about investment rationally and they evaluate firm rationally. In their study they found that managers may forego some investment opportunities instead of issue of more common stock. They prefer internal sources of financing and if those internal sources are not enough then they use debt as a source of finance instead of issue of more stock. In the presence of growth options firms use short term loan so there is inverse relationship among the growth opportunities and life of debt. Managers do so for the benefits of existing owners of the business because when the new stock will be issued and overall information in the market may not be available to the potential investors then value of the existing stock will decrease and if it will issue debt then it will not influence the market value of the existing stock but will increase the risk due to debt financing. Mauer and Ott (2000) also supported the existence of agency cost of debt in which the problems of underinvestment, overinvestment or the direct transfer of wealth from debt holders to investors may exist.

Childs et al. (2005) examine that when there is financial flexibility that firm can adjust its leverage and debt maturity easily then the agency cost of debt can be minimized and the problem of underinvestment and can be eliminated; by doing so firm can also minimize liquidity risk when firm has flexibility in adjusting its

leverage and loan maturity. They also found that when the price of adjustment of debt is higher than firm uses less leverage but long term maturities and firms having option and flexibility in changing their leverage and debt maturities use high leverage initially because they can amend their debt and maturity structure according to the requirement of business. They further found in their study that firms increase leverage when tax rate increases and reduce debt maturity in case of increase in taxes. When interest rate increases, after tax cash flows of the firm decreases as the tax expense increases and the firm value decreases, to cover this deficiency firm increases leverage ratio because by doing so firm can get the benefit of more interest tax shields. But still there is net reduction in firm value due to which risk of debt increases, to respond that firm reduces maturity. Smith and Warner (1979) also study the existence of conflict in the interests of stockholders and bondholders. These may be in various different types such as assets replacement, underinvestment, overinvestment and the issuance of new debt securities that reduces the value of existing debt securities. And these issues are greater incase of small firms. Petit and Singer (1985) also proved the existence of agency issues which are due to debt financing and those are more prominent in case of smaller firms.

Whited (1992) used panel data in his study about debt and liquidity problems of the firm. He found inverse relationship among firm size and debt maturity. He argued that this relationship that small firms dont have enough assets that provide as collateral for long term debts. Due to the existence of liquidity problems small firms cannot access long term loan and capital markets easily.

Leland and Toft (1996) reported that the optimal debt to equity ratio while considering bankruptcy as endogenous and term structure of interest rate as variable of study. Decision about capital structure includes both the composition of debt to equity choices and decision about maturity of loan. They considered the presence of agency cost. They found that by using long term debt firm can get more benefits of tax shield benefits while by using short term debts firm cannot get some level tax benefits but due to the existence of agency cost firm uses shorter maturity debt and sacrifices tax benefits of long term loan. Firm can reach to

its optimal capital structure by balancing cost and risk associated to the debt financing. Model of the study determined that different debt maturities are used by firms of different risk levels by considering the tax benefits and liquidity risk. They also found leverage as an important component of the decision about the maturity of debt. Again Leland (1998) conducted study to know about the risk taking behavior of the equity holders while taking decision about the costly loans. These costly loans lead firms to take the projects of higher risk and of low quality. This study also concluded that firms with healthier potential prospects prefer shorter maturity loans and become agree to face liquidity risk because by doing so they have option to refinance with better terms. In case when debt market has no information about the future opportunities of the organization they consider their debt more risky and demand more compensation and when firm become successful in signaling its liquidity then it can get credit with less strict credit terms. Liquidity risk is the risk of borrower not able to pay the principal amount or interest or both to the fund provider on due date.

Modigliani and Miller (1963) introduced the concept of relevance of capital structure to the market value of firm. In 1958 in their study they concluded that in the presence of certain assumptions market value of firm does not change by changing capital structure, one important assumption was that there is tax free economy. Due to tax free economy there was no tax shield due to which value of firm was irrelevant to the decision of capital structure. But later on many market imperfections were introduced one of which was the existence of tax, Modigliani and Miller (1963) found that taxes influence capital structure decision and debt financing is advantageous over equity financing because interest is tax deductible whereas bonus payments are not deductible and also debt financing provides leverage to the market value of equity when firm is getting return on investment greater than the cost of debt because debt providers have to get only agreed and fixed return, the remaining return belongs to equity holders. Despite of the considerable advantages of debt financing many authors such as Kraus and Litzenberger (1973) and Baxter (1967) showed that higher debt financing is not better for firm because it may subject a firm to higher degree of illiquidity that increases the probability of

bankruptcy; So there is need of balancing the tax benefits and bankruptcy cost while making capital structure decision.

Scott (1976) presented a multi-period model for the valuation of firm. Underlying assumptions the model are that bankruptcy is not impossible for firms and assets markets are also imperfect. When author used the assumption of no bankruptcy then his model was same like to model of Modigliani and Miller but when he used the assumption of the existence of bankruptcy they reached to an optimal capital structure using comparative static analysis to check the descriptive hypothesis and concluded that there are chances that bankruptcy cost of debt may become lower than the tax shield through the use of debt financing.

Kane et al. (1985) conducted study on debt policy to find out the premium to leverage. They considered that market values of the levered firms should consider the tax shield benefits while calculating market values of its real assets. They found that the measure for the advantage of leverage is net extra return after the premium for bankruptcy risk which a levered firm can earn but similar unlevered firm cannot earn. In their study they construct a model for option valuation, by using that option valuation model they compute the determinants of optional debt maturities and optional debt maturities. Miller (1977) determined optional debt maturities using personal taxes as an important determinant. Kane et al. (1985) used personal as well as corporate taxes both as the factors of determination of debt maturity. They found inverse relationship among maturity of debt and tax rate concluding maturity of debt is determined on basis of tax benefits net of bankruptcy cost and this net of bankruptcy cost tax shield benefit should be not less than the cost of issuance that debt security. They also found converse connection among maturity of debt and instability in the firm value; firms having less volatility in their assets variance uses long term loan due to less bankruptcy cost expectations. Any firm having more than volatility in their assets and firm value will be forced to reshape its capital structure more regularly due to risk of insolvency cost and to reach an optimal capital structure hence more volatile firm will use debts with short maturities.

Wiggins (1990) study the relationship between the illiquidity and bankruptcy risk and maturity of debt considering benefits of debt ratio. Assumptions of the model of study are; bankruptcy has cost to the firm, there is tax economy and firm will get tax benefit by issuing debt and when the debt is issued it will be issued at fair price. In the model of Kane et al. they concluded that in the presence of perfect market and in the presence of no transaction cost to raise debt, debt maturity approaches zero but this study showed the contrary result to the Kane et al. Furthermore, study found positive connection among leverage benefits and total risk of the business which means higher the leverage higher will be the liquidity risk and higher would be the value of leverage. Also in case of higher volatility in the firm value longer will be the debt maturity.

Titman and Wessels (1998) examined the capital structure decisions of US companies using data from 1974 to 1982. They found inverse liaison among maturity of loan and firm size arguing the truncation cost is the important determinant while deciding debt to equity ratio. Generally cost of issuing long term loan is restively higher as compare to cost of issuing short term loan smaller firms prefer shorter maturity debt to minimize transaction charge. This study could not support other theories relating to debt maturity choices, other variables of study include firm volatility, growth opportunities. All the relationship for the above discussed variable is insignificant. Reason for these insignificant results could be that authors did not use accurate measures to measure the attributes of debt maturity structure.

Ogaluzor (2019) explore the connection among shared ownership and firm financial performance in Nigeria used the data for the year of 2016 which is collected from annual reports of the organizations. To control heterogeneity firm size is used in organization specific characters. GLS approach is used because of cross sectional data. They found that ownership concentration is significantly negatively related financial performances while they exist a positive connection between managerial possession and financial performances. Moreover, study recommends that policy tendency towards shared ownership distribution in well established regulatory authorities in Nigeria to maximizing the firm performances.

Mitchell (1987) reported that short term debt ratio has increased over the time phase of 1952 to 1982 because the future interest rate was uncertain during this period. He concluded inverse relationship among interest rate uncertainty and debt maturity; it was due to supply and demand side of debt. Organizations uses shorter maturity debt to replace existing debt with cheaper debt and supplier of debt provides short term debt to find a better opportunity to provide high interest rate debt. Mitchell (1991) also investigates the maturity of bonds and public bonds. He found that companies having asymmetry information uses shorter maturity debt for the purpose of minimizing adverse selection cost.

