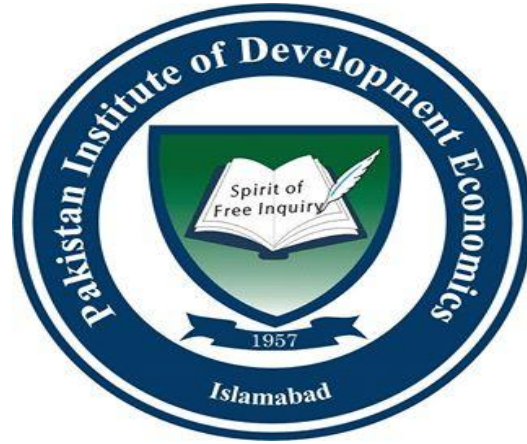


**Corporate Disclosure, Ownership Structure, and Earnings
Management: Evidence from Pakistan**



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CERTIFICATE

This is to certify that this thesis entitled "**Corporate Disclosure, Ownership Structure and Earnings Management: Evidence from Pakistan**". submitted by **Ms. Deeba Khursheed** is accepted in its present form by the Department of Business Studies, Pakistan Institute of Development Economics (PIDE) Islamabad as satisfying the requirements for partial fulfillment of the Degree of Master of Philosophy in Economics and Finance.

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Dedication

I dedicated this thesis to my grand parents Mr.Haji Momin ul Haq Qureshi (late), Mrs.Salma Perveen Qureshi who offered conditional love and moral, spiritual, emotional and financial support. I also want to dedicate this to my late parents.

To my brothers who shared their words of advice and encouragement to finish this study.

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*I thank all my teachers, and class fellows who supported me and helped me and never let me down. I would like to thank my family and friends for their constant support, care and guidance. I thank my husband **Muhammad Nadeem Khan** for his constant encouragement throughout my research period. I acknowledge the moral support of my friend **Ayesha Siddiqui**. She kept me going on and always helped me. I would like to pay gratitude to **Ghania inam** for her guidance and constant encouragement throughout my research period.*

Abstract

This study investigate the impact of corporate disclosure and ownership structure on earning management practices of Pakistani listed firms in a dynamic panel model. Two step system GMM dynamic panel estimator is applied to the listed firm's data from Pakistan Stock Exchange over the period 2008-2018. The results imply that corporate disclosure has a significant negative impact on the earning management. However, better corporate disclosure causes the reduction in the practice of earning management. Suggesting that firms with high intensity of disclosure will face low manager's discretions of smooth earnings. Moreover, ownership structure environment including family owners and institutional owners has a significant negative influence on the earning management. Therefore, these variables provide basis of an effective controlling mechanism that will moderate the manager's discretion over earning management. Hence, findings of the study suggest that corporate disclosure along with ownership structure of family or institutional can play a dynamic vigorous role in the mitigation of earnings management practice in Pakistani context.

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Chapter 1

Introduction

This chapter introduces the research topic of this particular dissertation. In addition, it also confers the problem statement along with research questions, objectives of the study, hypotheses formulated based on the research questions, scope of the study and plan of the rest of the study. For the purpose of simplicity, the chapter has been divided into respective subsections.

1.1 Introduction

The effectiveness of accountability and corporate governance has been a part of hot debate amidst the ever emerging financial scandals around the globe. Although the term ‘corporate governance’ is not new to our ears, its true role remains amiss particularly in the context of the developing countries such as Pakistan. Its role must be considered in determining corporate disclosures requirements especially in ownership structures due to the fact that financial reporting is largely affected by the values, motives and choices of the ones in control.

The legendary financial scandals in the early of the 2000 such as Parmalat, WorldCom, and Enron have involved large scale manipulation of financial reports that resulted in a growing attention towards the newly emerged concept named corporate governance. Whilst the financial scandals surfacing the face of the corporate world, earnings management became a well-researched niche in the arena of accounting literature. Theoretically speaking, the support comes from the Jensen and Meckling’s (1976) agency theory, Ross’s (1978) signalling theory, and Watt and Zimmerman’s (1979) positive theory of accounting.

All of these theories explain that use of such accounting strategies. For this reason, it is safe to state here that the concern of regulators, practitioner, and academics about earnings

management is a need of the hour. Such concerns primarily revolve around introducing a set of devices of corporate governance aimed at controlling managers to curb on this particular phenomenon. Controlling mechanisms, which are introduced by shareholders, on the light of agency theory, are very much likely to reduce agency costs and managerial discretion. Moreover, ownership structure features and corporate disclosures remain among controlling mechanisms in this regard.

On one hand of the discussion, as Jensen and Meckling (1976) put it, corporate disclosures, as a part of controlling mechanisms, significantly play a key role in reducing conflicts of interests among the major stakeholders. As a matter of fact, timely corporate disclosures help in shrinking the informational gap in between effects of information asymmetry and the investors, who were well informed, on the cost of capital. Akerlof (1970) has based this argument on the grounds of his intuition that due to the presence of information asymmetry among various market participants, managers are likely to face the problem of adverse selection.

However, on the other hand of discussion, as Shleifer and Vishny (1997) explain it, ownership structures of the equity firms play a critically important role in controlling device by large shareholders. As a matter of fact, shareholders holding larger blocks of shares in an equity firm are likely to protect their investment and thus, to mobilize the resources to monitor the activities of the managers. Based on this argument, many researchers in the past have claimed that the major shareholders enjoy an extra edge in having the capacity, resources, and opportunity to monitoring and influencing the decision power of the managers. In the same vein, these shareholders, through an aggressive management of the shares, also alter the process of financial statement preparation as well as preventing the managers from acting in an unfavourable manner.

1.2 Problem Statement

Based on this discussion, the primary purpose of this particular research study revolves around examining the relationship of ownership structures and corporate disclosures with earnings management in the Pakistani listed firms. Primarily, the Pakistani equity firms remain a matter of concern due to the fact that most of the companies in the country maintain a particular corporate governance environment. For instance, the ownership structure of a large majority of the Pakistani equity firms are concentrated in the hands of a few wealthy families. Additionally, in comparison to the Anglo-American model of corporate governance, the pattern in Pakistan is less transparent. Moreover, the companies are more prone towards the possibilities of separating cash flow rights and voting rights through the use of crossholding, double voting rights, and pyramids. For these reasons, the ownership structure of equity firms in the country remain complex. Such complexity often provides the controlling shareholders with the opportunity to holding more control. As a matter of fact, it further amplifies the entrenchment effect.

1.3 Objectives of the Study

In an attempt to bridge the research gap on the significantly critical topic corporate disclosures, ownership structure and earnings management in the context of Pakistani equity firms, the prime objective of this particular study is

- To investigate the impact of corporate disclosure and ownership structure on earnings management in the context of Pakistan

In this regard, this study will employ panel dataset of 75 Pakistani equity companies and 10 years (2008-2018). Panel data is useful because more information can be collected with observations that span both individuals and time in a cross-section. It allows researchers to test a wide range of hypotheses and provides more efficient estimates as well.

1.4 Hypotheses of the Study

Based upon the research questions formulated in the previous sections, the present study formulated the following hypotheses:

- H_0^1 : Corporate disclosures have insignificant impact on earnings management.
 H_1^1 : Corporate disclosures have significant impact on earnings management.
- H_0^2 : Ownership structures have insignificant impact on earnings management.
 H_1^2 : Ownership structures have significant impact on earnings management.

1.5 Scope of the Study

Essentially, the outcome of this research study will significantly impact the academia, the market, and the policy makers. Primarily, it will provide an outcome that is meaningful for the academia, i.e., students, researchers and teachers. The result of this study will remain a remarkable base for opening new horizons in the field of research. In this regard, it will provide students and teachers with the extensive opportunity to expand their areas of expertise. Therefore, the researchers and students will become the direct recipient of the benefits of the outcome of this research study.

Additionally, the outcomes of this research study in particular will help the market in as many ways as possible. Primarily, it will provide the suppliers and customers with the vision about the importance and significance of corporate disclosures, ownership structure and earnings management in their businesses. It will explain, for parties on both sides of the transaction, the practical benefits of implementing the system in their respective businesses. Essentially, it will help them controlling the risks of financial scandals via the route of reducing the agency costs, managerial discretion, and conflicts of interests among the stakeholders. Overall, it will facilitate them in developing and maintaining an extensive system of manageable corporate governance.

