The Impact of Debt Financing on Earnings Management with the moderating role of Audit Quality:

Evidence from Pakistan

By:

Inam Ul Haq   *01-321211-026*

Supervisor:

Dr. Sajid Ali

Department of Business Studies

Bahria University Islamabad

Spring-2022

The Impact of Debt Financing on Earnings Management with the moderating role of Audit Quality:

Evidence from Pakistan

By:

Inam Ul Haq   *01-321211-026*

Supervisor:

Dr. Sajid Ali

Department of Business Studies

Bahria University Islamabad

Spring-2022

THESIS APPROVAL SHEET

Viva-Voce Examination

Viva Date: <u>01/08/2022</u>

Topic of Research: The Impact of Debt Financing on Earnings Management with the moderating role of Audit Quality: Evidence from Pakistan

Name of Student: Enroll #

    Inam Ul Haq   01-321211-026

Class: MBA Finance

Approved by:

_____

Dr. Sajid Ali

Supervisor

_____

Mr. Abdullah Hafeez

Internal Examiner

_____

Muhammad Akram

External Examiner

_____

Dr. Syed Haider Ali Shah

Research Coordinator

_____

Dr. Khalil Ullah Mohammad

Head of Department

Business Studies

Abstract

This study attempts to investigate the association between earning management and debt financing with the moderating role of audit quality evidence from Pakistan. It empirically examines the relationship understudy in one of the emerging economies of South Asia i.e., Pakistan, for the period from 2009 to 2018. This association between debt financing and earnings management can be explained with the support of trade-off theory, pecking order theory, and agency cost theory. For analysis, the data from 100 non-financial representative listed firms from each market is used. Panel regression is employed as the estimation procedure. This study demonstrates that the audit quality has a moderating effect on the relationship between debt financing and earnings management. However, the role of audit quality has a vital role in earnings management. While this analysis is constrained by results, it guides key users of the financial statements. This thesis calls upon researchers to investigate and evaluate the financial sector of Pakistan.

Acknowledgment

Table of Contents

List of Tables

Chapter 1

This chapter highlights the statement of the problem; how accounting systems and standards play an important role in business reporting and in earnings smoothing or earnings management as well. It also explains the background study related to earning manipulation between practitioners and regulators. Scope and delimitation of the study are also explained. Underlying theories that are related to the detection of earnings management and debt financing are also highlighted. And lastly, this chapter highlights the significance this research topic has for various stakeholders.

1.1 Introduction

In today's business environment, the accounting systems and standards plays an important role for business reporting. However, these rules or standards have the opportunity to legitimately manipulate financial records which is commonly known as earnings smoothing or earnings management. Earnings management is not an illegal act because it does not violate the international financial reporting standards (IFRS). Even though earnings management or smoothing falls in the domain of IFRS it is not an illegal manipulation of financial reporting, but it is a subject which needs understanding. Albeit, earnings management doesn't violate the International financial reporting standards followed throughout the world, it still misrepresents the financial performance of the company to the investors. Furthermore, the concept of earnings management was first used in 1939. True earnings were not observable at that time. Moving forward, further development towards measurements and explanation were identified by numerous researchers. Albeit, there are many models used to detect earnings management, the five most well-known models are namely: The Jones model (1991), the modified Jones model (1995), Welch and Wong model (1998), Kasznik model (1999) and lastly the Kothari model (2005). There have been many previous researches on the impacts on earnings management of audit results, and debt financing, but little research has been done on the effect on South Asian nations, such as India, China, Nepal and Pakistan, on the quality control and debt financing. My research will therefore concentrate on one of the developing countries in South Asia i.e., Pakistan. The joint audit efficiency commitment and debt financing for income control was not based on prior research. Mixed findings on the effect of audit efficiency and debt financing on income accounting have been shown in previous research.

The earnings management is always controlled or managed by debt financing. However, the audit quality effects the earnings management scope. So, it is pertinent to address the role of audit quality on earnings management dynamics which is still unaddressed. Although, some previous researches have demonstrated the relationship between earnings management and debt financing.

Caramanis and Lennox (2008) demonstrated in their study the effect of audit effort on earnings management. He concluded that when there was low audit effort, management of the company tended to report high earnings in order to conceal zero earnings benchmark. Moreover, accruals

which were not normal tended to be mostly positive rather than negative. Furthermore, Rusmin (2010) identified in his study the association between the audit quality and earnings smoothing. He concluded that there was an inverse relationship between audit quality and earnings management. He further elaborated that the potential of earnings management among companies which hired the services of skilled audit firms were essentially lower than companies hiring audit services from a skilled auditor. Moreover, J. Clout, Chapple et al. (2013) explained in his study whether the auditor's reforms introduced in 2004 led to an improvement in income quality in the post-transition period. He concluded that the quality of profits for start-ups had improved after the change. However, this was not the situation for developing companies. The findings further show that improved quality outcomes are correlated to the corporate governance processes of the Board of Management's independence and the financial performance of the Board of Directors. Similarly, Habib, Jiang et al. (2014) identified in his study the effect of audit quality on merit price and earning components in China. His results showed that there was a negative or inverse effect of the top 10 local audits on profit prices in China. However, the paper didn't find any consistent influence of the top 10 local audits on market prices of yield components.

The aim of this study is to explain how the management of earnings is affected based on profit management potential between the quality of the audit, debt financing and earnings management. The spectrum of standard audit directs the size of the administration of the profits and guides the level of financial reporting. In fact, debt financing or equity also has a specific effect on income reduction risks. This paper addresses the cumulative effect on the level of income control of audit results and debt financing. Two main viewpoints are the inspiration behind this research. Firstly, earnings management has a major impact on the performance of businesses. Effective management of profits raises corporate interest while other opportunities in income management decrease the corporate valuation; the analysis would discuss how this activity can be driven by audit efficiency and debt finance. The content in the literature confirms that research on the relationship between audit quality, debt finance and income management or smoothing in Pakistan, in particular, has yet to be undertaken.

Thus, this research paper contributes to the existing literature in many ways. Firstly, this research paper is the first to investigate the collective impact of audit quality and debt financing on the extent of earnings management based on the sample from Pakistan. A large portion of the research papers issued on earnings smoothing are written on the US, Western Europe or Asia but not particularly South Asian countries. The literature confirms that study of earnings smoothing in South Asian countries still needs more exploring. The markets of south Asian countries are developing rapidly and increasing in importance throughout the world. Secondly, this research paper tries to adopt panel data of Pakistan. Little prior research was done to adopt both cross sectional and longitudinal data for each earnings management model and to examine their combined effectiveness. Therefore, the adoption of panel Data in this research paper contributes to the earnings management literature by giving new insights in Pakistan.

1.2 Background of Study

In accounting literature, there is a growing focus on income smoothing between practitioners and regulators Shah et al., (2009). This is due to the manipulation strategies used to permit managers to reach reporting targets in some economic conditions Chen et al. (2006), which impact the long-term survival of firms and their financial statements, often undermine stakeholders' interests. Income smoothing has different meanings, but they all have the same fundamental sense that the purpose of income smoothing is the misrepresentation of the performance of a business.

Schipper (1989, p. 92) described income smoothing as "a deliberate involvement in external financial reporting in order to achieve some form of personal benefit" Healy and Wahlen's (1999) also describe earnings management as when managers attempt to manipulate transactions that can affect the results reported in the financial reports to conceal the real economic performance or impact outcomes of some contracts.

Fields et al. (2001) in a study stated that income smoothing is facilitated by the versatility of accounting principles, which permits managers to choose the appropriate procedures for reporting and to choose assumptions and forecasts suitable to each firm's nature. Offering the managers with an opportunity to pick a reporting method that optimizes their assets Watt & Zimmerman (1990). Operators with an opportunity to report. Thus, the exact net worth and economic value of a business cannot be identified by stakeholders, because the financial results do not represent the company's actual performance. In literature, income smoothing is generally calculated on the basis of discretionary models; discretionary accruals are widely used as synonyms for income smoothing (Kothari, 2001).

These studies explained the impact of earnings management on various prospects of the business and identified new paradigms of research. Recently earnings management has received a lot more attention from the researchers. Inspection of earnings management activity will expand currently limited earnings management analysis to increase audit efficiency and debt financing to promote investment market growth and auditing businesses. The literature further discusses the effect on the revenue potential of audit efficiency and debt financing.

1.3   Research Questions

- Is there any relationship between debt financing and intention for earnings management?
- What is the impact of audit quality on earnings management potential?
- Does the audit quality moderate the relationship between debt financing and earnings management potential?
- Does the control variable i.e., firm size moderate the relationship of debt financing and earnings management?

1.4   Research Objectives

- To identify any existing relationship between debt financing and intention for earnings management.
- To identify the impact of audit quality on earnings management potential.
- To identify if audit quality moderates the relationship between debt financing and earnings management potential.
- To identify the control variable i.e., firm size and recognize if it moderates between relationship of debt financing and earnings management.

1.5   Underlying Theories

So basically, there are three sources to finance a company, internal funds, equity & debt. And our topic is mainly focusing on debt financing. Theories related to our topic are Kothari model 2005, Trade-off theory, Pecking order, and Agency cost.

(Kothari, 2005) is one of the measures used for the detection of earnings management. Kothari tried to improve the accuracy of accrual model forecasting in two ways: first, through constant inclusion, and second, through performance control. (Kothari, 2005) uses a constant term to minimize heteroscedasticity misrepresentation problems of residuals and variables omitted. In addition, Kothari indicates that the random sales change property and that revenue shifts are predicted to be 0 in the next year. Depending on accruals, the estimated accruals are also zero depending on shifts in revenue. (Kothari, 2005) suggest that some of the abnormal accruals of businesses that have undergone irregular performance ought to be consistently non-zero and thus the business performance and abnormal accruals are correlated to each other. In estimating discretionary accruals, Kothari et al. (2005) explore two ways of monitoring performance. The abnormal accrual regression may include a performance variable like ROA as an extra independent variable. Put it another way, abnormal accruals matched by performance can be measured by first comparing the observations of firm-year of the firm that is treated with the observations of firm-year of the firm that is controlled on the same double-digit SIC code and year, with the closest Return on assets in the present year or the preceding year. and thus, by subtracting the controlling

company's abnormal accruals from the treatment company's abnormal accruals. (Kothari, 2005) suggested that matching depending on the present year's Return on assets works more efficiently than matching the previous year's return on assets and this success-matched method is preferable over having a performance variable included in the abnormal accrual regression.

Tradeoff says while choosing debt, choose its proportion wisely with equity so that there is a tradeoff of cost and benefit for the firm. We did this while calculating the capital structure. We can also say the leverage ratio to the trade-off theory. Capital structure's trade-off theory is the ability for a company to choose how much duty fund and how much interest account to use by changing expenditures and benefits. An important reason for the theory is to explain how businesses are mainly funded partly by debt and in part by equity. This says there is a preferred position for debt financing, debt tax reductions, and debt investment, financial distress spending, like bankruptcy. and non-bankruptcy costs. To sum up, the trade-off theory states that a trade-off between tax savings and debt pressure is based on the capital structure. Companies with free, tangible assets and plenty of taxable income from a shield to shield should have high target debt ratios. The theory may explain why capital structures differ between industries, although it cannot explain why profitable companies within the sector have lower debt ratios (trade-off theory predicts the opposite as profitable firms have greater scope for tax shields and should, therefore, have higher debt rates.