Brick and Palmon (1992) and Emery et al. (1988) also support the tax timing by using longer maturity loan to increase the firms market value due to tax benefit. When tax rate are fluctuating these give rise to the opportunity of tax timing options; value of longer maturity debt is calculated by current significance of predictable cash flows using a required rate of return, when interest rate increase the value of longer maturity loan decrease and longer maturity loan holders has option to realize capital loss which in turn gives tax benefit. When the interest rates change downward the importance of long term debt increases and debt holder will not realize expected gain to get tax timing option to increase the market value of shares.

Emery (2016) developed a model in different way to find the choice of debt maturity. According to model choice of longer maturity debt versus shorter maturity debt is reliant upon its product demand. Model predicted that companies do not use debt with long maturity as matching the maturities of its resources and liability due to seasonal demand of its products. While determining uses of shorter maturity debt by organizations author discussed other issue relating to firm such as financing cost, profit products prices, marginal cost and inventory. He concluded that firm use short term debt when short term interest cost as compare to use of long term debt plus additional operating profits due to change in additional seasonal demand of the product is larger than the issuing cost another short term loan with low favorable condition. When yield curve of interest rate premium is small firm tend to issue loan with long maturity. Firm having cyclical

demands of their products the market mostly use both types of loan; mixture of little and longer maturity of debt match with maturities assets with liability to avoid liquidity risk. Under some assumptions when floatation cost of getting debt is zero mostly companies used shorter maturity debt. The model of study further predicts that firms having more investment in fixed assets use short term debts to facilitate seasonal investment in current assets to meet the seasonal demand of its product. Benefit of using short term loan to meet its seasonal needs increase market value of firm as it avoids financial cost of idle funds. If firm use long term debt will have to bear financial cost of idle funds as it cannot mature long term debt. By doing so firms facilitate sales and increase operating profit by meeting its seasonal needs by using seasonal loans.

Barclay and Smith (1995) conducted a study to test corporate debt maturity. They use panel data analysis on US firms consisting of 3994 observations with the time during 1974 -1992. They found optimistic relation among maturity of debt and size of firm. They accomplished that most of the smaller firms had debt maturity of less than three years. By this relationship of debt maturity and firm size they also concluded that firms be likely to use shorter maturity loan when they have growth opportunities in near future. The result of the study consistent with Myers (1977) that companies control the agency problem between equity holders and bond holders by the use of debt maturity.

Elyasiani et al. (2002) conducted a study to examine the determinant of debt maturity at the time of issuance of securities while considering the both leverage and maturity of debt. In current study he used system of simultaneous equation model. He also use single equation model for estimation of debt maturity using OLS method of estimation for comparing the result of determinants of debt maturity with previous studies. He defined debt maturity by using two approaches one is incremental approach and the second is balance sheet approach that is distinct like the percentage of entire loans. Result of single equation model supported underinvestment problem that firm with lesser growth options use long term loan while the result of simultaneous equation could not find the existence of the unhelpful connection among maturity of debt and firms growth and also this equation

model found that growth opportunities influence the decision of leverage not the decision of debt maturity.

Jun and Jen (2003) reported that the debt maturity choices is the trade off risk and remuneration of using shorter maturity debt. Generally short term loans are cheaper as compare to long term loan due to the liquidity preferences of the debt providers but it entails the risk of refinancing and the risk of interest rate uncertainty. While making the decision about debt maturity choices firm has to make cost and benefit analysis of using short term debt. They found that financially strong companies use shorter maturity loan to take benefit less interest costs.

Steephen et al. (2008) conducted a study in transition market to find out determinant of debt maturity. They used panel data of 4300 non financial firms of Ukraine covering period of 2000 to 2005. They consider signaling, agency cost of debt, maturity matching as important determinant of debt maturity structure of the companies working in transition economy. They found that firms debt maturity choices are more dependent on signaling and liquidity while asset maturity hypothesis is not supported by this study.

Cai et al. (2008) conducted a study on Chinese listed firms to investigate different determinant of debt maturity using existing theories on debt maturity. They used GMM estimation method for determining the relationship of different determinant of debt maturity. They used firm size, liquidity, collateral assets, and effective tax rate and firms quality as the theoretical determinant of debt maturity. They found the positive relationship among firm size and debt maturity and also between asset maturity and debt maturity. Collateral and growth options have significantly related to determinant of debt maturity decisions while organization quality and effective tax rate have no impact on debt maturity as per the finding of the study.

Scherr and Hulburt (2001) focused their study for small firms unlike the previous studies about debt maturity. They used data of the firms from NSSBF and considered those firms as small firm having employees less than 500. They reported that small organizations diverge from the large organization in several way; they

have the different level of growth opportunities, default risk, asset maturity and taxes due to which they focused their study for the sample of small firms. They found that small organizations are more likely to use short term debt; and found strong support for the existence of the maturity matching principle. Furthermore, companies having debt ratio use long term loan. There is no strong evidence found for growth opportunities, authors argued that this can be due to the reason of the sample having less variation in growth opportunities of the firm included in sample.

Ataullah and Vivian (2017) study the relationship between top managements overconfidence and debt maturity. They argue that managements overconfidence is probable to reduce underinvestment problem this is the frequently main concern for long term loan lenders. They found that inside overconfidence that is base of trading and top management overconfidence so the underinvestment problem has major impact on debt maturity rather than the overconfidence of middle management e.g. chief financial officer. Generally, this study find the early support to positively overconfidence maturity of debt link by means of this lessen the agency cost of the debt. Korner (2015) finds that when the long term loan increases when firm size, assets maturity and leverage increases. While growth opportunities, collateral assets and company specific factors are prove significant.

Afraz and Shah (2017) examine the impact of ownership possession on debt maturity on Pakistani listed companies. They used a sample size of 365 non financial companies during the time period of 1997 to 2012. They found that different ownership companies have different debt maturity. Moreover, supply side factor are more responsible of decline in debt maturity of listed firm although demand side factor are also in charge for such decrease in maturity but supply side factor has more prominent effect to decline in debt maturity.

Riportella and Ughetto (2018) conducting a study to investigated the impact of corporate governance that may be effected the maturity structure of debt on listed companies. They used the sample size of 330 companies over the time period of 1998 to 2016 and used panel data techniques to find out the desire outcomes. Results shows their exist a positive relationship among big four auditor and debt

maturity. Organizations having more concentrated ownership have high portion of long term debt.

Nazim Uddin, Khan and Hosen (2019) conducting a study to examine role of corporate governance on decision making of leverage structure of organizations over the time period of 2004 to 2017. Panel data is used to find the results in this study. They found that governance attribute like size, managerial possession, are main factors for making a decision regarding leverage. A result indicates that size of firm, ownership has an prominent function of decision making of leverage structure. Moreover, results of the study prove that political and family relationship in governance mechanism significantly effects the leverage decisions.

Antoniou et al. (2006) conducted a study to observe the determinants of debt maturity of German and British firms. They included these countries because these countries have different legal and financial systems that have different impact on debt maturity structure. Author used GMM estimation model in this study to analyze empirically three most important theories of debt maturity. The model predicted for all countries that organization prefer long term loan when term structure of interest rate is upward sloping to minimize cost by getting maximum tax shield benefit. They found positive impact of effective interest rate on corporate debt maturity in Germany. Study also support liquidity risk hypothesis for all the countries included in the study. They also found leverage and debt maturity have optimistic association conforming the fact that organizations reduce their bankruptcy risk. They concluded that only company specific factors are not the determinants of debt maturity choice, there are also some country specific factors that have influence on debt maturity structure.

Guedes and Opler (1996) reported that capital structure discussion had much attention of researchers that how much should be debt and how much be equity financing, besides the above discussions it is also important to check the time of repayment of debt holders. They collected data from the data base of the federal reserve board and using ordinary least square (OLS) model found that companies matches the maturity of debt with the life of assets to avoid the difficulties of refinancing when the debt matures before the generation of cash flows from its

assets. They also reported that to avoid the risk of reinvestment when there is mismatching of assets life and debt maturity.