Most importantly, the outcomes of this research study will assist the policymakers in devising new policies regulating the costs running in the market. The policymakers, in this regard, include both the ones sitting in the governmental departments and the ones in the market. They would be able to devise policies that would regulate the costs in an attempt to stabilize the economy and the market. Therefore, the significance of this study implies benefits for the academia, the market and the policymakers.

1.6 Plan of the Study

The rest of the study is organized as follows: Chapter 2 will present the extensive literature survey to check the evidence that if corporate disclosures and ownership structure have any linkage with earnings management with a particular focus on the case of Pakistan. Chapter 3 will encompass the methodology for testing the hypotheses and required variables to test the objectives. Chapter 4 will provide details about data and variables. Chapter 5 will present the empirical findings and interpretation of the study whereas the last chapter will conclude the results.

Chapter 2

Literature Review

This chapter confers the literary aspect of the association between the variables of corporate disclosures, earnings management and ownership structure. For the purpose of simplicity, this chapter has been sub-divided into several subsections. The first section introduces the topic whilst providing the reasons for a controversy prevailing among the relationship, if any, of the said variables. The second section covers the theoretical and empirical evidence in this regard. The theoretical literature covers the definitions of corporate governance, earnings management, and ownership structure from the past studies whereas the empirical evidence covers the studies from the perspective of their data types, i.e., time-series data, cross-section data and panel data. The last section provides an analysis of the reviewed literature.

2.1 Introduction

A controversy surrounds the relationship, if any, among corporate disclosures, earnings management and ownership structure. This controversy emerges from at least four sources. *Firstly*, the choice of the determinants of the variables under discussion, among the researchers and practitioners, remains debatable. *Secondly*, a contention surrounds the direction of causation in the variables of corporate disclosures, earnings management and ownership structure. Whereas most of the past empirical studies provide evidence on either one-way or the other-way postulations, many of these studies give added information for such causation. Additionally, other parts of literature find a lack of relation among the variables at all.

Thirdly, the type of studies, i.e., the approach used for studying the hypothesis stirs a controversy. There are two groups in this regard. The first group utilizes the approach of cross-

country relation to study the relation among the variables while the other group focuses on using the regression application to test the relation, which commonly is a time series data prediction approach. This group applies various types of techniques concerning time-series data such as co-integration procedure, Granger causation test, and unit root test along with panel data analysis and pooled regression. *Lastly*, the route of causation among the two variables remains a matter of controversy. It has often been made a part of the discourse over the past few decades.

2.2 Theoretical Literature

Corporate governance is a set of rules or principles for the outside investors to protecting their rights against expropriation caused by the insider investors. Earnings management refers to the managers' attempts to manipulating the financial figures of the business.

The theoretical literature covers the definitions of corporate governance, earnings management, and ownership structure from the past studies. Further details are provided in the following subsections.

2.2.1 Corporate Disclosures

Primarily, corporate governance is a set of rules or principles for the outside investors to protecting their rights against expropriation caused by the insider investors, i.e., management and controlling shareholders. For this reason, the primary objective of corporate governance is to protecting the rights of the creditors and stockholders whilst ensuring that the interests of the outsiders and insiders successfully converge in a fruitful manner. Therefore, it can be stated that a good corporate governance practice contributes to the economic and social development of a country as it enables firms and businesses to perform in an improved manner.

The Asian financial crisis in 1997 pointed out the presence and prevalence of weak corporate governance among various corporations around the globe. It also gave rise to an awareness among the business community to remain more sensitive towards the need of examining the efficiency of the systems of corporate governance within corporations. However, in the upcoming years, the financial statements of various large firms largely fell victim to an increasing instances of fraud. A few of the examples of corporations in this regard include the Olympus Corporation, the Taj Company, Aldelphia, Tyco International, WorldCom, and Enron. Because of the ever rising financial scandals, many countries have drafted corporate governance codes with the purpose of improving the mechanisms of corporate governance in their firms and businesses. For this reason, it can be stated that the corporate governance structure performs several functions, and one of them is to making sure that transparent financial reporting procedures prevail in the country.

As Jensen and Meckling (1976) put it, corporate disclosures, as a part of controlling mechanisms, significantly play a key role in reducing conflicts of interests among the major stakeholders. As a matter of fact, timely corporate disclosures help in shrinking the informational gap in between effects of information asymmetry and the investors, who were well informed, on the cost of capital. Akerlof (1970) has based this argument on the grounds of his intuition that due to the presence of information asymmetry among various market participants, managers are likely to face the problem of adverse selection.

2.2.2 Earnings Management

Earnings management refers to the managers' attempts to manipulating the financial figures of the business. For this reason, the financial statements of a firm are ought to present transparent figures. However, a consensus concerning a comprehensive definition of the term is lacking in the previous studies. Therefore, the most widely accepted definition is considered here. It was put forward by Healy and Wahlen (1999) and explains that managers practice earnings either management in order to manipulate contractual outcomes relying on reported financial statements or use judgments in accounting numbers to deceiving some of the stakeholders with regard to the underlying financial performance of the business.

2.2.3 Ownership Structure

As Shleifer and Vishny (1997) explain it, ownership structures of the equity firms play a critically important role in controlling device by large shareholders. As a matter of fact, shareholders holding larger blocks of shares in an equity firm are likely to protect their investment and thus, to mobilize the resources to monitor the activities of the managers. Based on this argument, many researchers in the past have claimed that the major shareholders enjoy an extra edge in having the capacity, resources, and opportunity to monitoring and influencing the decision power of the managers. In the same vein, these shareholders, through an aggressive management of the shares, also alter the process of financial statement preparation as well as preventing the managers from acting in an unfavourable manner.

2.3 Empirical Literature

The effectiveness of accountability and corporate governance has been a part of hot debate amidst the ever emerging financial scandals around the globe. It is safe to state here that the concern of regulators, practitioner, and academics about earnings management is a need of the

hour. Such concerns primarily revolve around introducing a set of devices of corporate governance aimed at controlling managers to curb on this particular phenomenon. Controlling mechanisms, which are introduced by shareholders, on the light of agency theory, are very much likely to reduce agency costs and managerial discretion. Moreover, ownership structure features and corporate disclosures remain among controlling mechanisms in this regard.

The empirical evidence covers the studies from the perspective of their data types, i.e., time-series data, cross-section data and panel data. Further details are provided in the following subsections.

2.3.1 Evidence from Cross-Section Data

An extensive part of the past literature using cross-sectional data has found a positive relation among the variables under discussion by taking care of the unobserved country specific effects, omitted variables, and potential biases brought by simultaneity (Atieh & Hussain, 2012; Dechow *et al.*, 1995; Cohen & Zarowin, 2010; Dechow *et al.*, 2012; Bartov *et al.*, 2000).

One of the critical drawbacks of the studies using cross-section data to analyse the association among the variables of corporate disclosures, earnings management and ownership structure is that these studies cannot probe the direction of causation among the variables under discussion. Moreover, these studies lack the ability to develop a discussion on integration and co-integration properties of dataset.

2.3.2 Evidence from Time-Series Data

As pointed out earlier, the association among corporate disclosures, earnings management and ownership structure has received due amount of attention since the early times. Several researchers and practitioners, over the years, have studied the relation using the time series data,

and ended up with mixed results (DeAngelo, 1998; Peasnell *et al.*, 2000; Ye, 2007). A large part of the past literature has found a positive association between the variables under discussion (DeAngelo, 1998; Peasnell *et al.*, 2000) while others did not find any association among them at all (Ye, 2007).

The discussion concludes that time-series data provides contradictory results concerning the relation among financial development and economic growth.

2.3.3 Evidence from Panel Data

A negative relation among corporate disclosures and earnings management and a positive relation between ownership structure and earnings management have been witnessed from the recent panel data studies. These studies appear to be more reliable and authentic due to the fact that they attempt overcoming the shortcomings of the time-series and cross-country data studies.

In the recent years, the relationship between earnings management and corporate disclosures has stirred a discussion among the researchers and practitioners particularly in the context of improving and enhancing the transparency of the firm's financial performance. As a matter of fact, and as explained by the previous studies, voluntary corporate disclosures highly improve the visibility of firm's operational activities and thus, the financial performance (Plenborg *et al.*, 2006; Yonca, 2007). This foregoing discussion leads us to our first hypothesis as under:

- H_0^1 : Corporate disclosures have insignificant impact on earnings management.