Another theory that's related to our topic is the pecking order theory that refers to using the least risky option first that is to choose debt over equity external finance is required. It is also the least costly. The selection of financing by the client sends out some signals in the market. It is considered a strong indicator if a company is able to support itself internally. This indicates that the organization has ample resources for financing needs. If a company issues a loan, it indicates that it is assured that management can fulfill the fixed payments. It's a negative indicator if a company funds itself with new stock. Normally, when the company perceives the stock to be overvalued, it issues new stock. All of the above logics are used to construct the pecking order theory hierarchy. This hierarchy should be observed when making decisions on capital structure. The pecking theory demonstrates the inverse link between profit ratios and debt ratios. They tailor their target benefit payout ratios to their assets and try to prevent unexpected income shifts.

Agency theory is another theory that relates to our topic states that debt is useful to reduce conflict of interest between managers and shareholders because when internal funds are fewer managers can't exploit to make money for themselves. (Jensen & Meckling, 1976) developed the theory of the agency costs. They suggested a theory of how an organization's management relies on conflicts of interests between its owners (shareholders), its managers, and major debt finance providers. When a shareholder dividend payout happens or the firm issues high-priority debts (Smith & Warner, 1979), the question of transfer of wealth takes place. Where an entity issues new debt higher than the current one, the value of the debt declines as the company assets and the cash flows are claimed by greater numbers of debt holders. The problem of asset replacement emerges from a strong incentive for investors to invest capital in high earnings companies, even if the likelihood

of success is minimal because debt holders are only entitled to fixed payments, these highly risky schemes are not to be taken advantage of. Most of them will be ripped off and get the benefit in case of success. There are different interests and goals for each of these groups. The principal debt suppliers have an interest in the executives of the company in sound financial management so that the company can pay off its debts timely. The theory of agency can be used to describe income smoothing. (Jensen & Meckling, 1976) describe that tie between agencies occur when one party gives another party power to do work or service and offer decision-making authority. Income smoothing results from the relationships between the (principal) who are the shareholders and (agents) who are the company managers. This specific relationship of an agency may establish conflict of agency, as there is a disparity in interests between the principal and the agent. This dispute would result in information asymmetry because the management does not report the details to shareholders in an honest and open manner.

1.6 Study Significance

This study will help the organizations by improving firm value and improving the agency issue in organization. It also focuses on the interest of audit firms and manufacturing sector as it helps to improve the firm performance in stock market through earning management, monetary and prospects. Moreover, this study is applied under different sectors such as the audit firms are more inclined in identifying earning management and curtailing it through better audit quality.

Chapter 2

This chapter will discuss the previous literature related to earnings management, audit quality, and debt financing by different authors. In this chapter, the previous literature related to earnings management have been discussed, then the previous literature of audit quality has been discussed. Furthermore, the previous literature on debt financing was also explained. The relationship between audit quality and earnings management was discussed in detail which was followed by a detailed discussion of the relationship between earnings management and debt financing, and lastly, the overall relationship between audit quality, earnings management, and debt financing was also discussed in detail. These studies explained the impact of earnings management on various prospects of the business and identified new paradigms of research. These studies also explained; the relation between the quality of the audit firm and managerial ownership, the impact of external debt and equity financing on the quality of financial reporting, the relationship between the essential elements of audit committees and earnings restatement, and lastly the relation between quality of earnings and access to funding for external and internal debt.

2.1   Literature Review

Earning Management is a technique to present the financial statements in a positive way. This concept is also known as Window dressing which is done through manipulation of financial statements. Earning Management is the one of the classic matters in accounting field. The majority of the extant research concentrate on accrual-based earning administration. Prior studies on Earnings Management led to develop some models i.e., the Margin model (2000), the Jones model (1991), Healy model (1985), the modified Jones model (1995), the DeAngelo model (1986) and the performance- matching Jones accrual model (2005). These studies explained the impact of Earnings Management on various prospects of business and identified new Paradigms of research. Recently earnings management has received a lot more attention from the researchers. Inspection of earnings management activity will expand current limited earnings management analysis to increase audit efficiency and debt financing to promote investment market growth and auditing businesses. The literature further discusses the effect on the revenue potential of audit efficiency and debt financing.

2.1.1   Earnings Management

In this domain, a concerned study by Ajina and Habib (2017) discussed Earnings control and market liquidity partnerships, which reduces cash flows through Earning Control. The sample was taken over a period of four years (2008–2011) from 161 French companies. Descriptive statistics and multivariate regression were the methods used to explain the relationship between earnings management and market liquidity. The study showed the results in this article which is the point of interest for my study, however, the impact of audit quality on earnings management is not covered. Likewise, Muttakin, Khan et al. (2017) empirically studied the effect of relationship between earning management and the companies those form alliances.

The study was based on a sample of 917 observations for a fixed year collected by the 2005-2013 Dhaka Stock Exchange (DSE). The determinable values of accruals were used which were not yet realized but were recorded in the books of accounts and auditor size and fee were used as proxies to measure audit quality. Through their study Muttakin and others find out positive correlation between the affiliation status of the group of companies and that the quality of the audit as a moderating variable reduces this relationship. This article relates to my study because of the role audit quality played on the relationship between companies who have formed alliances and earning management in the economy like Bangladesh. However, it also requires attention that is not discussed in this report, the effect of debt financing on income management. Further study by Alhadab (2018) studied the linkage between real and accrual-based earnings smoothing and abnormal audit fees. The sample was taken from 2006 to 2015 of 1055 observations. To assess the relationship between actual and income management and anomalous audit fees, the OLS regression method was applied. The results showed that excessive audit fees were reciprocally linked to real income management. This article is related to my study in the sense it examines the impact on earnings management due to abnormal audit fees. However, leverage can also affect the earnings management that isn't addressed in this research. Moreover, El-Helaly, Georgiou et al. (2018) studied whether RPT's are related to real or accruals management. In 2009-2014 the results were gathered for the companies listed in the Athens Stock Exchange (ASE) and based on a survey of 374 findings from business years. The findings have shown that both the RPT and the wealth control factors function as replacements. In fact, the results showed that the RPT's relationship to earnings management is not important. This paper concerns my study as it examined the role of audit quality in the conduct of the relationships mentioned above. Another study was conducted by (Muhammad Hamma Masud, 2014) on how the management of earnings affects corporate diversification. The results of the study indicated that the handling of profits is mitigated by locally dispersed businesses and a mix of sectors and geographically diversified corporations. Managers in diversified companies are less in need of accrual management to support earnings equalizing hypotheses, as diversified companies have more free cash flows to naturally reduce income volatility. The study also found that the concept of asymmetric information is not denied due to data asymmetry issues with diverse companies. Nevertheless, debt ratios are also related to big organizations, but the more debt ratios are adversely connected to earnings control. Mean similarity experiments were also carried out, but findings were the same as regression results and did not support an asymmetric knowledge hypothesis. However, the impact of debt financing on EM is not addressed in this article which is the point of interest in my study.

As the above studies discussed only the relationship between earnings management and other various prospects, this will help us in such a way that we will be able to link these studies that how will audit quality and debt financing have an impact on earnings management potential.

2.1.2 Audit Quality

Within these parameters authors such as Kane and Velury (2005) looked into the relation between the quality of the audit firm and managerial ownership. The study was based on a sample size of 21,495 firm-year observations between 1991-2001. The data had been collected from COMPUSTAT and the Compact disclosure database. Linear regression and descriptive statistics were used to measure the relationship between the two variables. The results showed that there was an inverse relationship between provision of audit services and managerial ownership. This study relates to my research paper in the sense that audit quality and managerial ownership have association with each other. However, debt financing can also have a role in effecting managerial ownership which is not yet discussed in this paper. Apart from this, Ding and Jia (2012) gave evidence in the period after merger with a notable growth in audit charges for PWC and other Big-X client firms, that suggested the impact of cumulatively increased market dominance which influences the merger due to the impact of cost saving. The sample was based on 4,639 observations for Big-X auditor client firms and 1,181 observations for Non-Big-X client firms. The data was collected from COMPUSTAT Global and the hypothesis was tested using Descriptive Statistics, Regression and OLS assumption. The results proved that savings in cost caused by a merger would in general decrease the audit fees or were controlled by collectively improved market intensity of top-level auditors which will in general increment review charges. This study only focuses on audit functions of the accounting firms. However, I will try to fill the gap by relating the audit quality with the leverage and earnings smoothing or management.

Additionally Houmes, Foley et al. (2013) studied to provide high quality incentives for actions to mitigate these outcomes, furthermore the studies regarding audit quality proved that accruals decreases if the audit firm is large or if the audit firm is specialized in industry or the audit client has a long-time frame. To verify this allegation, the author had removed the following optional provisions: Controls, Variable Index Capital/Equity Valuable 1 If the Price does not match schedule in the highest P / E quintile, the value of the indicator variable is 1 for alternative measures. For the quality of the audit and the interaction between the highly valued marker variable and the control quality indicator factors. The results showed positive and statistically significant coefficients for each of the very valuable quality interaction notions of equity control, assuming that with a high appreciation of the firm, the deduction effect of the competency of the accounting is reduced to a high quality, reference is made to my study because it confirms the relationship between audit quality and overvalued capital and the impact of leverage on the earnings management is unaffected in this article the point of interest of my study. In the meantime J. Clout, Chapple et al. (2013) examined whether the auditor's reforms introduced in 2004 led to an improvement in income quality in the post-transition period. This study examined the reporting behavior of the two groups of listed companies in the context of the administrative change period 2003-2006. Regression model is used to test the relationship between extended audit independence, the quality of results, and the corporate governance system in the period before and after the regulation. The results showed that the quality of profits for start-ups has improved after the change. However, this was not the situation for development companies. The evidence also

suggested that the corporate governance mechanisms of the independence of the Board of Directors and the financial performance of the Board of Directors were related to improved quality of results. The greater is the grouping of ownership, lower the quality of the profits. With this study, we can bridge the gap by linking the leverage factor with the quality of the audit, and thus identify a combined impact on earnings management.