DemirguK et al. (1999) examine the effect of financial institutions and financial market on debt maturity. Author used the samples of the firms from 30 different countries for the period from 1980 to 1991. They found that stock market have no impact on debt maturity and debt level for small firms. They also found the firms situated in countries having large banking sector; small firms use long term debts. Maturity matching hypothesis is supported in this study that compnieswith long life of assets use long term sources of financing.

Silva, Rita and Ramalho (2018) inspect the impact of family ownership structure on the leverage of the firm. They also investigate the impact 2008 global crisis on capital structure of family owned business. Study find family owned firms have positively related to organization to be found in metropolitan area and there is no effect on small firm located in out of metropolitan area. They also found that the crisis of 2008 has a considerable, although diversify, effect on family owned firms leverage and after 2008 these firm are more need to use debt. Small firm have less access to capital market.

Fattah and Slehat (2019) study the relationship of leverage, size and assets maturity on value of the organizations. They take a sample size of 13 listed companies of Amman during time phase of 2010 to 2018. Authors use different analytic approaches to address the problem. Results of the study shows that financial leverage has no impact on the firms value and find the existence of negative relation between leverage and Tobins q. Though, they exists positive relationship among firm size structure of assets with Tobin Q. Study revealed that firms should attain optimal level of debt to equity to survive for long period.

Marriam, Khursheed and Mustafa (2020) investigated the impact of determined leverage and control on the performance of the firm. They use sample size of 141firms listed in PSX on the base of high market capitalization during the time period of 2008 to 2018 Leverage and ownership deliberation have a significantly affected firm performance in both ways positively and negatively. Results show

that the existence and non existence of growth opportunities of the firms are major factors to analyze ownership possession and maturity of the loan on the performance of the organization. Authors used growth opportunities as dummy variable and find in the existence of growth opportunities, no liner connection are initiate among the organization performance and ownership concentration and finds that debt is significantly and positively related to performance of the organizatio.

Ahmad and Matemilola (2018) investigate the impact of firm level factor and instructional factors on corporate debt maturity on listed firm of Africa. To eliminate endogeneity issue study used panel data techniques of moments. Finding of the study revealed that a vibrant method of adjustment to finest level of debt maturity. Moreover, organization specific factors like leverage, assets maturity and size of the firm can give proper support for the contract cost, signaling theory and maturity matching hypothesis. Findings of instructional factors show that high performance institutions have long term loan maturity structure.

Mollah, Farooque and Karim (2012) examine the relationship between ownership possession, characteristics of board and financial performances to determines the function of governance mechanism behaviours of the firms listed in African stock exchange. Results shows that the different character of governance mechanism behavior between another performance measurement can used among accounting base and market base measurements. These findings offer the policy makers with insight to obtain suitable measurement on corporate governed and development of stock market to make sure the efficiency of the firms.

Jorge and Veloso (2019) investigate the non liner impact of ownership possession, growth options on debt maturity. They chose the sample size of 20586 firms extract for business survey and applied tobit regression model to address the problems. Results of the study shows that maturity of debt reduces in concentrated ownership. Government owned firms have positive related to debt maturity. Growth options had negatively related to firm debt structure and leverage had positively related to concentrated ownership. Zaher Abdel (2019) shows that leverage, organization size, an assets maturity and their impact of firm value.

2.1 Hypothesis

H₁: Asset maturity is positively related to debt maturity.

H₂: Firm size has significant positive influence on debt maturity.

H₃: Leverage (capital structure) is either positively or negatively related to debt maturity.

H₄: Individual shareholding has significant positive influence on debt maturity.

H₅: Investment companies' ownership has positive influence on debt maturity.

H₆: Foreign ownership has significant positive influence on debt maturity.

H₇: Debt maturity is positively related to net working capital.

H₈: Loan granted to private sector is positively related to debt maturity.

Chapter 3

Research Methodology

3.1 Data Description and Methodology

In this study data of only 78 Non-financial firms listed in PSX Pakistan Stock Exchange is collected for the period of 2004 to 2016. Principal source of this data is Balance Sheet analysis and some of the data is collected from managerial ownership. The data of loan granted to private sector is collected from official website of State Bank of Pakistan (SBP) under economic data panel. While selecting the sample we exclude the firm with negative equity and also exclude the public utility firms because these firms are not independent in debt maturity decisions and are regulated in different ways and firms with missing observations are excluded from sample. Non-Financial sector e.g. Textile industry, Cement industry, Energy sector and Sugar industry are included whereas, financial companies like banking, insurance companies and leasing companies are not included in this study.

3.2 Estimation Model

Study used panel data analysis to find out the relationship between debt maturity, determinants of debt maturity and components of ownership structure such as individual ownership, foreign ownership, and investment companies ownership.

In panel data analysis data for more than one sample units is collected over a period of time, both time series and cross section are pooled together in panel data. Panel data has many advantages over time series and cross section data for empirically analysis. In panel data we use sample of many individual units over a period of time due to which there exists heterogeneity in these sample unit by using panel data estimation, we can take this heterogeneity into account by checking individual variable specific effects. In panel data more cross sections are available over the period of time, so there exists less co-linearity among variables and also their exist more variability, more degree of freedom in data and the data is more informative for analysis. In panel we use repeated cross sections due to which data become more efficient to study the dynamics of change. Panel data analysis is used to measure and study those phenomena which are not measurable by using simple cross sectional or time series data. Panel data is categorized into two categories one is balanced panel data and the second is unbalanced panel data. It depends upon the availability of data for the individual sample units over the period of time. In balanced panel data for all observations data is used for same period of time and in unbalanced panel data for all observations is not for the equal period of time. Both types of data is used in panel data estimation, both give proper estimation with little different usage of methodology.

For panel data analysis pooled OLS regression, fixed effect regression and random effect regression are the important methods. Hausman test is used to conclude weather the fixed effect model is appropriate for analysis or not. In pooled OLS regression (common effect) the intercept and coefficient are constant across the time series and cross section. Fixed effect regression is used to considered the fixed cross section effect in which intercept is cross section specific, it also controls the effect of time invariant characteristics of the cross section (for the individual firm specific). In random effect regression the cross section effect is considered fixed and dummies are used to check the effect in intercept while the coefficient are common for the cross sections and time series.

The entire test regarding handling the panel data are conducted such as auto-correlation, Heteroskedasticity and cross sectional dependence. Heterosecdasticity

mean that the data is not homogenous and the variance of the error term is not constant and spread is also not same from regression line. Heteroscedasticity causes biasness in our regression results, due to heteroskedasticity be remain efficient and consistent but it affects standard error which ultimately effects t-statistics due to effects on t-statistics some significant relationship become insignificant and some insignificant relationship become significant which causes biasness in our results. Furthermore, due to this problem f-statistics can be disturbed and our decision making become inefficient because of the reason that regression line does not remain best fit in the presence of heteroscedasticity.

Problem of auto-co-relation exists when there are patterns in data; it also biases our results of regression. Chances of existence of auto-correlation are higher in case of daily or weekly data but as we move towards monthly or yearly data chances of auto-correlation become low. In the existence of auto-correlation there is no effect on beta, it remains efficient and consistent and error term variance become becomes inconsistency due to which standard error may increases or decreases which ultimately causes issue in the significant and vice-versa.

3.3 Econometric Model

This study has used panel regression model for testing the hypotheses. Debt maturity is the dependent variables in all regressions.

In this study two equations namely demand side and supply side are used to find out the impact of ownership structure on corporate debt maturity and to find out the reason of declining in debt maturity in last few years. Whether firms own characteristics (demand side factor) are responsible for this decline or it may debt market (supply side factors) is responsible for this decline. Equations are given below.

3.3.1 Demand-side Regressions

$$DMit = \alpha it + \beta 1 ASMAT it + \beta 2 FS it + \beta 3 LEV it + \beta 4 DPO it + \beta 5 IND it + \beta 6 FW it + \beta 7 INV it + \epsilon it$$

3.3.2 Supply-side Regressions

$$DMit = \alpha it + \beta 1 ASMAT it + \beta 2 LEV it + \beta 3 NWC it + \beta 4 LGPS it + \beta 5 DPO it + \epsilon it$$

Debt Maturity is an dependent variable in above equations, while FS is used an independent variables which represents firms size, ASMAT represent assets maturity which is used an independent variable, LEV is used an independent variables which represent leverage, IND is also an independent variable which is deputation of individual ownership, INV reports investment companies ownership which have been used as independent variable, FO is deputation of foreign ownership which have been used as independent variable, DPO is abbreviation of dividend payouts which have been used as independent variable, NWC represent net working capital which have been used as independent variable. Whereas,

i Represent number of cross section used in this study.

t Represent the time period of study.

