IMPACT OF CORPORATE GOVERNANCE ON EARNINGS MANAGEMENT AND COST OF CAPITAL: EVIDENCE FROM PAKISTAN

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DEDICATION

This Thesis is Dedicated:

To my Parents

The reason of what I become today.
Thanks for your great support, unconditional love and continuous care.

To My Dearest Wife and My Sweet Daughter “Maryam Ilyas”

I am really grateful to both of yours.
I am truly thankful for having you in my life.

To My Brothers and Sisters

You have been my inspiration, and my soul mates.

Mr. Muhammad Ilyas
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I would like to thank all those without whose support this daunted task of completing my Ph.D. thesis would not have been possible. First of all, praise and thanks to the Almighty Allah for bestowing upon me so many blessings and made me complete the thesis.

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special attention whose love and fun instilled me with devotion and motivation for getting over the line.

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Mr. Muhammad Ilyas
DECLARATION

I, Muhammad Ilyas, hereby declare that in my Ph.D. thesis titled "Impact of Corporate Governance on Earnings Management and Cost of Capital: Evidence from Pakistan," the materials contained have not been previously submitted for a degree in Abdul Wali Khan University, Mardan, or any other university. I further declare that this thesis is solely based on my own research.

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PLAGIARISM UNDERTAKING

I solemnly declare that research work presented in the thesis titled "Impact of Corporate Governance on Earnings Management and Cost of Capital: Evidence from Pakistan" is solely my research work with no significant contribution from any other person. Small contribution/help whenever taken has been duly acknowledged and that complete thesis has been written by me.

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I undertake that if I am found guilty of any formal plagiarism in the above titled thesis even after award of Ph.D. degree, the university reserve the rights to withdraw/revoke my Ph.D. degree.

Student signature: ____________________________
Muhammad Ilyas
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This is to certify that the research work presented in this thesis, entitled "Impact of Corporate Governance on Earnings Management and Cost of Capital: Evidence from Pakistan" was conducted by Mr. Muhammad Ilyas under the supervision of Dr. Shahid Jan Kakakhel.

No part of this thesis has been submitted anywhere else for any other degree. This thesis is submitted to the Institute of Business Studies & Leadership, Abdul Wali Khan University, Mardan in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the field of Finance, Institute of Business Studies & Leadership, Abdul Wali Khan University, Mardan.

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ABSTRACT

Firms need to disclose financial information to earn the trust of the investors and the market for efficient utilization of its resources and to reduce the cost of capital for their expansion. In this regard, companies are required to publish their annual reports as mandated by law. However, some firms also report voluntary disclosure of information to increase their goodwill for increasing the base of their existing investors as well as potential investors. In this regard, companies are required to follow accounting standards and other regulations as laid down by the respective regulatory environment. This not only helps firms to refrain from accounting manipulation but also helps them gain extra capital for their projects at the lower cost of capital.

This thesis investigates the association and impact of the regulatory environment on earnings manipulation (EM) activities as well as the cost of capital (CoC) for firms listed on Pakistan Stock Exchange (PSX). Moreover, this study also investigates the impact and association of EM on (of) CoC. These empirical investigations are done in three stages. The first stage examines the impact of Corporate Governance (CG) on Earnings Management (EM); the second stage reports the impact of CG on CoC. Moreover, to take into account the important role of EM in business failure around the world. In the third stage investigates the impacts of EM on CoC. The sample of the study is taken from PSX of all listed firms for the period 2006-16. A company is included in the sample if its data are available for the entire period of study. Thus, the study is restricted to only 144 firms for the 11-year period. Secondary data are downloaded from the State Bank of Pakistan (SBP), Securities and Exchange Commission of Pakistan (SECP), Companies’ websites and open doors website. Moreover, World Bank data has also been used in the study. The data are panel in nature. EM and CoC are used as dependent variables while CG is used as an independent variable. Moreover, EM is used as independent variables in the third stage of the current study, while CoC is used as dependent variable. For EM, the study used four different proxies namely Jones Model (JM), Modified Jones Model (MJM), Performance Matched Model (PMM) and Discretionary Revenue Model (DRM). For

1 In this thesis the regulatory environment represents the corporate governance system/mechanisms.
2 Earnings manipulation and earnings management in this thesis used interchangeably.
CoC, this study measures it through the weighted average cost of capital (WACC). CG is measured through an index developed from different factors of CG namely Board of Directors (BoD), Ownership and shareholding, and transparency, disclosure, and auditing. The study also includes control variables of the size of the firm, performance, leverage, capital expenditures, and cash flows from operations, Beta and gross domestic product growth rate. For the first stage of the thesis, the results show that CG significantly and negatively affects EM practices and this association is statistically significant. In stage two, the association of CG and CoC is negative and statistically significant. In the last stage of the thesis, the study finds that EM is positively associated with CoC and the association is statistically significant.

The overall findings of the study support the theoretical justifications that a strong and efficient system of CG ensures the dissemination of information to the concerned quarters and all stakeholders through the disclosure requirements of a firm. This disclosure of information not only improves the quality of accounting information but also builds and restore the trust of investors on the firm fundamental information. Thus, investors take into account the disclosed information while making the investment decision and thus reduces the cost of capital of a firm. Moreover, conclude that earnings manipulation practices of management generate the negative signal in the capital market. Thus, investors demand extra returns on their investment as compared to non-manipulated firms.
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<th>Description</th>
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<tr>
<td>ACT</td>
<td>Agency Cost Theory</td>
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<td>AFC</td>
<td>Asian Financial Crisis</td>
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<td>AT</td>
<td>Agency Theory</td>
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<td>BC</td>
<td>Board Characteristics</td>
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<td>BCT</td>
<td>Bankruptcy Cost Theory</td>
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<td>BET</td>
<td>Business Ethics Theory</td>
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<td>BI</td>
<td>Board Independence</td>
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<td>BoD</td>
<td>Board of Director</td>
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<td>BSA</td>
<td>Balance Sheet Approach</td>
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<td>BSA</td>
<td>Balance Sheet Data Analysis</td>
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<td>CAPM</td>
<td>Capital Asset Pricing Model</td>
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<td>CCM</td>
<td>Common Constant Method</td>
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<td>CFA</td>
<td>Cash Flow Approach</td>
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<td>CFO</td>
<td>Cash Flows from Operations</td>
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<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>CG</td>
<td>Corporate Governance</td>
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<td>CGI</td>
<td>Corporate Governance Index</td>
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<td>CM</td>
<td>Capital Market</td>
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<td>COC</td>
<td>Cost of Capital</td>
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<td>CoD</td>
<td>Cost of Debt</td>
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<td>CoE</td>
<td>Cost of Equity</td>
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<td>CRA</td>
<td>Credit Rating Agencies</td>
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<td>CS</td>
<td>Capital Structure</td>
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<td>DRM</td>
<td>Discretionary Revenue Model</td>
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<td>DW</td>
<td>Durbin and Watson</td>
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<td>EM</td>
<td>Earnings Management</td>
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<td>FE</td>
<td>Fixed Effect</td>
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<td>FEM</td>
<td>Fixed Effect Model</td>
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<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>FFI</td>
<td>Fundamental Financial Information</td>
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<td>FFI</td>
<td>Firm Fundamental Information</td>
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<tr>
<td>FRS</td>
<td>Financial Reporting System</td>
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<tr>
<td>GAPP</td>
<td>Generally Accepted Accounting Principles</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GDPG</td>
<td>Gross Domestic Product Growth rate</td>
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<td>GFC</td>
<td>Global Financial Crisis</td>
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<td>GLS</td>
<td>Generalized Least Square</td>
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<tr>
<td>IA</td>
<td>Information Asymmetry</td>
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<td>IP</td>
<td>Investors Protection</td>
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<td>IT</td>
<td>Institutional Theory</td>
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<td>JM</td>
<td>Jones Model</td>
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<td>KSE</td>
<td>Karachi Stock Exchange</td>
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<td>LL</td>
<td>The Levin and Lin</td>
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<td>LM</td>
<td>Lagrangian Multiplier</td>
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<td>MJM</td>
<td>Modified Jones Model</td>
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<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
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<td>OLS</td>
<td>Ordinary Least Square</td>
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<td>PMM</td>
<td>Performance Matched Model</td>
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<td>PSX</td>
<td>Pakistan Stock Exchange</td>
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<td>Political Theory</td>
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<td>RDT</td>
<td>Resource Dependency Theory</td>
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<td>RE</td>
<td>Random Effect</td>
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<tr>
<td>REM</td>
<td>Random Effect Model</td>
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<tr>
<td>ROA</td>
<td>Return on Assets</td>
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<td>ROE</td>
<td>Return on Equity</td>
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<td>SBP</td>
<td>State Bank of Pakistan</td>
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<td>Signaling Cost Theory</td>
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<td>SECP</td>
<td>Security and Exchange Commission of Pakistan</td>
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<td>SOE</td>
<td>State Own Enterprises</td>
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<td>SOX</td>
<td>Sarbanes-Oxley Act</td>
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<td>ST</td>
<td>Stakeholder Theory</td>
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<td>Code</td>
<td>Abbreviation</td>
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<tr>
<td>ST</td>
<td>Stewardship Theory</td>
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<tr>
<td>UK</td>
<td>United Kingdom</td>
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<tr>
<td>US</td>
<td>United State</td>
</tr>
<tr>
<td>VIF</td>
<td>Variance Inflation Factor</td>
</tr>
<tr>
<td>WACC</td>
<td>Weighted Average Cost of Capital</td>
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<tr>
<td>WB</td>
<td>World Bank</td>
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CHAPTER-1

INTRODUCTION

In the wake of the 1997 Asian Financial Crisis (AFC) many Asian countries made significant changes in their capital market (CM) regulatory systems. To avoid the unfavorable consequences, they further strengthen firms’ disclosure requirements and directed them to strictly implement investor protection arrangements. Other significant crises that brought regulatory changes were the market crisis of Russia (1998) and corporate collapses such as Health International Holdings (HIH) in Australia, Parmalat in Italy, Global Crossing Limited (GCL) and Enron in the United States (US). In addition, report that the regulatory measures such as improvements in trading and information infrastructure are undertaken. A well-functioning CM requires both strong legal and enforcement mechanisms. Therefore, a strong institutional and regulatory environment is closely associated with stock market information quality in countries with better investor protection (IP) (hereinafter will be used as a synonym to CG system) (Teoh, Yang, & Zhang, 2008; Wang & Yu, 2008).

In this regard, the capital market provides the platform to investors to allocate their resources in an efficient manner to achieve macroeconomic goals of the economy (Audu, Pelasai, & ThankGod, 2013). Moreover, reports that stock markets play an important role in an investor’s investment decisions, promote industries growth and facilitate companies to raise funds (Aurangzeb, 2012).

In addition, reveals that the developed CM’s increase the confidence of the investors on market and the businesses get their required financing at lowest possible cost. Such as Daouk, Lee and Ng (2006) demonstrate that due to improvement in the CM’s system cost of equity of firms’ are decreasing. Moreover, the good governance policies decrease the overall cost of capital (CoC). Reduces the ratio of business

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3 Stock market and capital market are synonymously used in literature.
failure because good CM’s and governance systems reduce the earnings manipulation (EM) practices of management.

The regulatory framework in Pakistan is introduced after the implementation of regulatory reforms. With the passage of time, these reforms are strengthened and modified for the purpose to meet future challenges (Hussain, 2011).

Corporate scandals such as Enron, WorldCom, Parmalat, Tyco, HealthSouth and Xerox in the late 20th and early 21st centuries again emphasized on the financial reporting quality of firms (Gul & Tsui, 2001). Such scandals led the researchers to conclude that financial information that is disclosed to the stakeholders need to be accurate and reliable. Firms may disclose such the financial information that may not reflect the true and economic value of the firm. Thus, management may indulge in masking the true picture of the financial performance of the firm. Moreover, they may also tend to hide their private benefits of control through such activities (Leuz, Nanda, & Wysocki, 2003).