In a similar fashion, the relationship between earnings management and ownership structure has stirred a discussion among the researchers and practitioners in the recent years as well primarily due to the fact that a conflict of interest prevails between the large and minority

shareholders within a firm, which often gives rise to a high agency cost. A few of the studies explain that the large shareholders of a company tend to extract private benefits at the expense of the minority shareholders (Classens *et al.*, 2000; Nenova, 2000). Moreover, Liu *et al.*, (2009) argue that these shareholders extract private benefits of control because of having incentives to managing earning for expropriating minority shareholders. This preceding discussion leads us to our second hypothesis as under:

- H_0^2 : Ownership structures have significant impact on earnings management.

2.4 Analysis of Reviewed Literature

An extensive part of the past literature using cross-sectional data has found a positive relation among the variables under discussion by taking care of the unobserved country specific effects, omitted variables, and potential biases brought by simultaneity (Atieh & Hussain, 2012; Dechow *et al.*, 1995; Cohen & Zarowin, 2010; Dechow *et al.*, 2012; Bartov *et al.*, 2000). The past studies have studied the relation using the time series data, and ended up with mixed results (DeAngelo, 1998; Peasnell *et al.*, 2000; Ye, 2007). A large part of the past literature has found a positive association between the variables under discussion (DeAngelo, 1998; Peasnell *et al.*, 2000) while others did not find any association among them at all (Ye, 2007). A negative relation among corporate disclosures and earnings management and a positive relation between ownership structure and earnings management have been witnessed from the recent panel data studies. These studies appear to be more reliable and authentic due to the fact that they attempt overcoming the shortcomings of the time-series and cross-country data studies.

Chapter 3

Theoretical Framework

This chapter aims to explain the theoretical framework of the study. This chapter contains discussion of different theories of finance related to earning management. And will explain the earning management in light of these theories.

3.1 Agency Theory

The article of Jensen and Meckling (1976) titled “Theory of firm: Managerial behavior, Agency cost and Ownership structure” considered as the dominant base of agency theory in finance and corporate governance literature. Establishment of agency theory is rooted in the assumption that all the previous theories are incredible on theoretical level but cannot be empirically tested. Agency theory imparted the new vision to researcher. That firm contains the principle agent relations. Agency theory label the owners as principles and managers as agents who act in best interest of owners. In the same way, agency relationship is being developed between managers and shareholders. This section will discuss the agency theory on base of the points mentioned below and also describe the relationship between agency theory and earning management.

3.1.1 Agency Cost (Earning Management)

As discussed above, presence of moral hazards leads the managers to act in best of their own interest. Two types of agency cost will be arises. One of its losses that occurred in terms of not maximizing the wealth of shareholders due to the self-interested focus of manager for his own benefits. And second, if a system is employed to overview the actions of managers. For controlling and monitoring such kind of actions there is need to develop a system which make

managers accountable to someone for their doings. So, for monitoring these contracts a prescription control system needed to implement. And this system will also associated with some cost. Which also accounted as the agency cost.

In case of earning management managers seems keen towards their incentives. These incentive could be on contractual basis, bonus, or may be these are some compensational agreements that lead managers to hide the true performance of the firms. And doing this act make decline in future earnings of firm plus shareholder's wealth as well. Thus, earning management is also a type of agency cost. And it can conclude that there is positive relationship between the agency relation and earning management.

3.2 Signalling Theory

Modigliani and Miller assume in their whole work that information is not asymmetric. Both internal management and investors have same level of information. Realistically and logically market phenomena is not align with the assumption. Because, while making the capital decisions the management of company is always have more information than any other stake constituents of the society. Which again create the asymmetry of information.

For example, a company wishes to take an investment project for business expansion purpose by issuing new equity shares. One of the basic objective of business existence is to maximize the value of its shareholders. But in this case, by issuing new share management is intended to dilute the value of already outstanding share. Which is not a good signal to investor. Because it indirectly shows that company have not certain future cash flows to pay the high rate of interest (in case of debt borrowing) thus company issuing the new shares. Which avert the new investor for investing in such company. Management knows all the above story including

the expected cash earnings of company. So management will finance this project by borrowing the debt which create a good signal for investor that company have certain future earning that's why they can pay back the investment amount. So, signalling can change the scenario, because information disclosure through financial reports is in the hands of management.

M. Spence (1978) is one them who develop that signalling theory in terms of modelling, equations, and diagrams. He also introduce the job market signalling theory. Which states that an employee gives signal to employer through his/her academic achievements. And employers judge them on the basis that having high educational credential persons have greater ability than the lower credentials holders. Here the actual ability will be exposed when the individual start working on the job. Educational credentials is just the signal. In short according to signalling theory, company gives signal to the investors and stakeholder that company is performing better than its competitors through financial reporting and disclosure.

3.2.1 Earning Management and Signalling Theory

A. M. Spence (1973) give the 6 principles of the signalling and declared the information asymmetry is very important and rank it on top. Which clearly indicate that signalling theory is based on the asymmetry of information. Which creates the agency problem and ultimately leads to the creation of agency cost in form of managing earnings. Because, in the case of earning management, managers intentionally miss-classify the core expenses to special items to show the better performance of company. All the readers miss-guided through decisive financial reporting and disclosure. Which finally costs devaluation in shareholder's wealth and future profitability. Based on the hypothesis of signalling theory, it can be concluded that signalling exists because of the asymmetry of information. Higher the level of asymmetry of information higher the effect of

signalling. Which will end in final cost (earning management) for creating these signals. Accordingly, one can conclude that there is positive relationship between asymmetry of information and earning management.

Chapter 4

Data and Methodology

This chapter is further scattered in six sections. Section 4.1 comprises the detail of data sample, section 4.2 data collection procedure, section 4.3 description and measurement of variables used in this study, section 4.4 empirical model, section 4.5 estimation technique for models, and finally 4.6 econometric methodology.

4.1 Sample of the study

In this study initially all the firms from the construction of KSE 100 Index are selected because this index usually reflects the presence of firm from every underlying sector. Which will also help to analyse the current phenomena in different sectors as well.

4.2 Method of data collection

The study will use the secondary data from 2008 to 2018 for all the firms. The rationale behind the period of data is that in Pakistan corporate governance code for listed firms was published in 2003 and implemented. Thus maybe there happened some robust change in accrual policy of the firms to avoid acute problems regarding accrual reporting. This is a time-specific event and is of no interest in this study, so to avoid such wonders this study is considering period after this event. Data will be collected from annual reports of the firms. For this purpose web site of each firm, State Bank of Pakistan's site and other published reports from the Pakistan Stock Exchange will be used.

4.3 Measurement of variables

In this sub section measurement for all the variables and description of these variables is given in detail:

4.3.1 Dependent Variable

4.3.1.1 Earning Management

Earning management is proxy by discretionary accruals scaled by one time lag of total assets in this study. Which is consistent with the literature (Becker, DeFond, Jiambalvo, & Subramanyam, 1998; Bradshaw, Richardson, & Sloan, 2001); Dechow, Sloan, and Sweeney (1995), the study will use the accruals in order to check the extent of a firm's earning management. Prior study (Subramanyam, 1996) suggest that discretionary accruals are the part of total accruals which are subject to the managers influence. And that's the reason accruals are considered as the right measure for earning management practices. For the estimation of discretionary accruals this study will utilize the Modified Jones Model used in the (Lobo & Zhou, 2001) study. Due to the fact that the discretionary accruals are basically the segregated part of total accruals (other segregated part is non-discretionary accruals). Hence, one should first calculate the total accruals. So, for calculation of total accruals, there are two different approaches. One of them is known as balance sheet approach used by many studies in literature and other one is cash flow approach proposed by (Hribar & Collins, 2002).s

By using the balance sheet approach, total accruals are measured as follows:

$$TAAC_{(i,t)BS} = (\Delta CA_{i,t} - \Delta CL_{i,t} - \Delta Cash_{i,t} + \Delta LTSTDET_{i,t} - DEPTN_{i,t}) \quad (1)$$

Where:

- $TAAC_{i,t}$ = Total accounting accruals in time period “t” of firm “i”
- $\Delta CA_{i,t}$ = Change in current assets in time period “t” of firm “i”
- $\Delta CL_{i,t}$ = Change in current liabilities in time period “t” of firm “i”
- $\Delta Cash_{i,t}$ = Change in cash and cash equivalents in time period “t” of firm “i”
- $\Delta LTSTDET_{i,t}$ = change in the current maturities of long-term debt and other short-term debt included in current liabilities in time period “t” of firm “i”
- $DEPTN_{i,t}$ = Depreciation and amortisation expense in time period “t” of firm “i”

Problem with balance sheet approach to measuring the accruals twigs in the measurement error that induces the significant damage to overall measurement of total accruals. Hribar and Collins (2002) claims that prior studies that used the balance sheet approach are tainted due to the measurement error. They evidenced that measuring the total accruals through cash flow approach is better than the balance sheet approach to calculate the total accruals. Therefore, this study will use both the approaches. Because balance sheet is well document in the literature, whereas the cash flow approach is also become prominent (Collins & Hribar, 1999).

