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TECHNOLOGY, ISLAMABAD



**Contribution of Sources of
Capital and Investment Level in
Investment Financing of
Non-financial Firms: Evidence
from Pakistan**

by

Minhaj Firdous Abbasi

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

in the

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This work is dedicated to my beloved parents and family members who have encourage me to achieve this milestone. I would also like to dedicate this work to my respected supervisor “Dr. Jaleel Ahmed Malik” for his support and guidance in each step of this study.



CERTIFICATE OF APPROVAL

Contribution of Sources of Capital and Investment Level in Investment Financing of Non-financial Firms

by

Minhaj Firdous Abbasi

(MMS183011)

THESIS EXAMINING COMMITTEE

S. No.	Examiner	Name	Organization
(a)	External Examiner	Dr. Aijaz Mustafa Hashmi	NUML, Islamabad
(b)	Internal Examiner	Dr. Arshad Hassan	C.U.S.T. Islamabad
(c)	Supervisor	Dr. Jaleel Ahmed Malik	C.U.S.T. Islamabad

Dr. Jaleel Ahmed Malik

Thesis Supervisor

September, 2022

Dr. Lakhi Muhammad

Head

Dept. of Management Sciences

September, 2022

Dr. Arshad Hassan

Dean

Faculty of Management & Social Sciences

September, 2022

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In the Name of **Allah**, The Most Gracious, The Most Merciful. Praise be to God, the Cherisher and Sustainer of the worlds. All thanks to Almighty Allah, The Lord of all that exist, who bestowed me with His greatest blessing i.e. knowledge and Wisdom to accomplish my task successfully. Thousands of salutations and benedictions to the Holy prophet **Hazrat Muhammad (P.B.U.H)** the chosen-through by whom grace the sacred Quran was descended from the Most High.

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(Minhaj Firdous Abbasi)

Abstract

This study examines the relative importance of various forms of capital in financing investments by Pakistani firms. This study uses data from 2009 to 2019 by applying Ordinary Quantile Regression (QR). The results from the quantile regression (QR) method suggest that Pakistani firms tend to use debt capital more than they do equity capital at low and medium levels of investments, large firms mostly rely on long term debt while small firm tend to rely on short term debts, while their reliance on equity issuance increases at high levels of investments. The study also revealed that cash reserves have a high impact on capital expenditure while financing any investment. The study strongly helps investors and policy-makers when financing their investments. They should keep in mind that the key concern is whether policies are properly organized to satisfy the main requirements of investment and, as a result, overall economic growth, rather than whether the policy environment is typically interventionist or faire.

Keywords: Investment financing; Quantile regression, Pakistani firms, long term debts, short term debts, cash reserves, capital expenditures.

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Abbreviations

CF	Cash Flow
EquIss	Equity Issuance
FA	Fixed Asset
LTD	Long Term Debt
NWC	Net Working Capital
OA	Ordinary Least Square
QR	Quantile Regression
STD	Short Term Debt

Chapter 1

Introduction

One of the broadly discussed area in corporate finance is that how firms finance their investments. According to [Myers \(1984\)](#) information asymmetry between investors and managers causes a preference ordering among financing sources. Firms Prefers internal financing over external (the primary step of financing hierarchy), and if they need external financing, they prefer debt financing over equity (second step of financing hierarchy). Though, there exist disagreement among the scholars on how well the pecking order truly captures enterprises' real financing behavior ([Leary and Roberts, 2010](#)).

More crucially, there has been no systematic research on comparative role of diverse types of capital in investments financing like R&D spending, capital expenditures as well as acquisitions. [Gatchev et al. \(2009\)](#) conducted rare examination in to this topic, finding that US corporations employ debt issue more frequently than equity issuance, although cash reserves are used only infrequently to fund capital expenditures.

The study looks at manufacturing companies listed on the Pakistan stock exchange to see how different types of funding contribute to financing investments in a rising industry. The study uses capital expenditures and research and development spending as indicators of investment. This study investigation is conducted using two techniques. [Edirisuriya et al. \(2015\)](#) the system-of-equations methodology built on seemingly unrelated regressions which is comparable to ([Gatchev](#)

et al., 2009) approach. This methodology has a unique feature of a set of cross-equation constraints that ensure the total volume of capital generated from numerous sources of financing precisely short-term and long-term debt, cash reserves, and equity issuance equals the total amount of used capital (for investments).

Quantile regression (QR) is a complementary methodology that is used in the study. QR calculates the explanatory variables effect throughout the whole dependent variable distribution [Koenker and Hallock \(2001\)](#). The methodology supports in determining input of certain type of capital to finance projects at various stages of investment, like whether stock issuance contributes additional to big investment as compared to smaller investment. Furthermore, unlike the SUR technique, the QR method's regression specification evaluates the direct influence of cash movements on investments.

Pakistan's average company spends 127 percent of its cash reserve to fund \$1,000 in total capital expenditures ([Basheer et al., 2018](#)). The usage of cash reserve is more obvious between high-quality enterprises, which employ almost 230 percent of cash reserve over average for the funding of 1000 in total capital expenditure. The finding contradicts with the study of [Gatchev et al. \(2009\)](#) that cash reserves raise essentially nothing to finance capital expenditure for the average US corporation. Furthermore, unlike American enterprises, Pakistani organizations tend to raise the cash reserves primarily through cash flows, implying cash flows account for a significant part of cash reserves used for capital expenditures.

This study tracks investments as total investments, which are described as the sum of capital and R&D spending. Moreover, the study indicates that incorporating R&D spending in the measurement of investment has minimal impact on the study's conclusions on the relative value of different types of capital. The study discovered that equity issuance contributes about the same amount to finance inclusive investments as it does to finance the capital expenditures. It indicates that, unlike in the United States, stock issuance contributes a little part to fund R&D in Pakistan.

Another study uses the SUR approach, the SUR findings demonstrate that subgroups more sensitive to asymmetry of information (organization with significant

idiosyncratic volatility) employ equity financing at a higher rate than other firms. Given that this result contradicts what will happen if information asymmetry drove security decisions that supports the pecking order idea. Pecking order behavior might be caused by factors as compare to information asymmetry, like agency costs and leverage metrics oblige as a proxy for optimal leverage to capture whether the organization own lagged leverage influences financing decisions (Myers, 2003).

Quantile regression (QR)-based supplementary analyses provide more insight into Pakistani enterprises' investment financing behavior. Given that, all sources of capital, the cash flow has the biggest effect on investments across the various levels of investment, further study QR findings are compatible with first phase of financing hierarchy. However findings confirms the substantial influence of cash reserves on all levels of investments and their involvement in financing large investments is very minimal, owing to their limited availability. The influence of issuance is larger in comparison to debt issuance at high level of investment, whereas at low levels of investment the converse is true. This statistic could imply that, while companies initially rely on debt, they eventually switch to equity financing once their loan volume is reduced by huge level of investments.

1.1 Background of the Study

This research adds to the body of knowledge by expanding the understanding of business investments financing behaviors. This is the first research that tries to determine the Comparative input of many sources of capital in investments financing in emerging markets, precisely in Pakistan.

1.1.1 Theory of the Study

After the inception of Irrelevance theory, further many theories came along time to time. Among them, the pecking order theory states that due to information asymmetry between the investors and managers, there arises a preference classification among financing sources. According to Myers, firms usually prefer

internal financing over external financing, and if external financing is to be used, debt is preferred over equity, that is, the firms tend to borrow first and then issue equity as a last resort if their financing needs are not met from internally generated sources. Pecking order theory expresses that leverage increases the discernment of the market against value, and therefore, this increases the firms value.

The overall condition of the market when an organization tends to search for financing affects the capital structure, results in a different outcome of capital structure, considered as optimal for the companies operating under similar conditions. Market timing theory states that firms issue shares at a higher price, and then repurchases them at the lower price, as they would know better than the market if their shares are either under or overpriced.

In terms of its implication for theory and policy, our evidence is instructive in numerous ways. First, the study examines the extent to which financing behavior follows the finance hierarchy. The QR results imply that cash flows have a bigger impact on investments than debt or equity issuances at practically all investment levels, showing compatibility with the first stage of the financing hierarchy. While the SUR findings imply that average Pakistani organizations prefers debt issue (long term debt issuance) to equity issuance for the funding of investments, there is little sign that this partiality is founded on information asymmetry.

The finding of the study match with [Leary and Roberts \(2010\)](#) work, who found that knowledge asymmetry had no bearing on the decision to issue debt versus equity. Instead, there is little indication that financing decisions replicate a company's aim to keep its leverage levels close to ideal. Second, in contrast to [Gatchev et al. \(2009\)](#) results in the United States, the results of Pakistani enterprises depend on cash reserves in investment financing shows that Pakistani organization may have limited access to external funding. This perception is corroborated by our sample Pakistani enterprises' very high sensitivity of cash reserves to cash flows (a symptom of financial limitation, according to [Almeida et al. \(2004\)](#)).

In a related point, unlike in the United States, a fundamental part of cash flows for Pakistani enterprises is to repay long term debt, implying that debt volume is vital for Pakistani organizations. Upcoming research could look into whether

comparable evidences of financial limits can be found in other developing financial markets. Third, contrary to findings suggesting stock issuance contributes significantly to U.S. enterprises' R&D spending (Brown et al., 2009). These evidences suggest that equity issuance plays a little part in financing R&D spending in Pakistan. Debt finance is improbable to play a significant part in R&D investment due to the effort of knocking R&D assets (like; intangible assets) up as collateral. As a result, a key to increasing corporate R&D in the Pakistani economy may be to revitalize the stock market's resource allocation function, allowing equity capital to flow to R&D investment.

In Pakistan, a historical dependance on implicit contracting, an oligopolistic industrial structure, and weak capital markets have given corporate groups more room to grow. New Pakistan banks have established major ownership stakes in the Pakistan industrial sector since privatization began in 1993. The majority of the groups acquired their holdings through debt-for-equity swaps, government provisions, and privatization sales. By 1994, they had begun to combine assets in dominating blocks, taking advantage of the little competition afforded by capital market investors (Johnson, 1997).

The Financial-Industrial Group was the name given to the new organizational structure (henceforth FIG). FIGs were occasionally formally established by the government or organically created. FIGs were given official status by presidential order in December 1993. FIGs benefit from a variety of provisions under this decree, including the right to collect blocks of shares in privatized firms from GKI, favorable reserve necessities from the central bank, and priority access to permits and licenses.

Given Pakistan's historical history and current market conditions, such institutions may be the best organizational structure. Arm-length contingent contracting is difficult due to weak law enforcement. Pakistan has never known an Anglo-Saxon kind of business built on trustworthy contractual relationships. Enterprise directors depended on relational contracting to secure supplier delivery and performance during the Soviet era. In Pakistan, high transaction costs linked

to segmented information and weak contractual enforcement suggest that centralized asset ownership could improve corporate and contractual governance. FIGs, for example, may be an ideal structure for carrying out the essential reallocation of ownership and control in Pakistan. Many bank-centered organizations executives frequently argue that they and other banks play the same role in the Pakistan economy today as investment bankers did at the turn of the century.

The study begins with an empirical examination of the connection between investment and internal finance in Pakistan non-financial firms, both group-affiliated and independent. The study compares enterprises that are associates of formal Financial Industrial Groups and/or are owned by a significant Pakistan bank to a control group of bulky firms with management, discrete ownership, and employee control. For the second set of enterprises, the study found that internal liquidity affects investment, but not for the first.