Apart from this, Habib, Jiang et al. (2014) reviewed to recognize the effect on the merit price and earning components in China due to audit quality. The document assessed the quality of the audit based on the three rating levels of the audit firm, namely the large 4 big international audit firms, the top 10 local audit firms and finally second level local audit firms. Profits are divided into provisions and cash flow components, and provisions are divided into optional and non-optional accruals. The research paper stated that, despite the fact that the profit and its components are valued by the Chinese stock market, the Big 4 audit did not provide customers with a progressive advantage in terms of the market price of the financial figures of their customers. This paper shows a negative effect of the top 10 local audits on profit prices in China. However, the paper didn't find any consistent influence of the top 10 local audits on market prices of yield components. This research paper refers to my study, which examines the impact on the earning potential due to audit quality. However, the effect of debt financing on window dressing/earnings management is not addressed in this article. This is the point of my study. Another research by Wang and Dou (2015) studied the impact on audit results of reform of the corporate accounting form. This survey was conducted based on the data for 2008-2012 of A companies listed in China Stock Market and Accounting Analysis and the Databases of WIND (Wind Information Co. Ltd). Descriptive statistics and OLS (regression tests) were used to measure the outcome. The results showed that the quality of the audit improved. This study confirms that the size of the accounting company does not influence the quality of the audit. This study does not, however, focus on the effect on earnings management of audit quality and debt finance, which is of interest to my study.

Another study was conducted by (Hoitash, Markelevich, & Barragato, 2007) which studied Whether the fees paid by the auditors were related to the efficiency of the report. In the years between overall charges and both proxies for audit results, the document reported a statistically significant negative association. Such findings were valid for a variety of further experiments and different alternate concept parameters. The tests were compatible (pre- and post-SOX).

At last, study by Lai (2019) Investigated whether the clients of a merged audit companies have shortened report lags increased audit charges or reduced audit quality following the merger. The study was based on the sample size of 875 observations sorted from the firms listed in Hong Kong Stock Exchange using Descriptive Statistics, Regression (Correlation). This study reviewed more on the negativity of the mergers rather than the positivity. My study will be conducted by relating this study with Earnings Management and debt financing.

All of the above studies discuss Audit Quality from different prospects i.e., they determine the impact of audit quality on mergers of firms, managerial ownership, audit fees, accruals-based

earnings, audit committees and the firm size. These studies will help us to bridge the gap and let us find the joint impact of Audit Quality and Debt Financing on Earnings Management Potential.

2.1.3   Debt Financing

In this discipline Kardan, Salehi et al. (2016) studied the impact of external debt and equity financing on the quality of financial reporting. The sample of 152 companies in a period of 4 years i.e., 2010-2013 was collected from Tehran Stock Exchange and multiple linear regression method was used as a methodology. The results of the study are multiple, firstly it showed a direct relationship between earnings management which were defined by their qualitative attributes of the theoretical principal of the Iranian Financial Accounting Standard Board and leverage. Secondly, the results showed inverse relationship between quality of financial reporting based on the Dechow Dichev (2002) model and leverage. Moreover, the result showed that a negative relationship exists when both above mentioned models are combined and their impact is viewed on both debt and equity financing. This study will let us fill the gap and we will be adding Audit Quality factor, Earnings Management factor and link this with my topic i.e., Impact of Audit Quality, debt financing on Earnings management.

2.1.4   Audit Quality and Earnings Management

In this area of study Lin, Li et al. (2006) examined the relationship between the essential elements of audit committees (size, independence, financial literacy, activity and ownership) and earnings restatement - a direct measure of earning management. A multivariate logistic regression model was used. The results showed that there was an inverse correlation between the size of the audit committee and the occurrence of earnings management. The other four characteristics of the review board did not show a meaningful impact on the quality of reported revenue. This article refers to my study which investigates the amount of impact of audit committee performance on earning quality (indirect earning management). However, the impact of debt management on earning management is not discussed in this article, which is at the center of my study. Later, Caramanis and Lennox (2008) tested the effect of audit effort on earning management. The basis of this study was upon conducting 9,738 audits in Greece in the time period of 8 years from 1994 -2002, using Descriptive Statistics and Regression (multivariate). The results showed that there exists no empirical evidence). However, the impact of debt management on earning management is not discussed in this article, which is at the center of my study. Later, Caramanis and Lennox (2008) tested the effect of audit effort on earning management. The basis of this study was upon conducting 9,738 audits in Greece in the time period of 8 years from 1994 -2002, using Descriptive Statistics and Regression (multivariate). The results showed that there exists no empirical evidence regarding the impact of audit effort on earnings management. This showed that the main focus of study is on impact of audit effort on earnings management. However, audit effort can affect this relationship if debt financing and the audit quality is also being addressed.

Furthermore, (Rusmin, 2010) examined the relation between the audit efficiency and earnings smoothing / management. The sample from the Singapore stock exchange (SGX) had been

collected from 301 publicly listed companies. The technique of cross-sectional jones was used. The results showed that the quality of the auditors and the management of income had a negative relation, showing that the degree of income earnings between companies which connect a skilled persons service is significantly less than companies acquiring the audit services of a non-specialist auditor. In addition, this article deals with the effect of auditing on income management in the sense that it discusses my research. However, the impact of debt financing on earnings management is not addressed in this article which is the point of interest in my study. Similarly, Rusmin, W. Astami et al. (2014) divided this study into two parts. First of all, he concentrated on businesses with high free cash flow and low growth potential and tried to determine if they contributed to a high quality of financial reporting. Secondly, the audit quality impact on earnings management was studied by the authors. In a survey of companies listed on Bursa Efek Indonesia, Bursa Malaysia and the Singapore Market Börse between 2005 and 2010 the author included Rusmin, W. Astami et al. (2014). In order to measure the desired quantities, the author used the updated cross-section model. The results showed that the company's management, which had improved cash flows and low growth prospects, preferred to use numerous accounting tools and techniques for making high-earnings accounts choices. Moreover, this study showed that the top four accountants were not a significant moderator for the relationship between SFCF earnings management. This research focuses on the effect of excessive free cash flow as well as the consistency of reports in income management. This will also allow us to relate the leverage factor and find a combined effect on the management of earnings.

2.1.5 Earnings Management and Debt Financing:

Salehi, Timachi et al. (2018) studied the relation between quality of earnings and access to funding for external and internal debt. The study was based on the examination of the panel statistics and a selection of 108 companies listed on the Tehran Bourses from 2006 to 2015. In order to test the theory, the R econometric program was used. The results showed that earnings quality and managerial access has a positive or direct relationship to external debt financing. It also showed that Earnings quality is negatively related with internal debt financing. This paper confirms the relationship between earnings quality and debt financing. However, audit quality can also have an impact on earnings quality or earnings management which needs to be addressed in my study. Furthermore, Lazzem and Jilani (2018) studied the effect of accrual-based leverage earning management practices. On the basis of the data obtained by 185 French non-financial companies and OLS, the results showed that the management of the profits is higher at the leverage of the the firms than in high leverage firms. This research verified the leverage and earnings management relationship. However, the audit quality can affect this relationship that need to be addressed. In the same way, Wang, Lin et al. (2018) discussed the effect on earning management decision with respect to external financing activities. The analysis was based on an 11-year sample size of 6667 companies, i.e., 2004-2015, and data from the Taiwan Economic Journal database was obtained from the Taiwan stock exchange company. The outcome of the variable under study were measured by using descriptive statistics and regression (correlation). It was proposed that when businesses invest in external debt financing activities, executives tend to use fewer practical

activities and accumulation-based benefit Management. My study focuses on the impact (leverage) on earnings management of audit quality and debt financing. This paper is related to my study to the extent of the impact of external debt financing on earnings management. This paper mainly focuses on impact of external equity financing and external debt financing but my main variable audit quality is missing so in my paper I will try to fill this gap which also includes audit quality.

The studies above address only the relation between earnings and debt financing, so we can relate those studies so that the consistency of audits and debt financing can have an impact on earnings management potential.

2.1.6   Audit Quality, Earning Management and Debt Financing:

In the light of Audit Quality, Earning Management and Debt Financing Persakis and Iatridis (2015) the audit quality, capital cost and earnings management consequences were reviewed in 2008 as a result of the financial crisis. An analysis of 137,091 company-year results for the 2005-2007 period before the financial crisis was carried out. Linear regression analysis technique was used. The result of this study showed that financial crisis had a positive impact on the cost of equity capital, but cost of equity has negative impact on audited firms by the big 4. Moreover, the results showed that relationship between cost of capital and earnings quality is significantly negative. This investigation is divided into 3 groups; firstly, association between Cost of Capital and Audit, secondly Cost of Capital with debt, and thirdly Cost of Capital and Earnings Quality. However, this study will help if debt financing, audit quality and its impact on the Earning Management is also addressed.

Chapter 3

This chapter will discuss the theoretical framework which comprises of 3 variables (independent, dependent, and moderator) that relate to debt financing, earnings management, and audit quality. Then the hypothesis which was developed based on previous literature, has been highlighted. Furthermore, a detailed explanation of all the variables included in this study like discretionary accrual, debt, cash flow, audit risk, audit complexity is given. And lastly, the sampling structure which includes sample, data collection techniques, and data analysis techniques are also briefly explained.

3.1 Theoretical Framework

```
                    ┌─────────────────┐
                    │  Audit Quality  │
                    │   (Moderator)   │
                    └─────────────────┘
                             │
                             ▽

┌─────────────┐                           ┌─────────────────┐
│    Debt     │                           │    Earnings     │
│  Financing  │  ────────────────▷        │   Management    │
│    (I.V)    │                           │      (D.V)      │
└─────────────┘                           └─────────────────┘
```
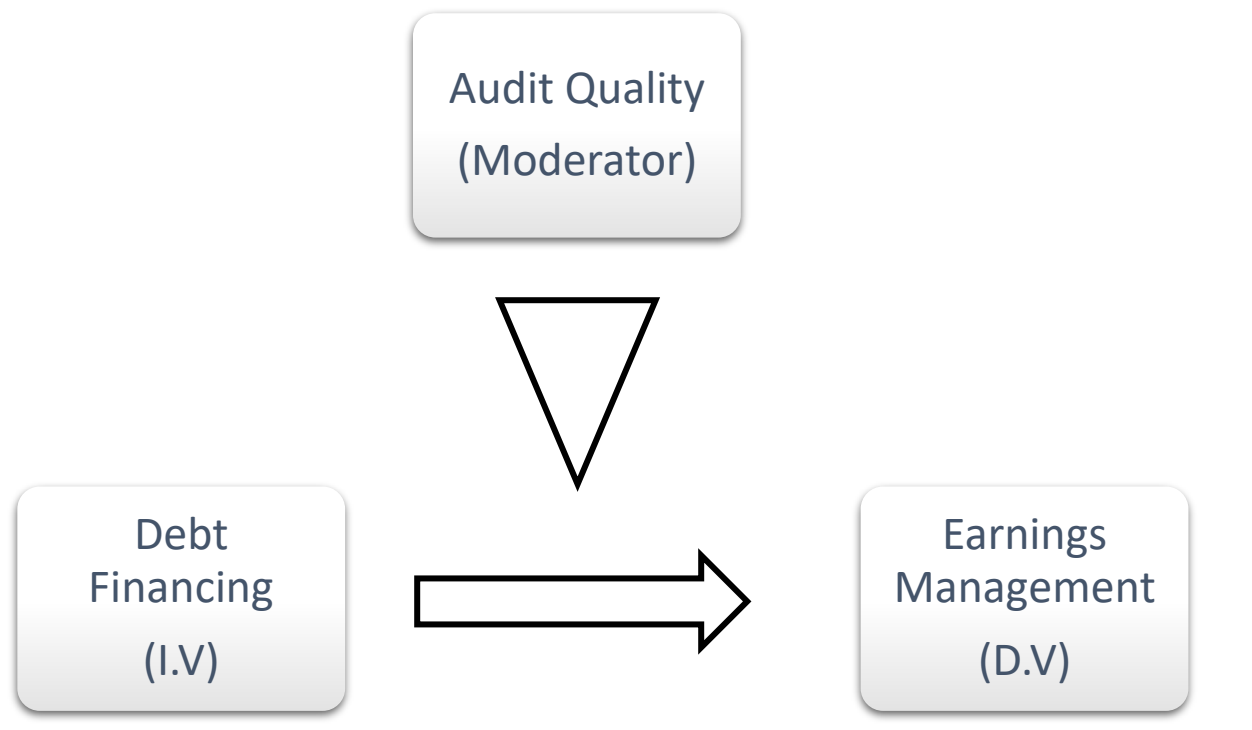
The theoretical framework comprises of 3 variables independent, dependent and moderator. Debt Financing is independent variable, Earnings Management is dependent variable and the Audit Quality plays the role of moderator. In this study two proxies namely Audit Risk and Audit Complexity will be used as the measurement basis for Audit Quality.