In cash flow approach, total accruals can be measured as follows:

$$TAAC_{(i,t) CF} = EBXI_{(i,t)} - OCF_{(i,t)} \quad (2)$$

Where:

- $TAAC_{(i,t)}$ = Total accounting accruals in time period “t” of the firm “i”
- $EBXI_{(i,t)}$ = Earnings before extraordinary items and discontinued operations in time period “t” of the firms “i”
- $OCF_{(i,t)}$ = Operating cash flows taken directly from the cash flow statement

Equation (1) and (2) will be used to calculate the total accruals from balance sheet approach and from cash flow approach respectively. In the next step, non-discretionary accruals will be needed. Because discretionary accruals can only be estimated, when we have total accruals and non-discretionary accruals (by taking difference of total accruals and non-discretionary accruals). Consequently for estimating non-discretionary, first Modified Jones Model will be used as follows:

$$\frac{TAAC_{(i,t)}}{TA_{(i,t-1)}} = \beta_1 \frac{1}{TA_{(i,t-1)}} + \beta_2 \left(\frac{\Delta REV_{(i,t)}}{TA_{(i,t-1)}} - \frac{\Delta REC_{(i,t)}}{TA_{(i,t-1)}} \right) + \beta_3 \frac{PPE_{(i,t)}}{TA_{(i,t-1)}} + \varepsilon_{(i,t)} \quad (3)$$

Where:

$TAAC_{(i,t)}$ = Total accruals in time period “t” for the firm “i” scaled by one time lag of total assets

$\Delta REV_{(i,t)}$ = Change in revenue in the time period “t” for the firm “i” scaled by one time lag of total assets

$\Delta REC_{(i,t)}$ = Change in net receivables in the time period “t” for the firm “i” scaled by one time lag of total assets

$PPE_{(i,t)}$ = Change in plant, property and equipment in the time period “t” for the firm “i” scaled by one time lag of total assets

Equation (3) will be estimated for each firm separately. By these regressions will get the estimates of β_1 , β_2 , and β_3 . And then these estimates will be used in the same model to estimate the non-discretionary accruals as follows:

$$NDAAC_{(i,t)} = \hat{\beta}_1 \frac{1}{TA_{(i,t-1)}} + \hat{\beta}_2 \left(\frac{\Delta REV_{(i,t)}}{TA_{(i,t-1)}} - \frac{\Delta REC_{(i,t)}}{TA_{(i,t-1)}} \right) + \hat{\beta}_3 \frac{PPE_{(i,t)}}{TA_{(i,t-1)}} + \varepsilon_{(i,t)} \quad (4)$$

By obtaining the non-discretionary accruals from equation (4), finally will be able to calculate the discretionary accruals as follows:

$$DAAC_{(i,t)} = TAAC_{(i,t)} - NDAAC_{(i,t)} \quad (5)$$

Equation (3) will be estimated in two different settings, first will use the total accruals $TAAC_{(i,t)BS}$ from the balance sheet approach to estimate the Modified Jones Model. Second time, will use the total accruals $TAAC_{(i,t)CF}$ from cash flow approach to estimate the Modified Jones Model. And then equation (4) and (5) will be estimated accordingly.

4.3.2 Independent Variables

4.3.2.1 Corporate Disclosure

In this study corporate disclosure variable proxy by the disclosure quality of corporations. For the construction of disclosure variable, following the methodology of (Ali, 2018; Gul, Rashid, & Muhammad, 2016; Nosheen & Chonglertham, 2013) the study will assign score to each of four different attributes on a 0 to 4 scale. The aggregate of each section score represents the disclosure quality of a company. Details of each attribute or item used to measure the disclosure variable are given in the appendix.

4.3.2.2 Institutional Ownership

Number of share held by institutional ownership divided by total number of outstanding share (Cao & Petrasek, 2014).

4.3.2.3 Family Ownership

Variable family ownership will be measure as percentage of the shares held by family members of a firm following the methodology of Nguyen (2011).

4.3.3 Control Variables

The study will use a set of firm and industry-specific variables that are considered to impact earnings management.

4.3.3.1 Firm Size

Size is considered as the most core element while talking about profitability of firm. Because big size firm have greater profit ratios than smaller firms (Fama & French, 1995). Several studies used different variables to measure the size of the firm. Most of the studies used the total assets, sale volume and number of employees in a firm.

In measurement of relationship between real earning management and financial performance need to control the impact of size. Therefore, to control the influence of size (Katherine Ann Gunny, 2005; Katherine A Gunny, 2010; Rahmawati, Agustiningsih, & Setiany, 2015; Tabassum, Kaleem, & Nazir, 2014) used the natural logarithm of total assets as proxy for size. (D. Leggett, Parsons, & Reitenga, 2009; D. M. Leggett, Parsons, & Reitenga, 2016) take logarithm of market value of equity to minimize the impact of size of firm. Hence, to control the impact of size of firm this study uses the natural logarithm of total assets and denoted by size.

Size = Natural logarithm of total assets

4.3.3.2 Firm performance

The core objective of earnings management is to distort analysts forecast and to misinform the financiers by giving them erroneous information about a firm's real operating performance. (Haw, Hu, Hwang, & Wu, 2004; Kasznik, 1999) find a positive association between firm performance and the level of unusual accruals. However, (Jaggi, Leung, & Gul, 2009) find a negative coefficient on accounting performance. Therefore, one cannot expect the direction of the relationship. The study will use the return on assets ratio to measure firm performance. This study will include return on assets as (Butler, Leone, & Willenborg, 2004) indicate that the relation between discretionary accruals and profitability may be nonlinear that's why need to control it.

4.3.3.3 Leverage

Harris and Raviv (1991) evidenced that debt moderates the infrequent accruals as the company is subject to cash related commitments. (Jelinek, 2007; Shahzad, Rauf, Saeed, & Al Barghouthi, 2017) reported a negative relation between debt and income increasing manipulation. Whereas on the other hand (Press & Weintrop, 1990), evidenced that when firms are closer to default, managers are more likely to exercise accounting manoeuvring. Meanwhile the result of leverage on earnings manipulation is blurred, one cannot expect the direction of the relationship. That's why need to take it as control variable. Leverage is measured as the ratio of total debt over total assets.

4.4 Empirical Model Specifications

To explore the effect of corporate disclosure and ownership structure on the earning management, the study will use the following regression models;

$$\begin{aligned}
DAAC_{(i,t)BS} = & \beta_0 + \beta_1(DAAC_{(i,(t-1))BS}) + \beta_2(Dscore_{(i,t)}) + \beta_3(IO_{(i,t)}) + \beta_4(FO_{(i,t)}) \\
& + \beta_5(ROA_{(i,t)}) + \beta_6(Size_{(i,t)}) + \beta_7(LEV_{(i,t)}) + \varepsilon_{(i,t)}
\end{aligned}
\tag{6}$$

$$\begin{aligned}
DAAC_{(i,t)CF} = & \beta_0 + \beta_1(DAAC_{(i,(t-1))CF}) + \beta_2(Dscore_{(i,t)}) + \beta_3(IO_{(i,t)}) + \beta_4(FO_{(i,t)}) \\
& + \beta_5(ROA_{(i,t)}) + \beta_6(Size_{(i,t)}) + \beta_7(LEV_{(i,t)}) + \varepsilon_{(i,t)}
\end{aligned}
\tag{7}$$

Where:

$DAAC_{(i,t)BS}$ = In equation (6) are the estimated discretionary accruals in the time period “t” for the firm “i” by using the balance sheet approach proxy for earning management

$DAAC_{(i,t)CF}$ = In equation (7) are the estimated discretionary accruals in the time period “t” for the firm “i” by using the cash flow approach proxy for earning management

β_1 = One time lag of discretionary accruals in time period “t” for the firm “i” in both the equations (6) and (7) respectively

$Dscore_{(i,t)}$ = Disclosure score in time period “t” for the firm “i”

$IO_{(i,t)}$ = Institutional Ownership in the time period “t” for the firm “i”

$FO_{(i,t)}$ = Family Ownership in the time period “t” for the firm “i”

$ROA_{(i,t)}$ = Return of Assets in the time period “t” for the firm “i” proxy used for firm performance

$Size_{(i,t)}$ = Natural log of total assets in the time period “t” for the firm “i”

$LEV_{(i,t)}$ = Leverage ratio in the time period “t” for the firm “i”

$\varepsilon_{(i,t)}$ = Error term in the time period “t” for the firm “i”

4.5 Econometric Methodology

This section consist of details about estimation technique and all the process or tools to be used in the analysis of data set. So, one by one discussion about these steps are follows:

4.5.1 Description of Panel Data

Panel data also named as longitudinal data is a multi-dimensional data with measurement over time period. Panel data include observations of various phenomena acquired over different time periods for the same companies, people, nations, etc. The advantage of practice panel data can overwhelmed the issue of the identification. Currently, panel information is increasingly being used and popular in different spheres of financial areas. Thus, panel data considered more preferable because this method can model the unobserved individual impact that connected with the same units. According to Baltagi (2008) panel data always have the same cross-section over the different time period.