The extant literature concludes that such activities lead to the expropriation of the investors’ funds. In turn, such actions encourage an imbalance in the financial system of the CMs’ and finally resulting in the corporate collapses (Habbash, 2010). Further, Khan (2016) reports that such collapse in the world’s CMs’ shook the investors’ confidence in these markets. However, these collapses not only affected the developed countries but also had a strong influence on the developing economies. For example, the AFC that started in 1997, many investors lost their investments in these Asian economies. Similarly, the Global Financial Crisis (GFC) also affected not only the individual investors but also many CM in the world. In addition, Johnson, Boone, Breach and Friedman (2000) report that these economies were not only weak in their macroeconomic indicators but a major cause of the AFC was the weak regulatory system of these countries. Likewise, Ohnesorge (2007) reports that one of the main causes of GFC was the weak economic and financial institutions of these countries which were affected the most. Moreover, during the credit crunch, not only developed countries but as well the developing countries led towards the GFC. The property prices were the main starting point of GFC.

4 See for example Goncharov (2005).
Furthermore, the extant literature concludes that a major reason for these crises were two fold; that the weak governance system of these CM, and the reporting of financial information by the management of the companies as well as the disclosure of these information (Caramssi, Gros, & Micossi, 2009; Hupkes, 2008). These studies conclude that though there were governance and regulatory arrangements in these CMs’ but they were not implemented in its entirety. For example, Bhattacharya, Daouk and Welker (2003) investigate 103 countries for insiders trading laws and the associated CoC and report that 87 of them have insiders trading laws. However, they find that the CoC is low in countries where these trading laws were the basis of court litigation or prosecution. Thus, the extant literature is consistent with the arguments that one of the main causes of these crises and corporate collapses were the weak regulatory and institutional environment of these CMs’.

Others report that the managers of these firms reported the firm’s financial position in a distorted way, i.e. the quality of financial information and disclosure were not representing the true and fair value of the firm. This behavior of managers regarding disclosures of firm information increased the information asymmetry (IA) that shattered the confidence of the investors (Johnson et al., 2000). This increase in IA led to two problems; investors were not able to understand what is being reported in the firm fundamental information (FFI) and they make an informed decision based on these FFIs which is based on earnings manipulated information. In turn, this leads to high EM and CoC.

Another strand of literature reports that a strong governance system not only improves the disclosures but also ensure the efficient utilization of resources (Healey & Palepu, 2003). For example, La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) report that countries whose governance mechanisms are strong, tend to have developed CM, have dispersed ownership structure and thus strong disclosure environment. It is also reported that the IP environment defines the reporting regulation of a country. For example, Hail and Luez (2006) report that countries with a market based system that follows standards and regulation along with high disclosures of FFI results in lower CoC, high value relevance and low EM. On the other hand, banking economies that tend to base their capital on credit from the
banking sector and financial institutions are usually associated with limited disclosures of FFI and thus results in higher CoC. Thus, a strong IP system is not only required to increase the disclosures but at the same time avoid large corporate collapses.

Thus, in order to restore the confidence of the investors, different countries initiated a change in their regulatory environment to protect their investors. For example, the US enacted Sarbanes-Oxley Act (SOX) 2002; Malaysia revised its CG systems, revised its Central Bank’s prudential regulation; United Kingdom (UK) initiated and revised its different committees’ reports, as well as Pakistan, started its code of corporate governance (CG) in 2002. Moreover, Organization for Economic Co-operation and Development (OECD) and World Bank (WB) also helped the legislative activities as well as in the strengthening of the regulatory environment in the developing economies (Organization for Economic Co-operation and Development, 1999).

Prior literature reports that such revised and strong regulatory systems enhance the financial reporting quality of listed firms on the CM. Firms started following a set of the finest rules and regulations to provide the best quality of financial information to their stakeholders. For example, La Porta, Lopez-De-Silanes, Shleifer and Vishny (1997) report that a strong IP system not only regulates the CM of a country but also help understand improve the quality of financial information in these CM. Moreover, Bartov, Goldberg and Kim (2001) report that a strong IP system helps to improve the quality of financial information, thus the confidence of stakeholders are restored and improve the disclosure of such FFI. Strong IP system and a detailed disclosure of FFI help to reduce the IA between the insiders and outsiders. Alternatively, it reduces the EM as well as CoC practices in the CM of the world.

The IA between the insiders and outsiders has existed since the inception of the business. For example, Jensen and Meckling (1976) report that the agency problem exists between the insiders and outsiders. However, this phenomenon is not connected to a specific region or country rather has existed both in developed and developing world. Bhattacharya et al. (2003) report that higher IA affects developing

5 For a detailed discussion on these regulatory changes, please see Ahmad (2013).
countries more than the developed countries as they investigate the effect of insiders trading laws and their effect on the CoC. They find that countries where a case is registered in a court of law against a firm, those countries tend to have low CoC and the vice versa. Since developing countries normally have a weak IP system, thus may have a higher IA in their CM. Moreover, Shliefer and Vishney (1997) report that the existence of IA is higher in developing countries than developed countries as developed countries has a strong IP system than the developing countries. Thus, developing countries may have higher expropriation of funds of investors specifically the minority investors than the developed countries (La Porta et al., 1997). In the similar vein, others report that the weak IP system may lead to higher EM and CoC (Bhattachrya et al., 2003; Luez et al., 2003).

Since Pakistan is a Common Law country but possesses the characteristics of Code Law countries where CM are weak and IP is low, hence this leads to a higher IA in its CM. Moreover, Pakistani firms have a strong concentrated ownership structure that may compel the managers to take such an investment project that is only beneficial to these owners and thus leading the minority investors to lose their invested funds. Since a weak IP system may weaken the disclosure of FFI to a great extent, therefore results in a higher IA giving managers the opportunity to manipulate the firm performance or hide their personal benefits of control. This may not only result in higher EM but also higher CoC since the disclosure levels of these FFs are low in a weak IP environment. Thus, an investigation of the level of EM and CoC practices in a weak IP system requires attention. In this thesis empirically investigates the impact of CG on EM; impact of CG on CoC; and impact of EM on CoC of sample firms listed on Pakistan Stock Exchange (PSX).

1.1 Corporate Governance and Earnings Management

The first stage of this thesis investigates the impact of CG on EM. After high profile corporates scandals, the issues of CG and EM received significant attention from government authorities and the general public (Basiruddin, 2011). CG affected

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6 Since cost of capital is based on the disclosure of financial information and the extant literature conclude that higher disclosure which is the result of strong regulatory environment leads to low cost of capital (Healy & Wahlen 1997).

7 Refer to Luez et al. (2003).
the EM from the perspective of agency theory (AT) (Habbash, 2010). The literature reveals that CG reduces the practices of EM. Moreover, CG theories such as agency cost theory (ACT), stakeholder theory (ST), stewardship theory (ST), institutional theory (IT), resource dependency theory (RDT), legitimacy theory (LT) and business ethics theory (BET) recommend that CG significantly affect the activities of EM because the agency theory encourage management to act for the shareholders’ wealth maximization instead of their own private benefits. In addition, in light of stakeholder theory management act for the interests of all stakeholders, stewardship theory also encourage management to act as steward. Similarly, other theories also act in such a way that management cannot indulge in the activities of the EM.

1.2 Corporate Governance and Cost of Capital

The second stage of the thesis investigates the impact of CG on the CoC. The cost-based theories of capital structure, CG theories and previous studies literature recommended that CG negatively and significantly affects the CoC. In the research of corporate finance, the role of CG received much more attention because it creates value for shareholders. Studies reveal theoretically and empirically the importance of CG because it aligns managers and shareholders’ interests. CG increases the value of the firm and in turn, it reduces the CoC. The CoC is the required rate of return of the investors which they demand on the basis of risk because the systematic risk of the firm reflects the CoC. CoC of poorly governed firms is high as compared to good governance firms’. Claessens and Yurtoglu (2013) report that if the CG system is good, then access of firms to external financing becomes high that decreases the CoC. However, in a country where governance system is weak then the CG mechanisms become less effective and this increase CoC. Since, a strong CG system enhances the financial reporting quality of the firms and alternatively, the CoC is reducing (Pham, Suchard, & Zein, 2013). Moreover, others report that to minimize the costs and to raise the external capital at the lowest possible costs firms are adopting the rules and mechanisms of CG (Claessens & Yurtoglu, 2013). Others reveal that if there is a good CG system then the CoC will be low (Shleifer & Vishny, 1997). Further, Shah et al. (2009) report that firms having good governance system then lenders and investors are more willing to make an investment at a lower relative rate of return and CoC will be lower.
Additionally, reveal that the differences in information among investors affect the CoC (Easley & Ohara, 2004). Discloser of information adding transparency and in turn transparency in earnings reduces the expected level of CoC (Barth, Konchitchki, & Landsman, 2013). Since the disclosure quality is high because underwriters and lender default risk perception leads to the lowest cost of debt (CoD) (Sengupta, 1998).

1.3 Earnings Management and Cost of Capital

The third section of the current study investigates the impact of EM on CoC. Keeping in view the importance of accounting information quality and its repercussions on the CoC. The corporate failures reflect the inefficiency of CM and governance system that shook the trust of investors in the CM. Consequently, the uncertainty increased and in turn, the CoC of firms also increased as investors demand a high rate of return.

Studies reveal that bankruptcy cost theory (BCT), signaling cost theory (SCT) and agency cost theory (ACT) show that if firms are engaged in earnings manipulation then their CoC becomes high. BCT states that high level of risk increases the risk of firms and hence management manipulate their earnings and alternatively, such manipulation increases the IA among the stakeholders of firms generally and specifically between management and creditors & investors. Thus, IA increases the CoC. Similarly, SCT proposes that if firms issue more equity as compared to debt then the stock prices are declining and management can manipulate their earnings to show smooth earnings. However, if firms engage in manipulation practices then investors demand higher returns and CoC of firms rises. Likewise, AT posits that there is a conflict of interests of management and investors. Hence, if management manipulates their earnings for self-interest then investors may demand high returns and CoC will rises. Empirically such as Shen and Huang (2011) examined the capital structure adjustment across countries and find that those firms who include more debt in their capital structure affect their rating level. If the rating agencies declared that these firms are involved in EM practices, then their CoC raises because the investor does not believe what financial reports present. In addition, Francis, LaFond, Olsson and Schipper (2004) and Easley and Ohara (2004) investigate informative risk and CoC and find that CoC and information risk are
positively associated. Those firms who do not disclose information and thus they demand a high rate of return.

1.4 Problem Statement of the Thesis

After the thorough study of previous literature find that EM practices are responsible for the business failure and the high CoC both in developed and developing economies. However, studies report that the efficient governance system reduces or eliminate the EM practices. Therefore, in this study concentrated to investigate the impact of corporate governance on earnings management and cost of capital in the context of developing economy like Pakistan.

As reported in the literature that due to inefficient governance system and the discretionary power of management firms indulge in the activities of earnings manipulation. Such activities mask the true financial information of firms. This is reported that the absence of transparency in financial reporting generates negative information (Piri, Abdoli, & Homayoon, 2013). Hence, the correct decision making of investors is affected by uncertainty. The literature further reveals that such actions of management also increase the CoC of listed firms because the confidence of investors are reducing and they demand an extra return on their investment to compensate for the high level of risk. Therefore, research demonstrates that corporate governance system and its implementation are utmost important to reduce or eliminate the earnings management practices and also reduces the level of CoC in developed and developing economies. Such as report that transparency in the reporting process reduces EM practices (Hunton, Libby, & Mazza, 2006). Moreover, quality information ensures greater transparency in financial reports (Holland, 1999). Further, demonstrated that financial institutions and States are the concern authorities to ensure the quality of financial information disclosure (Klai & Omri, 2011). In the similar vein, conclude that quality financial reporting’s are regulating through good governance system because governance system plays an important role to solve the problem of conflicts of interest and allocate the available resources in an efficient manner (Shah, Butt, & Hassan, 2009).