3.2 Hypothesis

Based on the above literature, following hypothesis have been established;

- H1: There is no statistical significance between debt financing and intentions for earning management.
- H2: There is no statistical significance between audit quality and earnings management potential.
- H3: Audit Quality has no moderating effect on the relationship between debt financing and earnings management potential.
- H4: Firm size has no moderating effect on the relationship between debt financing and earnings management potential.

3.3 Variable

Following is the description of all the variables included in this study namely,

DAC   = It represents the dependent variable Discretionary Accruals,

D   = It represents Debt as the independent variable,

S   = It represents Size as a control variable,

G   = It represents Growth as a control variable,

IO   = It represents Institutional Ownership as a control variable,

ROA   = It represents Return on Assets as a control variable,

CFO   = It represents Cash Flow Operations as a control variable,

AR   = It represents Audit Risk as a proxy variable,

AC   = It represents Audit Complexity as a proxy variable,

Above variables are identified from the theoretical framework

3.3.1 Discretionary Accrual:

Various proxies have been used to measure discretionary accruals. Peace wise linear variant of Jones model (1991) was used in a research paper. Moreover, Model of Dechow et al. (1998) has been used as a proxy to measure discretionary accruals. Furthermore, Cross sectional variables of the jones (1991) has been used in several papers. Moreover, Mcnichols (2002) model, Hribar and Colins (2002) model, Raman and Shahrur (2008) model, Kothari Et al. (2005) models have been used as proxies in various papers to measure discretionary accruals.

Following is the equation of Kothari model 2005 used for measuring discretionary accruals.

$$TAC = \alpha + \beta_1 \left(\frac{1}{A}\right) + \beta_2 \left(\frac{\Delta Rev - \Delta REC_t}{A}\right) + \beta_3 \left(\frac{PPE}{A}\right) + \beta_4 (ROA) + \varepsilon$$

Equation 1

3.3.2 Debt:

The Debt ratio is used as a proxy to measure the debt. This method has been commonly adopted by Joeveer (2013) and Delcoure (2007). It was also adopted by DeFond (1992) and Craswell et al. (1995). The debt ratio is calculated through the division of total obligations by total assets. This ratio has been commonly used as a proxy to measure the debt in various research papers. Moreover, the Ratio of interest expense to average debt has also been used as a proxy for measurement of debt. It was proposed by Carmo et al. (2016) & Kajalainen (2011). Another proxy used to measure Debt is the ratio of Long-term debt to Total book value of equity.

$$Debt\ ratio = \frac{Total\ liabilities}{Total\ Assets}$$

3.3.3 Firm Size:

Natural log of asset or the market value of equity of the firm is taken to measure the firm size. Various studies Ulhaq and Leghari (2015) adopted as a size measure of the company, natural asset log. Other measure of firm size is Audit fee (Hay, 2010). Natural log has been used of asset as a measure of firm size as it can be easily calculated. Furthermore, other indicators such as audit fee has limitations because they are not objective. In one of the research papers, Ln of Sales was also used as a proxy to measure Firm size which was rarely seen in other relevant papers. Likewise, Ln of market value of equity of firm has also been used as a proxy to measure Firm size.

3.3.4   Growth:

Turnover/sales is used as a proxy for the measure of the firm growth. Various studies Zhou and de Wit (2009) adopted the Sales as the measure of firm growth. Other measures of the firm's growth are employment, assets, market share and profits. Sales turnover have been used as a measure of firm's growth because it can be easily obtained and it depicts both short term and long-term fluctuations in a firm. Additionally, other indicators like market shares have limitations because they are not objective. Other proxies such as adding Market book ratio with Sales growth ratio or the percentage change in total Assets compared to prior year can also be used to measure firm growth. Tobin Model is another proxy that can be used for measuring firm growth.

3.3.5   Institutional Ownership:

In the assessment of institutional ownership, the number of shares owned by institutional investors divided by the total number of shares remaining is used as a proxy. It is represented as follows:

$$Institutional\ Ownership = \frac{Shares\ owned\ by\ Institutional\ investors}{Numbers\ of\ shares\ outstanding}$$

Moreover, in one of the papers, the ratio of independent members on the BOD to the total number of directors of a firm has also been used as a proxy to measure institutional ownership.

3.3.6   ROA:

As proxy for measuring the company performance, the return on the asset is used. Different studies by (Haq & Leghari, 2015) have taken return on asset to measure corporate performance. The return on assets can be measured through the division of net income by total assets which can be expressed as

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

Tobin's Q also adopted ROE in prior studies, for the measurement of firm performance. However, these measures have some limitations as ROE is more effective when the sample is based on specific industry and in this study the sample is from diverse industry. The Tobin's Q is useful for the market performance, but in current study the focus is on performance based on fundamental. So, the present study adopted Return on Asset (ROA) as the measure of firm performance.

3.3.7 Cash flow Operations:

The start of the year's assets and the cash flow ratio of certain papers are used to measure the cash flow transactions. Cash flow can also be used as a proxy for the final year, present year, and next year's operating cash flows. For fact, the average gap for cash flow between operations and total assets as at the year's end has also been used as a metric for calculating cash flow from operations.

3.3.8 Audit Risk:

Current Ratio is used as a proxy for the measure of audit risk. Various studies such as Ulhaq and Leghari (2015) adopted the current ratio as the measure of audit risk. The current ratio measures the company ability to pay off its current liabilities. It can be calculated by dividing current assets by current liabilities.

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilites}$$

Other measure of audit risk are Return on Assets and Dummy Variable loss. Current ratio has been used as a measure of audit risk as it can be easily measured and depicts the firm's ability to pay its short-term obligations. Another Proxy that can be used to measure Audit risk is of audit firm's reputation (Big 4).

3.3.9 Audit Complexity:

It is obvious that when a business has complex operations it will take more hard work and energy for it to get audited than a company with simple operations. So therefore, two proxies are used to measure audit complexity. First, business unit variable (these are found by taking the square root of business sections/units that operate in the business) was used as a proxy to measure Audit complexity. Secondly, the sum of stock/inventory and debtors was used as a proxy for audit complexity.

3.4 Sampling Structure

This thesis attempts to examine how debt financing influences earnings management by the use of quantitative statistical approaches to the data obtained, and by measuring basic statistics such as standard deviations, percentages, and means and using them in regression and correlation analysis. More precisely, the objective of this study is to discover and identify the moderating role of audit quality on the relationship between debt financing and earnings management. The data for Pakistan was collected from the State bank of Pakistan (SBP).

3.4.1 Sample:

The sample consists of 100 representative firms of Pakistan listed on the Pakistan stock exchange (PSX) during the period 2009 and 2018. These 100 representative firms account for 85% of all Pakistan's stock exchange market cap. Furthermore, the 10 years data was collected because of the consistency. Despite this, it has been noticed that many of the companies did not have the required data for research variables to include. Thus, those specific companies were excluded and other representative firms that had the required data for the research variables were included. After the data was changed, the variables were arranged as per the panel data regression.

3.4.2 Data Collection Technique:

Secondary data has been gathered for research purpose. The data related to audit fee and Institutional ownership were obtained from the annual reports available on the firm's websites, whereas the financial report of non-financial firms issued by State bank of Pakistan provided financial details for the remaining variables included in the study. Furthermore, the State bank of Pakistan's database has a large collection of the standard data on Pakistan's firms based on their published and audited financial statements. Moreover, I have used the aforementioned variables to formulate the models: discretionary accruals (TAC), debt, operating cash flow, institutional ownership, scale of the business, growth, assets return, audit risk, audit complexity.

3.4.3 Data Analysis Technique:

Looking at the theoretical framework, the models were devised and analyzed the respective regressions by using the statistical software Stata 16, with the control variables identified. A panel data regression is carried out on TACs to investigate the importance of the contributions made by debt along with other firm-specific factors and the moderating role of audit quality. Furthermore, the panel data regression model is further divided into three models, namely Fixed effect, Random effect, and Cross-sectional weightage average. The explanation and measurement of the explanatory variables are discussed in detail in the section below.

Chapter 4

This chapter will discuss the methodology used in the research paper which includes a brief discussion of 3 models i.e. Estimated generalized least square (EGLS), Cross-section Fixed Effect Model & Cross-section Random Effect Model. Furthermore, it will also discuss the model specification i.e., how the three general equations have been modified according to the panel data model. This chapter also briefly discusses Wooldridge, Hausman's, and Pesaran's test equations for the selection of efficient panel data model.

4.1 Methodology

Several analytical approaches such as estimated generalized least square (EGLS), cross-section fixed effect model and cross-section random effect model, are used for panel data analysis purposes. Several, previous studies have highlighted the effectiveness of all three models.

Fixed effect model relates to models with slopes that are the same (constant) but with differing or changing cross-sectional intercepts (which in my study is the companies of the different nature/industries). While intercepts can differ among companies, they do not change frequently (Gujrati, 2004). This calculation with ordinary least squares results in a general least square fixed effect, so the outcome of the data is impartial and accurate. Furthermore, fixed effect models can be measured by the least squares dummy variable model (LSDV). Moreover, this model includes a dummy variable for each individual in the whole data set. The fixed effect model helps researchers in conducting pool data analysis this is because when companies pool, they often ignore the fixed effect, which in turn creates biasness in the slope. So, to avoid this issue the fixed effect model incorporates the dummy variable method which is called the differential constant dummy technique.