1.2 Gap Analysis

There are limited studies on how the firms arrange and prefer their finances for capital expenditures. Most studies have examined capital structure issues in developed countries, mainly the US. This study uses data from manufacturing firms of Pakistan determine the relative importance of different forms of capital in financing investments. There are many ways to finance any investment but this study is consisting of cash flows (CF), Capital reserve (CA), Long term debts (LTD), Short term debts, Equity issuance (LEQU) and account receivables (ARC). As this study is consist of 442 firm of non-financial sector of Pakistan.

In constructing our sample, we require firm-years to have valid records of book assets, book equity and year-end share price. We also require firm-years to have non-negative change in net fixed assets because our purpose is to analyze the pattern of investment financing but decreases in net fixed assets do not represent investments. After these screens, our final sample consists of 3274 firm-years spanning the period 2009 to 2019.

Past studies shows that addition of firm-years with negative cash flows in investment regressions could contradict the estimated influence of cash flows on investments (i.e., the estimated importance of cash flows in financing investments), especially for financially constrained firms for which negative cash flows are a frequent occurrence (Almeida et al., 2004; Henderson et al., 2006; Cleary, 1999). Capital expenditure is the key measure of investement in this study. Inclusive measure of investments is also considered in the study. Hence, the purpose of this research is to fill this gap by studying that how the selected sources, contributes as the source of financing investments in Pakistan.

1.3 Problem Statement

Financial and non-financial firms operate in quite different ways, especially when it comes to their choices of financing investments. Even though Modigliani and Miller (1958) there is no universal theory of the debt-equity choice, and no reason to expect one, researchers are still trying to check the implication of different theories on the debt-equity ratio of firms all over the globe. However, the contribution of trade credit as a source of financing investments has been left out in the open. Whether trade credit contributes in the same proportionate for all the companies is yet to be examined. Therefore, this requires an investigation on the practices of firms listed on Pakistan Stock Exchange for their choices of investment financing.

1.4 Research Questions

Keeping in view research gap following questions are raised and answered:

Research Question 1

What is the contribution of different sources of capital for financing investments?

Research Question 2

Is the contribution of different sources of capital is same for small, medium and large-scale investment?

1.5 Research Objectives

Objectives of the study are as follows:

Research Objective 1

To investigate the contribution of different sources of capital for financing investments.

Research Objective 2

To investigate the contribution of different sources of capital for small, medium and large-scale investment.

1.6 Significance of the Study

The global economy, on average, in 2018 was characterized by a steady growth, but around 120 economies (approximately three quarters of the world economy) experienced a slower growth rate in year-on-year basis. Despite this deceleration, the Global Islamic Financial Services Industry (IFSI) managed to maintain a positive growth, marking a year-on-year growth of about 6.9% (Islamic Financial Services Industry Stability Report 2019), where most of the growth is powered by issuance of Sharia compliant stocks and Sukuks (Sharia Compliant Bonds).

In the current era, investors demand nearly perfect information to examine the performance of firms, so that they could make sure that their capital is invested and accumulates gain with minimum risk and cost involved. As the current stage of Globalization is preordained and unavoidable, the patterns of financing investments among firms should be aligned to compete globally. Fewer researches have been made on the methods and preference of sources of capital for investment financing by companies, taking into account the role of trade credit. Therefore, this study investigates the importance of trade credit along with other sources of capital to finance investments, across the companies in Pakistan.

1.7 Organization of the study

Chapter 1 discusses the Introduction, Theoretical Background, Gap Analysis, Research Questions and Objectives and Significance of the Study. Chapter 2 covers the literature review which briefly display past studies in context of investment financing and hypothesis of the study. Baseline model is employed in the study that is covered in chapter 3. Results generated through employing model is analyze and briefly interpret in chapter 4. Last Chapter enclosed the conclusion, recommendations, limitation and future directions of the study.

Chapter 2

Literature Review

The role of finance in the economic growth process has been the subject of much research. Many authors have argued for a causal relationship between finance and growth ([Levine and Zervos, 1996](#); [Levine, 1997](#); [Levine, 2005](#)) with academic studies backed up by work done by the International Financial Institutions. Financial development, according to theoretical models, should result in increased and more efficient investment, improved risk management, better monitoring and corporate governance, and trade facilitation ([Levine, 2005](#)).

2.1 Role of Financing in Multinational Corporation

The efficiency of multinational corporations has been viewed with rising skepticism in industrialized countries. The overwhelming evidence suggests that Western diversified groupings sell at a discount to a portfolio of independent enterprises in related industries; they have a lower Tobins Q on average; and they are more likely to be split up, with their share price rising. Further the study investigated investment patterns in conglomerate divisions, concluding that they appear to engage in some form of sub optimal socialist reallocation of resources across divisions, shifting funds from profitable firms in high Q industries to support investment in lower Q industries. The primary explanations for this under performance have centered

on the agency conflict between investors and empire-building executives. Internal power struggles, according to some authors, induce wasteful resource allocation to under performing divisions (Jensen and Warner, 1988).

In contrast, in many emerging nations work done by Khanna and Palepu (2000) where activity of private sector is generally held by diversified companies groups, industrial-financial conglomerates persist and often prosper. The motivation to resolve shortage in the intermediate product and capital markets has been mentioned in several theoretical rationales for such organizational structures. The formation of such groups may also be a result of the inadequate institutional environment in Asia, Latin America, and Eastern Europe's rising market economies. Groups may have considerable governance functions in countries with limited law enforcement, an unstable regulatory structure, and widespread corruption. They may facilitate internal trade, maintain strict oversight of management choices, and manage privileged access to political benefits like as subsidized credit, advantageous regulation and licensing, and strategic resource access. Finally, organizations may form to take advantage of compensate for a lack of markets, scarcity rents, or both.

During the previous three decades, financial markets have been progressively globalized (Lane and Milesi-Ferretti, 2008). Many nations, especially in the developing countries, have attempted significant changes to open their local financial sectors to capital inflows. This policy action is informed by a vast literature, both theoretical and practical, focused on the causal role of finance in boosting economic growth. By identifying the specific streams through which finance impacts lengthy development trends, endogenous finance-growth models manifest strong conceptual channels throughout which finance impacts lengthy development patterns. Generating data about investment opportunities and allocated capital, tracking investments and getting exercise governance practices, enabling trading, asset allocation, and risk assessment, mobilizing and accumulating savings, and enabling the exchange of goods are just a few of them, according to Levine.

Beck et al. (2003) the area of empirical research is broad and covers a wide range of problems connected to financial development and growth. The goal of this

study is to investigate how finance can assist with investment. The current study on this topic falls under two categories: first, research on economic literacy, capital, and economic expansion in a single or cross-country setting, and second, research on the influence of financial reforms on portfolio credit restrictions (proxying the levels of financial development).

A handful of studies in the first category are particularly relevant. In an influential early study on this topic [Rajan and Zingales \(1996\)](#) analyses whether industries that are extra heavily reliant on external finance grow respectively faster in nations with more established financial system. They look at cross-country industry data to see if financial development has an impact on growth through this channel. They discover that financially dependent sectors grow disproportionately swiftly if the financial systems are improved established by developing the industrys technological requirement for external money.

[Love and Zicchino \(2006\)](#) used pooled cross-country firm level data to inspect the influence of financial expansion on investment credit limitations. The methodology uses an Euler equation approach to introduce financing limitations by parameterize the shadow cost of external funds as a function of the firms financial situation, particularly its cash stock. According to the findings, financial development reduces financing limitations, which leads to increased investment activity. To examine the relationship between investment and a firms finance status, utilize a firm-level panel vector-auto regression (VAR). They discovered that finance constraints have a greater impact on investment in nations with less established financial systems.

Large publicly traded companies are likely to be the minimum financially limited, with easier access to foreign and domestic capital markets. Small and medium businesses and other non-listed organizations, which rely on bank credit as their sole external finance source, would be the focus of a more accurate investigation of the impact of financial development on credit limits. [Guariglia \(2008\)](#) makes a point about this. Furthermore, from a progress standpoint, the data used in such articles exclude many of the least developed nations, where financial institutions are likely to be the least developed and businesses confront severe access to credit

challenges. Extending this type of analysis to the context of development could yield valuable information.

Demirgüç-Kunt and Maksimovic (1999) conducted additional study on the differential effects on enterprises of bank-based versus stock-market-based financial progress. However, because these studies focused on funding expansion and credit facility usage, they do not directly address the challenges of investment finance restrictions. For European enterprises,

2.2 Role of Financing in Public Enterprises

Mortal and Reisel (2013) used a similar study design. In contrast to they found that, on average, public enterprises invest high and have stronger investment sensitivity to progress possibilities than private firm. Because this alteration is individual seen in nations with a sophisticated stock market, the authors accomplish that having access to regulated capital market allows public companies to take advantage of progress prospects more effectively.

Asker et al. (2014) found that, on average, public enterprises invest high and have stronger investment sensitivity to progress possibilities than private firm. Because this alteration is individual seen in nations with a sophisticated stock market, the authors accomplish that having access to regulated capital market allows public companies to take advantage of progress prospects more effectively. Relying on available to the public supply side statistics from the US chemical sector.

Mortal and Reisel (2013) shows that private businesses modify production capacity more quickly than publicly listed firms. By timing investments to benefit from demand increases and avoid negative shocks for a limited sample of firms, he demonstrates that corporate entities invest more effectively. Brav (2009) compared public and private enterprises in the United Kingdom and found that private companies rely on debt financing much more than public firms, resulting in higher debt ratios. Private enterprises with substantial information asymmetry between insiders and outsiders, i.e., firms with concentrated ownership structures

and minimal transparency, have the greatest reluctance to finance using external equity.

[Birley and Westhead \(1990\)](#) compares public and private enterprises in the United Kingdom and found that private companies rely on debt financing much more than public firms, resulting in higher debt ratios. Private enterprises with substantial information asymmetry between insiders and outsiders, i.e., firms with concentrated ownership structures and minimal transparency, have the greatest reluctance to finance using external equity capital. Furthermore, demonstrates that public enterprises use earnings to invest, whereas private firms raise their cash holdings and investments only with a time lag in response to increases in profitability. In private firms, there is also evidence of a strong correlation between performance and payouts to shareholders, which is not seen in public firms, according to his research.

Furthermore, his study demonstrated that public enterprises use earnings to invest, whereas private firms raise their cash holdings and investments only with a time lag in response to increases in profitability. In private firms, there is also evidence of a strong correlation between performance and payouts to shareholders, which is not seen in public firms, according to his research. The study showed that private companies pay lower dividends but vary them far more frequently in response to changes in earnings. Further he discovered that the cash holdings of private and public enterprises in the United States are only half as large as those of matched public firms. Most notably, they reveal that public companies invest extra cash in investment initiatives that have a negative impact on performance ([Brav, 2009](#))

In the sense of [Modigliani and Miller \(1958\)](#) agency problems is perhaps the most significant factor affecting optimal investing. They compared the investing and savings practices of private as well as public firms also corresponds to the more overall area of research worried with the impacts of asymmetric information and agency problems on company allocating capital even though private but also public firms experience agency problem between shareholders / operators to varying degrees. For businesses with a low to quasi level of agency conflicts, this study

utilize private firms as a standard for how capital flow is distributed. This technique is based on the finding that when a company is managed by an outsider, agency conflicts are larger and diminish with managerial ownership. The most obvious organizational differences between private and public companies are these two characteristics.