Moreover, the impact of earnings management on the cost of capital is also investigated.
The literature further reveals that the governance role in developed and developing economies are investigated. The role of CG in the developed economies are clear, however in developing economies like Pakistan still room exists to improve their systems. Moreover, literature reports that governance system and its effect on earnings manipulation is investigated in Pakistan such as Shah et al. (2009) and Kamran and Shah (2014) but the results do not clearly reveal its role in Pakistan CM. Shah et al. (2009) report that the governance system of Pakistan is in the transitional stage, therefore the unexpected results are revealed. Similarly, Benkel, Mather and Ramsay (2006) report that the time period of a study is the potential reason for this unexpected association. Hence, this study attempt to investigate the impact of CG system on earnings manipulation and also on the cost of capital. Moreover, Rad (2014) reveals that CG and CoC are largely missing in developing countries. Therefore, in this study take into consideration the Rad recommendation to investigate these areas in developing economy like Pakistan. Moreover, Barry, Peavy and Rodriguez (1998) reveal that CoC is a well-known topic of discussion in the field of corporate finance, though little research work is performed about the CoC in emerging markets generally and CoC and CG specifically. In addition, previous studies used individual characteristics of CG but in this study used corporate governance index (CGI) instead of individual factors. Such as recommended in the research studies of Kamran and Shah (2014) in Pakistan and Lakhal (2015) in international study to use an index instead of separate factors of CG. Moreover, demonstrates that the research area of EM and CoC are largely missing in the developed and developing capital markets. Hence, this study investigates impact of earnings management on CoC in Pakistan to examine in the context of developing countries because the earnings manipulation practices significantly affect the CoC. Finally, in the following sections, the three stages of this thesis are briefly explained.

1.5 Aim and Objectives of the Thesis

The main aim of the current study is to investigate the practices of earnings manipulation and the role of corporate governance system of Pakistan to prevent such practices of management and its effect on the cost of capital of listed firms on PSX. On the basis of the above discussion and problem statement, to answer the research
questions and to test the hypotheses, the following are the main objectives of the thesis.

1. To investigate the impact of corporate governance on earnings management in non-financial listed firms on Pakistan Stock Exchange, Pakistan.
2. To examine the impact of corporate governance on the cost of capital in non-financial listed firms on Pakistan Stock Exchange, Pakistan.
3. To investigate the impact of earnings management on the cost of capital in non-financial listed firms on Pakistan Stock Exchange, Pakistan.

1.6 Research Questions of the Thesis

To answer the thesis objectives, the following three questions are developed.

1. Does corporate governance control or eliminate the earnings manipulations practices of non-financial firms listed on Pakistan Stock Exchange?
2. Does corporate governance reduce the cost of capital of non-financial listed firms on Pakistan Stock Exchange?
3. Does the earnings management affect the cost of capital of non-financial firms listed on Pakistan stock exchange?

1.7 Main Findings of the Thesis

In summary, it is stated that this thesis is conducted in three stages. In the first stage, the impact of CG on EM is investigated; stage two refers to the impact of CG on CoC and in the third stage the impact of EM on CoC of the firm is investigated.

In all stages, the study used a sample of 144 firms from the listed companies of PSX for the period of eleven years during 2006-2016. A firm is included in the sample if the data are available for the entire period of study. Thus, the study is limited to the use of only 144 firms’ data and the total firm-year observations of the study are 1440 used for analysis. The data are secondary and panel in nature. Data are collected from the annual reports of the respective firms, State Bank of Pakistan (SBP) Balance Sheet Analysis (BSA), Securities and Exchange Commission of

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9 The study used in models of EM one lagged values, hence the study period is from 2007-2016
Pakistan (SECP), Pakistan Stock Exchange (PSX), open doors website, the World Bank (WB) and the sample firms’ websites.

The study measures the dependent variable of stage one EM through four different proxies. These are Jones model, modified Jones model, performance matched model and discretionary revenue model taken from the extant literature. CG is taken as an independent variable and is measured as CGI, which is adopted from Javid and Iqbal (2010) based on three diverse yet comprehensive factors namely board of directors (BoD), ownership and shareholding and transparency, disclosures and auditing covering 22 features. Since the data are panel in nature, thus after the diagnostic tests, the study uses panel data techniques for analysis for the all the three stages. After controlling for firm size, leverage, ROA, CFO, and CE, the study finds a strong and negative association of CG with EM. This relation is statistically significant at 5% level of significance.

The second stage of the thesis examines the impact of CG on the CoC of firms listed on PSX. As reported above, CG is measured through CGI adopted from Javid and Iqbal (2010) while the CoC is proxied by the weighted average cost of capital (WACC), which is the combination of the cost of debt and equity. The results show that CG is negatively associated with the CoC after controlling for a number of control variables as firm size, leverage, ROA, Beta as a proxy of market risk, and GDPG rate. This strong negative relation is statistically significant at the 5% level of significance.

In the third stage of the thesis, the impact of EM on CoC is empirically examined. The study used the same four measurement proxies for EM as discussed in stage one while for CoC, the thesis used WACC as a proxy. Moreover, the third stage like stage one and two used control variables like firm size, leverage, ROA, CFO, Beta as a measure of firms’ systematic risk and CE. The results of the third stage are that EM practices and CoC are positively and significantly associated and this association is statistically significant at 5% significance level. The positive association is due to the involvement of management in earnings manipulation that reduces the investor trust in such fraudulent information environment. Hence, they demand a high rate of return and ultimately the CoC increases.
The results of the study support the view that an efficient governance system improves the accounting quality of firms through proper and timely disclosures of accounting information. These results also indicate that firms need to follow an established method of reporting to improve and enhance their goodwill in the market to attract investors. Thus, it not only provides capital at a low cost but also results in a good firm performance based on the true and fair economic value of the firm. Moreover, these results suggest that firms in Pakistan adopt the Code of CG of 2012 in letter and spirit as it avoids the EM activities of the firm’s management. The results suggest that a strong governance system helps in removing all the allowable accounting alternatives that a manager enjoy while reporting accounting information and helps in limiting the managers’ discretion to manipulate accounting information. In line with this other report that firm and country specific institutional and regulatory environment affect the characteristics of financial reporting and thus, suggest that enforcement is the key for achieving the desired outcomes of higher accounting quality and low CoC due to these revised rules and regulation (Leuz et al., 2003). These results are in line with the extant literature, which reports a negative association of a CG system with EM and also CoC (Iraya, Mwangi, & Muchoki, 2015; Shamimul, Zabid, & Rashidah, 2014; Tanjung, Sucherly, Sutisna, & Sudarsono, 2015; Turegun & Kaya, 2016; Xie et al., 2003). Moreover, the results are also consistent with the argument that a better governance system increases the value of the firm and limits the activities of insiders reporting discretion, which they use for the expropriations of minority shareholders. Thus, an increase in a firm’s value leads to lower risk and finally to lower CoC (Azam, Usmani, & Abassi, 2011; Bozec & Bozec, 2011; Claessens & Yurtoglu, 2013; Yasser, 2011).

1.8 Organization of the Thesis

The thesis is organized as follow. Chapter-2 explains the concept of EM, financial reporting system, financial reporting, CG and its theories; Chapter-3 reports literature review; Chapter-4 presents the research methodology; Chapter-5 reports the critical section as the results and discussion of the thesis; and the last Chapter concludes the thesis findings, limitations, future researches and implications of the thesis.
CHAPTER-2

FINANCIAL REPORTING SYSTEM AND ACCOUNTING QUALITY: THEORIES OF CORPORATE GOVERNANCE

This chapter aims to explain the background of the main concepts of earnings management (EM), regulatory and financial reporting systems and the corporate governance (CG). Further, this chapter present theories of CG and their implications.

The financial crises around the world attract the attention of regulatory authorities and other government agencies. The regulatory authorities initiated reforms in their existing systems such as accounting standards practitioners revised the accounting standards and the government and other corporate sectors initiated and/or revised their governance reforms. These reforms not only strengthened the IP system but also improved the financial reporting system (FRS) that results in an enhanced disclosure of fundamental financial information (FFI), thus leading to a reduction in information asymmetry (IA) and enhancing the accounting quality. Moreover, the strong and revised CG system affect the management decision in reporting financial information to the stakeholders. These stakeholders take an informed decision based on these FFI, which has a low IA between the insiders and outsiders. However, the high level of IA between insiders and outsiders not only creates divided between these two important pillars of a firm but also creates doubts in the minds of investors. Thus, insiders take full advantage of the high IA by portraying the performance of the firm, which in reality do not represent the true and economic value of the firm. This Chapter is further organized as follow;

In section 2.1 presents the EM and its motivations; section 2.2 presents regulatory systems; section 2.3 shows financial reporting; 2.4 presents the accounting and regulations development in Pakistan; section 2.5 CG and its mechanisms; section 2.6 explains CG in developed and developing countries; section 2.7 reports CG code development in Pakistan and its challenges; section 2.8 explains the theoretical perspective of CG and EM; section 2.9 report the CG theories; and 2.10 summarize the Chapter.
2.1 Earnings Management

“Managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers” (Healy & Wahlan, 1999, p.368).

This phenomenon is referred to as EM. The extent literature defined that EM has different perspectives; e.g. Schipper (1989) is defined it as;

“a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain (as opposed to say, merely facilitating the neutral operation of the process)” (p.92).

Others such as Roychowdhury (2006) defined EM as;

“Management actions that deviate from normal business practices, undertaken with the primary objective of meeting certain earnings thresholds” (p.2).

“Earnings management have been considered as one of the methods used by the business leaders to mislead their stakeholders to report unrealistic numbers, despite the various check and balances (e.g. corporate governance code) on the process” (Mikoa & Kamardin, 2015, P.1).

These definitions can be organized into three classes such as 1) “Beneficial and White Earnings Management”. “Earnings management is taking advantage of the flexibility in the choice of accounting treatment to signal the manager’s private information on future cash flow”. 2) “Neutral and Grey Earnings Management” “Earnings management is choosing an accounting treatment that is either opportunistic (maximizing the utility of management only) or economically efficient” and 3) “Pernicious and Black Earnings Management” “Earnings management is the practice of using tricks to misrepresent or reduce transparency of the financial reports” (Ronen & Yaari, 2008, p.25).

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10 Management personal desire such as bonuses and promotions etc.
The extent accounting literature argues that EM is a controversial and longstanding issue. It is reported that EM results in the collapse of large businesses, failure of audit standards and poor quality of financial reporting. Barghathi (2014) concludes that accounting manipulation started as early as 1893. Others report that manipulation of accounting information is an old issue that can be traced back to the emerging period of accounting practices (Heinz, Patel, & Hellmann, 2013). Hence, Pornupatham (2006) reveals that due to its nature and its effects the issue of EM becomes a hot topic for researchers around the globe. In the similar vein, Beneish (2001) concludes that EM is one of the important issues in accounting research. In addition, Mohanram (2003) argues that EM is an important issue not only in accounting and finance literature but it also gained utmost attention in the capital market because a large number of firms misguide their investors through intentionally manipulating financial statements. He reports that managers change accounting assumptions; e.g., to include the previous capitalization expenses in the current period to show small size of bad debts; through transaction management manage firm income; take large one-time charge. Further, add that managers manipulate accounting information through accruals. If the value of discretionary accruals is positive and low, then firms manage earnings downward and vice versa.

The strand of literature gave different terminology to such manipulation practices such as income smoothing, earnings management, creative and big bath accounting and window dressing (Stolowy & Breton, 2004). In addition, Barghathi (2014) reports that managers manipulate their firms’ earnings through income smoothing or big bath practices of accounting. Copeland (1968) argues that income smoothing is “management’s intervention to reduce the volatility of an income stream over time by transferring earnings from over-weighted years to under-weighted years”. While big bath is defined as “a wholesale write-down of assets and accrual of liabilities in an effort to make the balance sheet particularly conservative so that there will be fewer expenses to serve as a drag on earnings in future years” (p.28). Further, Meini and Siregar (2014) demonstrate that EM is of two prominent types such as accrual11 and real12 EM. However, Beaudoin, Cianci, and Tsakumis (2015) demonstrate that managers still indulge in the activities of EM.

11 Judgments in financial reporting is accrual based EM (Healy & Wahlen, 1998).
Literature reports that in different industries practices of EM are different such as in services sector EM practices are high as compared to the manufacturing sector (Abed et al., 2012). Moreover, the literature reveals that EM practices are more common in publically listed companies as compared to private listed firms (Uadiale, 2012).