Random effect model relates to models with slopes that are the same (constant) but with differing or changing cross-sectional intercepts (which in my study is the companies of the different nature/industries) in a random rather than in a fixed manner (Gujrati, 2004). The intercept or constants represent the individual differences in the model of the fixed effect, but the differences between individuals in the random effect model are adjusted in the stochastic term of each individual.

4.1.1 Financial Model:

The following are the general equations of this study. The following three equations are made by including the control variables and also with respect to the moderating variable Audit quality whose proxy variables are Audit Risk (AR), Audit Complexity (AC), and Audit Fee (AF).

$$DAC_{it} = \alpha + \beta_1(D_{it}) + \beta_2(D_{it})^2 + \beta_3(IO_{it}) + \beta_4(S_{it}) + \beta_5(GRO_{it}) + \beta_6(ROA_{it}) + \beta_7(CFO_{it})$$
$$+ \beta_8(D_{it})(AR) + \beta_9(IO_{it})(AR) + \beta_{10}(S_{it})(AR) + \beta_{11}(G_{it})(AR)$$
$$+ \beta_{12}(ROA_{it})(AR) + \beta_{13}(CFO_{it})(AR) + \varepsilon_{it}$$

Equation 2

$$DAC_{it} = \alpha + \beta_1(D_{it}) + \beta_2(D_{it})^2 + \beta_3(IO_{it}) + \beta_4(S_{it}) + \beta_5(GRO_{it}) + \beta_6(ROA_{it}) + \beta_7(CFO_{it})$$
$$+ \beta_8(D_{it})(AC) + \beta_9(IO_{it})(AC) + \beta_{10}(S_{it})(AC) + \beta_{11}(G_{it})(AC)$$
$$+ \beta_{12}(ROA_{it})(AC) + \beta_{13}(CFO_{it})(AC) + \varepsilon_{it}$$

Equation 3

$$DAC_{it} = \alpha + \beta_1(D_{it}) + \beta_2(D_{it})^2 + \beta_3(IO_{it}) + \beta_4(S_{it}) + \beta_5(GRO_{it}) + \beta_6(ROA_{it}) + \beta_7(CFO_{it})$$
$$+ \beta_8(D_{it})(AF) + \beta_9(IO_{it})(AF) + \beta_{10}(S_{it})(AF) + \beta_{11}(G_{it})(AF)$$
$$+ \beta_{12}(ROA_{it})(AF) + \beta_{13}(CFO_{it})(AF) + \varepsilon_{it}$$

Equation 4

4.2 Test Equations

Following are the test equations used in this study, for the calculation of results.

4.2.1 Wooldridge Test:

The approach of Wooldridge uses the residual first differences in regression. Recognize that the initial differentiation of data in the model eliminates the effects at individual levels, the covariate duration, and the consistency;

$$y_{it} = \Delta X_{it}\beta_1 + \Delta \varepsilon_{it}$$

Equation 5

The Wooldridge procedure begins with the β_1 parameter estimate by regressing Δy_{it} to $\Delta X_{it}\beta_1$ and obtaining the $\Delta \varepsilon_{it}$.

4.2.2 Hausman's Test:

The Hausman test is used to differentiate situations in which certain predictors in a mixed effect model are assumable to be considered as a random effect, which equates exactly to the fixed effects and is normally distributed around zero. Where the Hausman test is not substantial ("non-systematic coefficient difference"), the frame becomes more efficient if the random impacts are assumed to be no longer significant.

$$W = (\beta_{RE} - \beta_{FE})'\hat{\Sigma}^{-1}(\beta_{RE} - \beta_{FE}) \sim \chi^2(k)$$

Equation 6

4.2.3 Pesaran's test:

The statistics from Pesaran take a standard distribution into account, and can handle balanced and unbalanced panels and are used to determine the cross-sectional dependence in turn. Cross-sectional correlation is related to the effect of one variable on another variable of shifts or variance whether they are in the panel data collection.

$$\bar{y}_t = N^{-1}\sum_{i=1}^{N} y_{it}, \ and \ \bar{x}_t = N^{-1}\sum_{i=1}^{N} x_{it},$$

Equation 7

Chapter 5

This chapter will discuss in detail the results that have been calculated i.e., the panel data analysis, descriptive stats, correlation matrix, and discretionary accruals. Furthermore, the panel data analysis has been separately discussed in detail for each of the general equations that have employed in this study. Likewise, the descriptive stats and correlation matrix have been discussed in detail.

5.1 Results & Analysis

Now all the results that are represented in the form of tables, should be discussed in more detail. Moreover, the full form of all the variables has been mentioned in the captions of all the respective tables.

5.1.1 Results for Discretionary Accruals:

This table shows the results of the discretionary accruals which are measured through the Kothari Model. Moreover, it will be explaining all the variables in three stages, namely, total accruals, current accruals and performance-based accruals.

Table 1: Discretionary Accruals

Variables	Results
C	0.003170 [0.303283] *
1/TA	-10182.71 [-0.900052]
(REV-REC)/TA	-0.015158 [-4.066011] *
FA/TA	-0.054221 [-4.092508] *
ROA	0.413663 [15.38397] *
Statistics	
R^2	0.231206
F-Statistic	74.65852
Durbin-Watson Stat	1.752561

*Coefficient is significant at the level of 0.05
**Coefficient is significant at the level of 0.01

Firstly, if we consider the variables (REV-REC)/TA and 1/TA, these are the current accruals and as the p-value of the variable 1/TA is greater than 5%. It is considered as insignificant whereas, if we consider the variable (REV-REC)/TA, it is highly significant because its p-value is less than 5%. Furthermore, the FA/TA variable represents the total accruals and as its p-value is less than 5%, it is highly significant. Lastly, the ROA variable represents the performance-based accruals and as its p-value is more than 5%, it is insignificant.

5.1.2 Descriptive Statistics:

Table 2 depicts the descriptive statistics which highlight the characteristics of the entire or sample of a population for Pakistan.

Table 2: Descriptive Statistics

Variables	Observations	Mean	Std. Dev	Min	Max
IO	899	0.5043695	0.3152542	0.0009	1.0348
S	900	16.70575	1.410985	12.70253	20.31752
GRO	900	0.1593107	0.6016153	-0.9827251	13.25796
ROA	900	0.0595475	0.1206314	-1.906808	0.5578808
D	900	0.5549029	0.2767732	0.0252422	2.017656
CFO	900	0.0777212	0.1224041	-0.3438509	0.6975212
DAC	899	-2.52E-06	0.1189142	-1.805497	0.4302935

IO: Institutional Ownership, S: Firm Size, GRO: Firm Growth, ROA: Return on Asset, D: Debt, CFO: Cashflow from Operations, DAC: Discretionary Accruals

In above statistics results, if we look at the mean value of IO, we can see that 50.4% of the shares are held by the financial institutions and mutual funds which is not a small amount in itself. In addition, the minimum and maximum values for IO are 0.0009 and 1.0348. Moreover, on average, the firm size (S) is 16.7. Whereas, the average of firm growth (GRO) is 15% which clearly indicates that the sample of Pakistani firms considered for this study have a low opportunity for growth. In addition, the minimum and maximum values for firm growth are -0.98 and 13.2 respectively. Now if we look at the performance variable, ROA the average is 5.9%. The minimum and maximum values for ROA are -1.90 and 0.55 respectively. Furthermore, the average of Debt is 55%, which is quite high in the context of Pakistan. The respective minimum and maximum values for the debt ratio are 0.02 and 2.01. The operating cash flow on the other hand is a mere 7.7% which is not significant. The average value of DAC is negative $-2.52*10^{-6}$.

5.1.3   Correlation Matrix:

Table 3 depicts the correlation matrix. Correlation testifies multicollinearity among explanatory variables. 1 show that each variable is perfectly correlated to itself whereas 0 shows no correlation.

Table 3: Correlation Matrix

Variables	IO	S	GRO	ROA	D	CFO	DAC
IO	1						
S	0.2454	1					
GRO	0.0131	-0.0446	1				
ROA	0.0799	0.1086	0.1666	1			
D	0.031	0.1089	0.0703	-0.379	1		
CFO	0.1196	0.0579	0.09	0.3292	-0.277	1	
DAC	-0.071	-0.0104	0.0099	0.2521	0.0614	-0.825	1

IO: Institutional Ownership, S: Firm Size, GRO: Firm Growth, ROA: Return on Asset, D: Debt, CFO: Cashflow from Operations, DAC: Discretionary Accruals

The above results shows that the correlation between IO and all the other variables. We can clearly see in the above table that the correlation between IO and size is 0.24 which indicates that both the variables have a positive weak correlation and hence move in the same direction. Moreover, the correlation between IO and GRO is 0.01 which shows that both the variables have a weak correlation. Furthermore, the correlation between ROA and IO is 0.07 which is considered a positive weak correlation. Regarding the relationship between IO and D, the correlation is 0.03, which indicates a positive weak correlation. Moreover, the correlation between CFO and IO is 0.11 which is a positive weak correlation. The correlation between DAC and IO is -0.07 which indicates a negative weak correlation and hence both the variables move in the opposite direction.

If we review the correlation of S with all the other variables, we can see that S and GRO have a correlation of -0.04 which is a negative weak correlation. Moreover, the correlation between S and ROA is 0.10 which is a positive weak correlation. The correlation between S and D is 0.10, which indicates a positive weak correlation. The correlation of S and CFO is 0.05 which indicates a positive weak relationship. DAC and S have a negative weak correlation of -0.01 which indicates that both move in the opposite direction. Furthermore, if we check the correlation of GRO with all the other variables, we can see that GRO and ROA have a correlation of 0.16 which is a positive weak correlation. The correlation between GRO and D is 0.07 which is a positive weak correlation. Furthermore, for GRO and CFO there is a positive very weak correlation i.e. 0.09. The correlation of GRO and DAC is 0.009 which indicates almost no correlation between the variables. Moreover, if we check the correlation of ROA with all the other variables, we can see that ROA and D have a correlation of -0.37 which is a negative moderate correlation. Now for ROA and CFO the correlation is 0.32 which indicates a positive moderate relationship. Furthermore, the correlation between ROA and DAC is 0.25 which indicates a positive weak-moderate correlation. At Last, D

and CFO has a negative weak-moderate correlation of -0.27. Moreover, D and DAC has a positive weak correlation of 0.06. So, we can safely claim that more D leads to more earnings management. CFO and DAC have a negative strong correlation of -0.82 and therefore move in the opposite direction.

5.2 Regression Analysis

In the following tables below, we will be describing panel data regression analysis. Moreover, we will be using only the most efficient panel data model for the interpretation of the results. Most Importantly, we have given a value of one to the dummy variable that is greater than industry median and a value of zero which is below industry medians.

5.2.1 Result for Cross Section Random Effect Model:

In table 4 (shown below), as the Wooldridge test is significant, we will be using cross-section random effect for the interpretation of the results in this study.