Studies on the impact of agency conflicts originating from knowledge asymmetries between managers and owners on investment decisions date back to Jensen and Mecklings foundational work in 1976. The tendency for management over investment is one aspect of this agency conflict. Managers grow firm size above an ideal point, according to [Jensen and Warner \(1988\)](#) by over investing free cash flows in unsuccessful investments opportunity or building up cash reserves rather than distributing it to shareholders. Managers pursuit of private goals is known as empire-building, and it is most obvious when free cash flow is strong. Furthermore, managers avoid both rising outside capital and being observed by stockholders by withholding excess cash flow. Empirical evidence is found there which support this hypothesis. The enterprises with the smallest shareholders right have the maximum capital expenditure in their sample of publicly traded companies in the United States.

According to [Amihud et al. \(1990\)](#) empire-building inclinations do not have to exhibit themselves in general over investment, but rather in excessive expenditure when free cash flow is available to managers. Overall, the control in public enterprises and separation of ownership leads to a greater correlation among cash flows and investment than in private firms, according to the empirical evidence and theoretical framework described above.

A corpus of theoretical work that models the effect of ownership structure on investment allocation also support the over investment hypothesis. According to [Albuquerque and Wang \(2008\)](#) less investor protection at the country level encourages controlling shareholder over investment. Weak (minority) investor protection allows the dominating shareholder to divert private benefits, causing optimal investment behavior and distribution policy to be distorted. Further, the study simulated the influence of imperfect shareholder control over managers, as well

as managers private advantage seeking, on investment behavior and asset price, using Jensens empire-building theory.

When corporate governance norms are poor and free cash flow is strong, their model forecasts over investment. Empire-building inclinations do not have to exhibit themselves in general over investment, but rather in excessive expenditure when free cash flow is available to managers. Overall, the control in public enterprises and separation of ownership leads to a greater correlation among cash flows and investment than in private firms, according to the empirical evidence and theoretical framework described above ([Albuquerque and Wang, 2008](#)).

The stock market listing, according to [Narayanan \(1985\)](#) lays pressure on management to achieve short-term expectation of shareholder in order to maintain their status and keep their jobs. Administrators may respond myopically by altering well-organized investments plan in order to boost short-term performance metrics like earnings. Short-term is a type of corporate conduct that results in inefficient capital allocation due to under investment.

[Myers and Majluf \(1984\)](#) an alternate pathway through which knowledge asymmetries contribute to under investment is described. They explain how information gaps between insiders and outsiders cause inefficient investment plans to be distorted when external cash is required to fund company investments. Because raising external stock sends a negative signal to the market, management would rather forego favorable net existing value investment schemes than issue additional shares. Assumed the assumptions used in these articles, a stock market listing forecasts public companies under investing relative to private companies. Managerial caution or financial limitations ensuing from agency problem among firm outsiders and insiders are the causes of inefficient corporate activity.

The pecking-order theory states that a companys financing decision is influenced by the relative expenses of raising cash. Equity financing is generally the most expensive option, both in terms of direct issue costs and adverse selection costs. When a company seeks external funding in the equity market, investors are unsure about the motivation behind the companys move. For example, the market may read an equity issue as an indication of overvaluation [Myers \(1984\)](#)

or, conversely, as a sign of a profitable investment opportunity. As a result, the investment decision aids in addressing the uncertainty around the firms previous financing decision. This could create a relationship between bidder profits and previous funding decisions, regardless of the firms investment options.

In contrast, according to [Stulz \(1990\)](#) given a weak investment opportunity set, managements likelihood of investing in negative NPV projects grows as the extent of administrative discretion over investment money increases. Firms with a strong investment opportunity set, on the other hand, are more inclined to forego a project in exchange for less managerial freedom. Because managerial discretion is dependent on the source of funding, there is likely to be a link between finance decisions and bidder gains in cash acquisitions. The perceived worth of the firms investment potential determines the quality of this link.

According to [Myers and Majluf \(1984\)](#) external funding is often thought to be high expensive than internal financing in term of transaction costs and adverse selection costs,. Furthermore, its assumed that issuing equity is more expensive than to issue debt. Furthermore, they used asymmetric knowledge among investors and managers to develop a model that predicts that firm will never finance their project with equity and will instead reject a project with a positive net present value in direction to maximize existing shareholder capital. This is because the diluting influence on current shareholders claims on the assets-in-place surpasses the right on the projects NPV. As a result, equity difficulties are always an indication of overvaluation, and the market considers them bad news.

Another study extended the concept by creating a model that allows for adverse NPV schemes in the firms investments opportunities set while to ensure that managers optimize current shareholders equity. When a company selects equity to fund a project with a comparatively large net present value (NPV) and lesser-valued assets-in-place, an equity issuance is no extensive considered bad news. An equity offering, on the other hand, could suggest a highly profitable enterprise, resulting in a possibly favorable announcement abnormal return. [McConnell and Muscarella \(1985\)](#) found evidences of positive stock market response when industrial businesses announce increase in capital expenditure, which is consistent with

this. The stock price response is linked with a financing choice is the net impact of two signal: investment opportunities and overvaluation, given that enterprises confront both positive and negative NPV projects. As a result, the stock price response connected with the ex-post investments choices indicates the markets resolution of doubt about the firms ability to actualize the investment opportunity, as well as if the financing decisions was influenced through overvaluation.

According to [Roll \(1986\)](#) the existing studies on corporate takeovers and investments is separated into two types of papers: those that assume the firms management will maximize shareholder wealth under specified constraints, and those that assume management would follow their own interests. Sub optimal investment happens in the first example due to circumstances beyond managements control, such as asymmetric knowledge, transactions costs, or taxes.

An agency conflict occurs when executives maximize their own capital or usefulness rather than that of current stakeholders, resulting in a high loss and lowering shareholders value. Also, when bondholders and shareholders have agency issues, sub optimal investments decision and value loss might occur. A third theory is that sub optimal investments decision are motivated by irrational conduct, such as overoptimism, rather than self-interested managerial behavior ([Rodrigues et al., 2020](#)).

[La Porta et al. \(1997\)](#) evaluated bidder abnormal outcomes around tender proposals for higher and lower q companies with higher and lower quantities of cash flow to test the free cash flow concept. They found that the benefits for buyers with limited investment options and elevated amounts of free cash flow are substantially lower than the profits for high q bidders with elevated amounts of free cash flow, which is compatible with the free cash flow assumption. Additionally, bidders with weak cash flow and low capital potential outperform those with excellent investment prospects.

[Maloney et al. \(1993\)](#) establish a negative relationship between stock payment and bidder announcement returns, corroborating finding evidence that bidder target combinations of slack-poor and high free cash flow businesses yield greater anomalous announcement returns than bidder target combinations of both high

and low free cash flow firms. Furthermore, they illustrated that debt in the bidders capital structure plays a monitoring role. Bidders do not accumulate financial slack prior to a takeover, but do have quite high amounts of slack accessible. This study shows that, cash-rich companies are more likely to become acquirers.

Cash-rich corporate takeovers are best explained by [Jensen and Warner \(1988\)](#) free cash flow theory and are, on average, adversely accepted by the market after their announcement and suffer poor ex post operating performance. They investigated the source of a firms wealth and how these influences whether cash-rich businesses make excellent or terrible investments decisions.

Country governance, according to [Kaufmann et al. \(2011\)](#) is the way power is exerted on behalf of the public in administration of a countrys social and economic resources for development, as sanctioned by a collection of existing traditions, laws, and institutions. Stronger governance, which means better contract enforcement, property rights, freedom of expression, political stability, and public services, as well as less risk of expropriation and corruption, will improve the financial sectors soundness and make it easier to participate in financial markets, which are critical for development and investment. It is due to the fact that it will incentive investors to fund markets by assuring that their rights and assets are well protected from expropriation by governments, elites, as well as other stakeholders.

Furthermore, they lower their risk premiums on the cost of capital by trusting that their claims will be recovered in the event of bankruptcy. At the same time, smart investors limit the amount of money they put into poorly governed countries because doing so exposes them to the possibility of major expropriation and corruption. As the countrys governance improves, firms cash-holding demands diminish since they would be able to receive funds from marketplaces with investors willing to increase their funding networks with additional favorable terms anytime, they need them ([Kaufmann et al., 2011](#)).

[Cho et al. \(2014\)](#) has found that when it comes to corporate financial decisions, changes in one decision inevitably influence other decision in the system. Its due to the sources-equal-uses identity, which causes organizations to make connected financial decisions. For example, after making investments decisions, firm executives

must also decide how to finance the investment. Furthermore, opting to utilize any finance source has an impact on whether or not to employ other possible financing sources. Additionally, previous financial decisions may have an impact on current funding decisions. An improved comprehension of how businesses finance their investment opportunities, dividend income, and earnings shortfalls comes from looking at the influence of country democratic accountability on planning exercise and attempting to address the interdependent and inter temporal aspects of business decision-making procedures in order to catch their sophistication.

The fact that innovative concerns emerge after stocks prices surge [Eckbo and Masulis \(1995\)](#) indicated a mis evaluation effect on financing behavior. Though, such a pattern can be generated in a rational situation with asymmetric information, and give data that supports information asymmetry effects. According to the rational q capital asset pricing model, a share price lead up or a higher share value compared to book value implies an enhancement in growth potential, which motivates the firm to spend more and maybe raise further capital as financing.

[Ritter \(1991\)](#) the second type of evidences are the new issues puzzle, which consists of returns deficit after new stocks issues, with equity under performance being additional severe than debt under performance. The data has sparked discussion over the method of long-run irregular returns testing and the use of risk factors benchmarks. Evidence suggesting the debt vs equity mix of net financing at the firm level does not predict future returns, on the other hand, has been viewed as contradicting the premise that issuance decisions are made to take advantage of mispricing.

Furthermore, conditions on current issues have the disadvantage that businesses take activities to induce mis evaluation at the time of the new issue, which makes it difficult to verify the causal effect of mis evaluation on new issues. For example, during the time of new issuance, corporations engage in upward earnings management, and more earning management on the period of issue is related with extra adverse post-issue returns ([Teoh et al., 1998](#)). These experiments focused more strongly on how mis evaluation influences financing decisions, rather than the reverse relationship from strategic financing choice to the businesss decisions

to instigate overestimation, by considering previous mis evaluation prior to the instant fresh issue period.

Another study showed that indicators of overestimation are related to higher capital spending and R&D and that the impacts of share price valuations whether effective or noton investment are stronger for firms with tighter budgets (firms that are equity-dependent). The hypothesis that greater overvaluation causes more share issue, though, is only marginally related to this finding. This is found that the enterprises with advanced measured overestimation tend to pay for takeovers with equity rather than debt ([Dong et al., 2006](#)). Though intriguing, data does not prove that stock issuance is linked to mis evaluations in a large scale of companies. In fact, despite the fact that small businesses are overthrow bidders far fewer regularly than huge businesses, our results of mis evaluation impacts on issuance are largest among small enterprises.

2.3 Role of Debt and Equity in Investment Financing

[Henderson et al. \(2006\)](#), found that the aggregate equity stake in fresh issues is a negative predictor of subsequent market returns. This is in line with the theory that when the stock market is overpriced as a whole, the constituent overvalued enterprises switch from debt-to-equity issuance. This research, however, does not address whether more mis valuation is a predictor of larger equity issuance across the board, or whether mis valuation is linked to increased total (debt plus equity) issuance.