Another strand of research further reveals that EM practices may be bad or good for organizations. For example, Parfet (2000, p. 485) differentiates EM into bad and good EM. Bad EM is “improper earnings management because it intervening to hide real operating performance by creating artificial accounting entries or stretching estimates beyond a point of reasonableness” while good EM is the “reasonable and proper practices that are part of operating a well-managed business and delivering value to shareholders”. Afar the above reported information, Kassem (2012) reports that EM activities are either ethical or unethical. Proponents of EM argue that it is a legal action because it is within the boundaries of Generally Accepted Accounting Principles (GAPP). While others oppose this view and argue that it is not different from fraud. Hence, they considered that EM is an unethical act of management. Further, these situations create a challenge for auditors to know and identify whether these activities are either EM or fraud. Further, they report that still no consensus is developed that how to differentiate these activities. Therefore, auditors still face the difficulty to detect EM practices clearly. In this regard Fields, Lys and Vincent (2001, p.16) argue that “although not all accounting choices involve earnings management, and the term earnings management extends beyond accounting choice, the implications of accounting choice to achieve a goal are consistent with the idea of earnings management.” Managers may manipulate their earnings via two types of accounting approaches such as, “the accounting choices approach” which is further divided into two categories as legal and illegal transactions. Moreover, distinguishing between legal and illegal accounting choices is deemed one of the most common difficulties that auditors and accountants face. The reason being that there are many gaps in the accounting standards, GAAP, and international auditing standards. These differences create an opportunity for managers to manipulate the financial statements to achieve their desired goals instead of organizational goals. However, that it is the task of auditors to determine whether transactions are legal or

\[12\] To manipulate reported income to deviate from normal practices of business (Rowchowdhury, 2006).
illegal because there is no clear guidance on where this breakeven point exists to determine it. In addition, Mohanram (2003) examines that EM practices cannot always be illegal because sometimes managers manipulate their results in such a manner that fulfill their own interest. The second approach is the operations decisions approach (Rahmawati & Dianita, 2011). They further add that EM through operating decisions is extremely difficult to detect. That is one of the reasons that the previous research focuses on the accounting choices approach instead of operating choice approach.

The practices of EM negatively affect the value of firms that indulge in such action because it also reduces the quality of accounting information. For example, Habbash, Xiao, Salama and Dixon (2013) demonstrate that practices of EM reduce the quality of reported income because such activities cannot represent the true picture of the firm in term of performance. Moreover, Ascioglu, Hegde, Krishnan and McDermott (2012) demonstrate that quality of reported income and level of the disclosure are declined due to management manipulation practices of earnings information. Thus, financial information that may possess the degree of EM represents a low quality of accounting information. Further, Dechow, Sloan and Sweeney (1996) and Wild (1996) find that besides the above affects the EM can affect the investment decision of the investor because it reduces the confidence of them.

2.1.1 Earnings Management Motivations

This section reports that a number of factors act as the drivers of EM practices. Fields et al. (2001) report that when managers use their own discretionary choices instead of accounting numbers, then EM practices are initiated. Moreover, Mohanram (2003) concludes that by different ways firms’ managers manage earnings such as to change the accounting assumptions, include the previous capitalization expenses in the current period to show small size of bad debts, firm’s income is managed by transaction management and take large one-time charges. Further, Abaoub, Homrani and Gamra (2013) examine the driving forces of EM and demonstrate that EM determinants are the operational risk, loan loss provision, total risk, systematic risk and dividend per share.
Others report such as Fudenberg and Tirole (1995) demonstrate that managers make earnings smoothening to reduce the chances of their dismissal. Defond and Park (1997) reveal that managers make decisions about discretionary accruals to reduce dismissal chances due to the firm poor performance. Therefore, managers take into account a current year and expected year earnings and make manipulation in earnings figure. In addition, job security may also motivate managers to smooth earnings of current and future years to make sure the relatively consistent performance. Moreover, if a firm perform poor in the current period and managers expect good earnings in future then manager adjust the future earnings in the current period and if the current period earnings are good and expected earnings are poor, then managers save it and make future adjustment.

Another strand of literature demonstrates that sometimes the activities of EM are used as a tool to avoid loss such as Moreira and Pope (2007) reveal that firms’ having negative return during the time period when bad news is spread in the market about firms. Therefore, these firms involve in practices of EM activities to hide their losses from credit market participants and ultimately this affects the cost of debt. Firms which need more debts then they practice EM at a large scale to avoid losses. Similarly, Burgstahler and Dichev (1997) conclude that managers manage earnings either to avoid losses or to decreases in earnings. Moreover, to manage earnings, the managers make changes in working capital and CFO. Efendi, Srivastava and Swanson (2007) show that when a firm management expect that it is close to the level of default then management involvement in the preparation of fake statements that represent the accounting information in such a way to avoid losses. Furthermore, Trueman and Titman (1988) demonstrate that managers also use earnings smoothing to reduce cost. They argue that due to a high level of earnings volatility, the probability of bankruptcy become high. Therefore, firms borrowing cost also increases. Moreover, Barghathi (2014) demonstrates that firms which are financially weak become involved in the practices of EM to represent favorable financial position. Furthermore, Balvers (2009) demonstrates that among the incentives of EM one is the CoC.

Not only different drivers’ push management toward EM practices but an inefficient CG system also acts as a driver of EM activities. Studies conclude that
existing CG system is not efficient and such weak CG mechanisms drive EM process (Jiraporn, Miller, Yoon, & Kim, 2008; Rezaei & Roshani, 2012). Similarly, Liu and Lu (2007) conclude that EM practices are the result of the inefficient CG system.

It is also noted that regulators tolerate managers to manage financial report information for a better image of the firm. However, this reveals that the discretionary power in reporting is like a double-edged sword (Leuz, 2010). Moreover, Xiaoqi (2013) shows that activities of EM are either real or accrual base. Real EM affect cash flow while accrual-based EM do not affect it. Some firms use real EM activities as they change the value of current earnings according to their choice by altering time or structure of transactions. Furthermore, Baber, Fairfield and Haggard (1991), Bushee (1998) and Dechow and Sloan (1991) conclude that firms chief executive officers (CEO) reduce research and development cost at the time of their tenure ending to show high earnings during the short term. Further, in this regard, Baber et al. (1991) conclude that managers can increase or decrease expenses of research and development to affect the statement of profit and loss to get their own targeted incentives. Similarly, Bange and Bondt (1998) conclude that managers may change the cost of research and development to achieve their desired level of results such as to increase the level of free cash flow and decrease the taxes level on taxable profit. Another method of EM is that when management offer price discount to accelerate the level of sale, show overproduction to reduce the cost of goods sold, mention low level of discretionary expenditure and reported margin improvement (Roychowdhury, 2006). In addition, Dechow and Skinner (2000), Fudenberg and Tirole (1995) and Healy and Wahlen (1999) demonstrate that managers may adopt different approaches for EM such as they accelerate the level of sale, alter the shipment schedules, delaying the expenditure of research and development and maintenance. In addition to this, Bruns and Merchant (1990) and Graham, Harvey and Raigopal (2005) report that financial executives use the real manipulation instead of accruals based manipulation because regulators and auditors have attracted more by accrual based manipulation as compared to real earnings manipulations. Accruals-based manipulation alone is a risky act for the firms. Additionally, Jiraporn et al. (2008) add that managers sometimes use their discretionary power in financial reporting to create an opportunity for their own private benefits instead of stockholders benefits and Omonu
(2007) demonstrates that managers involve in EM activities to get incentives of strategic reporting and they change the revenues and expenses figures of the firm.

Other researchers demonstrate that there are also a number of numerous factors exist that motivate managers to engage in EM activities such as Healy (1985) shows that managers for increasing their bonuses and compensation are engaged in EM practices. DeAngelo (1988) reveals that managers use their discretion accounting choices to show an ideal picture of firms’ performance. Hence, managers present a positive position of the firm over a longer time period to earn bonuses related to profitable performance.

Veenman, Hodgson, Praag and Zhang (2011) report that managers continuously observes the expectations of the CM. Hence, they involve in EM to increase their own stock options. Further, McNichols and Stubben (2008) investigate EM motivations consequences. They concentrate on capital investment decision and demonstrate that firms report fake information in term of overinvestment in property, plant, and equipment. Therefore, internal decisions strongly affect the EM of firms. Moreover, Pornupatham (2006) concludes that EM is initiated for the purpose to increase the firm’s share prices. In this regard, further Barghathi (2014) concludes that the literature shows that analysts reveal that managers try to meet or beat the expected values of financial performance. And they engage in EM as this market reacts to such negative reported earnings of firms is severe while it rewards positive reported earnings. Similarly, Aharony, Lee and Wong (2000) reveal that through discretionary accruals firms show their earnings high. Thus, the stock prices of such firms are increased. In this regard Barth, Elliott and Finn (1999) also find that managers use earnings smoothing for maximization of share prices.

Besides the above discussed factors, others report that the level of EM is affected by political and regulatory systems such as Burgstahler, Hail and Leuz (2006) examine a large sample of private and public firms from 13 European countries and the results show that EM activities are high in private firms as compared to public listed firms. Moreover, in countries where the legal system, as well as its implementation, is weak, then the management involvement in EM practices are high, and vice versa.
Holthausen (1981) concludes that to increase the informational content of financial information managers manipulate earnings and such manipulation is beneficial for the shareholders. In this regard, Arya, Glover and Sunderthe (2003) conclude that earnings level and its pattern convey information and on the basis of such information managers achieve their desired results. Moreover, Chen et al. (2009) investigate the regulatory incentives of EM in Chinese listed firms and demonstrate that firms due to regulatory incentives engage in manipulation activities to avoid the chances of firm delisting and suspension of trading. In addition, Moyer (1990) investigates the EM activities in the U.S. commercial banks and the results demonstrate that these banks are involved in EM activities to get the obligatory regulatory cost reductions.

Literature also reveals that not only organizational and management concerned factors motivate management to manipulate earnings information but corporate tax rate also acts as a motivational factor of it. The importance of tax in undeniable in any country and in a corporation as well. Since it reduces the income of a firm, therefore management engages in practices of EM to reduce the impact of tax (Mulyadi & Anwar, 2014; Smith & Stulz, 1985).

In addition, this is also reported that the weak governance system of a country also responsible for EM and business failures. Such as Dechow et al. (1996) examine the internal CG mechanisms effect on EM activities. The analysis reveals that firms involve in EM activities in situations when the executive director's control the board, duality, CEO is the founder of the firm, the audit committee of the firm is a weak and small number of outside block-holders own the firm ownership level. Moreover, managers also engage in EM to attract a large number of external investors at the lowest cost.

Jiraporn et al. (2008) and Rezaei and Roshani (2012) demonstrate that numerous incentives motivate managers to engage in EM activities. Existing literature on EM categorized such activities into opportunistic and beneficial EM practices. Further, reveals that managing earnings to achieve private incentives (the managers’ desired goals) constitutes opportunistic EM and managing earnings to achieve stockholders’ incentives constitutes beneficial EM. Leuz et al. (2003) investigate 31 countries for the systematic differences in the activities of EM. The results conclude
that insiders for the purpose of their own private benefit use EM activities. Almasarwah (2015) reports that EM has certain incentives such as CM, bonuses, mergers and acquisition, regulatory and political, research and development and information value. Moreover, Healy and Wahlen (1999) demonstrate that managers may be tempted to adjust earnings to achieve desirable incentives. In the similar vein, Beneish (2001) concludes that there are two types of EM practices such as informative and opportunistic. Informative EM is to maximize firm value, while opportunistic EM is that when managers get their private benefits and mislead the shareholders. It is worth mentioning to note that opportunistic EM provides less reliable accounting earnings because it does not represent the true financial performance of the company. Therefore, the quality of reported earnings of the firm are reduced (Habbash, 2010). The following paras explain some of the most important incentives of EM as reported in the extent literature (Healy & Wahlen, 1999).