α Represents the regression constant.

β Represents the co-efficient for all variables used in this study.

ϵ Represents the error term.

3.4 Explanation of Variables

3.4.1 Dependent Variable

3.4.1.1 Debt Maturity

In this study Debt Maturity is used as a dependent variable. There is not any generally accepted definition of debt maturity. Many researchers have measured

maturity of debt in different ways such as Barclay and Smith (1995) considered long term debt that has maturity of more than three years. Guedes and Opler (1986) used maturity of issued bonds as a proxy of longer maturity debt. To measure debt maturity we followed the balance sheet approach as Barclay et al. (2003) and Antoniou et al. (2006) used in their studies and measuring long term loan as the proportion of debt maturity after one year.

$$\text{Debt Maturity} = \frac{\text{Debt maturing in more than one year}}{\text{Total Debt}} \dots\dots\dots (i)$$

3.4.2 Independent Variables

3.4.2.1 Firm Size

Firm size is used as independent variables. According to agency cost and moral hazard theory there may exist more problems and conflicts among shareholders and bound holders in case of smaller organizations, moreover because of information asymmetry and a small number of assets small organizations face difficulty to issue longer maturity debt. Larger companies have more access to capital market as compare to smaller companies and they have more assets that can provided as collateral to get long term loan; so we expect inverse relationship between debt maturity and firm size. We will use natural logarithm of total assets of firm as proxy for firm size.

$$\text{Firm Size} = \text{Natural Log of Total Assets} \dots\dots\dots (ii)$$

3.4.2.2 Dividend Payout

There are a few intermediaries used to figure out the dividends payouts and for this reason the majority of the past studies utilized an intermediary of dividend payouts to decide the dividend policy of the firm as Rath (2005), Al-Malkawi (2007), Gugler (2003) and Ahmed and Attiya (2009) used in their study while

Kumar (2006) utilized intensity of dividend as an elective dummy for the dividends payouts. The formula to figure out the dividend payouts as aggregate dividend paid divided by profit after tax.

$$Dividend\ Payouts = \frac{Total\ amount\ of\ Dividend\ paid}{Profit\ after\ Tax} \dots\dots\dots (iii)$$

3.4.2.3 Leverage

Literature provided that leverage is used issuing as a proxy of firms debt issuing capabilities. For this purpose, total liabilities divided by total asset is used to measure the firms debt issuing capability. Leverage can be measure as the ratio of total debt to total assets of the firm (Venugopalan 2013).

$$Leverage = \frac{Total\ Liabilities}{Total\ Assets} \dots\dots\dots (iv)$$

3.4.2.4 Asset Maturity

According to maturity matching approach debt maturity should be matched with the life of asset to avoid the refinancing and reinvestment issue because when the life of assets is greater than the life of liability; cash inflows from assets will come latter but liability come due earlier than the cash inflows and now firm has need of finance to meet that liabilities. When life of assets is lesser than the life of liability through which that assets is financed; the cash flows will come earlier and liability will come due latter firm may faces difficulty in investing those cash flows at required rate or those finances may remain idle firm has to bear cost of those idle funds.

$$Assets\ Maturity = Natural\ log\ of\ fixed\ Assets \dots\dots\dots (v)$$

3.4.2.5 Individuals Shareholding

Individuals shareholding means a shareholder or stockholder is an individual or corporation legally owned shares of company is known as individual shareholding or individual ownership. Individual shareholder might be invest in different companies for maximization of wealth and make portfolio to avoid the risk of investing in one company. Individual ownership is the one of the elements of ownership structure. The data of individual holding are available in balance sheet of the companies.

3.4.2.6 Investment Companies

The companies whose major business is holding securities of different companies or firms for investment purpose to get the ultimate profit. The data of investment companies are available in the balance sheet of the chosen companies as percentage of ownership held by the investment companies.

3.4.2.7 Foreign Companies Investment

Foreign ownership or foreign control of business or hold a shares of a company by an individual who are not the citizen of that country or companies who hold a shares of different companies outside that country. Foreign ownership occurs when multinational companies make long term investment in a foreign country in form of foreign direct investment FDI. In other words the companies acquire the establishing business operations or business assets in another country. The data foreign ownership is available in balance sheet of the companies.

3.4.2.8 Net Working Capital

Capital structure deals with the raising of funds along with the management of long term funds whereas Working capital, including current assets minus current liabilities, is the source of short term capital. (Chiou et al. 2006).

The Net working capital (NWC) is measured by the proportion of current assets minus current liabilities to total assets.

$$NWC = \frac{\textit{Total Current Assets} - \textit{Total Current Liabilities}}{\textit{Total Assets}} \dots\dots\dots (vi)$$

Chapter 4

Results and Discussions

4.1 Descriptive Statistics

The descriptive is used to describe data in defined and meaningful manner. For the explanation of the basic characteristics of dependent and independent variables descriptive statistics is used such as minimum, maximum, mean, median and standard deviation. The results of descriptive statistics show that the mean value of

TABLE 4.1: Descriptive Statistics

<i>Variable</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<i>DM</i>	<i>867</i>	<i>.282</i>	<i>.219</i>	<i>.011</i>	<i>.814</i>
<i>ASMAT</i>	<i>867</i>	<i>.521</i>	<i>.207</i>	<i>0.056</i>	<i>.927</i>
<i>FS</i>	<i>867</i>	<i>.964</i>	<i>.463</i>	<i>.836</i>	<i>.195</i>
<i>LEV</i>	<i>867</i>	<i>.542</i>	<i>.235</i>	<i>.108</i>	<i>.441</i>
<i>NWC</i>	<i>867</i>	<i>.095</i>	<i>.234</i>	<i>-0.711</i>	<i>.664</i>
<i>DPO</i>	<i>867</i>	<i>.332</i>	<i>.437</i>	<i>.014</i>	<i>.886</i>
<i>IND</i>	<i>867</i>	<i>.200</i>	<i>.168</i>	<i>.01</i>	<i>.948</i>
<i>FW</i>	<i>867</i>	<i>.066</i>	<i>.183</i>	<i>.001</i>	<i>.949</i>
<i>INV</i>	<i>867</i>	<i>.011</i>	<i>.053</i>	<i>.000</i>	<i>.776</i>

Note: The dependent variable is DM which represents debt maturity. The independent variables are Assets maturity ASMAT, Dividend Payout, Foreign ownership, Firms size, IND represent individual ownership, Investment Companys ownership, Leverage and NWC which represents Net working capital.

DM debt maturity is .282. It means firms use average 28.9 % long term debt. Maximum and minimum value of debt maturity is .814 and .011, while standard deviation of debt maturity is 0.219. The maximum and minimum value of assets

maturity ASMAT is .927 and .056. The mean value of assets maturity is 0.521. Standard deviation of assets maturity ASMAT is 0.207. FS is the abbreviation of firm size. The minimum value of FS firm size is 12.836 and maximum value of firm size is 20.195, while the standard deviation of firm size is 1.463. The mean value of FS is 15.964.

The maximum value of LEV is 1.441 and minimum value is 0.108. The mean value of leverage is 0.542 which mean that firm can uses 54% leverage. LEV is the abbreviation of leverage the standard deviation of leverage is 0.235. The standard deviation of dividend pay outs DPO is .437, while the maximum value of dividend pay outs is 2.886 and minimum value of dividend pay outs is .014. The mean value of dividend pay outs is 0.332 this value shows that the average dividend pay outs DPO ratio is 33%.

FW is the abbreviation of foreign ownership the mean value of foreign ownership is 0.066 which means that the average foreign ownership in each firms is 6.6%. The standard deviation of FW foreign ownership is 0.183. The minimum value of foreign ownership is .001 and maximum value of foreign ownership is .949. IND is an abbreviation of individual ownership the mean value of individual ownership is 0.2 this value shows that the average individual ownership is 20% in all firms. The maximum value is .948 and the minimum value is 0.010. The standard deviation of IND individual ownership 0.168.