[Donaldson \(2000\)](#) under asymmetric knowledge, the market may mis price equity. If companies fund new projects by issuing equity, the under pricing may be so severe that new investors receive a larger part of the projects NPV than existing shareholders. This could result in an issue of under investment, as such projects will be rejected even if the NPV is good. This under investment can be mitigated by funding the project using a security that is less susceptible to market

mispricing. Internal funds will not be undervalued, and even low-risk debt will be favored to stock. This is known as the pecking order hypothesis of capital structure. The description is based on earlier empirical study, which found that managers preferred to fund investment using retained earnings rather than using outside capital.

There is no well-defined desired mix of debt and equity finance in this model. The observed debt ratio of each company indicates its total external financing needs. Profitable businesses will borrow less since they can rely on internal resources. Because corporations favor internal equity, they will employ less debt than the trade-off theory predicts. Firms are also more inclined to create financial slack in order to fund future projects. Management behavior, corporate control concerns are some of the other elements that have been mentioned to assist explain the range of observed capital structures ([Williamson, 1988](#)).

As a result of this inclination, companies adopted dividend policies that represented their expected need for investment cash, policies that management were hesitant to change significantly. Debt would be repaid if retained profits exceeded investment needs. If external financing was required, companies tended to issue debt first, then stock as a last choice ([Donaldson, 2000](#)).

Other early UK studies include one by [Marsh \(1982\)](#), who looked at security issues and discovered that when it comes to deciding between debt and equity, companies are significantly impacted by market conditions and the prior history of security prices. He also gave evidence that businesses use financing solutions as if they are aiming for a certain level of debt. These debt levels are determined by the size of the company, the risk of bankruptcy, and the asset mix.

Further, the study found that both agency and tax concerns were essential in assessing debt and equity difficulties in a similar study. It looked into the factors that influence debt structure, maturity, and priority structures and discovered significant differences in debt structure, maturity, and priority structures based on company size; for example, the relationship between debt and agency costs appears to apply only to large companies, whereas small company debt appears to be driven by profitability([Marsh, 1982](#)).

Finally, researchers such as [Baker and Wurgler \(2002\)](#) have discovered that companies with high market values compared to the book value is more likely to issue stock. Following the equity offering, the investments or takeover announcements could assist clarify the motive for the equity issue, and thus be welcomed by the market with a favorable stock price reaction.

Finally, researchers such as [Jung et al. \(1996\)](#) and [Baker and Wurgler \(2002\)](#) have discovered that companies with high market values compared to the book value is more likely to issue stock. Following the equity offering, the investments or takeover announcements could assist clarify the motive for the equity issue, and thus be welcomed by the market with a favorable stock price reactions.

Lastly, the correlation of valuation ratios with equity issue or buyback is the seventh sort of evidence. [DeAngelo et al. \(2010\)](#), found that market-to-book ratio is significantly connected with the likelihood of a firm conducting a seasoned stock offering. However, because market-to-book represents both growth prospects and mis evaluation (among other things), it cannot be used to determine whether market inefficiency influences stock issuance.

[Graham and Harvey \(2001\)](#) the sixth type of evidence is that CFOs say that stock market prices are a significant consideration in their firms decision to issue common stock in answer to survey questions. This is, however, evidence of managerial attitudes rather than real mis valuation and issuance. Managers that are overconfident in their companies may mistakenly believe they are undervalued. Furthermore, practitioners rarely distinguish between mis valuation that occurs in efficient markets with asymmetric knowledge and mis valuation that occurs as a result of market inefficiencies in processing public data. Markets valuation influence financing decision in all scenarios, but the goal here is to see how market inefficiency influence financing decisions.

In a perfect market system, another study showed that financial decisions are not interdependent. According to [Greenwald et al. \(1984\)](#), external financing sources demand a greater return on capital in the existence of potential conflicts and expensive surveillance of managerial decisions to cover the costs of the surveillance and related moral hazard problems. Information asymmetries issues

in financial markets are used to show market faults. [Bernanke and Gertler \(1986\)](#) investigated that agency cost results in a premium on external financing that rises as the borrowers net value falls. Because internal funds have a cost advantage over external funds, enterprises functioning in such circumstances are attentive to the availability of interior capitals when making investment decisions. The impact of financial restrictions on business policies has long been a focus of corporate finance study.

The perfect markets theory of financial decisions, which states that investment decisions have no impact on dividends. Due to information asymmetry and market inefficiencies, a company's investment decisions may be influenced by its dividend and financing decision. With asymmetric information, [Bhattacharya \(1979\)](#) showed that a manager can use dividend to give signal about their firm's current productivity and future progress. Unexpected dividend increases would be a positive indicator of the company's future progress. Also, an unexpected reduction in dividend would send a negative message about the company's future projections. The association among earnings and dividends and found that they are significantly connected in both temporal and cross-sectional data.

Several investigations have looked into the empirical validity of Fama and Millers separation concept. The interdependence hypothesis is based on Partington's work on simultaneous equation financial decision modeling. They discover interdependencies that are in violation of the separation principle. However, [Fama \(1974\)](#), found that dividend and investments are unrelated. The study conducted a time-series analysis of company payout policy and discovered that corporate investments decision, not the other way around, lead to payment policies. Furthermore, increases in overall compensation to corporations are linked to long-term improvements in earnings. According to him, sustaining the dividends amount for manager is comparable to investments decision. Firms dividend and investment decisions are linked. Their friction less full payout model forecasts a rise in dividends after a significant investment, and investments policies aren't the only factor that influences value. Further, the study showed that shocks to dividend variations have short-term implications for investment variations and vice versa, but

then over the longer horizons the association among the two variables is weak.

[Adedeji \(1998\)](#) A large body of empirical research has attempted to determine which of the two primary theories best explained capital structure practice. The fact that the hypotheses are mutually exclusive is implicit in such testing. While both theories lead to a set of exactly adverse forecasts in their most basic form, there is growing understanding that neither theory can explain the complexity experienced in practice on its own. This is especially true when trying to come up with a single hypothesis to explain a wide range of company financial policy decisions.

According to [La Porta et al. \(1997\)](#) the lawful system of a country is the most important driver of foreign financial accessibility. They describe shared law states (such as the United Kingdom and the United States) as providing best legal protections to shareholder, while French-civil-law nations provide less. In common law nations, legal protections for creditor against executives is typically substantial, which is important in times of financial difficulty (including the UK). The United States, on the other hand, is a notable exception in this regard, having been designated as one of the most creditor-hostile countries.

2.4 Investment Financing in the U.S Firms

Both the U.K and the US have strong law execution and a low attention of corporate ownership. Though, any flaws in the legal structure can be mitigated, at least in part, by a grouping of banking system regulation and administration. In their analysis of global capital structures, the study argued that it is crucial to assess the applicability of US results in various contexts.

According to them, it may be important to consider regional variations in tax and banking laws, the corporate control market, and the historical importance of banks and the stock market. The expansion of financial markets has a significant influence on enterprises financing strategies ([La Porta et al., 1997](#)). Moreover, even if the same factors affect capital structure choices in both rich and emerging nations.

Booth et al. (2001) asserted that continuing cross-country differences demonstrate that our knowledge of the effects of different institutional components is still inadequate. In common law nations, legal protections for creditor against executives is typically substantial, which is important in times of financial difficulty (including the UK). The United States, on the other hand, is a notable exception in this regard, having been designated as one of the most creditor-hostile countries. Both the U.K and the US have strong law execution and a low attention of corporate ownership. Though, according to Demirgüç-Kunt and Maksimovic (1999), any flaws in the legal structure can be mitigated, at least in part, by a grouping of banking system regulation and administration.

Aggarwal and Zong (2006) employ a data set that includes corporations from the four greatest industrialized countries (the United States, the United Kingdom, Germany and Japan) and showed that businesses have limited access to external capital and may function on a pecking order. Furthermore, they found that the dependency of investments on cash flows are largest for those externally financial restricted enterprises with a relatively high amount of internal reserves, based on a huge panel of economic data on UK businesses. The findings show that access to external capital, which has long been a source of policy concern, may be a significant constraint on investment by successful young, small businesses.

Gompers et al. (2003) studies on the impact of agency conflicts originating from knowledge asymmetries between managers and owners on investment decisions. The tendency for management over investment is one aspect of this agency conflict. Managers grow firm size above an ideal point, by over investing free cash flows in unsuccessful investments opportunity or building up cash reserves rather than distributing it to shareholders. Furthermore, managers avoid both rising outside capital and being observed by stockholders by withholding excess cash flow. The enterprises with the smallest shareholders right have the maximum capital expenditure in their sample of publicly traded companies in the United States.

Michaely and Roberts (2012) show that private companies pay lower dividends but vary them far more frequently in response to changes in earnings. Finally, Gao et al. (2013) discover that the cash holdings of private and public enterprises in the

United States are only half as large as those of matched public firms. Most notably, they reveal that public companies invest extra cash in investment initiatives that have a negative impact on performance.

The challenges of assessing gearing and discovered that debt determinants differ significantly across short-term and long-term debt components. [Adedeji \(1998\)](#) confirmed the pecking order theory prediction that there should be a negative association between dividend payout ratio and investment. Pecking order against trade-off theory, with neither theory dominating. Overall, the evidence for the United Kingdom (as well as the United States) is inconclusive. While several separate elements can be recognized as significant, neither of the two primary theories can effectively explain the outcomes of enterprises financing decisions in practice on their own ([Marsh, 1982](#)).

Recent research has begun to focus on dynamic features of capital structure, such as whether enterprises engage in capital structure re balancing, as predicted by the trade-off theory. [Ozkan \(2001\)](#) showed that UK enterprises do have target ratios and that they react to them rather fast. [Antoniou et al. \(2002\)](#) found that enterprises in three European countries (including the United Kingdom) alter their debt ratios to achieve desired structures, but at varied rates, implying that environmental and cultural factors play a role. US firms do not re balance in reaction to changes in leverage caused by equity offerings or market changes in equity prices. In contrast, the capital market frictions motivate firms to modify capital structure, but that this adjustment is rare, resulting in long excursions away from their aims. They discovered that US enterprises follow a dynamic trade-off policy in which they actively re balance leverage to stay within an optimal range.

[Flannery and Rangan \(2006\)](#) developed a model that allowed firms target capital structures to change over time and for firms to gradually adjust toward the target. They revealed that US corporations operate with a target leverage ratio and that the distance to the target has been reduced by more than half in just two years. Finally, contrary to the trade-off idea, the significant inverse link between profitability and leverage has been demonstrated to be reconcilable when mean reversion in earnings is taken into account. While the evidence is

inconclusive, it appears that enterprises use some type of target or target range, which is compatible with trade-off theory logic.

On the determinants of capital structure, [Bancel and Mittoo \(2004\)](#) polled 87 managers from big publicly traded companies in 16 European nations; respondents included 10 (7 percent response rate) from the United Kingdom and 2 from Ireland. When issuing debt, financial flexibility was considered to be the most important consideration, followed by earnings per share dilution when issuing stock. When raising cash, managers emphasize hedging concerns and employ windows of opportunity. Both the institutional environment and overseas activities have an impact on a company's financial policies.