### 2.1.1.1 Capital Market Incentives

EM and stock prices of firms are associated. Kim and Yi (2006) demonstrate that discretionary accruals of publically traded firms are high than private firms. Therefore, the statement of stock prices and EM association is supported by this research finding. Bartov et al. (2001) reveal that in stock market investor believe in the expectations of financial analysts. Therefore, managers manipulate their firm statements according to the expectation of analysts. Habbash (2010) shows that to beat the financial analyst expectations and to attract potential investors’ managers’ become involved in the activities of EM. Managers’ use income increasing and decreasing strategy of EM when pre-manage income is below its expected value and when pre-manage income is high than its expected value. Therefore, report positive profit to make sure the sustainable last year performance. However, firms which are going for the initial public offerings (IPOs’) their share prices are based on their financial performance. Therefore, managers manage their firm earnings to get an offer of the high share price. Moreover, Bens, Nagar, Skinner and Wong (2003) reveal that if earnings per share are below the expected value then managers decide to repurchase its share and this action is considered as EM tool.
1.1.1.2 Incentives of Political and Regulatory Requirements

The political and regulatory systems are playing an important role in economic development in developed as well as in developing economies. In the context of Pakistan, the political system is over a long period is uncertain, therefore this uncertainty and instability significantly affect the business performances. Moreover, the regulatory authorities also design and implement various rules for the smooth operations of the business and economic prosperity\textsuperscript{13}. The literature and empirical evidence reveal that economic growth require stable political and efficient regulatory systems.

Habbash (2010) reports that the manager sometimes engaged in EM because they trying to fulfill the incentives of other stakeholders. Further, add that the regulatory rules may push firms towards EM practices such as Haw, Hu, Hwang and Wu (2004) demonstrate that in China the government set regulations for firms to issue additional capital in the form of bonds or shares should maintain minimum 10\% ratio of return on equity (ROE). Consequently, this requirement push firms towards practices of EM. In this regard, Jones and Sharma (2001) investigate EM practices in new and old listed firms in Australia. The results show that newly listed firms are less involved in EM activities as compared to old listed firms. Assisted the results that on new firms’ market impose rules to fully disclose required information and quarterly disclose cash flow statement. Similarly, Han and Wang (1998) demonstrate that during the Gulf war, oil companies reduced their income due to the political inventions and in turn, these companies earned high profit from low retail prices.

2.1.1.3 Management Compensation Contracts Incentives

To get their personal incentives managers are engaged in EM activities and influence their firm share prices. Moreover, to reduce agency cost of agency problems and further to align shareholders and management interests they report a profit as required (Habbash, 2010). Similarly, demonstrated that for their own monetary compensation managers manipulate earnings of their firms (Healy, 1985). To overcome the problem of EM a number of initiatives are taken in every country like

\textsuperscript{13} Such as corporate governance code of Pakistan developed in 2002 and amended in 2012.
strengthening the regulatory systems, revised accounting standards and procedures and governance systems.

2.2 Regulatory System

The corporate and market collapses of 1998, the Russian market crisis and a number of business failures such as Enron 2001 in the US, GCL 1997, HIH 2001 in Australia and Parmalat 2003 in Italy brought significant changes in the regulatory systems of CMs’ around the globe. Moreover, report that the AFC 1997 exposed the regulatory systems of the CM in Asian countries. Therefore, countries around the globe started revising their regulatory and institutional infrastructure. The improved information infrastructure and trading systems are the outcomes of the regulatory measures of the CM. In addition, the strong enforcement and legal mechanisms are required for the well-functions of CM. Finally, conclude that countries, where IP is better than the strong regulatory and institutional environment, are closely associated with quality information of stock market (Teoh et al., 2008; Wang & Yu, 2008).

Literature reveals that laws and regulations vary from country to country and the laws and regulations are implemented through courts, market regulators, and participants. If laws and regulations are not implemented effectively then insiders fail to repay to creditors and to distribute profits among their shareholders. Therefore, external sources of finance are not providing funds to these firms (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). Moreover, better legal protection through institutional environment controls the self-interest of managers to a great extent. For example, conclude that the board independence enhances managers monitoring behaviors to a certain extent in favor of stakeholders and the chances of takeover exert extra pressure on managers. Therefore, they act for the interests of shareholders (Man & Wong, 2013). Thus, managers are reluctant to manipulate the accounting information in order to avoid costly litigation and even in some cases removal from the position (DeFond & Park, 1997; Fudenberg & Tirole, 1995)

Cross countries literature concludes that countries where IP is strong then managers use real EM activities instead of accrual based EM because analysts’ can easily find the management involvement in earnings manipulations if they use accrual based EM (Enomoto, Kimura, & Yamaguchi, 2015). Moreover, it has also been
reported that the CG system strengthens the ethical behavior of management to avoid accounting reporting manipulation (Pornupatham, 2006).

The Credit Rating Agencies (CRA’s) also play an important role in improving the legislative activities in a country, thus they strengthening the CM. Moreover, the financial accounting and CG systems are assisted through these agencies. The CRA’s help financial markets to improve since these markets reduce IA between investors and issuers about the creditworthiness of countries and companies. These agencies base their information sharing on the disclosure level of the firms (Elkhoury, 2008). It is worth mentioning here that many of these accounting manipulations are being referred to EM in the developed countries. However, the CG system of these countries is strengthened and developed to a level that the market controls the activities of firms (Nicholson & Kiel, 2004).

Literature regarding developing countries is scarce for accounting quality, IP and FRS environment (Lazarides & Drimpetas, 2011; Mulili & Wong, 2011). For example, Pakistan is also strengthening the regulatory system to protect the interests of the stakeholders of the market. The regulatory framework in Pakistan is introduced after the implementation of regulatory reforms in early 2000 in the wake of AFC (Hussain, 2011). Moreover, to implement the regulatory systems the role of CG cannot be underestimated because CG stimulates companies’ performance, limit the abuse power of insiders and behaviors of managers. In addition, the CG act as a monitoring tool to ensure the accountability of corporate to protect interests of investors and society. Stock market due to the implementation of CG regulations plays its role to protect the interest of small shareholders. Because of front-line regulators, the stock market takes initiative actions against the firms which do not fulfill regulatory requirements of PSX (Pakistan Stock Exchange, 2017). Hence, reveals that the efficient regulatory system affects the financial reporting system.

2.3 Financial Reporting

Besides the regulatory system of the CM, the financial reporting also plays its role to reduce or eliminate the manipulation of accounting information. The financial reporting is an important determinant of a strong CM. Information of financial reports is considered as a performance parameter of firms because reported information
attracts investors for investment and also act as a tool of IP (Bartov et al., 2001). This information shows the financial performance and position of publicly held firms (Bushman & Smith, 2001). Thus, disclosures of earnings significantly affect the business activities, management and investment decisions of a firm. However, managers still attempt to adjust earnings to achieve their desirable incentives (Healy & Wahlen, 1998). Similarly, the accounting standards permit managers to prepare financial statements according to their judgment that gives discretion to managers to manipulate accounting information (Healy & Wahlen, 1999).

In this regard Asuquo (2013) defined the financial reporting as;

“Financial reporting is the act of communicating to interested parties, information on the resources obligation and performance of the entity or enterprise” (p.5).

The FRS requires companies to publish statements that must be clear, simple and easy to understand. Salteh et al. (2012) find that in the existing economic system, reliable and accurate financial information play a vibrant role in decision making process of firms. On the other hand, stakeholders also need information to make their own decisions. Hence, financial reports are important for the information transmission from insiders to outsiders because financial reports facilitate stakeholders for making informed decisions. Moreover, the quality information of financial reports ensures that market participants make accurate investment decisions. Therefore, quality information ensures greater transparency in financial reports (Holland, 1999). Hence, the CoC of firms’ decline due to reducing the level of uncertainty. They also add that quality of financial reporting ensures the authenticity of the information provided through financial reports (Choi & Pae, 2011). Furthermore, report that financial reporting is not the end results but its quality depends on every stage of its process like transactions disclosure and information of the selection of accounting policies. Financial reports require qualities of transparency, clarity, reliability, and relevancy that reduces IA and ultimately this helps in informed decisions of investors. Finally, this reduces the CoC (Jonas & Blanchet, 2000).

Good quality financial reporting is defined as;
“I conceptually define financial reporting quality as the precision with which financial reporting conveys information about the firm’s operations, in particular its expected cash flows, in order to inform equity investors” (Verdi, 2006, p.3).

After corporate scandals, stakeholders raise questions on the quality and reliability of financial reports. Hence, the accounting information must be neutral, complete and free from any type of error (Uadiale, 2012). Further, the quality of information is necessary for decision making purpose (Barghathi, 2014; Cotter, Tarca, & Wee, 2012). Hence, accountant and management are responsible to prepare and present high quality financial reports because they prepare such reports (Atik & Ismail, 2011). One of the objectives of the accounting and financial reporting process is to provide useful information about the profitability of firms because accounting earnings are used in decision making process of investors and all other users (Piri et al., 2013). This leads to a reduction of IA and alternatively result in low EM and investors taking into account the disclosed FFI, thus lowering the CoC (Chen, Hope, Li, & Wang, 2010).

2.3.1 Financial Reporting and Earnings Management

Quality financial reporting helps in improving the decision making process of the investor as being low IA between insiders and outsiders helps in detecting EM (Hunton et al., 2006). However, if financial reports are not transparent then true information about firm performance is kept hidden. They hide the true financial information for the purpose to protect their professional career (Piri et al., 2013). Furthermore, others report that if the financial reports lack transparency then firm provides IA which representing the manipulated financial statements and managers achieve their personal gains instead of firm. Moreover, the manager self-interest reflects in accounting information instead of company economic reality (Halioui & Jerbi, 2012).

Regulators of accounting information create opportunities because they relax to adopt the methods of reporting their own choice. Hence, managers exercise their own judgments in preparation of financial reports (Barghathi, 2014). In addition, others report that using this as an opportunity to estimate accounting figures in financial reports according to their own discretion and personal agenda (Holland &
Ramsay, 2003). In this regard report that accrual based accounting system facilitate the practices of EM as managers on the basis of assumptions prepare the accounting information. For example, accounting choice helps managers to manipulate accounting statements according to accounting standards which provide a room for opportunistic treatment. However, according to discretionary accruals managers estimate accounting figures through their own judgment. Discretionary accruals choice is less costly for the firm and it has low constraints as compared to accounting choice approach (Pornupatham, 2006).

To control such accounting manipulation techniques and to ensure transparency in accounting information for the purpose to safeguard the interest of shareholders is required (Leuz, et al., 2003). Moreover, quality financial reports ensure to control and reduce manipulation practices (Almasarwah, 2015). In addition, reported that web-based financial reporting increase the quality of earnings because due to transparency IA between investors and managers are low, hence reaction of the financial market to web-based financial reports and quality of earnings is positive. Thus, findings reveal that web-based financial reporting is also an important determinant in controlling of EM practices of firms (Cormier, Ledoux, Magnan, & Aerts, 2010).

2.3.2 Financial Reporting and Corporate Governance

CG and financial reports are interdependently associated. After financial reporting scandals, the role and importance of CG in financial reporting received considerable interest from regulators. Investors’ loss their confidence in financial reports due to scandals of high profiles, auditors’ independence concern issues and restatement of financial reports by managers (Rezaee, 2004). Another study reports similar results that after the accounting scandals realized the need to improve the financial reporting standards to establish good governance environment. In developed economies, the association of CG and quality of information has been investigated and recently realized this issue in emerging economies (Klai & Omri, 2011). Moreover, research reveals that the failure of CG results in the failure of financial reporting (Norwani, Mohamad, & Chek, 2011).
With the help of good CG system can reduce management manipulation process. However, the literature reveals that the international accounting standards may detect the practices of EM through transparent financial reports (Leuz et al., 2003). In this regard also find that good CG system improves quality and transparency of financial statements (Pornupatham, 2006). Additionally, the agency theory (AT) and literature reveal that CG helps to reduce the conflict of interest of managers and shareholders and in turn, it improves the financial reporting quality (Habbash, 2010). Further, reports that CG effects the financial reporting quality. The results reveal that CG mechanisms significantly affect the financial information quality. However, the quality of reporting is reduced by the power of families, foreigners, and block-holders (Klai & Omri, 2011). In this regard, further, add that validity and transparency of financial statements are enhancing through strong CG system. The results reveal mix evidence about the impact of the CG strength on the quality of financial statement information (Myring & Shortridge, 2010). In addition, find that good quality of earnings is utmost important because it encourages the practices of good CG and effective disclosure practices. CG and quality of earnings are positively associated (Meeampol, Rodpetch, Srinammuang, & Wongsorntham, 2013). The literature further shows that CG use as a mechanism of monitoring for the consistency and reliability of financial statements (Kelimeler & Sınıflandırması, 2016). Others report that consistency and reliability of financial statement become more effective when CG reduce or eliminate the practices of EM (Turegun & Kaya, 2016). Further, reveals that if directors having the expertise in financial matters then they can easily detect the EM activities of management, specifically in firms where CG is weak (Man, 2013). However, if the quality of CG mechanisms is weak then firms cannot follow financial statement requirements according to accounting standards. In such fraudulent firms, the quality of CG is poor in any form (Smaili & Labelle, 2009). If the CG system is weak then firms produce such financial information that misleads information users and results in EM practices.