Table 4: Panel Data Analysis (Audit Risk)

Variables	EGLS	Cross Section Random Effect	Cross Section Fixed Effect
Constant	0.0618058	0.1607201	0.186179
	[75.51]	[128.79]	[156.76]
IO	0.0028203	0.0022776	0.001937
	[10.42]	[8.72] **	[7.49]
S	-0.0008772	-0.006932	-0.00849
	[-17.16]	[-90.23] **	[-114.71]
GRO	-0.0007397	0.001257	0.001281
	[-4.29]	[15.02] **	[16.27]
ROA	0.5756589	0.5946755	0.595389
	[498.57]	[930.34] **	[987.52]
D	-0.0034399	-0.0113841	-0.01083
	[-3.67]	[-17.8] **	[-17.67]
CFO	-0.9712163	-0.9858315	-0.98676
	[-1124.06]	[-2225.41] **	[-2366.62]
D^2	-0.0022562	0.004689	0.004358
	[-4.09]	[10] **	[9.5]
D×AR	0.005851	-0.0004293	-0.0014
	[8.51]	[-1.08]	[-3.72]
IO×R	-0.0044235	-0.004447	-0.00398
	[-12.14]	[-17.46] **	[-16.4]
S×AR	-0.0004426	-0.000042	-6.30E-06
	[-17.37]	[-2.74] **	[-0.43]
G×AR	0.001705	0.0006171	0.000649
	[8.15]	[5.99] **	[6.69]
ROA×AR	0.016068	-0.0028143	-0.00364
	[12.09]	[-3.91] **	[-5.37]
CFO×AR	-0.0224129	-0.0062275	-0.00628
	[-21.17]	[-11.5] **	[-12.32]
Model Fit			
R^2	0.9897	0.9879	0.9831
Adjusted R^2	0.9897	-	-
F-Statistic	> 99999.00	-	1.53e+06
Wald Chi^2	-	330398.87 **	-
Log Likelihood	-	162130.93	-
LR chi^2	-	257191.14 **	-
Test			
	Chi^2	Prob	
Hausman	-51.70	-	
Pesaran's	0.819	0.4126	
Wooldridge	143.865	0.0000	

IO: Institutional Ownership, S: Firm Size, GRO: Growth, ROA: Return on Assets, D: Debt, CFO: Cashflow from operations, AR: Audit Risk (Dummy Variable)
*Coefficient is significant at the level of 0.05, **Coefficient is significant at the level of 0.01

Firstly, we have the constant, these show the impact on the dependent variable discretionary accruals if the independent variable is kept zero. If we look at institutional ownership, it has a positive coefficient, which means that it has a positive impact on discretionary accruals even though a minor one and it further indicates that, the more there is ownership of mutual funds or other institutional investors in a company, the more there are chances of discretionary accruals. Now if we look at the firm size variable, even though it has a negative coefficient, which in turn will have a negative impact on discretionary accruals, the effect is rather minor. In other words, with the increase in the size of a firm, the discretionary accruals will decrease.

For the growth variable, it has a positive coefficient, which means there is a positive relationship between growth and discretionary accruals. In other words, as the sales growth of a company increases, the discretionary accruals will increase. The ROA has a rather significant positive impact on discretionary accruals as the coefficient is a significant positive 59.46%. In other words, an increase in ROA will cause a significant increase in discretionary accruals. This significant positive impact could be because ROA is exaggerated by the use of discretionary accruals or by earning management techniques.

Next, we have a debt. It has a negative coefficient, which means that higher the debt of a company, the lower will be the chances of earnings management through discretionary accruals. This relationship could be explained since firms do not try to avoid debt covenants violations. For example, if a firm has borrowed a loan, it will not try to adhere to some of the debt covenant regulations i.e., the firm will show profit above a certain limit set to not meet the debt covenant regulations. This as a result forces the firm to not exaggerate the earnings. Then we have cash flow from operations. It shows a negative significant coefficient, which means that it has a negative impact on discretionary accruals. In other words, as cash flow from operations increases, the chances for discretionary accruals significantly decreases.

Next, we have the squared debt. Now, if we look at the original debt, it has a positive coefficient. We explained its relationship with discretionary accruals. The squared debt has a nonlinear relationship with the discretionary accruals. In other words, the discretionary accruals will keep increasing as the debt is increasing.

Next, we have the dummy variable audit risk. We have multiplied audit risk dummy with debt to see whether it has any impact on the relationship between debt and discretionary accruals. Now, if we look at the coefficient, it is negative. This tells us that the impact of audit risk on the relationship between debt and discretionary accruals is negative. In other words, the interaction term of debt and discretionary accruals showed a negative significance, in that case the firm with audit risk above industry median has lower discretionary accruals than the firms below the industry median. Keeping the debt constant, and if the audit risk is above the industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between debt and discretionary accruals which was first also negative because now good audit quality reduces the need to exaggerate earnings to fulfill debt covenants regulations.

Next, we will see the impact of the dummy variable audit risk on institutional ownership. We will see whether the audit fee has any moderating impact on the relationship between institutional ownership and discretionary accruals. Now, if we look at the coefficient it is negative. This tells us that the impact of audit risk on the relationship between institutional ownership and discretionary accruals is negative. In other words, the interaction term of institutional ownership and discretionary accruals showed a negative significance, in that case the firm with audit risk above industry median has lower discretionary accruals than the firms below the industry median. Keeping the institutional ownership constant, if the audit risk is above the industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between institutional ownership and discretionary accruals which was first positive this is because higher audit quality does not allow institutional investors to manage earnings easily as was the case before where investors at the management level were easily managing earnings.

Furthermore, we will see the impact of the dummy variable audit risk on firm size. We will see whether audit risk has any moderating impact on the relationship between firm size and discretionary accruals. Now, if we look at the coefficient it is negative. This tells us that the impact of audit risk on the relationship between firm size and discretionary accruals is negative. In other words, the interaction term of firm size and discretionary accruals showed a negative significance, in that case the firm with audit risk above industry median has lower discretionary accruals than the firms below the industry median. Keeping the firm size constant, and if the audit risk is above the industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between firm size and discretionary accruals which was also first negative because good audit quality reduces the agency issues and complex firm's governance issues which comes with the increase in the size of the firm and ultimately reduces earnings management.

Moreover, we will see the impact of the dummy variable audit risk on Growth. We will see whether audit risk has any moderating impact on the relationship between growth and discretionary accruals. Now, if we look at the coefficient it is positive. This tells us that the impact of audit risk on the relationship between growth and discretionary accruals is positive. In other words, the interaction term of growth and discretionary accruals showed a positive significance, in that case the firm with audit risk above the industry median has higher discretionary accruals than the firms below the industry median. Keeping the growth constant, and if the audit risk is below the industry median, the discretionary accruals will increase. All in all, this shows that audit quality positively impacts the relationship between growth and discretionary accruals which was also first positive because now audit quality does not reduce the need of a firm to adjust surplus earnings and attract investor attention for expansion plans and ultimately lead to earnings management.

Next, we will see the impact of the dummy variable audit risk on ROA. We will see whether audit risk has any moderating impact on the relationship between ROA and discretionary accruals. Now, if we look at the coefficient it is negative. This tells us that the impact of audit risk on the

relationship between ROA and discretionary accruals is negative. In other words, the interaction term of ROA and discretionary accruals showed a negative significance, in that case the firm with audit risk above the industry median has lower discretionary accruals than the firms below the industry median. Keeping the ROA constant, and if the audit risk is above the industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between ROA and discretionary accruals this is because a good audit quality restricts a firm from high performance and ultimately reduces the chance for earnings management.

Lastly, we will see the impact of the dummy variable audit risk on CFO. We will see whether audit risk has any moderating impact on the relationship between CFO and discretionary accruals. Now, if we look at the coefficient it is negative. This tells us that the impact of audit risk on the relationship between CFO and discretionary accruals is negative. In other words, the interaction term of CFO and discretionary accruals showed a negative significance, in that case the firm with audit risk above industry median has lower discretionary accruals than the firms below the industry median. Keeping the CFO constant, and if the audit risk is above the industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between CFO and discretionary accruals which was first negative because good audit quality restricts high cash flow which as a result reduces earnings management.

By looking at the model fit section of the table, we can see that the values for R-square and F-test are quite high and thus, indicates that overall, the model is significant. In other words, the percent of variance in the dependent variable is explained well by all the independent variables in the model.

In table 5, we will again be using the same cross section random effect for the interpretation of the results in this study, as the Wooldridge test was significant.

Table 5: Panel Data Analysis (Audit Complexity)

Variables	EGLS	Cross Section Random Effect	Cross Section Fixed Effect
Constant	0.034546	0.1539388	0.1787553
	[34.13]	[118.44]	[145.18]
IO	-0.0038426	-0.0017093	-0.0028146
	[-13.61]	[-4.97] **	[-8.09]
S	0.000485	-0.0066903	-0.0081289
	[7.57]	[-83.95] **	[-106.52] **
GRO	0.0006755	0.0012685	0.0013012
	[6.02]	[22.92] **	[24.97]
ROA	0.5882775	0.5938108	0.5938589
	[867.73]	[1711.56] **	[1817.9]
D	0.0135261	-0.0042574	-0.004828
	[20.27]	[-7.5] **	[-8.83]
CFO	-0.9904912	-0.9879295	-0.9892377
	[-1405.1]	[-2624.38] **	[-2781.18
D^2	-0.0103819	0.0032256	0.0031224
	[-23.65]	[7.44] **	[7.34]
D×AC	0.0058928	-0.0066739	-0.0066306
	[11.79]	[-16.03] **	[-16.55]
IO×AC	0.0055246	0.0035233	0.0050381
	[14.5]	[9.85] **	[14.39]
S×AC	-0.0005067	0.0001017	0.000015
	[-22.31]	[4.9] **	[0.74]
G×AC	-0.0018645	0.0008457	0.0009343
	[-7.23]	[6.71] **	[7.89]
ROA×AC	-0.0144262	-0.007481	-0.0070765
	[-10.55]	[-9.54] **	[-9.55]
CFO×AC	0.0052707	-0.0052435	-0.0045202
	[4.96]	[-9.66] **	[-8.84]
Model Fit			
R^2	0.9893	0.9871	0.9818
Adjusted R^2	0.9893	-	-
F-Statistic	> 99999.00	-	1.48e+06
Wald Chi^2	-	322241.50 **	-
Log Likelihood	-	161333.51	-
LR chi^2	-	255596.31 **	-
Test			
	Chi^2	**Prob**	
Hausman	-52.75	-	
Pesaran's	1.032	0.3021	
Wooldridge	143.865	0.0000	

Firstly, we have the constant, these show the impact on the dependent variable discretionary accruals if the independent variable is kept zero. If we look at institutional ownership, it has a negative coefficient, which means that it has a negative impact on discretionary accruals and it further indicates that, the more there is ownership of financial institutions or other institutional investors in a company, the less there are chances of discretionary accruals. Now if look at the firm size variable, even though it has a negative coefficient, which in turn will have a negative impact on discretionary accruals, the effect is rather minor. In other words, with the increase in size of a firm, the discretionary accruals will decrease.