INV is abbreviation of investment companies ownership. The value of standard deviation is 0.053, while the minimum and maximum value is 0.000 and .776 respectively.

The mean value of investment companies is 0.011. NWC is the abbreviation of net working capital the value of mean is .095 which means that the average net working capital of the firms is 09%. Standard deviation of NWC net working capital is .234, while the maximum value of net working capital is .664 and minimum value is -.711.

Investment companies ownership is significantly positively related to debt maturity. When investment companies ownership increases maturity of debt also increases.

4.2 Correlation Analysis

Correlation analysis is done to check the nature and strength of the connection among dependent and independent variables. Results of the correlation analysis in Table no.4.2 show the nature and strength of relationship among dependent and independent variables and also between independent variables.

TABLE 4.2: Correlation Analysis

<i>Variables</i>	<i>-1</i>	<i>-2</i>	<i>-3</i>	<i>-4</i>	<i>-5</i>	<i>-6</i>	<i>-7</i>	<i>-8</i>	<i>-9</i>
(1) <i>DM</i>	1								
(2) <i>ASMAT</i>	0.717	1							
(3) <i>FS</i>	0.201	0.147	1						
(4) <i>LEV</i>	0.136	0.135	-0.053	1					
(5) <i>NWC</i>	-0.199	-0.599	0.004	-0.745	1				
(6) <i>DPO</i>	-0.152	-0.132	0.198	-0.264	0.235	1			
(7) <i>IND</i>	0.065	0.135	-0.33	0.097	-0.154	-0.127	1		
(8) <i>FW</i>	0.205	-0.183	0.126	-0.14	0.169	0.171	-0.196	1	
(9) <i>INV</i>	0.032	0.026	0.041	0.042	-0.045	-0.013	-0.075	0.009	1

Note: The dependent variable is DM which represents debt maturity. The independent variables are Assets maturity *ASMAT*, Dividend Payout, Foreign ownership, Firms size, *IND* represent individual ownership, Investment Company's ownership, Leverage and *NWC* which represents Net working capital.

Correlation shows the association between the variables. Correlation also shows the relationship between two variables is strongly and weakly correlated. Debt maturity is positively correlated with assets maturity 0.717 because when the debt maturity increases assets maturity also increases if assets maturity is less than the maturity of debt firms tends to bear a cost.

Debt maturity is negatively correlated with dividend payout -0.152. Because when firm pay dividend they will not be able to repay debt. Debt maturity is positively correlated with foreign ownership 0.205 because when foreign ownership increases debt maturity also increases. Firm size is positively correlated with debt maturity 0.201. Because smaller firms use short term debt as compared to larger firms and smaller firms have less access to capital markets as compared to larger firms. Individual ownership positively correlated with debt maturity 0.065. Debt maturity is positively correlated with leverage 0.136. Because when debt maturity increases leverage of the firm also increases. Debt maturity is negatively correlated with net working capital -0.199.

Asset maturity is negatively correlated with dividend payouts -0.132. Foreign ownership is also negatively correlated with asset maturity -0.183. Assets maturity is positively correlated with firm size 0.147 because asset maturity of larger firms is high as compare to smaller firms. Asset maturity is also positively correlated with individual ownership 0.135. Investment companies ownership is positively correlated with assets maturity 0.026. Assets maturity is positively correlated with leverage 0.135. Net working capital is positively correlated with assets maturity -0.599.

Firm size is negatively correlated with individual ownership -0.330. Investment companies ownership is positively correlated with firm size 0.041. Firm size is negatively correlated with leverage -0.053. Net working capital is positively associated with firm size 0.004 because larger firm have more net working capital as compare to smaller firms.

Dividend payouts are positively correlated with foreign ownership 0.171. Firm size is positively correlated with dividend payouts 0.198. Dividend payouts are negatively correlated with individual ownership -0.127. Dividend payouts are negatively correlated with investment companies ownership -0.013. Leverage is negatively correlated with dividend payouts -0.264. Net working capital is positively correlated with dividend payouts 0.235.

Foreign ownership is positively correlated with firm size 0.126. Individual ownership is negatively correlated with foreign ownership -0.196. Foreign ownership is positively correlated with investment companies ownership 0.009. Leverage is negatively correlated with foreign ownership -0.140. Net working capital is positively correlated with foreign ownership 0.169.

Individual ownership is negatively correlated with investment companies ownership -0.075. Individual ownership is positively correlated with leverage 0.097. Net working capital is negatively correlated with individual ownership -0.154. Investment companies ownership is positively correlated with leverage -0.042. Investment companies ownership is negatively correlated with net working capital -0.045. Leverage is negatively correlated with net working capital -0.745.

4.3 Demand Side Regression Analysis

TABLE 4.3: Impact of Demand Side Variables on Debt Maturity

<i>Variables</i>	<i>Coef.</i>	<i>St.Err</i>	<i>t-value</i>	<i>p-value</i>	<i>Sig.</i>
<i>C</i>	-1.317	0.084	-15.76	0.000	***
<i>FS</i>	0.019	0.005	3.76	0.000	***
<i>LEV</i>	0.862	0.027	31.8	0.000	***
<i>NWC</i>	1.225	0.027	44.55	0.000	***
<i>DPO</i>	-0.013	0.007	1.93	0.054	*
<i>IND</i>	-0.006	0.021	-0.3	0.763	
<i>FW</i>	0.022	0.017	-1.29	0.005	**
<i>INV</i>	0.022	0.057	0.4	0.091	*
<i>R-squared</i>	0.792		Number of obs		867
<i>F-test</i>	329.133		Prob> F		0.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

4.3.1 Redundant Fixed Effects-Likelihood Test

This test is used to know which model is appropriate e.g. fixed effects model or random effect model.

Effects Test	Statistic	D.f.	Prob.
Cross-section F	5.49811	-77,806	0
Cross-section Chi-square	376.567	77	0

Probability result is significant 0.000 shows that null hypothesis is rejected which mean that fixed effect is used in this study.

4.3.2 Random Effects Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	25.553733	8	0.0013

This test is used to know which model is best for study probability is significant which shows that fixed effect model appropriate for this study.

Random effects hausman test evidently shows that fixed effect model is appropriate for study.

4.4 Explanation of Fixed Effect Model (Demand Side)

Table 4.3 reports that the significant and positive association among debt maturity and assets maturity. This indicates that as assets maturity increase debt maturity also increases. The reason of positive relationship between assets maturity and debt maturity is that firm tries to match the maturity of its assets to the maturity of debt. This result is also consistent with the result of Guedes and Opler (1996) they found that organizations matches the debt maturity with the life of assets to avoid the difficulties of refinancing when the debt matures before the generation of cash flows from its assets.

They also reported that to avoid the risk of reinvestment when there is mismatching of assets life and debt maturity. This result is also consistent the result of Cai et al. (2008) he found positive relationship between assets maturity and debt maturity.

Result of Fixed effect model also shows that there is significant and positive relationship among size of firm and debt maturity. It mean when the firm size increases maturity of debt also increases.

The reason for this positive relationship between firm size and debt maturity can be explained that in Pakistan firms mostly get loan from banking sector and bank provide loan on collateral security of the assets of the firm. Larger firms will be able to give more collateral security to get long term loan and smaller firms will not be able to get long term loan due to less collateralize able assets.

Smaller firm have less access to capital market as compare to larger firms. This finding of the positive relationship between firm size and debt maturity is consistent with agency cost hypothesis and many empirical studies such as Stohs and Maurer (1996), Ozkan (2002) and Attaullah Shah et al. (2006). They also argued

about the positive relationship between firm size and debt maturity and it is due to the existence agency cost hypothesis.

Results also show that there is positive and significant association among maturity of debt and leverage of the firm. This indicates that leverage of the firm increases as maturity of debt increases. This result is also consistent with Richard et al. (2000) and Dennis et al. (2008) also report the positive connection among debt issuing abilities and maturity of debt because agency cost of under investment may well be constrained by minimizing the abilities of issuing loan.

Results of table 4.3 also show the significant and positive relationship among net working capital and debt maturity. This indicates that when net working capital increases maturity of debt also increases. This mean that long term debt is used to financed net working capital. Defensive net working capital management restricts the firm to take short term debt.