Further, the literature reveals that without good CG system accountability, responsibility, transparency, and fairness in accounting information are disappearing. They add that consistency and reliability of financial statements become effective because CG limiting the practices of EM (Turegun & Kaya, 2016).
2.4 Accounting and Regulations Development in Pakistan

Ashraf and Ghani (2005) examine that in the South Asian region Pakistan has their own economic potentials. Pakistan is situated in South Asia, earlier it was the part of British Colony. In 1947 the Indian Subcontinent is divided into India and Pakistan. Moreover, several wars have happened between Pakistan and India, and in 1971 the East and West Pakistan’s are divided into two countries like Pakistan and Bangladesh. For their business concern, after independence, Pakistan adopted the companies’ act 1913 and auditor certificate rules of 1932. Moreover, in 1952 formed a private institute (Pakistan Institute of Accountants) and allow it to carry on its own interests and the government accounting professional matters. After that in 1961 Institute of Chartered Accountants of Pakistan (ICAP) was formed and in 1966 established the Institute of Cost and Management Accountants of Pakistan (ICMAP). Ibrahim (2006) report that in Pakistan during 1999 introduced the national accountability ordinance to eliminate the public officers corrupt practices as well the corruption from the country. Moreover, the accountancy profession is regulated through Chartered Accountants (CAs), Cost and Management Accountants (CMAs), and Public Finance Accountants (PFAs).

Further, Ashraf and Ghani (2005) reveal that the accounting development in Pakistan passes through three stages; 1) from independence to 1971, 2) 1971-1984 and 3) from 1984 onward to till date. Moreover, report that Pakistan follows the International Accounting Standards\(^{14}\). Hence, reveal that the CM of Pakistan offers to foreigner investors the opportunity of promissory investment. Moreover, reported that countries are either follow common or code laws. The situation of Pakistan in some studies report as common laws because firms adopted the tax and financial reporting systems separately, low level of labor influence on CG system and in standard settings low involvement of government. However, others show that Pakistan as a code laws country because Pakistani listed firms use debt and preferred sources of financing, firms find indulge in low quality financial reporting, weak equity market and large and strong family owned group businesses. Conclude that a number of attributes affect the accounting quality in Pakistan. Therefore, demonstrate that the family owned ownership act as a threat to auditors’ independence. The low audit fee in

\(^{14}\) Now is international financial reporting system.
Pakistan affects the quality of accounting practices in Pakistan. To avoid the burden of taxes Pakistani listed firms show revenue as understate and overstate their expenses. In addition, Ameer (2013) reports that the Pakistani firms follow the detail reporting procedures as compared to other developing economies. Companies cannot provide the actual information, they portray fake information and such activities directly or indirectly affect the decisions of stakeholders’. Similarly, Qureshi (1975) concludes that the financial reporting weaknesses in Pakistan such as firms cannot maintain the distinction in provisions and reserved, lack of disclosure accounting policies and valuation of assets at their gross values in the balance sheet. Further, reported the rules and regulations evolution process in Pakistan, in 1974 Pakistan got the membership of the International Accounting Standard Committee (IASC) and after that Companies Ordinance 1984 was passed. In addition, in 1999 formed the SECP under the securities and exchange act 1997. Finally, the CG code of 2002 Pakistan directed firms to follow the standards of IFRS for disclosures and financial statements preparations. In addition, the code directed firms to quarterly publish the un-audited financial statements and companies need to publish a compliance report in their annual reports. However, Ashraf and Ghani (2005) demonstrate that IFRS adoption of Pakistan is not improving the quality of financial reporting. In Pakistan, capital market finds lack of IP, weak enforcement mechanisms and inefficient judicial system are explaining the state of financial reporting.

2.5 Corporate Governance

The importance of CG in the early 90’s and 2000 has been reported in the extent literature. In the recent past, the concept of CG received more attention due to a large number of corporate scandals. Moreover, weaknesses of CG are explored and this attracts the attention of the general public all over the world and especially in U.S. (McGee, 2008). Further, add that issues related to CG are aggressively discussed in early 2000’s (Azeem, Hassan, & Kouser, 2013). In the similar vein, due to the failure of many good reputed firms around the world CG received much attention in the academic literature (Okpala, 2012). Similarly, other reports that CG in the recent past become a hot topic for discussion. The investment decision of investors is based on strong and efficient governance system. Hence, its importance is to take into account because it reduces the level of risk (Tore, 2015).
The recent financial crisis and high profile corporate scandals in East Asia, Europe, and U.S. led the way of researches of CG in emerging, transitional and developing countries (Siam, Laili, & Khairi, 2014). The AFC recession is incurred and concludes that the weak CG structure welcomed such crises (McGee, 2008). Thus, after the 1997 AFC, CG is introduced and the public gets notice of weak CG also in Malaysia. After this crisis Malaysian government designed and adopted the reforms of CG for enhancement of good corporate management system. To investigate the effect of CG in post reform time in Malaysia researchers reveal that firms are involved in the malpractice of CG (Abidin & Ahmad, 2007).

Literature report that good CG system has a number of advantages such as it creates transparency, fairness, and accountability. It also provides guidance to corporate bodies in their deed and actions (Emmanuel & Hodo, 2012); reduce the agency problem among shareholders and managers, eliminates or reduces the EM activities (Man, 2013); moreover, report that it is used as a monitoring tool to protect the interests of minority shareholders (Yusoff & Alhaji, 2012).

CG is defined as;

“Structure whereby managers at the organization apex are controlled through the board of directors, its associated structures, executive initiative, and other schemes of monitoring and bonding” (Donaldson, 1990, p.376).

Shleifer and Vishny (1997) defined CG as;

“The ways in which suppliers of finance to corporations assure themselves of getting return on their investment” (p. 737).

However, a very mostly accepted definition was provided by La Porta et al. (2000).

“Corporate governance is, to a large extent, a set of mechanisms through which outside investors protect themselves against expropriation by the insiders” (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000, p.2).

On the other hand, OECD defines CG in a comprehensive way.
“The system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders and other stakeholders and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance” (OECD, 1999, p.38).

The definitions of CG reveals that the organizations need to developed such an environment that protect the rights of various stakeholders. Moreover, to protect the interests of investors and especially the rights of minority shareholders. Hence, by creating such an environment the businesses can easily achieve their targeted goals and survive in the competitive environment.

Due to such important role of CG mechanisms in the business success, Clarke (2004) demonstrates that to prevent failure of corporations the business world welcome and acknowledge CG mechanisms. The literature demonstrates that in the last two decades’ developed and implemented a number of different mechanisms of CG to monitor the discretionary actions of management. Moreover, reports that investors believe that such mechanisms protect their rights. Regulators are found that CG mechanisms solve the agency problems, therefore protected the creditors’ interests (Habbash, 2010). Further, reveals that these mechanisms will facilitate the monitoring process of management and measurement activities of accounting figures. CG mechanisms can be divided into two groups such as internal and external. Internal mechanisms are concerned with shareholders’ interests and top management monitoring process. However, external mechanisms are concerned with regulations of monitoring process which affect firms, credit risk of firms, policies related with investment and non-executive directors controlling behavior (The World Bank, 2013). In addition, report that CG mechanisms improve the efficiency and effectiveness of operational systems of firms and also reduces the incidence of error or manipulation in accounting systems (Lee, 2006).

Moreover, in the world of economics discuss the CG rules because it is the most important issue in recent years. Moreover, the rules of CG equally become important for public and private firms. On the basis of these existing rules, new and
effective rules are designed to strengthen the existing CG mechanisms. These new rules become the driven force for policies transparency to protect investors, creditors and bankers. The advance rules reduce corruption and on the other hand accelerate the flow of foreign direct investment (Alhaddad, Alzurqan, & Alsufy, 2011).

2.6 Corporate Governance in Developed and Developing Countries

The literature reveals that in previous studies of CG majority are conducted in developed countries (Almasarwah, 2015); such as others report that the mechanisms of CG are investigated in listed firms of Germany, Switzerland, and U.S. They compared the CG systems in these economies and reveal that mechanisms of CG in these economies are developed. Hence, professionalism of managers is improved and in turn, their abilities of monitoring of firms are increased. Moreover, they recommended that mechanisms of CG can further improve through board composition, increase the level of duties of board members, extend the liability of monitoring of board, expand duties of care and employ external auditors (Bleicher, Leberl, & Paul, 1989). In this regard, Nicholson and Kiel (2004) suggest that as compared to developing countries the developed countries now pay less attention to the study of issues related to CG. They believe that mechanisms of CG are developed enough in countries such as Australia, U.S., and UK to affect the performance of firms. Moreover, Davies and Schlitzer (2008) demonstrate that practices of CG are different across the countries. Moreover, Aguilera and Jackson (2010) and Reddy and Minoiu (2009) find that economics, management, culture, society, law, and politics affect the development of CG mechanisms across the countries and further find that these factors differently affect the CG mechanisms which are based on the nature of each country. Similarly, Mulili and Wong (2011) investigate CG systems in developed and developing economies. The results conclude that CG systems of these economies are different due to differences in various factors such as economic, culture, financial systems, legal systems and structural differences of firm ownership. Further, they add that CG becomes an international issue due to business globalization. In the similar vein, Anderson and Gupta (2009) investigate the factors that affecting the CG system in a sample of 22 countries. The results demonstrate that the legal system and financial structure of these economies affect the nature of CG. Moreover, Doidge, Karolyi and Stulz (2007) investigate the CG adoption process in
developing and developed economies. The results conclude that country economic and financial development acts like incentives for the adoption of good CG mechanisms. The countries which have poor economic and financial development their CG mechanisms find poor incentives from economic and financial systems. Similarly, in the research work compared the CG system of different countries such as Hopt (2011) examines the comparison of CG system across in a sample of 33 countries. The analysis demonstrates that CG system direct and control firms, therefore CG system plays its important role in the mechanisms of stock exchange.

CG mechanisms concentrate on the protection of shareholders. Lazarides and Drimpetas (2011) investigate mechanisms of CG in Greece. The results conclude that as compared to developed countries CG in Greece is less effective due to firm size, board characteristics and power of leadership. Hence, conclude that in developing countries development and implementation of CG face a number of restrictions. In this regard Okpara (2011) identify a number of restricted factors of development and implementation of CG mechanisms in Nigeria. These factors are shareholder exploitation, BoD cannot act as they are responsible, lacking law enforcement mechanisms, weak monitoring and enforcement systems, and disclosure and transparency system are absent. However, Ebaid (2011) examines CG in a developing country and find that as compared to weak CG mechanisms strong CG and favorable auditors’ decisions are associated. Moreover, demonstrates that CG mechanisms are the voluntary adoption to improve the financial reporting procedure quality in Egyptian listed firms. Moreover, Clarke (2007) demonstrates that both in developed and developing countries around the world CG evaluation is based on the firm performance and accountability. Accountability and firm performance are in line with the procedures and policies of CG. Moreover, CG act as guidelines to determine responsibilities and rights of the management process.