Another advantage of using panel data that it increases the number of observations and also permit control variables that cannot be measured like variations in business practices across companies; or variables that change over time but not across entities. Moreover, it also develops the efficiency of econometric evaluations and contains more level of opportunity because it diminishes the problem of the multicollinearity problem up to a much extent (Pesaran, Shin, & Smith, 1999).

Panel data contains two types of data in it i.e.: Balanced and un-balanced data. Balanced panel data is a type of data that contains every observation of the variables over a period of time. It implies that not even single information about the variables is ignored. On the other hand, Un-balanced panel data is a type of panel data in which that is lack of observation for some variables over a period of time.

4.5.2 Correlation Matrix

This study uses correlation matrix that explain the correlation among the variables. In this study it is used to check whether there exists multicollinearity issue between the variables or not. If the correlation is low between the variables it will be say that there is no multicollinearity issue between the variables, multicollinearity exist in the model when correlation is exceeds from 0.80 or 0.90 (Bryman & Cramer, 2002).

4.5.3 Dynamic panel data

This study involves Dynamic Panel data econometric technique for the examination. In this study DAAC is the focusing variables across companies and used as a dependent variable to find out the impact of the corporate disclosure and ownership structure on firm discretionary accruals. There is also need to analyze the diligence of shock in discretionary accruals structure, so the study also utilized dynamic approach. A dynamic model is a kind of model in which the variables that are lagged dependent kept on the right side of the equation (Baltagi, 2008). The simplest dynamic panel data model is that where the dependent variable, $y_{i,t-1}$ along with $X_{i,t}$ as a regressor;

$$y_{i,t} = \alpha_i + \beta y_{i,t-1} + \alpha X_{i,t} + \delta_i + \mu_{i,t} \tag{8}$$

Where the subscripts I and t demonstrate the cross sectional and the time dimension of the panel sample respectively, α represent scalar, and β and $X_{i,t}$ (explanatory variable) are each $k \times 1$ are vector of explanatory variables other than that of $y_{i,t-1}$, where δ_i represent the effect of bank specific that is unobserved and $\mu_{i,t}$ represent the error term.

There are numerous econometric techniques which are used by the researchers over the period of the time some of the most popular methods are Pooled OLS, Fixed effect, Instrumental fixed effect and random effect and produce bias estimates. So considering all the biasness of different methods this study prefer to use Generalized Method of Moments (GMM) method, which is frequently used to check out the impact of bank specific and macroeconomic variables on the credit risk.

4.5.4 The GMM estimator

For the estimation of dynamic panel data and to get the unbiased results the experts prefer GMM technique over the others and considered it one of the best and superior estimation techniques. The GMM estimation is uniquely designed to provide effective and reliable estimations of the variables in dynamic panel data model, when one or more dependent variables are used as a covariate. The GMM estimation technique introduced by the (Arellano & Bond, 1991; Arellano & Bover, 1995; Blundell & Bond, 1998) and is particularly intended for the econometric analysis of the dynamic panel data models.

Additionally, the GMM method of estimation is used to address the issue of endogeneity, when the model repressors are not severely exogenous but associated with the present or previous values of the error term. Furthermore, GMM estimator takes into consideration the issue of heteroscedasticity and autocorrelation within individuals, but not across them.

4.5.5 Why the Blundell-Bond (1998) Estimator (GMM)

Meanwhile, dynamic models are used in this research the lag dependent variable is used as an explanatory variable. Due to the usage of lag dependent variables on the explanatory side, this can lead to problem.

Inconsistent estimates will generate, if the models are evaluated through using the Pooled OLS technique. The prominent characteristic of Classical Estimators (OLS) is to minimize the remaining amount of the squares and assume that the regressors and the error terms are not associated. However, models obviously disturb this main assumption of OLS, because in model parameter the lag dependent variables are associated with v_i , which cause autocorrelation problems in the error term. As a result, the Pooled OLS estimator arrives at inconsistent, unpredictable coefficient estimates. Correspondently, the coefficient estimated by the Pooled OLS for the lagged dependent variable is upwards, because the lagged dependent variable and the error term are strongly linked.

In addition, the conventional strategies used by the researchers to overcome inconsistency of the Pooled OLS in panel data analysis are (a) fixed effect Model (FEM) and (b) Random Effect Model (REM). Due to the reason that the fixed effect in the model creates inconsistency, the FEM model re shuffle the fixed effect (v_i) from the model, through the technique called within transformation. And within transformation, the mean value of each dependent and independent variable is subtracted from the corresponding variable as a consequence of which the model eliminates the fixed effect (v_i). On the other side, the REM considers that there is no heterogeneity between the cross-sections and that heterogeneity should be included in the error term. The decision to choose among FEM and REM is made through the Hausman test. However, it must be identify that the FEM and REM can only re shuffle unobserved fixed effect

(v_i) from the model and from the Pooled data reduce the inconsistency of the coefficients estimate but cannot fully eradicate it, as lagged dependent variable is still correlated to error term. Briefly, one period lag dependent variable is used in our model as a regressor, the estimation through FEM and REM create biased estimate of the coefficient of the lagged dependent variables. Therefore, this is not suitable method for this study due to this reason the model of the study move toward instrumental variable (IV) approach.

The IV approach introduced by Anderson and Hsiao (1982) which consist of two-step procedure, 1) Difference transformation, is to eliminate individual fixed effect, 2) Forms tools for the lag-dependent variable from the lag-level of the dependent variable is to eliminate the inconsistency of the estimation of the coefficient. The property of the tool is that it is not associated with the error term but extremely correlated with lagged dependent variables.

The property of the tool is that it is extremely associated with the lagged dependent variable and is not associated with the error term. If the error term is i.i.d, the second lag of the dependent variable may be extremely associated with the lagged dependent variable (and its variation) but not associated with the composite error method. On the other hand, a popular criticism of the IV is that it generates inconsistent coefficient estimates, since it does not include all the accessible motion circumstances.

The GMM estimator suggested by Arellano and Bond (1991) by making first distinction in the model eliminates the individual fixed effect and then using lags in the dependent variable level as tools for the lagged dependent variable or its variation to eliminate the endogeneity from the model. GMM estimators use Y_{it-2} (the second lag of the dependent variable) as a tool for Y_{it-1} (the lagged dependent variable) if Y_{it} is a dependent variable. Furthermore, Y_{it-1} and ΔY_{it-2} are used as tools for the distinction of lagged dependent variable (ΔY_{it-1}), if the model in

converted shape. Subsequently, both the instruments are correlated to the difference of lagged dependent variable (ΔY_{it-1}), and are not correlated with the error term. As a consequence, the GMM variation estimate offers reliable and consistent coefficient estimates of the dynamic panel data models.

Actually, Blundell and Bond (1998) estimator is supposed to perform well than some other estimation techniques, however, especially when the dependent variable performs a random walk, difference GMM produces bias and incorrect outcomes. Hence, if the dependent variable follows random walking, then the dependent variable level lags i.e. ($Y_{it-2}, 3\dots t$) are fragile tools because they are weakly correlated to difference of lagged dependent variable (ΔY_{it-1}). This implies that previous concentration transmit little data about future changes, so unchanged lag levels are weak instruments for converted regressor (Roodman, 2009) In order to address the issue of fragile instruments (Arellano & Bover, 1995) and (Blundell & Bond, 1998) suggested an enhanced approach, the system GMM.