Overall, they come to the conclusion that organizations determine capital structure by balancing financing costs and advantages. The results, however, should be viewed with caution due to the small sample size, both overall and for many of the specific countries ([Bancel and Mittoo, 2004](#)).

A single country study, in addition to the cross-country studies, is similar to our research. The relationship between financial growth, GDP growth, capital spending, and total factor productivity in 30 provinces of China from 1989 to 2003. They assessed financial developments in three ways: intermediary development and financial sector depth, state intervention in finance, and the extent to which the economy is financed by markets. The use of cross-provincial within-country data is unusual and adds a new perspective to the argument compared to previous studies. It resolves concerns about measurement error across nations [Levine and Zervos \(1996\)](#), as well as the ability to control for immeasurable to an econometric institutional difference in financial inter mediation. However, this study does not make the connection between financial development and business expansion. Additional related work worth mentioning focuses on the impact of financial liberalization on financial access and investment activity. These studies examine whether financial reform improves credit access and thus financial development by using firm-level credit limitations as a proxy for the amount of financial development. While they are not directly connected to this study, they are part of a larger body of work on financial development and progress.

Single-country studies such as [Haramillo et al. \(1996\)](#), do additional research on specific areas of banking market change and access to finance. The main take-away from this literature is that financial liberalization has a favorable influence on financing limitations, implying that financing development contributes to economic growth through improved finance allocation.

Understanding the many information, agency and contracting challenges that result in alterations in firms investment and financing decisions takes up a substantial section of corporate finance study. Many of the postulated resistances that develop in the procedure of acquiring external capital, as Stein (2003) described, can result in a situation where internal and external money are not considered as ideal equivalents. As a result, the availability of internal money may have a causal effect on investment decisions.

In experimentally analyzing the relationship among a firms expenditure decisions and its inner cash flows, there are two obstacles. The first step is to determine whether the spending-cash-flows relationship is causal. The relationship amid investments and cash flows may develop if investment possibilities are measured with error, as has been frequently studied, because cash flows are proxy for the excellence of investment chances. [Rauh \(2006\)](#) leveraged one-of-a-kind events or institutional traits that break the connection among cash flows and investments opportunities to get around this difficulty. The presence of enterprises internal capital markets is an alternate method offered, which the study accepts.

The identification of the underlying frictions that cause the investment-cash flow relationship is a second issue in researching it. Most authors use capital market imperfection theories, to understand the investment-cash flows association as a sign of cash-constrained businesses under investments. However, as Jensen suggests, its plausible that managers have a propensity to over invest internal funds. Managers can also use behavioral guidelines to create a causal relationship among investments and cash flows ([Malmendier and Tate, 2005](#)).

It appears plausible to assume that a grouping of these hypotheses has an impact on real-world businesses. As a result, separating conflicting story lines fully may not be a practical goal. It may be able to assess the relative importance

of the various hypotheses by recognizing business features that are related with a mainly significant advertising-cash flows relationship. This type of analysis is carried out below. A cash flow shock that impacts one section of a corporation can be communicated to other parts of the firm. In small sample of industrially diverse enterprises, he uses this approach. In the special situation of banks ([Lamont, 1997](#)).

[Shin and Stulz \(1998\)](#) discovered that a divisions investments spending are related to the cash flow of firms other division in a extensive sample of industrial businesses. However, these findings could be difficult to understand because there are frequently economic connections between partitions that might provide a relationship among cash flows in one section of the organization and investments opportunities in another.

Firms essential actively shift money across geographical areas for our tests to be effective. According to previous study, this movement occurs frequently. However, frictions caused by the tax system or regulatory constraints may obstruct active capital mobility in some circumstances. Companies in the US, in specific, may face a tax deterrent to expel their offshore revenues ([Hines Jr and Hubbard, 1990](#)). If these frictions are significant, the relationship among domestic advertising and overseas cash flows may be reduced or eliminated. The existence of a relationship suggests that frictions in the internal financial market are fewer than frictions in rising external capital.

There are a number of motives to suspect that frictions in cross-border capital transfers will not erase the influence. First, [Foley et al. \(2007\)](#) found that cross-country tax frictions are comparatively insignificant for financially limited businesses. Second, even if no explicit cash is transferred across national borders, a companys performance abroad might have an impact on its financial resources at home. When a companys consolidated financial health improves, debt covenants may be lifted, allowing extra cash to be taken down from domestic positions of credit. Finally, frictions connected with deportation of foreign incomes will be insignificant for enterprises who are net exporters of capital to their foreign procedures. The quantity of internal investment that needs to be shifted to external

operations, and thus the capitals available for internal spending, will be affected by these enterprises abroad performance (Foley et al., 2007).

Only a few theoretical studies of organizations best cash, investment, and risk management practices exist. A significant initial contribution by developing a stationary model of a corporation confronting outside financing cost and risky investments options. Almeida et al. (2011) added cash-flow and investment uncertainty to optimal cash holding in a three-period model theory.

Hennessy and Whited (2005) looked at dynamic investment models for financially restricted businesses. They do not model the firms cash buildup process, and they investigated a model with declining return to scale, which is less tractable than constant return to scale specifications. They also don't look into the relationship between business investment and risk management. It is recently extended to include debt issuance expenses, explaining why corporations can issue debt and hold cash at the same time. At the payout and stock issuance borders, the investment Euler equation for a financially limited corporation. They do not, however, link the company's risk and cash management practices to its investments and financing plans.

Riddick and Whited (2009) looked at a discretionary with falling returns to scale, a log-AR (1) income process, and cubic capital costs in a discretion. When confronted with outside cost of borrowing, they also consider the firms best cash stock and investment plans. The study may leverage the constant and continuous returns to scale structure to gain a more operational explanation of the firms best policy, even though their model is more flexible than ours. The research also looks into the company's dynamic hedging strategy and credit line usage. They also look at a continuous-time model of a company dealing with exterior financing expenses. Their firm, unlike ours, only has one infinitely-lived structure of static size, therefore they are unable to analyze the interaction between the firms actual and financial policies. In a continuous-time dynamic optimum contracting paradigm, they combine active agency with the q theory of investments. In their model, dynamic agency conflicts create an endogenous financial restriction that leads to liquidation and under investment.

In contrast to the rather sparse theoretic works on corporate risk management, there is a significantly bigger empirical literature on the factors that influence organizations cash holding. [Dittmar and Mahrt-Smith \(2007\)](#), in particular, focus on the connection among poor corporate governance and additional cash inventories. Taxes are a crucial component in cash stock strategy, as they are in other firm financial choices. [Desai et al. \(2001\)](#) studied the impact of corporate taxes on firm payout decisions. There is also a substantial number of evidence work on firms share buyback decisions (for a review of the share buyback literature that is most important to firms cash inventory model. Finally, more strategic issues such as creating a war fund to strengthen the firms financial performance in product markets or aiding financial transactions may have an impact on corporate cash strategy.

[Gilje and Taillard \(2016\)](#) used an exclusive data set of public and private natural gas companies to show that private companies adapt their drilling activities much less in response to price changes. Furthermore, private companies are fewer inclined to invest in capital-intensive exploitation of freshly exposed shale gas reserves, favoring instead to sell drilling rights to public companies in the same industry. As a result of having access to regulated capital markets, the authors argue that public companies are well positioned to take advantage of capital-intensive development prospects.

According to [Stein \(2003\)](#), agency problems is perhaps the most significant factor affecting optimal investing in the sense that (Modigliani and Miller, 1958). Any researchers compared the investing and savings practices of private as well as public firms also corresponds to the more overall area of research worried with the impacts of asymmetric information and agency problems on company allocating capital even though private but also public firms experience agency problem between shareholders operators to varying degrees.

For businesses with a low to quasi level of agency conflicts, this study utilizes private firms as a standard for how capital flow is distributed. This technique is based on the findings of [Ang et al. \(2000\)](#), who found that when a company is managed by an outsider, agency conflicts are larger and diminish with managerial

ownership. The most obvious organizational differences between private and public companies are these two characteristics.

A corpus of theoretical work that models the effect of ownership structure on investment allocation also support the over investment hypothesis. According to [Albuquerque and Wang \(2008\)](#), less investor protection at the country level encourages controlling shareholder over investment. Weak (minority) investor protection allows the dominating shareholder to divert private benefits, causing optimal investment behavior and distribution policy to be distorted. [Dow et al. \(2005\)](#) simulate the influence of imperfect shareholder control over managers, as well as managers private advantage seeking, on investment behavior and asset price, using Jensens empire-building theory. When corporate governance norms are poor and free cash flow is strong, their model forecasts over investment.

Another body of research contends that the opposite is true. The stock market listing, according to [Narayanan \(1985\)](#) and [Stein \(1989\)](#), lays pressure on management to achieve short-term expectation of shareholder in order to maintain their status and keep their jobs. Administrators may respond myopically by altering well-organized investments plan in order to boost short-term performance metrics like earnings. Short-term is a type of corporate conduct that results in inefficient capital allocation due to under investment.

2.5 Role of Financing Investment in Developing Countries

Many developing countries and emerging market economies have been recommended to liberalized financial markets and lessen government control over the banking sector. This, it is suggested, will lead to enhanced financial development, resulting in first-order growth consequences. However, the start of the recent financial crisis globally, as well as in the 1990s the East Asian and Latin American financial crises, has challenged the consensus on the role of finance in the growth process and financial liberalization, particularly for emerging nations. Further-

more, the unusual strength of the Chinese economy, which has a broken financial system has posed a conundrum in determining the role of financial markets in generating growth ([Guariglia, 2008](#))

[Rajan and Zingales \(1996\)](#) access to investment capital is one of the more well established avenues through which finance can impact real-world corporate behavior. The study revisits the topic of investment financing and financial development in order to pinpoint the processes via which finance can influence investment activity. The study uses a fresh and broad firm level data set from the Vietnamese enterprise survey from 2002 to 2008 to link financial development at the province level in Vietnam to enterprises investment in fixed assets via the financing channel in this research. The following are our specific contributions to existing research: First, the study uses Vietnamese cross-provincial data to estimate financial development along three lines: financial sector depth and intermediary development, governmental interventionism in finance, and the degree of market-driven financing in the economy.

The volume of credit granted to the private sector as a percentage of output is used to determine financial depth. The study includes the fraction of total loans held by state-owned enterprises (SOEs) as well as the ratio of SOE loans to SOE output when measuring state interference in financial markets. The study utilizes the ratio of investment financed with loans from commercial banks to the percentage of investment financed by government banks to measure market financing in the economy. These three metrics allow for the evaluation of a comprehensive definition of financial development ([Rajan and Zingales, 1996](#)).

[Love and Zicchino \(2006\)](#) extended the analysis to a development setting and employing data from non-listed small, medium, and large enterprises owned by the government, foreign investors, and private individuals. This comprehensive database includes both non-manufacturing and manufacturing businesses in Vietnam. Current research reveals that funding limitations are unevenly distributed among enterprises in any economy, and that including non-manufacturing and non-listed firms is vital. Private businesses and small businesses are the most vulnerable to restrictions.

They have unique difficulties obtaining external loans, owing to asymmetric knowledge, a absence of security, and a reliance on capital marketplaces in their immediate geographic vicinity. This study is groundbreaking since it is the first to link financial development indicators within countries, which capture both financial depth and resource allocation, to investment funding restrictions in poor countries (Love and Zicchino, 2006).