2.7 Corporate Governance Code Development in Pakistan and its Challenges

Javid and Iqbal (2010) reported that the establishment of SECP is an important step in the development of the regulatory framework of the CM of Pakistan. The regular institutions in Pakistan for businesses guidance are SBP, PSX, SECP, the
institute of corporate governance of Pakistan. Ibrahim (2006) study that like other countries the legislature of Pakistan assigned the development responsibility of CG code to SECP and the commission legislated the code in 2002. After the code introduction in the business it faces a number of problems such as the code cannot add value to stakeholders’ interests, it is outdated and defective. Moreover, report that businesses show their resistance because it is very expensive to comply with the provisions of the code and they observed the practical difficulties in its implementation. In addition, for the implementation of the code businesses cannot have required expertise. Other such issues face by the code is that Pakistan ethical principles draw from Islamic law, while SECP draws the fiduciary duties rules from the common law of Anglo-American. He further reports that the rule of CG in Pakistan has multifaceted such as general corporate law, corporate law rules and regulations, regulations of the stock exchange as listing rules, civil laws, criminal laws, and special processions. The proper governance system under the umbrella of these laws is difficult to develop and implement. In the similar vein, demonstrate that the internal and external audit committees are introduced in the global CG mechanisms and SECP also did this. However, these committees lack the financial expertise to ensure that the business affairs to be according to the laws. However, reported that CG cannot implement in isolation from principles and values of human beings. Further, he explains that the corporate ownership structure of Pakistani firms is concentrated in the form of a family’s ownership. They manage as well as control the businesses. However, Pakistan follows the Anglo-American common law rules that are not in line with the ownership structure of Pakistani firms because the Anglo-American laws is based on dispersed ownership structure. Moreover, the minority shareholders less than 20 and 10 percent respectively in the companies’ ordinance 1984 and corporate code are not favored them, such as ordinance report that at least 20% ratio required to initiate a complaint against management and according to the code required at least 10% shareholder’s to approach SECP for complaint. Therefore, the minority shareholders approach the civil courts for the issues they face in business. In addition, Javid and Iqbal (2010) report that the CG code of 2002 left the directors independence as voluntary to business, hence the issues of risk management, policies of board compensation and internal control guidance remain unclear. Moreover, they report that the CG code of Pakistan is based on the view that such listed firms having a low level of dependency on CM and outside investors, while
high level dependency on financial institutions and internal large investors as compared to developed economies. Further, add that in Pakistan listed firms the ownership is held by families, State and the affiliations of multinational corporations. They further add that the determinants of corporate governance code in Pakistan are the size of the firm, ownership concentration, need for external finance of firms and profitable investment opportunism.

In the similar vein, Ameer (2013) reports that in Pakistan lager number of businesses are control by majority ownership of families, hence they select such directors which are in their control and make policies in their best interest. In family owned businesses owners cannot transfer power to anyone else. In addition, shows that in Pakistani listed firms for independent non-executive directors only pay a fixed amount and they cannot compensate through proper remunerations. They also have no plan for long term benefits. In Pakistan businesses face the shortage of good professional and specific knowledge of governance matters, hence they cannot have utilized their expertise in the best interests of their business because such professional has limited time. The majority shareholders affect the actions of internal and external committees, hence they approve the statements according to majority shareholders’ expectation and in turn, they get the reward of this.

Ameer further reports that the CG code of Pakistan covered all necessary aspects like developed economies and SECP continuously trying to make the code more efficient and effective. Moreover, added that the businesses can interact with the factors that affect the global and local markets. SECP encourage businesses to follow the CG code in true spirit because the code ensures the accountability and transparency, and in turn, it protects the rights of stakeholders. The regulatory body like CEO, BoD, management, and shareholders implement the CG mechanism.

2.8 Theoretical Perspective of Corporate Governance and Earnings Management

In research, theories play an important role because the theoretical concepts more efficiently and perfectly explain the association among variables of the study. Therefore, in this section highly concentrated on the theories of CG.
Theories mean assumptions and concepts. Association of concepts is tested through research (Neuman, 2004). Therefore, reveals that theories explain and understand the particular research results. Thus, in a discipline where researchers follow the theories, it indicates the maturity of that particular discipline. Moreover, with the help of theories in a systematic way relate issues of a particular discipline easily and thoroughly investigating. In the field of social sciences, researchers need theory and theory require the empirical research work (May, 2011). Further, adds that theories and empirical evidence of research are interdependent.

Kerlinger (1986) defined theory as:

“A set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena” (p.9).

Deegan and Unerman (2006) explain the theory and related work as follow;

“In the wake of a growing number of high-profile accounting failures (such as Enron and WorldCom), it has never been more important for accountants to thoroughly understand and be able to critique the accounting practices which they use. Without such a theoretically informed understanding, it is difficult to evaluate the suitability of current accounting practices, to develop improved accounting ..., and to defend the reputation of accounting where accounting practices are wrongly blamed for causing companies to fail” (p.4).

In summary, a theory is a conceptual association of causes of concepts and through empirical ways, these associations and causes are tested (Barghathi, 2014). Therefore, in this study, a number of theories are made the base to test the developed hypotheses and answer research questions to achieve the objectives of the study. However, until now no consensus is developed about the theoretical base of CG in research but a number of theories are developed to describe the phenomenon of CG in various conditions (Parum, 2005). The next section presents theories of CG with previous empirical evidence from the literature.
2.9 Corporate Governance Theories

CG theories have their roots in the AT. Moreover, with the passage of time, various theories evolved such as stewardship, stakeholder and resource dependency theories. In addition, the series of such theories recently expanded to political, legitimacy and social contract theories. Further, conclude that the evolution of such a large number of theories is important to explain practices of good CG in an effective and efficient manner. These theories explain the cause and effect relation of variables instead of regulatory structure (Yusoff & Alhaji, 2012).

2.9.1 Agency Theory of Corporate Governance

The leading theory in the research of CG is the AT (Yusoff & Alhaji, 2012). This view is also supported by the statement that CG mechanisms are either internal or external in nature and are designed on the basis of AT (Roberts et al., 2005; Weir, Laing, & McKnight, 2002). The AT focuses on the separation of owners and management of a firm. Management act as an agent and work for shareholders’ interests such as maximization of wealth (Klein, 2002). Similarly, demonstrates that this is also referred to as agent and principal relationship. Hence, AT postulates that managers act for their own personal interest instead of shareholders rights. Therefore, this separation open room for AT in the business world (Habbash, 2010). The literature also reveals that AT is playing its role in various discipline.

The principal agent association creates a conflict of interest that leads to agency cost. Agency costs refers to cost of contract formation, loss due to agent decisions and costs of monitoring and controlling the actions of the agent (Eisenhardt, 1989), the cost to disciplining agent to prevent the abuse (Shleifer & Vishny, 1997) and expenditure of principal to prevent unusual expenditure of agent is known as agency costs (Jensen & Meckling, 1976).

Studies propose solutions to the agency problem and recommended an efficient market that has the characteristics of corporate control, labor management, and information about corporates (Clarke, 2004). Others also recommended that governance mechanisms align the relationship of principal and agent, minimize agency related costs and to protect interests of shareholders (Davis, Schooraman, &
Donaldson, 1997). CG act as controlling mechanism of conflict of interest as Demsetz and Lehn (1985) report that mechanisms of CG cannot directly improve firm performance rather it observes management behavior and monitor process of financial reporting to resolve the issue of agency problem and this increase firm performance. By this way, CG reduces agency cost and align the interests of management with the interests of shareholders. Similar arguments are also presented by Habbash (2010). In summary, conclude that AT reduces the problems of interests between principals and agents. Moreover, reduces or eliminate the problems between minority and majority shareholders of firms. Hence, management concentrates the value of the firms and interests of owners instead of their private benefits. Further, reveals in this study that the AT acts to control the manipulated activities of the management and CG mechanisms also monitor the management actions.

Further, reveals that AT also significantly affect the level of CoC of firms. Such as Mande, Park and Son (2012) find that firms which adopt and implement the CG system then the costs of debt and equity can be significantly reduced because it increases the value of the firm. High value firms show that these firms can pay debts and equity obligations in the future, therefore investors’ confidence increases and they demand low rate of returns. Others studies like Ajinkya et al. (2005) report that CG mechanisms reduce agency problems and this, in turn, reduces the agency costs. Hence, at this level reveals that the management manipulation practices of earnings and the CoC of listed firms are declined.

2.9.2 Stakeholder Theory

Another important theory of CG is the stakeholder theory (ST). Studies such as Blair (1999) and Schilling (2000) argue that ST has its roots in the concept of AT as ST is based on different stakeholders’ interest (Donaldson & Preston, 1995; Freeman, 1984; Freeman, Wicks, & Parmar, 2004). ST is based on the notion that large organizations become more powerful than even the government cannot control them. Moreover, these organizations move beyond the accountability of stakeholders (Habbash, 2010). Therefore, management can easily manipulate their financial information in their personal interest. However, the ST act to control management discretionary power to indulge in information manipulation.
Stakeholder theory is defined by Clarke (2004) as;

"Stakeholder theory defines organizations as multilateral agreements between the enterprise and its multiple stakeholders. The relationship between the company and its internal stakeholders (such as employees, managers, owners) is framed by formal and informal rules developed through the history of the relationship. While management may receive finance from shareholders, they depend upon employees to accomplish the productive purpose of the company. External stakeholders (customers, suppliers, and the community) are equally important, and also constrained by formal and informal rules that business must respect" (p. 158)

Furthermore, ST focuses on the issues of institutional stakeholders. Therefore, corporates focus on the concept of balancing interests of all stakeholders in order to get their satisfaction (Abrams, 1951). However, the concept of this theory is narrow in nature because it focuses only on the interests of shareholders and considers their interests are the only interest of the corporation. On the other hand, as compared to AT this theory is better because it focused on various constituents of firms (Coleman, 2008). Therefore, according to law the fiduciary duty of any organization is to maximize returns of the shareholders. Management gets investors, suppliers, and employees as inputs, process it and convert them into saleable form for customers. However, according to this approach customers, suppliers, employees, and investors have their own interests such as stakeholders are trade unionist and associations, political parties, government agencies, associated corporations, communities, the general public and prospective employees. Moreover, report that clients and competitors are the stakeholders, therefore firms need to improve operational efficiency. Further, conclude that firms are not only accountable to shareholders’ but also to a large number of stakeholders (Yusoff & Alhaji, 2012). Others also report that the economic value of a business cannot be created individually. However, people when come together and cooperate with each other than their positions are improving (Freeman et al., 2004).

Researchers’ empirically investigate stakeholders’ theory perspective; for example, Kiel and Nicholson (2003) show that stakeholders are either direct or indirect. Direct stakeholders are directly affected by the functions of organizations. Direct stakeholders of firms are shareholders, investors, customers, employees, and
suppliers, while indirect stakeholders are indirectly affected by functions of organizations such as government. Moreover, Mitchell, Agle and Wood (1997) show that stakeholders are employees, suppliers, local government, clients, banks and political parties. They also report three characteristics of stakeholders; 1) Stakeholders have the power to influence firms; 2) Stakeholders have a legal relationship with the firm and 3) Urgency of shareholders claim on the firm. On the basis of these attributes, managers develop strategies to handle the needs of stakeholders. Others report that stakeholders are differentiated into three broaden classes such as; consubstantial, contractual and contextual stakeholders. Consubstantial stakeholders are the essential stakeholders for the existing of the firm such as shareholders, investors, strategic partners, and employees. However, contractual stakeholders are stakeholders with them businesses have some contractual relationship such as suppliers, customers, subcontractors, and financial institutions. Further, they explain the contextual stakeholders are the representatives of countries, societies, communities, administrations of public and opinion and knowledge makers. They further add that to check the credibility of various businesses which operate in the environment to link their natural and social systems (Rodriguez, Ricart, & Sánchez, 2002).