In the GMM system, the instrument is increased as the difference between the lagged dependent variable (i.e. $\Delta Y_{it-1}, 2\dots t$) is used as a new set of instruments for the lagged dependent variable level (Y_{it-1}). Therefore, the GMM system uses these additional lag difference instruments as well as the lag level instruments as well as the lag level instruments to estimate the dynamic data panel models. In brief, by applying lags in the dependent variable (i.e. $Y_{it-2}, 3\dots t$) as instrument for lagged first difference repressor (ΔY_{it-1}) and the difference of lagged dependent variable (i.e. $\Delta Y_{it-1}, 2\dots t$) as instrument for the level of the lagged dependent variable (Y_{it-1}), the GMM system mitigates the fixed effect (v_i) of the model by adopting the first difference of the model and addressing the issue of endogeneity. GMM is system that

properly elastic because it permits to use additional instruments with different lag structure for both level as well as first differenced equations to researchers.

4.5.6 Concluding remarks

Estimation of dynamic panel data model through the strategy FEM and REM model fails because in the model the coefficient remains inconsistency. Correspondingly, the usage of Pooled OLS also generates biased estimates of the coefficients. Moving towards the IV approach, a suitable tool is found for the lagged dependent variable, where the fixed impact is expelled from the model with the help of first difference. The IV does not exploit all the data accessible and outcomes in a partial estimation of the coefficients. The GMM estimator, which is the extension of the IV approach, is considered to be a good estimator for dynamic panel data, since it incorporates all available moment condition. However, if the random variable is close to random walking, the GMM works weakly. An increasingly reasonable estimation technique for the estimation of the dynamic panel data models in the literature is the GMM suggested by Blundell and Bond (1998). The GMM technique generates consistent and reliable coefficient estimates of the model through the usage of additional lag difference instrument as well as the lag level instrument. For empirical analysis of the model this study used two step system GMM. This study use Arellano-Bond AR(2) tests for identifying order serial correlation and to check out the validity of the instruments study use J test of (Hansen, 1982).

Chapter 5

Empirical Results

This part will cover the debate of empirical findings of study extracted from the underlying data set of firms listed on Pakistan Stock Exchange. Moreover, chapter is separated into four different sections. First division will show the panel unit root test results. Second section contains correlation matrix for multicollinearity checking and expected sign of variables. Third section will present the description of the data mean, minimum, maximum and standard deviation for understanding the rough picture of relationship between discretionary accruals and ownership structure. Finally last section will demonstrate and discuss the regression results. Section 5.1 present the panel unit root test results.

5.1 Panel Unit Root Test

Owing to the environment of panel data, there are more chances to take place the unit root problem while examining the data set. For that reason, it is necessary to exam the unit root before advance proceedings in analysis. Usually, unit root detection tests including Fisher –ADF (Augmented Dickey Fuller), Fisher–Philip- Perron (PP), Levin, Lin and Chu (LLC), Breitung and Im, Pesaran and Shin (IPS) are being used. These tests generally not give the same results due to the fact that they have classically altered process for testing unit root from each other. For example, test like Levin, Lin and Chu, Hadri and Levin, and Breitung undertake that there is homogenous panel data unit root entirely the cross sections. Which is likewise a disadvantage of these tests. On the other hand some other tests including Im, Pesaran and Shin (IPS), Fisher–

Philip- Perron (PP), and Fisher –ADF assume that there is individual unit root process for every individual cross section.

In this study for the detection of unit root problem both tests IPS and LLC have applied. Results related to unit root test for all variables used in this study described in Table 5.1. It is determined that all the variables under study are not supposed to contain unit roots and are stationary at level conferring to P-values of both (LLC and IPS) tests. Since, there is low P-value for both the tests. So that null hypothesis cannot be accepted. Results of unit root tests after conducting the said tests are reported as follows:

Table 5.1 Panel Unit Root

Variables	LLC Test Stats	IPS Test Stats	Test for Unit Root	Conclusion
$Dscore_{(i,t)}$	-9.6194 (0.0000)	-8.4940 (0.0000)	Level	Stationary
$IO_{(i,t)}$	-3.3437 (0.0004)	-11.9160 (0.0000)	Level	Stationary
$FO_{(i,t)}$	-26.5564 (0.0000)	-11.2220 (0.0000)	Level	Stationary
$DAAC_{BS(i,t)}$	-14.2348 (0.0000)	-6.4917 (0.0000)	Level	Stationary
$DAAC_{CF(i,t)}$	-8.6004 (0.0000)	-5.0695 (0.0000)	Level	Stationary
$Size_{(i,t)}$	-4.3890 (0.0000)	-9.7788 (0.0000)	Level	Stationary
$ROA_{(i,t)}$	-9.1044 (0.0000)	-11.6045 (0.0000)	Level	Stationary
$LEV_{(i,t)}$	-20.9604 (0.0000)	-7.9490 (0.0003)	Level	Stationary

Note:

- *LLC is the Levin, Lin & Chu and IPS is Im, Pesaran & Shin panel unit root tests. With null “Panel contains unit root” LLC follows common unit root process and IPS follows individual unit root process.*
- *$Dscore_{(i,t)}$: is Corporate Disclosure score, $IO_{(i,t)}$: is Institutional Ownership measure as Number of share held by institutional ownership divided by total number of outstanding share, $FO_{(i,t)}$: Family ownership be measure as percentage of the shares held by family members of a firm, $DAAC_{BS(i,t)}$: is Discretionary accruals from balance sheet approach, $DAAC_{CF(i,t)}$: is Discretionary accruals from cash flow approach, $Size_{(i,t)}$: is size of the firm measure as natural logarithm of firm’s total assets, $ROA_{(i,t)}$: is a control variable measure as net income over total assets, $LEV_{(i,t)}$: is a ratio of total debt to total assets..*

5.2 Correlation Matrix

Multicollinearity is generally supposed as an acute kind of problem in empirical research that leads toward abstruse condition in any sort of analysis. Hence, before any type of data estimation it is very important and considered as precautionary to inspect the correlation among explanatory variables. For the reason that exceedingly correlated variables cause the problem of multicollinearity. To exposure multicollinearity, correlation matrix technique is generally

adopted in prior studies and have sound citation in literature. As a result, this study used the correlation matrix to recognize the problem of multicollinearity in explanatory variables and to get an idea about predictable association between understudy variables as well.

Table 5.2 below ascertaining that there is no multicollinearity problem in descriptive variables that are used in this study. Correlation matrix results also represent association among all the variables. For example, dependent variable DAAC (proxy for earning management) is showing negative association with the institutional ownership. Which means if the firms is owned by some institutional investor then there are less chances for the firms to engage in optimistic manoeuvrings of earnings. Due to the fact the institutional investors are keen about

	$Dscore_{(i,t)}$	IO	FO	DAACBS	DAACCF	Size	ROA	LEV
$Dscore_{(i,t)}$	1.0000							
IO	-0.0350	1.0000						
FO	-0.0140	-0.2323*	1.0000					
DAACBS	-0.0240	0.0061	-0.0216	1.0000				
DAACCF	0.0176	-0.0091	0.0178	0.3149*	1.0000			
Size	0.0588*	-0.0198	-0.1127*	0.0083	0.0010	1.0000		
ROA	-0.0449	-0.0302	0.0295	-0.0063	-0.0028	0.0502	1.0000	
LEV	-0.0043	-0.0551	0.0693*	-0.0006	0.0149	-0.0605*	-0.0092	1.0000

their investment. Logically they should allow the firm for such an act that will last in loss in long run. Same kind of negative association is found between family ownership and DAAC. Because, such ownership will not bear anything on the family name. Secondly, family owners are interested in long run earnings of business that's why they would not prefer to be engaged in such practices that earns for short term and then get back to loss in long run. In control variable side, discretionary accruals are negatively associated with leverage. It happens because, when firm take loan from any source then there will be definitely some monitoring restrictions from the lender. In the same way one can have idea about the relationship between all the other variables.