Foreign Investment Companys ownership also repots the positive and significant relationship with maturity of debt. This means that when the foreign ownership increases debt maturity also increases.

This indicates that firm having more percentage of foreign ownership have better debt maturity. This result is also consistent with Barcaly and Smith (1995) shows that organizations with more percentage of foreign ownership have better management and have issue longer maturity debt.

Table 4.3 shows the result of demand side regression in which fixed effect model is used. Dependent variable is D.M debt maturity, while firm size, asset maturity, net working capital, leverage, dividend payouts, individual holding, investment companies holding and foreign ownership are used as independent variables.

The value of Adjusted R Square is 0.859984. This indicate that all independent variables are explaining 85% variation in maturity of debt and the probability is less than 5% which indicates that the model is fit.

4.5 Supply Side Regression Analysis

TABLE 4.4: Impact of Supply Side Factors on Debt Maturity

<i>Variable</i>	<i>Coefficient</i>	<i>Prob.</i>
<i>C</i>	-0.344	0.000
<i>ASMAT</i>	0.774	0.000
<i>LEV</i>	0.274	0.000
<i>NWC</i>	1.225	0.000
<i>LGPS</i>	0.000	0.014
<i>DPO</i>	0.002	0.812
<i>R-squared</i>	0.763103	
<i>Adjusted R-squared</i>	0.71936	
<i>F-statistic</i>	17.44423	
<i>Prob(F-statistic)</i>	0.000	

Note: DM represents debt maturity which has been used as dependent variable, SF is abbreviation of firm size which has been used an independent variable, LEVR represents leverage, NWC represents net working capital, and DPO is dividend payouts.

4.5.1 Redundant Fixed Effects-Likelihood Test

Study use Redundant Likelihood to know which model is appropriate for demand side regression either, fixed effect or random effect or common sample model.

Effects Test	Statistic	D.f.	Prob.
Cross-section F	6.43481	-60,352	0
Cross-section Chi-square	309.501	60	0

Probability is significant which clearly show that fixed effect model is best fit for this study.

4.5.2 Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.8667	5	0.0367

4.6 Explanation of Fixed Effect Model (Supply Side)

Table 4.4 is the results of fixed effect method of supply side regression. In supply side regression study further examine the reason of decrease in maturity of debt. Because supply side factors significantly influence organizations debt maturity reported by Peterson and Faulkender (2006). Study includes one new variable LGPS which represents loan granted to private sector in supply side regression. Because organizations debt maturity is also depend upon debt approved to them. Study paying attention to examines whether the lack of enthusiasm of banks to issue debt of longer maturity are responsible for this decrease.

Table 4.4 shows that LGPS loan granted to private sector is significantly and positively effects debt maturity. This indicates that supply side factors has more prominent effect on debt maturity as compare to demand side factors and the supply side factors are more responsible of decrease in debt maturity as compare to other factors. This result is also consistent with Robert and Lemmon (2010), and Custedio et al. (2012).

Results also reports significant positive relationship between asset maturity and maturity of debt. This mean when assets maturity is increase maturity of debt also increase and when the asset maturity is decrease debt maturity also decreases. The relationship of leverage and debt maturity is also significant and positive. This shows that when leverage increase debt maturity also increase. Results also show significant and positive relationship between net working capital and debt maturity.

The value of adjusted R Square is 0.719357. Which means that all independent variable i.e. asset maturity, net working capital, loan granted to private sector, dividend payouts and leverage shows 71% variation in debt maturity. The value of probability is less than 5% indicates that the model is fit.

Chapter 5

Conclusion and Recommendations

5.1 Conclusion

This study has been conducted to find out the empirical evidence of an influence of ownership structure on corporate debt maturity for Non-financial firms listed in Pakistan Stock Exchange and also to find out the reason of decline in debt maturity in last few years. The objective of this study was also finding out the empirical validity of different theories in developing economies of Pakistan, these theories include the maturity matching hypothesis and agency cost hypothesis. On the basis of literature and theoretical viewpoints, we have considered assets life, firm size, networking capital, and leverage is an important determinant of debt maturity and also considered individual ownership, foreign ownership and investment companies ownership as the component of ownership structure. In this study a sample of 80 companies from different industries for the period of 2004 to 2016. Panel data regression and fixed effect model is used for statistical analysis. This study finds the significant relationship between debt maturity and firm size, assets maturity, net working capital and foreign ownership. The positive and significant relationship between debt maturity and firm size confirms the agency cost hypothesis that small firms have more growth options and use short term loan

and larger firms use long term loan. The existence of this optimistic relationship among debt maturity and firm size also implies that big organization have more assets and easy access to debt market. Study also found a significant relationship between net working capital and debt maturity this confirm that when net working capital increase firm debt maturity also increases, relationship between leverage and debt maturity is also significant that confirm when debt maturity increases the leverage of the firm also increases. Study finds a significant positive relationship between foreign ownership and debt maturity that confirm that when the percentage of foreign ownership increases the maturity of debt also increases. Study also found that loan granted to the private sector is significantly and positively effects debt maturity. This indicates that supply-side factors have a more prominent effect on debt maturity these factors are more responsible for a decline in debt maturity as compared to other factors. This result is also consistent with Robert and Lemmon (2010), and Custedio et al. (2012).

Results of the study shows positive and significant relationship between debt maturity and firm size that confirms the agency cost hypothesis that small firms have more growth opportunities as compare to large firms and use short term debt and larger firms use long term debt. The existence of this positive relationship between debt maturity and firm size also implies that larger firms have more access to long term debt.

Study found significant relationship for dependent variables; firm size, assets maturity, foreign ownership, dividend payouts, net working capital and leverage and found insignificant relationship between debt maturity and individual ownership. This study also supported maturity matching hypothesis and for agency cost hypothesis mixed results are found and showed significant positive relationship between firm size and insignificant relationship between debt maturity and individual ownership and investment companies ownership and there significant and positive relationship among debt maturity and loan granted to private sectors.

5.2 Recommendations and Future Direction

There are many limitations to this empirical analysis due to natural and systematic reasons while conducting a study regarding data collection, variables and determinants of debt maturity is used in this study. Most of the data used in this study is collected from Balance Sheet and financial statements of the companies. Accounting information does not provide the real phenomena about the company because financial statements are passing through the window dressing to show an attractive picture to shareholders and debt holders; worse picture to tax authorities based on the incentives of the company. This can be done easily by using legal tools as there is much flexibility in our accounting standards.

This study has special limitations regarding model specification in terms of not including all possible determinants of debt maturity and elements of ownership structure. Debt maturity is not dependent on the demand side of the debt, it also dependent on the supply side of debt. Debt maturity structure is also dependent on macroeconomic factors such as inflation and interest rate etc. while determining elements of ownership structure and determinants of debt maturity. Some firm-specific variables are also omitted such as information asymmetry, cash flows which are necessary for debt repayment. One can do future work by considering debt repayment pattern also because in this study only debt maturity is considered. This study is conducted only on PSX; further comparative study can be conducted considering ISE and LSE.

Mostly firms are concentrated in terms of ownership structure which itself explain the reason of conflicts of interest and hence opens the door to study these unexplored areas in detail and the factors that add up to these conflicts and can affect strategic and financing decisions.

Bibliography

- Acharya, V. V., Almeida, H., & Campello, M. (2007). Is cash negative debt? A hedging perspective on corporate financial policies. *Journal of Financial Intermediation*, 16(4), 515-554.
- Almeida, H., Campello, M., Laranjeira, B., & Weisbenner, S. (2009). Corporate debt maturity and the real effects of the 2007 credit crisis (No. w14990). National Bureau of Economic Research.
- Abor, J. (2008). Determinants of the capital structure of Ghanaian firms (No. RP_176). Nairobi: African Economic Research Consortium.
- Arslan, O., & Karan, M. B. (2006). Ownership and control structure as determinants of corporate debt maturity: a panel study of an emerging market. *Corporate Governance: An International Review*, 14(4), 312-324.
- Allen, f. and Michaely, R. (1994). Dividend policy. *North Holland handbooks of operations research and management science*, pp. 14-94.
- Allen, F., & Michaely, R. (2003). Payout policy. *Handbook of the Economics of Finance*, 1, 337- 429.
- Arslan, O., & Karan, M. B. (2006). Ownership and control structure as determinants of corporate debt maturity: A panel study of an emerging market. *Corporate Governance*, 14(4), 312-324.
- Barclay, M. J., & Smith, C. W. (1995). The maturity structure of corporate debt. *The Journal of Finance*, 50(2), 609-631.