Pawlina and Renneboog (2005), an alternate pathway through which knowledge asymmetries contribute to under investment is described. They explain how information gaps between insiders and outsiders cause inefficient investment plans to be distorted when external cash is required to fund company investments. Because raising external stock sends a negative signal to the market, management would rather forego favorable net existing value investment schemes than issue additional shares. Assumed the assumptions used in these articles, a stock market listing forecasts public companies under investing relative to private companies. Managerial caution or financial limitations ensuing from agency problem among firm outsiders and insiders are the causes of inefficient corporate activity.

McConnell and Muscarella (1985) found evidences of positive stock market response when industrial businesses announce increase in capital expenditure, which is consistent with this. The stock price response is linked with a financing choice is the net impact of two signal: investment opportunities and overvaluation, given that enterprises confront both positive and negative NPV projects. As a result, the stock price response connected with the ex post investments choices indicates the markets resolution of doubt about the firms ability to actualize the investment opportunity, as well as if the financing decisions was influenced through overvaluation.

The existing studies on corporate takeovers and investments is separated into two types of papers: those that assume the firms management will maximize shareholder wealth under specified constraints, and those that assume management would follow their own interests. Sub optimal investment happens in the first example due to circumstances beyond managements control, such as asymmetric knowledge, transactions costs, or taxes. A third theory is that sub optimal

investments decision is motivated by irrational conduct, such as over optimism, rather than self-interested managerial behavior (Roll, 1986).

Maloney et al. (1993) higher amounts of debt in a firms capital structure are linked to higher anomalous announcements return. Their report does not discriminate between good and bad investment opportunities, nor does it address debt and equity flows. The study establish a negative relationship between stock payment and bidder announcement returns, corroborating earlier findings of (Travlos, 1987). Bruner (1988) find evidence that bidder target combinations of slack-poor and high free cash flow businesses yield greater anomalous announcement returns than bidder target combinations of both high and low free cash flow firms. Further the study examines that debt in the bidders capital structure plays a monitoring role.

According to Oh and Oetzel (2011), power is exerted on behalf of the public in the administration of a countrys social and economic resources for development, as sanctioned by a collection of existing traditions, laws, and institutions. Stronger governance, which means better contract enforcement, property rights, freedom of expression, political stability, and public services, as well as less risk of expropriation and corruption, will improve the financial sectors soundness and make it easier to participate in financial markets, which are critical for investment and development. This is due to the fact that it will incentive investors to fund markets by assuring that their rights and assets are well protected from expropriation by governments, elites, and other stakeholders.

Furthermore, they lower their risk premiums on the cost of capital by trusting that their claims will be recovered in the event of bankruptcy (Belkhir et al., 2016). At the same time, smart investors limit the amount of money they put into poorly governed countries because doing so exposes them to the possibility of major expropriation and corruption. According to Seifert and Gonenc (2016), as the countrys governance improves, firms cash-holding demands diminish since they would be able to receive funds from marketplaces with investors willing to increase their funding networks with additional favorable terms anytime, they need them.

Parallel to these reasons, we argue that foreign equity holders seek larger risk premium on the cost of equity capital in badly governed nations because the

danger of expropriation by management or community representatives is larger than in better-ruled nations. Investors also avoid buying shares in nations with poor contract execution and property constitutional rights, a significant risk of expropriation, and corruption ([Álvarez-Botas and González, 2021](#)).

[La Porta et al. \(1997\)](#) the cost of expropriation fear is higher, and small investors demands for company shares is lower. As a result, we predict debt money to become fewer expensive than equity capital in such an environment. Companies in better-governed nations, on the other hand, rely on more stock issuance as equity capital become less expensive than debt capital. They come to the conclusion that businesses in nations with weaker rules and higher levels of government corruption are more likely to use debt rather than equity. As a result, assuming all other factors are equal, we believe that the stronger state domination across nations, the smaller the firms leverage will be.

[Kashefi-Pour et al. \(2020\)](#) has found that when it comes to corporate financial decisions, changes in one decision inevitably influence other decision in the system. Its due to the sources-equal-uses identity, which causes organizations to make connected financial decisions. For example, after making investments decisions, firm executives must also decide how to finance the investment. Furthermore, opting to utilize any finance source has an impact on whether or not to employ other possible financing sources. Additionally, previous financial decisions may have an impact on current funding decisions. An improved comprehension of how businesses finance their investment opportunities, dividend income, and earnings shortfalls comes from looking at the influence of country democratic accountability on planning exercise and attempting to address the interdependent and inter temporal aspects of business decision-making procedures in order to catch their sophistication.

Furthermore, conditions on current issues have the disadvantage that businesses take activities to induce mis evaluation at the time of the new issue, which makes it difficult to verify the causal effect of mis evaluation on new issues. For example, during the time of new issuance, corporations engage in upward earnings management, and more earning management on the period of issue is related with

extra adverse post-issue returns (Ekpenyong and Nyong, 1992). These experiments focused more strongly on how mis evaluation influences financing decisions, rather than the reverse relationship from strategic financing choice to the business decisions to instigate overestimation, by considering previous mis evaluation prior to the instant fresh issue period.

The third sort of evidence shows that indicators of overestimation are related to higher capital spending and R&D and that the impacts of share price valuation whether effective or noton investment are stronger for firms with tighter budgets (firms that are equity-dependent). The hypothesis that greater overvaluation causes more share issue, though, is only marginally related to this finding. This is found that the enterprises with advanced measured overestimation tend to pay for takeovers with equity rather than debt (Dong et al., 2006). Though intriguing, data does not prove that stock issuance is linked to mis evaluations in a large scale of companies. In fact, despite the fact that small businesses are overthrow bidders far fewer regularly than huge businesses, our results of mis evaluation impacts on issuance are largest among small enterprises.

Keasey and McGuinness (1990),found that the aggregate equity stake in fresh issues is a negative predictor of subsequent market returns. This is in line with the theory that when the stock market is overpriced as a whole, the constituent overvalued enterprises switch from debt to equity issuance. This research, however, does not address whether more mis evaluation is a predictor of larger equity issuance across the board, or whether mis evaluation is linked to increased total (debt plus equity) issuance. This is, however, evidence of managerial attitudes rather than real mis evaluation and issuance. Managers that are overconfident in their companies may mistakenly believe they are undervalued. Furthermore, practitioners rarely distinguish between mis evaluation that occurs in efficient markets with asymmetric and mis evaluation that occurs as a result of market inefficiencies in processing public data.

In a perfect market system, Modigliani and Miller (1958) show that financial decisions are not interdependent. According to Jensen and Warner (1988), external financing sources demand a greater return on capital in the existence of potential

conflicts and expensive surveillance of managerial decisions to cover the costs of the surveillance and related moral hazard problems. Information asymmetries issues in financial markets are used. (Bernanke and Gertler, 1986; Bernanke and Gertler, 1990) showed that agency cost results in a premium on external financing that rises as the borrowers net value falls. Because internal funds have a cost advantage over external funds, enterprises functioning in such circumstances are attentive to the availability of interior capitals when making investment decisions.

The impact of financial restrictions on business policies has long been a focus of corporate finance study. The influence of financial limitations on business investments decision. Organizations with greater financial constraints are more responsive to internal cash flows in their investment decisions than firms with less financial constraints. They interpret their results as suggestion of a disparity among external and internal capital costs, and they infer those economic limitations limit organizations capability to invest effectively. Their findings confirmed the theory that investments and internal funds are highly connected, and that this correlation occurs in models with capital market flaws (Aggarwal and Zong, 2006).

2.6 Dependency of Investment on Cash Flows

Guariglia (2008) found that the dependency of investments on cash flows are largest for those externally financial restricted enterprises with a relatively high amount of internal reserves, based on a huge panel of economic data on UK businesses. The findings show that access to external capital, which has long been a source of policy concern, may be a significant constraint on investment by successful young, small businesses.

Unlike studies that used the sensitivity of investments to cash flows or cash stock Fazzari et al. (1988) this study used direct data on the firms use of internal and external finance (financial composition mix) to estimate the degree of financing constraints. This is first time that this method has been used in a development setting. The empirical strategy models investment using the essential Q model of finance, together with a measure of financing limitations. The study

uses a difference GMM estimation technique to account for endogeneity and firm heterogeneity. The study-estimate the results using a distributed lag accelerator model and cash flow-investment sensitivity to ensure that our findings are robust.

The volume of capital raised up through stock issuing during the fiscal year prior the takeover statement is favorably and strongly connected to bidder gains, according to the findings. This, believe, demonstrated that the takeover statement resolves the uncertainty around the firms plan to issue equity. This demonstrate an adverse and substantial relationship among internal generation of free cash flow and bidder gain, which is dependable with the free cash flows hypothesis and the finding of (Lang et al., 1991). Here dont see a link between the quantity of money obtained through bidder gains and debt financing. This is in line with the idea that, depending on the firms investments potential, debt could function as both a monitoring and a constraining factor in managerial discretion.

The influence of financial limitations on business investments decision is the topic of several later research (Gilchrist and Himmelberg, 1995). They show that organizations with greater financial constraints are more responsive to internal cash flows in their investment decisions than firms with less financial constraints. They interpret their results as suggestion of a disparity among external and internal capital costs, and they infer those economic limitations limit organizations capability to invest effectively. Their findings confirmed the theory that investments and internal funds are highly connected, and that this correlation occurs in models with capital market flaws.

Sarig (2004) conducted a time-series analysis of company payout policy and discovered that corporate investments decision, not the other way around, lead to payment policies. Furthermore, increases in overall compensation to corporations are linked to long-term improvements in earnings. The dividends amount for manager is comparable to investments decision. Firms dividend and investment decisions are linked. Their friction less full payout model forecasts a rise in dividends after a significant investment, and investments policies arent the only factor that influences value. Dunham et al. (2008) showed that shocks to dividend variations have short- term implications for investment variations and vice versa, but

then over the longer horizons the association among the two variables is weak. There is no well-defined desired mix of debt and equity finance in this model. The observed debt ratio of each company indicates its total external financing needs. Profitable businesses will borrow less since they can rely on internal resources. Because corporations favor internal equity, they will employ less debt than the trade-off theory predicts.

Firms are also more inclined to create financial slack in order to fund future projects. Corporate control concerns are some of the other elements that have been mentioned to assist explain the range of observed capital structures ([Harris and Raviv, 1988](#)).

A large body of empirical research has attempted to determine which of the two primary theories best explained capital structure practice. The fact that the hypotheses are mutually exclusive is implicit in such testing. While both theories lead to a set of exactly adverse forecasts in their most basic form, there is growing understanding that neither theory can explain the complexity experienced in practice on its own. This is especially true when trying to come up with a single hypothesis to explain a wide range of company financial policy decisions ([Barclay and Smith Jr, 1999](#)).

In their analysis of global capital structures, [Khan \(2015\)](#) argued that it is crucial to assess the applicability of US results in various contexts. According to them, it may be important to consider regional variations in tax and banking laws, the corporate control market, and the historical importance of banks and the stock market. The expansion of financial markets has a significant influence on enterprises financing strategies. Moreover, even if the same factors affect capital structure choices in both rich and emerging nations, [Booth et al. \(2001\)](#) assert that continuing cross-country differences demonstrate that the knowledge of the effects of different institutional components is still inadequate.