For growth variable, it has a positive coefficient, which means there is direct relationship between growth and discretionary accruals. In other words, as the sales growth of a company increases, the discretionary accruals will increase. The ROA has a rather significant positive impact on discretionary accruals as the coefficient is a significant positive 59.38%. In other words, an increase in ROA will cause a significant increase in discretionary accruals. This significant positive impact could be due to the fact that ROA is over exaggerated by the use of discretionary accruals or by earning management techniques.

Next, we have the debt. It has a negative coefficient, which means that the higher the debt of a company, the lower will be the chances of earnings management through discretionary accruals. This relationship could be explained due to the fact that firms try not to avoid debt covenants violations. For example, if a firm has borrowed a loan, it will not try to adhere to some of the debt covenant regulations i.e. The firm will try to not meet a certain level of profit to meet the debt covenant regulations. This as a result forces the firm not to exaggerate the earnings. Then we have cash flow from operations. It shows a negative coefficient, which means that it has a negative impact on discretionary accruals. In other words, as cash flow from operations increases, the chances for discretionary accruals decrease.

Next, we have the squared debt. Now, if we look at the original debt, it has a positive coefficient. We explained its relationship with discretionary accruals. The squared debt has a nonlinear relationship with the discretionary accruals. In other words, discretionary accruals will keep increasing as the debt is increasing.

Next, we have the dummy variable audit complexity. In this we have multiplied audit complexity dummy with debt to see whether it has any impact on the relationship between debt and discretionary accruals. Now, if we look at the coefficient, it is negative. This tells us that the impact of audit complexity on the relationship of debt and discretionary accruals is negative. In other words, the interaction term of debt and discretionary accruals showed a negative significance, in that case the firm with audit complexity above industry median has lower discretionary accruals than the firms below industry median. Keeping the debt constant, and if the audit complexity is

above industry median, the discretionary accruals will decrease. All in all, this show's that audit quality negatively impacts the relationship between debt and discretionary accruals which was first also negative because of the lack of need to exaggerate earnings to fulfill debt covenants regulations.

Next, we will see the impact of the dummy variable audit complexity on institutional ownership. We will see whether audit complexity has any moderating impact on the relationship between institutional ownership and discretionary accruals. Now, if we look at the coefficient it is positive. This tells us that the impact of audit complexity on the relationship of institutional ownership and discretionary accruals is positive. In other words, the interaction term of institutional ownership and discretionary accruals showed a positive significance, in that case the firm with audit complexity above industry median has higher discretionary accruals than the firms below industry median. Keeping the institutional ownership constant, if the audit complexity is above industry median, the discretionary accruals will increase. All in all, this show's that audit quality positively impacts the relationship between institutional ownership and discretionary accruals which was first negative because now audit quality allows institutional investors to manage earnings easily.

Furthermore, we will see the impact of the dummy variable audit complexity on firm size. We will see whether audit complexity has any moderating impact on the relationship between firm size and discretionary accruals. Now, if we look at the coefficient it is positive. This tells us that the impact of audit complexity on the relationship of firm size and discretionary accruals is positive. In other words, the interaction term of firm size and discretionary accruals showed a positive significance, in that case the firm with audit complexity above industry median has higher discretionary accruals than the firms below industry median. Keeping the firm size constant, and if the audit complexity is above industry median, the discretionary accruals will increase. All in all, this show's that audit quality positively impacts the relationship between firm size and discretionary accruals which was first negative but now audit quality increases the agency issues and complex firm's governance issues which comes with the increase in the size of the firm and ultimately increases earnings management.

Moreover, we will see the impact of the dummy variable audit complexity on growth. We will see whether audit complexity has any moderating impact on the relationship between growth and discretionary accruals. Now, if we look at the coefficient it is positive. This tells us that the impact of audit complexity on the relationship of growth and discretionary accruals is positive. In other words, the interaction term of growth and discretionary accruals showed a positive significance, in that case the firm with audit complexity above industry median has higher discretionary accruals than the firms below industry median. Keeping the growth constant, and if the audit complexity is above industry median, the discretionary accruals will increase. All in all, this show's that audit quality positively impacts the relationship between growth and discretionary accruals which was first negative because now audit quality does not reduce the need of a firm to adjust surplus earnings and attract investor attention for expansion plans and ultimately leads to earnings management.

Next, we will see the impact of the dummy variable audit complexity on ROA. We will see whether audit complexity has any moderating impact on the relationship between ROA and discretionary accruals. Now, if we look at the coefficient it is negative. This tells us that the impact of audit complexity on the relationship of ROA and discretionary accruals is negative. In other words, the interaction term of ROA and discretionary accruals showed a negative significance, in that case the firm with audit complexity above industry median has lower discretionary accruals than the firms below industry median. Keeping the ROA constant, and if the audit complexity is above industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between ROA and discretionary accruals which was first positive because now a good audit quality reduces discretionary accruals which ultimately reduces earnings management.

Lastly, we will see the impact of the dummy variable audit complexity on CFO. We will see whether audit fee has any moderating impact on the relationship between CFO and discretionary accruals. Now, if we look at the coefficient it is negative. This tells us that the impact of audit complexity on the relationship of CFO and discretionary accruals is negative. In other words, the interaction term of CFO and discretionary accruals showed a negative significance, in that case the firm with audit complexity above industry median has lower discretionary accruals than the firms below industry median. Keeping the CFO constant, and if the audit complexity is above industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between CFO and discretionary accruals which was first positive because now a good audit quality reduces the CFO and hence firm's high performance which eventually curtails discretionary accruals and earnings management.

By looking at the model fit section of the table, we can see that the values for R-square and F-test are quite high and thus, indicates that overall, the model is significant. In other words, the percent of variance in the dependent variable is explained well by all the independent variables in the model.

In table 6, since the Wooldridge test is significant, we will be using the cross section random effect model for the interpretation of the derived results.

Table 6: Panel Data Analysis (Audit Fee)

Firstly, we have the

Variables	EGLS	Cross Section Random Effect	Cross Section Fixed Effect
Constant	0.0686531 [76.24]	0.1586625 [125.64]	0.1837053 [152.51]
IO	-0.0057457 [-22.73]	0.0019041 [7.16] **	0.0018438 [6.96]
S	-0.0015815 [-28.28]	-0.007057 [-91.32] **	-0.0085686 [-114.81]
GRO	0.0013507 [11.78]	0.0014855 [25.91] **	0.0014716 [27.28]
ROA	0.5877665 [896.94]	0.5933591 [1756.23] **	0.5935382 [1867.5]
D	0.0055129 [8.42]	-0.0067911 [-12.7] **	-0.0067414 [-13.09]
CFO	-0.9914752 [-1509.28]	-0.9897165 [-2858.66] **	-0.9905149 [-3037.06]
D²	-0.0085833 [-20]	0.0037069 [8.57] **	0.0039756 [9.36]
D×AF	0.0140233 [28.4]	-0.0031102 [-7.14] **	-0.0056959 [-13.61]
IO×AF	0.0076682 [20.89]	-0.004037 [-15.18] **	-0.0036145 [-14.23]
S×AF	-0.000284 [-12.94]	0.0003464 [19.6] **	0.0003769 [22.21]
G×AF	-0.0027041 [-11.63]	0.0001311 [1.13]	0.0003444 [3.15]
ROA×AF	-0.0189057 [-13.42]	-0.0100227 [-11.99] **	-0.0101855 [-12.86]
CFO×AF	0.0058522 [5.35]	-0.0022695 [-4.07] **	-0.0020572 [-3.92]
Model Fit			
R^2	0.9897	0.9874	0.9823
Adjusted R^2	0.9897	-	-
F-Statistic	> 99999.00	-	1.48e+06
Wald Chi²	-	324617.69 **	-
Log Likelihood	-	161375.51	-
LR chi²	-	255680.29 **	-
Test			
	Chi²	Prob	
Hausman	-53.17	-	
Pesaran's	1.241	0.2144	
Wooldridge	149.461	0.0000	

IO: Institutional Ownership, S: Firm Size, GRO: Growth, ROA: Return on Assets, D: Debt, CFO: Cashflow from operations, AF: Audit Fee (Dummy Variable)
*Coefficient is significant at the level of 0.05, **Coefficient is significant at the level of 0.01

constant, these show the impact on the dependent variable discretionary accruals if the independent variable is kept zero. If we look at institutional ownership, it has a positive coefficient, which means that it has a positive impact on discretionary accruals and it further indicates that, the more there is ownership of mutual funds, credit unions etc. or other institutional investors in a company, the more there are chances of discretionary accruals. Now if we look at the firm size variable, even though it has a negative coefficient, which in turn will have a negative impact on discretionary accruals, the effect is rather minor. In other words, with the increase in size of a firm, the discretionary accruals will decrease.

For growth variable, it has a positive coefficient, which means there is direct relationship between growth and discretionary accruals. In other words, as the sales growth of a company increases, the discretionary accruals will increase. The ROA has a rather significant positive impact on discretionary accruals as the coefficient is a significant positive 59.33%. In other words, an increase in ROA will cause a significant increase in discretionary accruals. This significant positive impact could be due to the fact that ROA is over exaggerated by the use of discretionary accruals or by earning management techniques.

Next, we have the debt. It has a negative coefficient, which means that the higher the debt of a company, the lower will be the chances of earnings management through discretionary accruals. This relationship could be explained due to the fact that firms try not to avoid debt covenants violations. For example, if a firm has borrowed a loan, it will not try to adhere to some of the debt covenant regulations i.e., the firm will try to not meet a certain level of profit to meet the debt covenant regulations. This as a result forces the firm not to exaggerate the earnings. Then we have cash flow from operations. It shows a negative coefficient, which means that it has a negative impact on discretionary accruals. In other words, as cash flow from operations increases, the chances for discretionary accruals also decreases.

Next, we have the squared debt. Now, if we look at the original debt, it has a positive coefficient. We explained its relationship with discretionary accruals. The squared debt has a nonlinear relationship with the discretionary accruals. In other words, discretionary accruals will keep increasing as the debt is increasing.

Next, we have the dummy variable audit fee. We have multiplied audit fee dummy with debt to see whether it has any impact on the relationship between debt and discretionary accruals. Now, if we look at the coefficient, it is negative. This tells us that the impact of audit fee on the relationship of debt and discretionary accruals is negative. In other words, the interaction term of debt ratio and discretionary accruals showed a negative significance, in that case the firm with audit fee above industry median has lower discretionary accruals than the firms below industry median. Keeping the debt constant, and if the audit fee is above industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between debt and discretionary accruals which was first also negative because of the lack of need to exaggerate earnings to fulfill debt covenants regulations. Even if we see the moderating effect

of audit quality, the interaction between debt and discretionary accruals is still negative. This means audit quality cannot mitigate the need of firms to avoid debt covenant violations.