- Berger, A. N., Espinosa-Vega, M. A., Frame, W. S., & Miller, N. H. (2005). Debt maturity, risk, and asymmetric information. *The Journal of Finance*, 60, 2895-2923.
- Buch, C. M., & Lusinyan, L. (2000). Determinants of short-term debt. Kiel Working Papers. Kiel Institute of World Economics. Germany.
- Custodio, C., Ferreira, M. A., & Laureano, L. (2013). Why are US firms using more short-term debt? *Journal of Financial Economics*, 108, 182-212.
- Datta, S., Iskandar-Datta, M., & Raman, K. (2005). Managerial stock ownership and the maturity structure of corporate debt. *The Journal of Finance*, 60(5), 2333-2350.
- Diamond, D. (1991). Debt maturity structure and liquidity risk. *Quarterly Journal of Economics*, 106, 709-737.
- Fama, E. F. (1985). What's different about banks? *Journal of Monetary Economics*, 15, 29-36.
- Fama, E. F., & MacBeth, J. D. (1973). Risk, return, and equilibrium: Empirical tests. *Journal of Political Economy*, 81, 607-636.
- Faulkender, M., & Petersen, M. (2006). Does the source of capital affect the capital structure? *Review of Financial Studies*, 19, 45-79.
- Flannery, M. (1986). Asymmetric information and risky debt maturity choice. *The Journal of Finance*, 41, 19-37.
- Garcia-Teruel, P. J., & Martinez-Solano, P. (2007). Short-term debt in Spanish SMEs. *International Small Business Journal*, 25, 579-602.
- Goyal, V. K., & Wang, W. (2013). Debt maturity and asymmetric information: Evidence from default risk changes. *Journal of Financial and Quantitative Analysis (JFQA)*, 48(3), 789-817.
- Guedes, J., & Opler, T. (1996). The determinants of the maturity of corporate debt issues. *The Journal of Finance*, 51(5), 1809-1833.
- Huang, R., Tan, K. J. K., & Faff, R. W. (2016). CEO overconfidence and corporate debt maturity. *Journal of Corporate Finance*, 36, 93-110.

- Ishtiaq, Q., & Abdullah, F. (2015). Ownership concentration and crossautocorrelation in portfolios returns. *Business & Economic Review*, 7(2), 85-104.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323-329.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Johnson, S. (2003). Debt maturity and the effects of growth opportunities and liquidity risk on leverage. *The Review of Financial Studies*, 16(1), 209-236.
- Khan, M. M. S., Ijaz, F., & Aslam, E. (2014). Determinants of profitability of Islamic banking industry: An evidence from Pakistan. *Business & Economic Review*, 6(2), 27-46.
- Leary, M. (2009). Bank loan supply, lender choice, and corporate capital structure. *The Journal of Finance*, 64, 1143-1185.
- Ahn, S., & Choi, W. (2009). The role of bank monitoring in corporate governance: Evidence from borrowers' earnings management behavior. *Journal of banking & finance*, 33(2), 425-434.
- Ahmed, H., & Javid, A. Y. (2008). Dynamics and determinants of dividend policy in Pakistan (evidence from Karachi stock exchange non-financial listed firms).
- Aggarwal, R. K., & Samwick, A. A. (2006). Empire-builders and shirkers: Investment, firm performance, and managerial incentives. *Journal of Corporate Finance*, 12(3), 489-515.
- Anderson, C. W., & GARCIAFEIJO, L. U. I. S. (2006). Empirical evidence on capital investment, growth options, and security returns. *The Journal of Finance*, 61(1), 171-194.
- AlNajjar, B., & Belghitar, Y. (2011). Corporate cash holdings and dividend payments: Evidence from simultaneous analysis. *Managerial and Decision Economics*, 32(4), 231-241.

- Alam, H. M., Ali, L., Rehman, C. A., & Akram, M. (2011). Impact of working capital management on profitability and market valuation of Pakistani firms. *European Journal of Economics, Finance & Administrative Sciences*, 32, 48-54.
- Bartram, S. M., & Aretz, K. (2007). Corporate Hedging and Shareholder Value. *Journal of Financial Research*.
- Bates, T. W., Kahle, K. M., & Stulz, R. M. (2009). Why do US firms hold so much more cash than they used to?. *The journal of finance*, 64(5), 1985-2021.
- Bayoumi, T., Tong, H., & Wei, S. J. (2012). The Chinese corporate savings puzzle: a firmlevel cross-country perspective. In *Capitalizing China* (pp. 283-308). University of Chicago Press.
- Baysinger, B. D., & Butler, H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *Journal of Law, Economics, & Organization*, 1(1), 101-124.
- Bathala, C. T., & Rao, R. P. (1995). The determinants of board composition: An agency theory perspective. *Managerial and decision economics*, 16(1), 59-69.
- Bigelli, M., & Sanchez-Vidal, J. (2012). Cash holdings in private firms. *Journal of Banking & Finance*, 36(1), 26-35.
- Brealey, A.R. and Myers, S.C. (1996) *Principles of Corporate Finance*, 5th edition, New York: McGraw-Hill.
- Barclay, and Smith, Jr, W. (1995) 'The Maturity Structure of Corporate Debt', *The Journal of Finance*, vol. 50, no. 2, June, pp. 609-631.
- Bhattacharya, S. (1979). Imperfect information, dividend policy, and "the bird in the hand" fallacy. *Bell journal of economics*, 10(1), 259-270.
- Bolton, P., Chen, H., & Wang, N. (2011). A unified theory of Tobin's q, corporate investment, financing, and risk management. *The journal of Finance*, 66(5), 1545-1578.

- Barnea, A., Haugen, R. A., & Senbet, L. W. (1980). A rationale for debt maturity structure and call provisions in the agency theoretic framework. *The Journal of Finance*, 35(5), 1223-1234.
- Barbosa, N., & Louri, H. (2002). On the determinants of multinationals' ownership preferences: evidence from Greece and Portugal. *International Journal of Industrial Organization*, 20(4), 493-515.
- Brick, I. E., & Liao, R. C. (2013). The Determinants of Debt Maturity and Cash Holdings. Blanchard, O., C. Rhee, and L. Shleifer, (1994), "The Stock Market, Profit, and Investment," *Quarterly Journal of Economics*, 108, 77-114.
- Basheer, M. F. (2014). Impact of Corporate Governance on Corporate Cash Holdings: An empirical study of firms in manufacturing industry of Pakistan. *International Journal of Innovation and Applied Studies*, 7(4), 1371.
- Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of financial Economics*, 58(1), 81-112.
- Crespi-Cladera, R., & Renneboog, L. (2003). Corporate monitoring by shareholder coalitions in the UK. ECGI-Finance Working Paper, (12).
- Chen, N., & Mahajan, A. (2010). Effects of macroeconomic conditions on corporate liquidity international evidence. *International Research Journal of Finance and Economics*, 35(35), 112-129.
- Campbell, T., & Brendsel, L. (1977). The impact of compensating balance requirements on the cash balances of manufacturing corporations: An empirical study. *The Journal of Finance*, 32(1), 31-40.
- Custodio, C., Ferreira, M. A., & Laureano, L. (2013). Why are US firms using more shortterm debt?. *Journal of Financial Economics*, 108(1), 182-212.
- Chiou, J. R., Cheng, L., & Wu, H. W. (2006). The determinants of working capital management. *Journal of American Academy of Business*, 10(1), 149-155.
- Cai, K., Fairchild, R., & Guney, Y. (2008). Debt maturity structure of Chinese companies. *Pacific-Basin Finance Journal*, 16(3), 268-297.