Other early UK studies include one by [Marsh \(1982\)](#), who looked at security issues and discovered that when it comes to deciding between debt and equity, companies are significantly impacted by market conditions and the prior history of security prices. He also gave evidence that businesses use financing solutions as

if they are aiming for a certain level of debt. These debt levels are determined by the size of the company, the risk of bankruptcy, and the asset mix.

Walsh and Ryan (1997) found that both agency and tax concerns were essential in assessing debt and equity difficulties in a similar study. The factors that influence debt structure, maturity, and priority structures and discovered significant differences in debt structure, maturity, and priority structures based on company size; for example, the relationship between debt and agency costs appears to apply only to large companies, whereas small company debt appears to be driven by profitability.

Bevan and Danbolt (2002) investigated the challenges of assessing gearing and discovered that debt determinants differ significantly across short-term and long-term debt components. The study confirmed the pecking order theory prediction that there should be a negative association between dividend payout ratio and investment. Overall, the evidence for the United Kingdom (as well as the United States) is inconclusive. While several separate elements can be recognized as significant, neither of the two primary theories can effectively explain the outcomes of enterprises financing decisions in practice on their own.

On the determinants of capital structure, Bancel and Mittoo (2004) polled 87 managers from big publicly traded companies in 16 European nations; respondents included 10 (7 percent response rate) from the United Kingdom and 2 from Ireland. When issuing debt, financial flexibility was considered to be the most important consideration, followed by earnings per share dilution when issuing stock.

When raising cash, managers emphasize hedging concerns and employ windows of opportunity. Both the institutional environment and overseas activities have an impact on a company's financial policies. Overall, they come to the conclusion that organizations determine capital structure by balancing financing costs and advantages. The results, however, should be viewed with caution due to the small sample size, both overall and for many of the specific countries (Bancel and Mittoo, 2004).

2.7 Hypothesis of the Study

Hypothesis of the study are as follows:

Hypothesis 1

Different sources of capital Contribute to the financing investment.

Hypothesis 2

Different sources of capital contribute different for the small, medium and large scale investment.

Chapter 3

Data and Methodology

3.1 Data Description

3.1.1 Population and Sample of the Study

This study is consisting on the panel data from 2009-2018 of non-financial firms. The data is collected from the annual reports of Pakistan stock exchange. The sample size is selected by 442 non-financial companies and do not categorize in terms of large and small firms but the study categorized the firms in terms of their ratio of investment such as low, medium and large-scale investments.

3.2 Econometric Models

In evaluating the relative contribution of several forms of capital to financing decisions, this study utilizes the Quantile Regression approach (QR). This approach is complementary with distinct benefits. The QR technique, from the other hand, has a major advantage in that it can assess the value of each type of capital at varied investment levels. In addition, the regression specification of the QR technique, in contrast to the SUR approach, takes into account cash flows as a primary source of capital for investment finance, allowing us to contrast the significance of cash flows with that of other kinds of capital.

3.2.1 Quantile Regressions (QR)

A statistical method called quantile regression is used to estimate key values functions and draw conclusions from them. Quantile regression technique provide a system for cost estimate models for contingent median function, as well as the full range of other considerations functions, in same way that classical linear regression methods based on reducing sums of squared residuals facilitate one to measure models for conditional mean features. Quantile regression can offer a more thorough statistical understanding of the stochastic interactions between random variables by combining methods for estimating a family of conditional quantile functions with methods for conditional parameter estimation.

The study employs investments ($\frac{DFA}{Assets}$) as the dependent variable and different types of capital as independent variables when applying quantile regression. The QR technique investigates how a variation in the source of funding given affects investments, as opposed to the approach above, which takes investment opportunities as given and evaluates how it is funded. The specification frequently used in the literature on investment-cash flow sensitivity is the foundation of the investment regression model (Fazzari et al., 1988; Kaplan and Zingales, 1997; Cleary, 1999; Chen et al., 2012).

$$FA_{i,t} = \beta_1(CF)_{i,t} + \beta_2(CA)_{i,t} + \varepsilon_{i,t} \quad (3.1)$$

where company and year are represented by i and t , respectively; ΔFA stands for capital expenditures, while assets (the scale variable) refer to books' assets at the start of the year. CF stands for cash flows, M/B for market-to-book, and $\varepsilon_{i,t}$ for an error term. Utilizing the ordinary least squares method, by fixed firm and year effects the regression model is typically calculated. The sensitivity of operations to internal funds is measured by the coefficient on $CF/Assets$, or β_{CF} , which quantifies the proportional input of cash flows to finance investment.

In the investment regression of the study, this work add more variables that represents the capitals different forms, change in cash holdings ($\frac{\Delta Cash}{Assets}$), short term debt

issuance ($\frac{\Delta STDebt}{Assets}$), long-term debt issuance ($\frac{\Delta LTDebt}{Assets}$), equity issuance ($\frac{EquIss}{Assets}$), and trade credit ($\frac{\Delta AR}{Assets}$).

Where i and t stand for the company and the year, correspondingly; ΔFA stands for the change in capital expenditures; $Assets$ (the scale variable) stands for the beginning-of-the-year book assets; ΔFA stands for the change in cash flows; and $\varepsilon_{i,t}$ stands for an error term. Ordinary least squares is typically used to estimate this regression model with fixed company and year effects. The proportional contribution of cash flows to funding investments is captured by the coefficient on $CF/Assets$ (CF), which measures the responsiveness of investments to internal funds. The following additional variables are included in our investment regression: change in cash holdings ($\Delta Cash/Assets$), short-term debt issuance ($STDebt/Assets$), long-term debt issuance ($LTDebt/Assets$), equity issuance ($EquIss/Assets$), and trade credit ($AR/Assets$).

$$\begin{aligned} \left(\frac{\Delta FA}{Assets}\right)_{i,t} = & \beta_0(C) - \beta_1\left(\frac{\Delta CF}{Assets}\right)_{i,t} - \beta_2\left(\frac{\Delta CA}{Assets}\right)_{i,t} + \beta_3\left(\frac{\Delta STD}{Assets}\right)_{i,t} \\ & + \beta_4\left(\frac{\Delta LTD}{Assets}\right)_{i,t} + \beta_5\left(\frac{\Delta LEQU}{Assets}\right)_{i,t} + \beta_6\left(\frac{\Delta TC}{Assets}\right)_{i,t} + \varepsilon_{i,t} \quad (3.2) \end{aligned}$$

The QR model assesses the impact on dependent variables of independent variables at various places in the distributions of the dependent variables [Koenker and Hallock \(2001\)](#). This technique evaluates given type of capital's commitment to financing investments over a range of investment levels other than merely at the average investment level, because that is what we are interested in. As the relative relevance of different types of capital in financing investments might vary depending on degree of investments, this strategy can be very helpful.

TABLE 3.1: Definition of Variables

“ Variable	Abbreviations	Description
Capital expenditures	FA	The change from year t_1 to t of net property, plant, and equipment plus depreciation.
Cash flow	CF	The sum of net income, depreciation, and change in year t_1 to t of deferred taxes.
Change in cash reserves	CA	The change from year t_1 to t of cash and short-term investments.
Short-term debt issuance	STDebt	The change from year t_1 to t of current financial liabilities.
Long-term debt issuance	LTDebt	The change from year t_1 to t of non current financial liabilities
Equity issuance	EquIss	The change from year t_1 to t in paid-in capital less repurchases
Change in net working capital	NWC	The change from year t_1 to t of [current assets-cash short-term investments current liabilities current financial liabilities]
Firm size	In Assets	The natural logarithm of total assets ”.

3.3 Definition of Variables

Table 3.1 shows the following variables that is used in the study including capital expenditure (FA), cash flow (CF), change in cash reserves (CA), short term debt issuance (STDebt), long term debt issuance (LTDebt), equity issuance (Equiss), change in net working capital (NWC) and firm size (In Assets) to capture their contribution to the investment financing.

Chapter 4

Results and Discussion

4.1 Graphical Representation

4.1.1 Stationarity of Data

The initial step in analysis is to check the stationarity of data. To detect the stationarity and heteroscedasticity of data, the most basic method is to plot the data and to see behavior of data through visualization whether it shows mean of the series is constant or not. All variables data use in the study show constant behavior and characteristics of stationarity and heteroscedasticity as show in 4.1.

TABLE 4.1: Stationarity of Data

Series: Standard Residual (2006-2019)	
Observations	3274
Mean	7.97E-19
Median	-8.40E-05
Maximum	0.5248
Minimum	-0.7883
Std. Dev	0.1079
Skewness	-0.9216
Kustosis	8.6563
Jurque-Bera	4827
Probability	0

The peakness or flatness of the data is measured by Kurtosis. As the kurtosis value is almost greater than 3 for all variables, indicating that the distribution is peaked or all series is leptokurtic. The finding provides more inspiration for the utilization of QR as a supplementary technique, as due to high skewness, the predicted contribution of different forms of capital based on OLS methods is extremely influenced by upper tail of distribution of investments. The highest standard deviation is shown by the short-term loans, indicating that maximum firms rely on short term loans for the investment financing. The study is consisting 3274 of total observations.

4.2 Correlation Analysis

The variables correlation is the connection among each variables included the dependent and independent variables that being analysis in the research. Table 4.3 show the correlation among variables. Correlation explains the relationship between variables i.e. how variation in one variable causes variation in other variable. A correlation coefficient is a value that show whether there is a linear linkage among two variables. The correlation coefficient absolute value will range between 0 to 1.

The existence of very high correlation among the independent variables will lead to the problem of multi-collinearity in the estimations. The high value of the correlation means that there is a good or strong connection between the two variables. Based on the table the correlation among the variables is stated by the value for each variable between others variables.

The results of the study reveal that the capital expenditure has a positive correlation with the cash flow having a 0.0389, indicates that increase in capital expenditure will lead an increase in cashflow, while capital expenditure has a negative correlation with the CA having a value of -0.1565, which indicates that increase in capital expenditure will negatively affect the CA. Furthermore, the strongest correlation is observed between the long-term debt and capital expenditures, while the weakest correlation is observed between the ARC and CA.

TABLE 4.3: Correlation Analysis

	FA	CF	CA	STD	LTD	LEQU	ARC
FA	1						
CF	0.0390	1					
CA	-0.1565	0.0945	1				
STD	-0.0392	0.0901	0.1535	1			
LTD	0.4438	-0.0054	-0.0848	-0.0701	1		
LEQU	-0.0962	0.1102	-0.0972	-0.3259	-0.3243	1	
ARC	-0.4108	-0.0440	0.0038	0.1669	-0.19893	-0.0631	1

4.3 Panel Cross-Section Heteroskedasticity LR Test

Due to the use of time series cross sectional data, it is crucial to look into heteroscedasticity in the study's model. The assumption that the residuals are homoscedastic represents the null hypothesis for the panel cross-section heteroscedasticity. Heteroscedasticity in the panel cross-section as a result The likelihood ratio test indicates that the null hypothesis is accepted because the likelihood ratio test's probability value is smaller than the critical value ($p < 0.05$). It follows from this that the likelihood estimate is statistically significant at the 5% level. The cross-section of the data employed for the study's model therefore exhibits heteroscedasticity. Table 4.4 display Panel Cross-Section Heteroskedasticity LR Test

TABLE 4.4: Panel Cross-section Heteroskedasticity LR Test

	Value	df	Probability
Likelihood ratio	1564.876	289	0.0000
LR test summary:			
	Value	df	
Restricted LogL	855.6275	3267	
Unrestricted LogL	1638.065	3267	

4.4 Quantile Regression

The study uses the QR technique to measure the contribution of different forms of capital in financing investments at different levels of investments. The levels categorized on the bases of time period, it mean the that the time period of the study is divided into ten portions/decile, from initial to the final stage of selected period. The study examines that below and above median what matters while financing an investment.