Table 5.2 Correlation Matrix

Note:

- *Dscore_(i,t) is Corporate Disclosure score, IO_(i,t) is Institutional Ownership measure as Number of share held by institutional ownership divided by total number of outstanding share, DAAC_{BS(i,t)} is Discretionary accruals from balance sheet approach, DAAC_{CF(i,t)} is Discretionary accruals from cash flow approach, Size_(i,t) is size of the firm measure as natural logarithm of firm's total assets, ROA_(i,t) is a control variable measure as net income over total assets, LEV_(i,t) is a ratio of total debt to total assets.*
- ** Shows significance of correlations among variables at significance level of 10%*

5.3 Descriptive Statistics

Below in the table 5.3 descriptive statistics related to the variables are shown. These statistics include the minimum, maximum, mean, and standard deviation. These statistics helps us to understand the raw picture of the data under discussion. Moreover, from the dispersion point of view minimum and maximum statistics with standard deviation number helps to compare the data with other researches.

Table 5.3 Descriptive Statistics

Variables	Mean	Minimum	Maximum	Standard Deviation
$CD_{(i,t)}$	0.34	0	1	0.35
$IO_{(i,t)}$	0.63	0	1.14	0.26
$FO_{(i,t)}$	0.41	0	1	0.49
$DAAC_{BS(i,t)}$	-0.21	-0.11	0.55	2.84
$DAAC_{CF(i,t)}$	-0.22	-0.12	0.53	2.40
$Size_{(i,t)}$	16.56	10.12	24.40	1.9
$ROA_{(i,t)}$	0.27	-14.41	7.03	2.18
$LEV_{(i,t)}$	0.59	0.002	2.09	0.32

Note:

- $CD_{(i,t)}$: is Corporate Disclosure, $IO_{(i,t)}$: is Institutional Ownership measure as Number of share held by institutional ownership divided by total number of outstanding share, $FO_{(i,t)}$: Family ownership be measure as percentage of the shares held by family members of a firm, $DAAC_{BS(i,t)}$: is Discretionary accruals from balance sheet approach, $DAAC_{CF(i,t)}$: is Discretionary accruals from cash flow approach, $Size_{(i,t)}$: is size of the firm measure as natural logarithm of firm's total assets, $ROA_{(i,t)}$: is a control variable measure as net income over total assets, $LEV_{(i,t)}$: is a ratio of total debt to total assets.

All the descriptive statistics are reported in the above table 5.3. It shows that on average the points of corporate disclosure measured by assigning points to each category of disclosure is 0.34 with minimum and maximum of 0 and 1 respectively.

Its standard deviation of 35% shows that in disclosure of information regarding strategic information, financial and other important non-financial information, Pakistani firms have not any consistent policy about the disclosure. And if we look at the ownership structure, on average

Pakistani firms have mean of institutional owners about 63% and for family ownership structure it's about 41%. It means that in Pakistan companies institutional investors are more preferable after the family owned businesses. It shows that ownership structure in Pakistani firms is more concentrated towards institutional and family owned environment. Which is consistent with findings of (Haw et al., 2004; Wang, 2006).

On the other hand our dependent variable discretionary accruals measured by using the modified jones model from balance sheet and cash flow approach have the mean value of -21% and -22% respectively that is inconsistent with the findings of (Bozec, 2008; Haw et al., 2004). Dispersion of accrual variable for both the approach is very high. Which is 2.84 and 2.40 that shows Pakistani companies are keen about smoothing the earnings. One of the reason for this volatile behaviour for their accruals may be the governance code or some of the changes implemented by regulatory bodies from time to time.

Some of the firm characteristics including its size, its profitability proxy by return on assets, and its capital structure. Size of the firm is the measured through the natural log of it total assets. Variable size have minimum and maximum of almost 10% to 24% that shows how much is the difference between the sizes of these underlying companies. This dispersion in size of firms clues that there are chances for the under study companies to engage in the practice of earning management. Because (Rahmawati et al., 2015) evidence that small size firms are more interest in earning management practices due to the fact that they have many opportunities for investment and new proposals.

Return on assets calculated by net income over total assets used as a firm characteristics. ROA have the mean of 27% with minimum and maximum of -14% to 7%. It has standard deviation of 2.18.

Leverage third firm characteristics and control variable measured as the total debt to total assets. Pakistani firms are on average .59 have taken loan and on average such numbers of firm can expect to be levered. Whereas with the minimum and maximum values of .002 and 2.09 respectively. Which shows that some of the firms from under study firms are almost not levered. It can also be checked keeping in view the dispersion of leverage. Thus, one cannot conclude any relationship between discretionary accruals and leverage.

Because on the foundation of agency theory it should be negative because lenders will ultimately monitor firm's decision and its disclosure. Which should indirectly protect the right of minority shareholders. That results the firms to avoid earning smoothing. But literature is not clear about the direction of relations between leverage and practice of earnings management. Some of the empirical studies (Jelinek, 2007; Shahzad et al., 2017) stated that there is negative relationship between levered firms and their probability to engage in the practice of earning management.

However, there is another stream of empirical researches that find that leverage positively influence the firms to engage in earning management practices. It explains the phenomena in prospect of default. (Press & Weintrop, 1990) empirically claims that when the firm is near to default or just about facing some loss, managers are more consciously engaged in accounting manipulations to smooth earnings. Only interest for doing so, is to save the name of the company or attract some external investors for investment that in long run will undo their manoeuvring loss. Hence, it is still debateable.

5.4 Regression results of the study

In this section regression results are presented in a panel table according to the model prescribed in the last chapter of methodology. Initially all the firms of KSE 100 Index were selected as sample of the study, but due to limited data some of them are drop and total sample size ended up with 75 firms.

Dependent Variable: “Discretionary Accruals” Proxy for Earning Management				
DA from Balance Sheet Approach			DA from Cash Flow Approach	
From Equation 6:			From Equation 7:	
Model 1			Model 2	
Variable	Coef.	Std. Err.	Coef.	Std. Err.
$DAAC_{CF(t-1)}$			-0.307	-0.00036***
$DAAC_{BS(t-1)}$	-0.1418	0.003***		
$Dscore_{(i,t)}$	-0.1207	0.031***	-0.333	0.0169***
$IO_{(i,t)}$	-0.653	0.0133***	-0.479	0.0209***
$FO_{(i,t)}$	-0.194	0.002**	-0.214	0.0103***
$ROA_{(i,t)}$	0.0014	0.0096***	0.0018	0.00722***
$Size_{(i,t)}$	-0.789	0.00234***	-0.157	0.00125***
$LEV_{(i,t)}$	-0.256	0.0834***	-0.274	0.0230***
$AR-2\ Test$	0.158		0.406	
$Hansen\ (P-Value)$	0.568		0.587	
$No.\ of\ Obs.$	825		825	

Table 5.4 GMM regression results using Modified Jones Model

Note:

- Here two-step system GMM robust analysis
- $DAAC_{CF(t-1)}$: is one time lag of the dependent variable discretionary accruals estimated from cash flow approach, $DAAC_{CBS(t-1)}$: is one time lag of dependent variable discretionary accruals estimated from balance sheet approach, $DScore_{(i,t)}$: is corporate disclosure, $IO_{(i,t)}$: is Institutional ownership, $FO_{(i,t)}$: is Family ownership, $ROA_{(i,t)}$: is return on assets measure as net income over total assets used in the study as control variable, $Size_{(i,t)}$: is the size of firms measured as natural logarithm of total assets of firms used as control variable, $LEV_{(i,t)}$: is leverage measured as total debt to total assets used as control variable, AR-2 Test; is the p-value of the autocorrelation test in the 2nd process used for detecting serial autocorrelation problem in the residuals of model, Hansen (P-Value): is significant value of Hansen test used for checking the validity of instruments in the model.
- Significance of the coefficients at significance level of 1%, 5%, and 10% are denoted respectively ***, **, *.

In above table 5.4 regression results are reported and shows the negative influence of one time lag of discretionary accruals on dependent variable. It shows that firms are consistently engaged in the practice of earning management through the discretionary part of accruals. One of possible incentive for managers to sustain the earning management practice may be to show their good window dressing skills of financial reports. Likewise managers may wanted to intact with increasing and decreasing of accruals because one time sudden off set will generate vigilant signal for the readers of reports.

Another possible explanation for such practice of accruals could be the reporting standards set by the regulatory bodies and the development of corporate governance rules for protection of minority shareholders. Negative coefficient of -0.1418 shows that manager reverse their decision of holding accruals more than one time period because it could be questionable by analysts. So they avoid the regular inclusion of such high accruals in every period. These findings are consistent with the study (Bradshaw et al., 2001; Jo & Kim, 2007; Lang & Lundholm, 1996; Lobo & Zhou, 2001; Subramanyam, 1996). Lag of discretionary is negatively related to the manager's decision of last year's accruals maintaining. And furthermore result from both the

approaches of accruals (Balance sheet approach and cash flow approach) are consistent and highly significant that are -0.1418 and -0.307 respectively. Coefficient from cash flow approach obtained by equation 7 is stronger than coefficient of balance sheet approach obtained by equation 6. Since, there are more chances of error for measurement of accruals from balance sheet approach (Collins & Hribar, 1999). They evidenced that cash flow approach to measure the total accruals is more reliable that's the reason coefficient is stronger than what obtained from equation 6 (balance sheet approach).