- Denis, D. J., & Sibilkov, V. (2009). Financial constraints, investment, and the value of cash holdings. *Review of Financial Studies*, hhp031.
- Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of political economy*, 93(6), 1155-1177.
- Dittmar, A., Mahrt-Smith, J., & Servaes, H. (2003). International corporate governance and corporate cash holdings. *Journal of Financial and Quantitative analysis*, 38(01), 111-133.
- Diamond, D. W. (1991). Debt maturity structure and liquidity risk. *The Quarterly Journal of Economics*, 709-737.
- Drobetz, W., & Grninger, M. C. (2007). Corporate cash holdings: Evidence from Switzerland. *Financial Markets and Portfolio Management*, 21(3), 293-324.
- Demirg-Kunt, A., & Maksimovic, V. (1999). Institutions, financial markets, and firm debt maturity. *Journal of financial economics*, 54(3), 295-336.
- DeAngelo, H., DeAngelo, L., & Skinner, D. J. (2000). Special dividends and the evolution of dividend signaling. *Journal of Financial Economics*, 57(3), 309-354.
- Easterwood, J. C., & Kadapakkam, P. R. (1994). Agency conflicts, issue costs, and debt maturity. *Quarterly Journal of Business and Economics*, 69-80.
- Ferreira, M. A., & Vilela, A. S. (2004). Why do firms hold cash? Evidence from EMU countries. *European Financial Management*, 10(2), 295-319.
- Flannery, M. J. (1986). Asymmetric information and risky debt maturity choice. *The Journal of Finance*, 41(1), 19-37.
- Fama, E. F., & Jensen, M. C. (1983). Agency problems and residual claims. *The journal of law & Economics*, 26(2), 327-349.
- Faulkender, M., & Wang, R. (2006). Corporate financial policy and the value of cash. *The Journal of Finance*, 61(4), 1957-1990.
- Foreman-Peck, J., & Federico, G. (1999). *European industrial policy: The twentieth century experience (Vol. 1)*. Oxford University Press on Demand.

- Fairchild, R. (2010). Dividend policy, signalling and free cash flow: an integrated approach. *Managerial Finance*, 36(5), 394-413.
- Guney, Y., Ozkan, A., & Ozkan, N. (2007). International evidence on the non-linear impact of leverage on corporate cash holdings. *Journal of Multinational financial management*, 17(1), 45-60.
- Gugler, K. (2003). Corporate governance, dividend payout policy, and the interrelation between dividends, R&D, and capital investment. *Journal of Banking & Finance*, 27(7), 1297-1321.
- Garc a-Teruel, P.J. and P. Mart nez-Solano, (2010). SSRN Working Paper Series. Tax effect on Spanish SME optimum debt maturity.
- Grossman, S. J., & Hart, O. D. (1980). Takeover bids, the free-rider problem, and the theory of the corporation. *The Bell Journal of Economics*, 42-64.
- Holderness, C. G., Kroszner, R. S., & Sheehan, D. P. (1999). Were the good old days that good? Changes in managerial stock ownership since the great depression. *The Journal of Finance*, 54(2), 435-469.
- Harford, J., Mansi, S. A., & Maxwell, W. F. (2012). Corporate governance and firm cash holdings in the US. In *Corporate Governance* (pp. 107-138). Springer Berlin Heidelberg. Haushalter, D., Klasa, S., & Maxwell, W. F. (2007). The influence of product market dynamics on a firm's cash holdings and hedging behavior. *Journal of Financial Economics*, 84(3), 797-825.
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1994). *Emotional contagion*. Cambridge university press.
- Harris, M., & Raviv, A. (1991). The theory of capital structure. *The Journal of Finance*, 46(1), 297-355.
- Hajiha, Z., & Akhlaghi, H. A. (2011). Ownership Structure and Debt Maturity Structure: An Empirical Study on Iranian Firms. *Midd. East. J. Sci. Res*, 9(6), 814-825.
- Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of financial economics*, 33(1), 3-56.

- Fama, E. F., & French, K. R. (1995). Size and booktomarket factors in earnings and returns. *The Journal of Finance*, 50(1), 131-155.
- Fama, E. F., & French, K. R. (1995). Size and booktomarket factors in earnings and returns. *The Journal of Finance*, 50(1), 131-155.
- Fama, E. F., & French, K. R. (1996). Multifactor explanations of asset pricing anomalies. *The journal of finance*, 51(1), 55-84.
- Fama, E. F., & French, K. R. (1998). Value versus growth: The international evidence. *The Journal of Finance*, 53(6), 1975-1999.
- Fama, E. F., & French, K. R. (2014). A five-factor asset pricing model. *Journal of Financial Economics*.
- Fama, E. F., & MacBeth, J. D. (1973). Risk, return, and equilibrium: Empirical tests. *The Journal of Political Economy*, 607-636.
- Gaunt, C. (2004). Size and book to market effects and the Fama French three factor asset pricing model: evidence from the Australian stock market. *Accounting & Finance*, 44(1), 27-44.
- Griffin, J. M., & Lemmon, M. L. (2002). Booktomarket equity, distress risk, and stock returns. *The Journal of Finance*, 57(5), 2317-2336.
- Hassan, A., & Javed, M. T. (2011). Size and value premium in Pakistani equity market. *African Journal of Business Management*, 5(16), 6747-6755.
- Iqbal, J., & Brooks, R. (2007). Alternative beta risk estimators and asset pricing tests in emerging markets: The case of Pakistan. *Journal of Multinational Financial Management*, 17(1), 75-93.
- Leland, H., & Toft, K. (1996). Optimal capital structure, endogenous bankruptcy and the term structure of credit spreads. *The Journal of Finance*, 51(3), 987-1020.

- Lemmon, M., & Roberts, M. (2010). The response of corporate financing and investment to changes in the supply of credit. *Journal of Financial and Quantitative Analysis*, 45, 555-587.
- Lopez-Gracia, J., & Mestre-Barbera, R. (2013). On the relevance of agency conflicts in SME debt maturity structure. *Journal of Small Business Management*. doi: 10.1111/jsbm.12083.
- Lorente, J. J. C., Didier, T., & Schmukler, S. L. (2016). How long do corporates borrow? Evidence from global bond and loan issuances (World Bank Policy Research Working Paper 7815).
- Mauer, D. C., & Ott, S. H. (2000). Agency costs, underinvestment, and optimal capital structure: The effect of growth options to expand. In M. J. Brennan & L. Trigeorgis (Eds.), *Project flexibility, agency, and competition: New developments in the theory and application of real options* (pp. 151-180). New York: Oxford University Press.
- Mitchell, K. (1991). The call, sinking fund and term to maturity features of corporate bonds: An empirical investigation. *Journal of Financial and Quantitative Analysis*, 26, 201-221.
- Morris, J. R. (1992). Factors affecting the maturity structure of corporate debt. Working Paper. University of Colorado at Denver.
- Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5, 147-175.
- Ozkan, A. (2000). An empirical analysis of corporate debt maturity structure. *European Financial Management*, 6, 197-212.
- Ozkan, A. (2002). The determinants of corporate debt maturity: Evidence from UK firms. *Applied Financial Economics*, 12, 19-24.
- Pettit, R. R., & Singer, R. F. (1985). Small business finance: A research agenda. *Financial management*, 14(3), 47-60.
- Ross, S. A., Thompson, S., Christenson, M., Westerfield, R. W., & Jordan, B. D. (2004). *Fundamentals of corporate finance* (3rd ed.). Australia: McGraw Hill.

-
- Scherr, F. C., & Hulburt, H. M. (2001). The debt maturity structure of small firms. *Financial Management*, 30(1), 85-111.
- Shah, A. (2011). The corporate cash holdings: Determinants and implications. *African Journal of Business Management*, 5(34), 12939-12950.
- Shah, A., & Hijazi, T. (2004). The determinants of capital structure of stock exchange-listed non-financial firms in Pakistan. *The Pakistan Development Review*, 43(4), 605-618.
- Shah, A., & Khan, S. A. (2009). Empirical investigation of debt-maturity structure: Evidence from Pakistan. *The Pakistan Development Review*, 48(4), 565-578.
- Shah, A. (2011). Impact of judicial efficiency on debt-maturity structure: Evidence from judicial districts of Pakistan. *Pakistan Development Review*, 4(50), 663-682.
- Stohs, M. H., & Mauer, D. C. (1996). The determinants of corporate debt maturity structure. *Journal of Business*, 69, 279-312.
- Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of Financial Economics*, 26, 3-28.