In Table 4.5, the results tabulate summary statistics of firms classified by the level of investments. The upper value shows the coefficient value of each variable, while the lower value shows the significant level of each variable in a row. The results shows that there is wide dispersion in the investment level between the sample organizations. From the results we can see that the cash flow is positively linked with the capital expenditure in the OLS with a value of 0.2565, which indicates that 1% increase in cashflow will lead to 0.5020 percent increase in the capital expenditure while financing an investment, on the other hand according to QR at all the quantile the relationship is insignificant for cashflows.

Furthermore, this is in fact that the linkage may even change sign between quantiles. The expected different effects of the explanatory variables at the different quantiles of the distribution are reflected in the size, sign, and significance of estimated coefficients on the different variables. As we can see cash reserves have a negative significant relation with capital expenditure applying the OLS model, having coefficient value of -0.0904, which indicates that 1% increase in cash reserves will lead to a 0.0904 percent decrease in the capital expenditure for financing investments, while in QR, CA also has an adverse connection with the capital expenditure over the all deciles. As we can see that the adverse linkage with the capital expenditure over the all deciles. As we can see that the adverse relation increases with increase in quantile from lower to higher which indicates that increase in cash reserves will lead to a decrease in capital expenditure. In the table we can see that in the first quantile it is insignificant while in 2nd quantile its value is -0.1062 and it goes high with the increase in quantile as in 5th quantile

TABLE 4.5: Quantile Regression

Variables	OLS	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
C	0.5020 (0.0000)	0.1984 (0.0000)	0.2962 (0.0000)	0.3688 (0.0000)	0.3937 (0.0000)	0.4643 (0.0000)	0.5221 (0.0000)	0.607 (0.0000)	0.6993 (0.0000)	0.7915 (0.0000)
CF	0.2565 (0.0000)	0.0382 (0.4242)	0.0334 (0.5872)	0.0187 (0.7715)	0.0355 (0.5035)	0.0127 (0.7951)	0.0507 (0.3323)	0.082 (0.0960)	0.1009 (0.0368)	0.1859 (0.0215)
CA	0.0904 (0.0000)	0.0672 (0.0908)	0.1062 (0.0023)	0.1700 (0.0000)	0.2160 (0.0000)	0.2448 (0.0000)	-0.2568 (0.0000)	-0.2553 (0.0000)	-0.2795 (0.0000)	-0.1951 (0.0000)
STD	0.0642 (0.0000)	0.0483 (0.0001)	0.0129 (0.3823)	0.0105 (0.3881)	0.1029 (0.0002)	0.1064 (0.0000)	0.1038 (0.0000)	0.0925 (0.0000)	0.0593 (0.0000)	0.0419 (0.0000)
LTD	0.1731 (0.0000)	0.5253 (0.0000)	0.6193 (0.0000)	0.6796 (0.0000)	0.7155 (0.0000)	0.6803 (0.0000)	0.636 (0.0000)	0.5559 (0.0000)	0.4307 (0.0000)	0.3048 (0.0000)
LEQU	0.0095 (0.0192)	0.0058 (0.1393)	0.0040 (0.6223)	0.0046 (0.5303)	0.0139 (0.1920)	0.0207 (0.0226)	0.0213 (0.0027)	0.0292 (0.0000)	0.0254 (0.0000)	0.0263 (0.0000)
ARC	0.6020 (0.0000)	0.3813 (0.0000)	0.4464 (0.0000)	0.5349 (0.0000)	0.5949 (0.0000)	0.6530 (0.0000)	-0.7306 (0.0000)	-0.8327 (0.0000)	-0.8527 (0.0000)	-0.8985 (0.0000)

it reaches to -0.2448.

The median of STD (short term debts) for the bottom investment decile is 0.0483, while the medians for high investment deciles 4 and 5 are 0.1029 and 0.1064, respectively. Which indicates that increase in STD, will lead as increase in capital expenditure, while in the 2nd and 3rd quantile it is insignificant.

For comparison purposes, column 1 in table 4.5 reports the OLS estimates. If we see the value of STD which is 0.0642 is too low than the QR on different level, which indicates that OLS is not an appropriate model to observe the role of key indicators to finance investments. The OLS estimator, by focusing only on the central tendency of the distribution, does not allow for the possibility that the impact of explanatory variables can be different for highly leveraged firms.

Now turning to the long-term debt (LTD), as the results show that it has a positive correlation with the FA at all the quantile and in the OLS model as well. The results show that its value increases as the quantile goes up. As in the 1st quantile its value is 0.5253 and, in the 4th, and 5th it reaches to 0.7155 and 0.6803 respectively. The positive correlation indicates that increase in the STD will lead to an increase in the capital expenditure.

LEQU only has a significant correlation with FA in the in last quantile in the table 4.5, while for the remaining all quantile it is insignificant. The final variable is the account receivables (ARC), which have negative significant relation with the capital expenditures while financing any investment. We can see that there is no any significant variation in the values at all the quantiles, which indicates that large and small firms almost rely the same on account receivables (ARC). The negative sign indicates that increase in ARC will lead to a decrease in the capital expenditures while financing any investment. Now turning to table 4.5 the table shows that there exists a wide dispersion in the investment level among the sample firms. From the results we can see that the cash flow is positively linked with the capital expenditure in the OLS with a value of 0.2565, which indicates that 1% increase in cash flow will lead to 0.2565percent increase in the capital expenditure.

while financing investments, on the other hand at the 6th and 7th quantile there exists insignificant relationship with capital expenditure and the 8th and 9th

quantile have a positive significant connection with the capital expenditures, as its values are 0.1009 and 0.1859 respectively, which indicate that 1% increase in the cash flow will lead to 0.1009 and 0.1859 percent increase in the capital expenditure respectively. We see that there is a high variation in the median values between 8th and 9th quantiles which indicate that as the decile goes higher, the capital expenditure increases.

Furthermore, this is in fact that the relationship may even change sign between quantiles. The expected different effects of the explanatory variables at the different quantiles of the distribution are reflected in the size, sign, and significance of estimated coefficients on the different variables. As we can see cash reserves have a negative significant relation with capital expenditure in the OLS, having coefficient value of -0.0904, which indicates that 1% increase in cash reserves will lead to a 0.0904 percent decrease in the capital expenditure for financing investments, while in QR, CA also has an adverse connection with the capital expenditure over the all deciles. As we can see that the adverse relation increases with increase in quantile from lower to higher which indicates that increase in cash reserves will lead to a decrease in capital expenditure.

Now preceding to short term debts, as we can see in the table 4 that STD has a positive significant association with the capital expenditures in the OLS as well as QR. The results show that this relation tend to decrease as the quantile increases from lower to higher, we see that at quantile 6th its value is 0.1038, while on the 9th quantile its value reaches to 0.0419, this high variation in values indicate that large firm rely lower on the short-term debts as compare to the small firms. A somewhat surprising finding is that long term debt (LTD) has a relatively high impact on investments, particularly, at high investment levels. The coefficients on long term debt are larger in the high investment quantiles 0.6 and 0.7 (0.6360 and 0.5559, respectively) than those of any of the other forms of capital such as CF, CA, STD and LEQU. This result suggests that firms tend to rely considerably on long term debt (LTD) in financing large investments.

Another notable variable is the equity issuance (LEQU), which have a positive significant connection with the capital expenditure while financing investments,

this finding follows (Brown et al., 2009). This result supports the hypothesis of the study as equity issuance has a significant role in financing as investment. From the results it is clear that equity issuance is increasing at high quantile, we can see that at the 6th quantile its value is 0.0213 and at the 9th quantile is 0.0263, which indicate that with the increase of quantile the equity issuance increases.

The final variable is the account receivables (ARC), which have negative significant relation with the capital expenditures while financing any investment. We can see that there is no any significant variation in the values at all the quantiles, which indicates that large and small firms almost rely the same on ARC. The negative sign indicates that increase in account receivables (ARC) will lead to a decrease in the capital expenditures while financing any investment.

Chapter 5

Discussion and Conclusion

5.1 Conclusion

The study use data from manufacturing firms to explore the comparative importance of several forms of capital in financing investments in Pakistan. There are many ways to finance any investment but this study is consisting of cash flows (CF), Capital reserve (CA), Long term debts (LTD), Short term debts, Equity issuance (LEQU) and ARC. As this study is consist of non-financial sector of Pakistan.

All variables data use in the study show constant behavior and characteristics of stationary and heteroscedasticity. Further descriptive statistics shows represents that the distribution of capital expenditures (FA/Assets) is positively skewed. Also, the mean value of 0.4494 is substantially greater with standard deviation 0.2714 than all variables for the full sample. Which indicates that short term loan represents the 45 percent of total capital expenditures. The lowest mean and standard deviation are shown by the ARC, which is 0.1019 and 0.1127 respective. Which means that the ARC holds the lowest portion of capital expenditure during financing any investment.

There used two models such as ordinary least square model (OLS) and Quantile Regression (QR) to analyze the distribution of selected variables while financing any investment. After applying all tests and regression the results of

QR confirms that Pakistani small sized organizations use mostly short-term debts while financing any investment as the most main source of funds among all levels of investments in Pakistan.

In addition the findings indicate, that Pakistans large organizations mostly rely on long term debts during financing any investment. A somewhat surprising finding is that long term debt (LTD) has a comparatively more influence on investments, mainly, at high levels of investment. Results shows the coefficients of long-term debt are greater in the high investment quantiles 0.6 and 0.7 (0.6360 and 0.5559, correspondingly) as compare to other forms of capital such as CF, CA, STD and LEQU. The results concludes that in financing of large investments, organizations tend to rely substantially on long term debt (LTD).

Also, the organizations depend more on debt financing in comparison to equity financing at low and medium investments levels, however in case of higher level of investment they do equity financing. As the results shows the mean value 0.4494 which is considerably greater with standard deviation of 0.2714 than all variables for the full sample. Which indicates that short term loan represents the 45 percent of total capital expenditures. The second highest mean and standard deviation is shown by the equity issuance with values of 0.4409 and 0.2248 respectively. Which means that Pakistani firms mostly rely on equity issuance as well.

5.2 Recommendations

This study looked closely at how a company finances its investments. According to the report, small businesses rely primarily on short-term financing while large enterprises primarily rely on long-term investments. Equity issuance also plays a significant role at various phases. However, this analysis may be taken into account by investors and policymakers when financing their investments.

Moreover, they should keep in mind that the key concern is whether policies are properly organized to satisfy the main requirements of investment and, as a result, overall economic growth, rather than whether the policy environment is typically interventionist or faire.

5.3 Limitations and Future Directions

As a result, the first limitation of this study relates to the constrained time frame of non-financial firms 2009-2018 due to challenges of locating available data for a longer period. The study does have some limitations, though. The study might be constrained by the usage of a single country with listed companies that report on sustainability. Future research can therefore include multiple countries in a single study to increase the study's generalization. Future research may include other variables like advertising expenditures and foreign cash flows, among others.

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