Regression results from table 5.4 shows that the level of corporate disclosure is inversely linked to the practice of earning management. Highly significant coefficient of corporate disclosure variable with negative value of -0.1207 proves the first hypothesis of the study that corporate disclosure is negatively related the earning management. These coefficient are consistent with the findings of (Fan & Wong, 2002; Jo & Kim, 2007; Lapointe-Antunes et al., 2006) .Result of the corporate variable obtained from both the models of study (-0.1207 from balance sheet approach and -0.333 from cash flow approach significant at level 1%) are consistent and indorses that better and transparent disclosure of firm leads towards the healthier corporate governance practices. Which is then not only mitigates the impact of earning management practice but also improves the overall governance practices. Such improvements leads the corporate entity towards effective management control system that ultimately limits the manager's discretion and protect the right or interest of minority shareholders.

If it is considered as true that more the disclosure of a firm more the firm is subject to transparent. Then the above strong coefficient of corporate disclosure variable depicts transparency. Which is also a strong determinant for smooth earnings. Because it protects the

minority shareholders interest so that's why it is the most vibrant constraint to earning management practice.

It can be concluded that chance of incentives for earning management would be greater in the firms where corporate disclosure is less as compared to the firms where disclosure is greater. Because low corporate disclosure also pronounced that there is a source for information asymmetry. Such findings of this study align with the agency theory (Jensen & Meckling, 1976). Corporate disclosure is also revealed as one among those parameter that are considered as mechanism of controlling expedient. Which ultimately leads towards aligning the interest of both the parties (shareholders and management). These coefficients of corporate disclosure variable from both the models are also align with the signalling theory appraisals. Because signalling theory refers that any kind of informational disclosure from the corporate entity is normally taken as a signal by market participants. On account of signalling theory, one can conclude that these negatively associated coefficients confers the vindication of rare information between investors (shareholders) and managers. Such vindication will leads towards the less engagement of earning management.

Ownership structure is considered as a major device to control the governance mechanism for any business entity. Because ownership structure defines the preference of top management related to any important decision of firm. In case of Pakistan normally entities are either family owned or owned by large institutions. Table 5.4 show that institutional ownership is negatively related to earning management practices. Coefficient of institutional ownership is -0.653 from model 1 and -0.479 from cash flow approach model 2 significant at level of 1%. Finding from both the models is consistent. It confers that firms that are institutionally owned have less chances to be engaged in practice of earning management. This result of the study is supported

by the previous literature (Ding et al., 2007; Fan & Wong, 2002; Katherine Ann Gunny, 2005; Javid & Iqbal, 2008; Jiraporn & DaDalt, 2009; Khlifi & Bouri, 2010; Saunders & Samei, 2006; Shahzad et al., 2017; Xingquan & Zhaonan, 2008). One of the common reason for this relationship in literature is explained in way that institutional owners have more resource than any other types of investors. Consequently, no one can deny the fact that institutional owners can effectively monitor the manager's decision with almost no monitoring cost because they already have developed their resources. Institutional owners not only can monitor the decisions of managers but can also discipline and dominate their decisions. Which ultimately leads towards the moderation of the practice of earning management.

Secondly, to capture the phenomena of ownership structure in both the proceeding models of this study family ownership variable is incorporated in addition with institutional ownership. Because in this way one can see the whole impact of ownership structure on earning management practice. Due to the fact most of the Pakistani firms are family owned that's why it's considerable. Regression results from table 5.4 shows that family owned firms are less engaged in the practice of earning management. Negative coefficient of family ownership -0.194 and -0.214 from model 1 and model 2 respectively shows that there are 19% to 22% less chances for the institutional and family owned firms to engage in the practice of earning management. These results are consistent with the findings of (Achmad et al., 2008; Bozec, 2008; Ding et al., 2007; Jiraporn & DaDalt, 2009; Prencipe et al., 2008). Literature proposed some reasons that why family owned firms not get to the side of smooth earning practices. Findings suggests that there is very less benefit for the members of family to behave opportunistically. Because it has some negative effects on the goodwill of family and also can damage the reputation of business group plus the overall wealth. Moreover, family members know very well that such manoeuvring

practices in long term can be very dangerous for business survival. Actually they are very keen about the long term benefits that they can enjoy on account of monitory shareholders. Consequently, they would not prefer the short term artificially maintained earnings and avoid the smoothing practices.

Both the model additionally include some the firm's characteristics just to control their effect. These control variables are performance proxy by ROA, size of the firms measured as the natural logarithm of total assets of the firm, and finally the leverage of firm. Results from model 1 and model 2 in the table 5.4 shows that return on assets is positively linked to earning management practice supported by (Tabassum et al., 2014). Manager's objective to engage in the practice of earning management is just to show the picture of the firms. So this can be seen from the results that earning management is linked to performance of firms. Second characteristic is size which is consistently and significantly inverse to the practice of earning management. Because there less chances for big size firms to generate more discretionary accruals. It may be difficult for the big size firm to do earning management while facing more strict regulatory disclosure rules as constraints.

Table 5.4 show that third characteristic leverage is inversely related to the practice of earning management. It's logically true because when a firm take some fund as a loan from any external source then first such type of firm will be evaluated. Afterwards such firms will be monitored by loan lender. Ultimately whole process will results in the mitigation or will depreciated the earning management practice. Because such loan lenders are always keen about the payback of their money.

Finally to check the reliability of these findings some residuals test are reported in the table 5.4. One should cross check autocorrelation problem after conducting the analysis just to

make sure that all the coefficients are not biased and there is no autocorrelation problem in the residuals. AR-2 test have the null hypothesis “there is no 2nd order serial autocorrelation exists in the residuals”. So, from the table 5.4, AR-2 test have value of 0.158 which refers that null hypothesis cannot be rejected. One can draw the conclusion that there is not second order serial autocorrelation in the residuals. For overall fitness and validity of model and instruments P-Value (0.568 and 0.587respectively) of Hansen test is reported in the table 5.4. From these values it can be concluded that overall instruments and both the models are appropriate.

Chapter 6

Conclusion

This study explored the relationship between corporate disclosure, ownership structure, and earning management practice. Specifically, this study investigate the relationship between the level of corporate disclosure and earning management practice in concordance with the Pakistani settings. Additionally, to explore the relationship between firms' ownership structure and its linkage the earning management practices. For the exploration of such phenomena sample of 75 Pakistani companies is used. This study find the negative relationship between ownership structure, corporate disclosure, and earning management. Which suggests that there are less chance for the firms with high level of corporate disclosure to engage in the practice of earning management. Moreover, in ownership structure perspective current study find that both types of ownership structures negatively influence the practices of earning management. Which refers that monitoring device should be rigour then it would mitigate the earning management practice. Because more transparent and highly monitored firms can be seen as avoider of the earning management practice. Findings of the study penlights that in Pakistani context, role of ownership structure and corporate disclosure is very important and crucial for monitoring and controlling the practice of earning management. Because it's the solution for protecting the rights and interest of minority shareholders.

6.1 Suggestions for future research

There are some points that can be considered for exploring the phenomena in more detail.

- Other proxies for earning management detection should be considered and compare their findings.
- For the consideration of governance side, one can use some latest indexes and proxies for corporate governance. And can also construct the corporate governance index consisting of more qualitative nature variables.
- One can specifically examine the current phenomena after ascend of Companies Ordinance 2017 that is revised version of companies act containing new rules for business entities regarding financial information disclosure and directed the firms to use IFRS instead of IAS.

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Appendix

Corporate Disclosure Dimensions

1. Does the Company Disclose Board Members Biographies? Does it list the other boards its directors sit on?

Two marks for each

2. Does the Company have a Policy for Handling Conflict of Interest?

Four marks for disclosure zero for absence

3. Does the Board of Directors Provide a Code of Ethics or Statement of Business Conduct for all Directors and Employees?

Four marks for disclosure zero for absence

4. Disclosure of the Attendance Record of Each Director at Committee Meetings

Four marks for disclosure zero for absence