Next, we will see the impact of the dummy variable audit fee on institutional ownership. We will see whether audit fee has any moderating impact on the relationship between institutional ownership and discretionary accruals. Now, if we look at the coefficient it is negative. This tells us that the impact of audit fee on the relationship of institutional ownership and discretionary accruals is negative. In other words, the interaction term of institutional ownership and discretionary accruals showed a negative significance, in that case the firm with audit fee above industry median has lower discretionary accruals than the firms below industry median. Keeping the institutional ownership constant, if the audit fee is above industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between institutional ownership and discretionary accruals this is because higher audit quality does not allow institutional investors to manage earnings easily as was the case before where investors at the management level were easily managing earnings.

Furthermore, we will see the impact of the dummy variable audit fee on firm size. We will see whether audit fee has any moderating impact on the relationship between firm size and discretionary accruals. Now, if we look at the coefficient it is positive. This tells us that the impact of audit fee on the relationship of firm size and discretionary accruals is positive. In other words, the interaction term of firm size and discretionary accruals showed a positive significance, in that case the firm with audit fee above industry median has higher discretionary accruals than the firms below industry median. Keeping the firm size constant, and if the audit fee is above industry median, the discretionary accruals will increase. All in all, this show's that audit quality positively impacts the relationship between firm size and discretionary accruals this is because the audit quality does not reduce the agency issues and complex firm's governance issues which comes with the increase in the size of the firm and ultimately gives rise to earnings management.

Moreover, we will see the impact of the dummy variable audit fee on growth. We will see whether audit fee has any moderating impact on the relationship between growth and discretionary accruals. Now, if we look at the coefficient it is positive. This tells us that the impact of audit fee on the relationship of growth and discretionary accruals is positive. In other words, the interaction term of growth and discretionary accruals showed a positive significance, in that case the firm with audit fee above industry median has higher discretionary accruals than the firms below industry median. Keeping the growth constant, and if the audit fee is above industry median, the discretionary accruals will increase. All in all, this show's that audit quality positively impacts the relationship between growth and discretionary accruals this is because audit quality does not reduce the need of firms to adjust surplus earnings and plan for expansions which attracts investor attention and engage in earnings management through discretionary accruals.

Next, we will see the impact of the dummy variable audit fee on ROA. We will see whether audit fee has any moderating impact on the relationship between ROA and discretionary accruals. Now,

if we look at the coefficient it is negative. This tells us that the impact of audit fee on the relationship of ROA and discretionary accruals is negative. In other words, the interaction term of ROA and discretionary accruals showed a negative significance, in that case the firm with audit fee above industry median has lower discretionary accruals than the firms below industry median. Keeping the ROA constant, and if the audit fee is above industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between ROA and discretionary accruals this is because a good audit quality restricts the firm for managing earnings and overcomes ROA.

Lastly, we will see the impact of the dummy variable audit fee on CFO. We will see whether audit fee has any moderating impact on the relationship between CFO and discretionary accruals. Now, if we look at the coefficient it is negative. This tells us that the impact of audit fee on the relationship of CFO and discretionary accruals is negative. In other words, the interaction term of CFO and discretionary accruals showed a negative significance, in that case the firm with audit fee above industry median has lower discretionary accruals than the firms below industry median. Keeping the CFO constant, and if the audit fee is above industry median, the discretionary accruals will decrease. All in all, this show's that a good audit quality negatively impacts the relationship between CFO and discretionary accruals this is due to the fact that good audit quality reduces the chances of high cash flow from operations from high firm performance and ultimately reduces the chances for earnings management.

By looking at the model fit section of the table, we can see that the values for R-square and F-test are quite high and thus, indicates that overall, the model is significant. In other words, the percent of variance in the dependent variable is explained well by all the independent variables in the model.

Chapter 6

This chapter will firstly highlight the purpose of the study along with the methodology used in this research. Then it will briefly summarize the key findings of this research. Furthermore, this chapter will highlight the implications this research will have for all the regulators and researchers. And lastly, the limitations and future research work to be done related to this topic have also been briefly identified.

6.1 Conclusion

6.1.1 Purpose

This study attempts to investigate the association between earning management and debt financing with the moderating role of audit quality evidence from Pakistan. It empirically examines the relationship understudy in one of the emerging economies of South Asia i.e., Pakistan for the period from 2009 to 2018.

6.1.2 Findings

The findings of my research showed that there was a relationship between debt financing and earnings management. For instance, the debt variable was positive which means debt and earnings management had a positive relationship. Moreover, the findings showed that the moderating variables audit quality indeed had a moderating role in the relationship between debt financing and earnings management. Overall, the audit quality has a negative structural marginal effect on the relationship between debt financing and earnings management which means better audit quality reduces the chances for earnings management. Furthermore, my findings showed that overall, audit quality had a positive structural marginal effect on the relationship between firm size and earnings management.

6.1.3 Implication

The findings of this research have implications for both regulators and researchers. For regulators, the findings of this research indicate that audit quality does not always reduce earnings management through discretionary accruals, instead, it only gives a chance to the managers to adopt different earnings management strategies.

6.1.4 Limitations/ Future Research Work

This study was limited to the time period of 2009-2018. Moreover, this study incorporated only the non-financial sector of Pakistan. So, for future research it is highly recommended that researchers study the same or related research topics, but by including the financial sector of the economy.

Chapter 7

7.1 References

Ajina, A. and A. Habib (2017). "Examining the relationship between earning management and market liquidity." <u>Research in International Business and Finance</u> **42**: 1164-1172.

Alhadab, M. (2018). "Abnormal audit fees and accrual and real earnings management: evidence from UK." <u>Journal of Financial Reporting and Accounting</u> **16**(3): 395-416.

Alhadab, M. and I. Clacher (2018). "The impact of audit quality on real and accrual earnings management around IPOs." <u>The British Accounting Review</u> **50**(4): 442-461.

Astami, E. W., et al. (2017). "The role of audit quality and culture influence on earnings management in companies with excessive free cash flow: Evidence from the Asia-Pacific region." <u>International Journal of Accounting & Information Management</u> **25**(1): 21-42.

Caramanis, C. and C. Lennox (2008). "Audit effort and earnings management." <u>Journal of accounting and economics</u> **45**(1): 116-138.

Chen, L., et al. (2018). "The relation between audit fee cuts during the global financial crisis and earnings quality and audit quality." <u>Advances in accounting</u> **43**: 14-31.

Ding, R. and Y. Jia (2012). "Auditor mergers, audit quality and audit fees: Evidence from the PricewaterhouseCoopers merger in the UK." <u>Journal of Accounting and Public Policy</u> **31**(1): 69-85.

El-Helaly, M., et al. (2018). "The interplay between related party transactions and earnings management: The role of audit quality." <u>Journal of International Accounting, Auditing and Taxation</u> **32**: 47-60.

Habib, A., et al. (2014). "Audit quality and market pricing of earnings and earnings components in China." <u>Asian Review of Accounting</u> **22**(1): 20-34.

Houmes, R., et al. (2013). "Audit quality and overvalued equity." <u>Accounting Research Journal</u> **26**(1): 56-74.

Huguet, D. and J. L. Gandía (2016). "Audit and earnings management in Spanish SMEs." <u>BRQ Business Research Quarterly</u> **19**(3): 171-187.

Inaam, Z. and H. Khamoussi (2016). "Audit committee effectiveness, audit quality and earnings management: a meta-analysis." <u>International Journal of Law and Management</u> **58**(2): 179-196.

J. Clout, V., et al. (2013). "The impact of auditor independence regulations on established and emerging firms." Accounting Research Journal **26**(2): 88-108.

Kane, G. D. and U. Velury (2005). "The impact of managerial ownership on the likelihood of provision of high quality auditing services." Review of Accounting and Finance **4**(2): 86-106.

Kardan, B., et al. (2016). "The relationship between the outside financing and the quality of financial reporting: evidence from Iran." Journal of Asia Business Studies **10**(1): 20-40.

Lai, K.-W. (2019). "Audit Report Lag, Audit Fees, and Audit Quality Following an Audit Firm Merger: Evidence from Hong Kong." Journal of International Accounting, Auditing and Taxation: 100271.

Lazzem, S. and F. Jilani (2018). "The impact of leverage on accrual-based earnings management: The case of listed French firms." Research in International Business and Finance **44**: 350-358.

Lin, J. W., et al. (2006). "The effect of audit committee performance on earnings quality." Managerial Auditing Journal **21**(9): 921-933.

Miko, N. U. and H. Kamardin (2015). "Impact of audit committee and audit quality on preventing earnings management in the pre-and post-Nigerian corporate governance code 2011." Procedia-Social and Behavioral Sciences **172**: 651-657.

Muttakin, M. B., et al. (2017). "Business group affiliation, earnings management and audit quality: evidence from Bangladesh." Managerial Auditing Journal **32**(4/5): 427-444.

Orazalin, N. and R. Akhmetzhanov (2019). "Earnings management, audit quality, and cost of debt: evidence from a Central Asian economy." Managerial Auditing Journal **34**(6): 696-721.

Persakis, A. and G. E. Iatridis (2015). "Cost of capital, audit and earnings quality under financial crisis: A global empirical investigation." Journal of International Financial Markets, Institutions and Money **38**: 3-24.

Persakis, A. and G. E. Iatridis (2016). "Audit quality, investor protection and earnings management during the financial crisis of 2008: An international perspective." Journal of International Financial Markets, Institutions and Money **41**: 73-101.

Rusmin, R. (2010). "Auditor quality and earnings management: Singaporean evidence." Managerial Auditing Journal **25**(7): 618-638.

Rusmin, R., et al. (2014). "The impact of surplus free cash flow and audit quality on earnings management: The case of growth triangle countries." Asian Review of Accounting **22**(3): 217-232.

Salehi, M., et al. (2018). "Earnings quality and managerial access to debt financing: empirical evidence from Iran." Journal of Economic and Administrative Sciences **34**(1): 48-70.

Ulhaq, A. and M. Leghari (2015). "Determinants of audit fee in Pakistan." Research Journal of Finance and Accounting **6**(9): 176-188.

Wang, C. and H. Dou (2015). "Does the transformation of accounting firms' organizational form improve audit quality? Evidence from China." China Journal of Accounting Research **8**(4): 279-293.

Wang, T.-S., et al. (2018). "The relationship between external financing activities and earnings management: Evidence from enterprise risk management." International Review of Economics & Finance **58**: 312-329.

Zgarni, I., et al. (2016). "Effective audit committee, audit quality and earnings management: Evidence from Tunisia." Journal of Accounting in Emerging Economies **6**(2): 138-155.

Zhou, H. and G. de Wit (2009). "Determinants and dimensions of firm growth." SCALES EIM Research Reports (H200903).

Zhou, H., et al. (2018). "Board of directors, audit committee, and firm performance: Evidence from Greece." Journal of International Accounting, Auditing and Taxation **31**: 20-36.