On the other hand, this theory is criticized on the ground that how different stakeholders are equally treated (Hoque, 2006). Moreover, the objectives of stakeholder theory are different from the fundamental objectives of the organization. This theory is further criticized because it acts as a single valued objective (performance of the firm is measured through the gain of all stakeholders) (Jensen, 2001). However, the performance of firms is not measured by this gain of stakeholders. Though, a number of issues are taken into account by this theory such as information flow from top to lower management, working environment and interpersonal relations (Sanda, Mikailu, & Garba, 2005).

Finally, in light of this theory conclude that the flow of information reduces the IA, hence the manipulation practices of the management decline. In summary, report that management cannot manipulate accounting information, therefore the confidence of the investors becomes high. Moreover, the CoC of the firm also reduces because the investor cannot demand a high rate of return.
2.9.3 Stewardship Theory

This theory also plays its role in the efficiency and strengthening of CG systems. Research shows that managers act as stewards and they act in the best interests of shareholders (Donaldson & Davis, 1991). Stewardship theory (ST) is also based on the sociological and psychological approach to align the interests of corporate executives, owners, and management (Albrecht, Albrecht, & Albrecht, 2004). Similarly, report that ST is based on the social psychology that affect the executive behavior. The steward prefers collectivists instead of individualistic approach behaviors. Moreover, steward behaviors cannot depart from organizational interests because the ultimate interest of the steward is organizational objectives (Davis et al., 1997). Further, reveals that maximization of shareholders’ wealth and utilities of stewards are associated because they act for the performance of firms to satisfy interests of all interested parties and to sustain a level of balance governance system (Smallman, 2004). Hence, the management does not act to manipulate firm information and ultimately the firm gets financing at cheaper costs because the investors make an informed decision. Moreover, this theory concentrates on the facilitation and empowerment instead of monitoring and controlling as compared to AT. On the other hand, this theory develops strong coordination system in the organization through an optimum structure of CG. Managers and directors’ act as a steward and maximize the wealth of shareholders (Habbash, 2010). Moreover, this theory is seeking a strong relationship between firm success and managers. Therefore, profit maximization improves dividend and share prices of firms (Davis et al., 1997). In light of this theory reveals that CG reduces the manipulation practices such as Nicholson and Kiel (2007) report that managers act as responsible persons. Moreover, Siebels and Knyphausen-Aufseb (2012) find that executives are trustworthy. Moreover, Letza, Sun and Kirkbride (2004) argue that managers are the stewards of the resources, hence they are authorized to run the business. Finally, sum the view of those who support this theory that executives on the basis of internal knowledge and information make informed decisions. Moreover, their decisions are quick and independent, therefore the value of the firm increases and they manage their firms efficiently (Donaldson & Davis, 1991). Alternatively, management does not manipulate earnings because they act as a steward for the wealth maximization of shareholders and then firms get external financing at a cheaper cost, therefore CoC
reduces. Moreover, Fama and Jensen (1983) report that internal and external market forces can ensure the lower agency costs because managers avoid the firm losses. Hence, managers as stewards’ act on contractual terms and they required to act on behalf of owners. If they concentrate only on their own interests and avoid the interests of owners and other stakeholders, then the agency problem arises. Further, add that there are two perspective arises; 1) agents when act on behalf of owners increases shareholder’s wealth and this leads to low EM and low CoC. If there a strong CG system, managers on the basis of strong performance and wealth maximization gets bonuses and owners get the dividend. 2) if the agent does not act, it gives rise to an increase in IA and this leads to high EM and high CoC. However, CG mechanisms ensure the reducing agency problem and its costs (Black, Jang, & Kim, 2006; Chen et al., 2009).

2.9.4 Institutional Theory

This theory is well known due to its nature because it focuses on the organization internal operating process and observable organizational structure. Empirically reveals that due to internal operating and external observable structure of organization external parties cannot investigate the organization activities (Meyer & Rowan, 1977). Thus, according to this theory CG asserts to link the organization to its environment through clearly defined organizational goals to meet the environmental expectations (Judge & Zeithaml, 1992). Further, studies reveal such as DiMaggio and Powell (1983) suggest that organizations need to follow the same organizational structure as other companies in the same environment because the monitoring mechanisms can easily be adopted and implemented. In this regard, Habbash (2010) reports that sometimes an organization internally design their own structure of CG and other organizations in the same environment follow its governance system. Therefore, with the passage of time similar CG systems are adopted by all firms. The overall findings of this theory reveal that CG and organizational structure are significantly associated. Hence, firms need to follow the same rules and regulations as adopted in other firms, for example, the accounting standard literature reports that firms also follow IFRS as a determinant of institutional theory (IT) and have higher accounting quality in comparison to those who have structured their accounting rules in light of local standards. Thus, such firms who follow similar accounting
conventions as IT have lower EM and CoC and a strong CG system, while those who follow local accounting standards they result in low accounting quality showing a high EM, CoC and a weak CG system.

2.9.5 Transaction Cost Theory

Cost is a very important element in the business world either to produce goods or provide services. Moreover, firms try to reduce the possible lower level costs of operations and for this purpose firms design a number of strategies such as cost leadership strategy. Cyert and March (1963) developed a transaction cost theory (TCT). Williamson (1996) argues that it is an interdisciplinary theory because it aligns economics, law, and organizations. Further, state that organizations are developed by people and alternatively people have their own objectives and views while these organizations engage in a number of transactions with their stakeholders. Thus, the transaction acts as a unit of analysis, which pushes managers to act as opportunists and arrange transactions of firms in favor of their interests. If the level of the cost of transactions is high, then management engage in the activities of EM and additionally, the CoC may also increase because the high cost creates uncertainty. Therefore, investors demand a high return from the business. Therefore, in summary, this theory postulates that transaction cost may also work as a determinant of EM that leads to a high CoC.

2.9.6 Resource Dependency Theory

The resource dependency theory (RDT) is based on the concept that organizations and outside resources are interdependent. Thus managers may link firms with the external environment to receive the required resources for the firm survival (Pfeffer, 1978). However, to link organizations with their environment to get their required resources to increase the level of uncertainty. Thus, it is important that the BoD absorbs the critical factors of uncertainty into firms from the external environment to reduce the level of risk (Yusoff & Alhaji, 2012). This is also observed that resources are unequally distributed. Hence, this unequal resources distribution leads the interdependence of relationship among organizations. This interdependence is also based on a number of other factors/characters such as resources importance, shortage of the relative resources and concentration of required resources in the
environment (Donaldson & Davis, 1991). In this regard report that strong governance mechanisms can create links with external resources that reduce the uncertainty of firm for these resources and the linkage of the firm with its external environment reduces the level of uncertainty. Alternatively, the transaction costs of the firm are declined (Hillman, Cannella, & Paetzols, 2000). Hence, managers do not need to manipulate the resources/information of the firm, thus lowering EM. Such actions lead to a trustable environment and stakeholders make an informed decision based on these resources, hence the CoC is reduced. Moreover, based on the rules of resource dependency to reduce uncertainty, BoD bring together important constituents such as public policy decision makers, social groups, suppliers and buyers, resources as skills and information and legitimacy (Gales & Kesner, 1994). On the bases of the above discussion reveals that managers make aligns with the business environment because they need resources for the business operations to reduce the level of uncertainty. Hence, the business does not manipulate accounting information and in turn, get external financing at the lowest possible costs because they get investors’ confidence. Such firms ensure the efficient utilization of available resources.

2.9.7 Social Contract Theory

Business success depending on the cooperative social interaction with it. Every society has its own values and norms, hence business management need to familiar with social values, norms, and customs.

This theory postulate that managers’ decisions should be ethical in their macro and micro social contracts (Donaldson & Dunfee, 1999). Further, elaborate that the macro-social contracts concentrate on the local communities and all expectations of the community from businesses. However, micro-social contracts are the specific type of contracts of business with society. In this regard Gray, Owen and Adams (1996) show that society acts as a series of social contracts and these contracts are established between society members and society itself. Moreover, Donaldson (1983) detects that corporate social responsibility act as a contractual obligation that firms owe to societies in which they operate. Thus, managers tend to avoid decisions that are not in the best interest of the firm rather act as stewards and perform their fiduciary duty. This leads to an informed decision making environment based on the actual reported
performance of the firm. This results in higher accounting quality and leads to low EM and CoC.

**2.9.8 Legitimacy Theory**

This theory is defined as:

“A generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate with some socially constructed systems of norms, values, beliefs and definitions” (Suchman, 1995, p.574).

Like SCT the legitimacy theory (LT) is developed on the basis of a social contract between organization and society because for the operations of businesses required permission from the society. The society provides permission of what business own, offered the authority to use the natural resources and to hire employees. Therefore, businesses are accountable to society in term of what it does and how it operates (Suchman, 1995). Firms need to cater to the needs of all stakeholders and if they are unable to fulfill the expectations of all stakeholders as mentioned in the contracts then impose restrictions such as the closing of business operations, ban resources of business and maybe avoid business products. Empirically investigate this phenomenon to establish the acceptable association between community expectations and corporate disclosures (Deegan, 2004). Other reports that the traditional approach of business is the profit maximization. However, according to legitimacy theory profit is the function of firm legitimacy (Ramanathan, 1976). Hence, like ethics and social contract theories, this theory also focusses not only on the rights of the shareholders but also concentrate on the interests of other stakeholders. Ultimately management does not indulge in the practices of EM. Hence, the CoC of the firm is declining.

**2.9.9 Political Theory**

Political system stability plays its role in the economic system and business success because of the political authorities’ design policies for their economies.

Political theory (PT) promise that shareholders have voting power rather than purchasing the voting power (Pound, 1983). This theory also presumes that allocation of firm profit, corporate power allocation and privileges are important. Moreover,
these actions are determined in the favor of governments. Therefore, the political model of CG affects firms’ governance systems development and implementation. The observation demonstrates that from last few decades the political governments influence organizational governance system. Therefore, politics are entering into the CG structure and other mechanisms of firms (Hawley & Williams, 1996). The results show that the political system can influence the firm governance system and also trying to develop a system that allocates the power and privileges of business. Hence, if the political system facilitates the business practices then management avoid manipulation of accounting information that tends to reduce the CoC.

2.9.10 Ethical Theories and Corporate Governance

There are a number of ethics relevant theories such as business ethics, virtue ethics, feminist ethics, discourse ethics, and postmodern ethics. Business ethics introducing morality into business as beliefs, values, and norms (Crane & Matten, 2007). This shows that the social norms play its positive role in the operations of the business. Hence, if ethically people engage in the management of firms then the EM practices are not opportunistic and additionally, the CoC of such firms are reducing. Ethics theories support the AT approach that principals and agents resolve the issues of conflicts of interests to reduce the probability of manipulation practices and level of risk, thus the CoC can decline.

Further, report that Pakistan is an Islamic country, therefore reveals that Islamic law guide people in an ethical manner. The BoD act for the best interests of all stakeholders and they cannot manipulate true information of firms to deceive them. Hence, expected that the management of Pakistani listed firms cannot indulge in manipulation practices because they follow the Islamic laws and governance system of Pakistan in true spirit.

2.10 Summary of the Chapter

This Chapter presents the concepts of EM, regulatory system in generally and also deport the regulatory and accounting systems of Pakistan, financial reporting, corporate governance and the theories of corporate governance. Moreover. The CG system of Pakistan and its challenges are explained. It is reported that management
due to opportunistic and informative purpose engage in earnings manipulation and ultimately mask the true financial position of the firm. Hence, a number of large firms around the world are failed. Countries started revising their regulatory and institutional infrastructure. The financial reporting is an important determinant of a strong CM and it acts as an investor protection tool. In addition, quality financial reporting helps in improving the decision making process of the investor as being low IA between insiders and outsiders helps in detecting EM and reducing the CoC. CG system has a number of advantages such as it creates transparency, fairness, and accountability. Moreover, to prevent failure of the corporation the business world welcome and acknowledge CG mechanisms. The system of CG work to reduces the activities of EM and CoC in developed as well as in developing economies around the globe. Moreover, the AT of CG highlight the role of management and shareholders, stakeholder, stewardship, institutional, transaction cost, social contract, resource dependency, legitimacy and business ethics theories guide management to do act in such a way that is best for the organization value maximization and to reduces the manipulation practices of management and the CoC of the frim.
CHAPTER-3

LITERATURE REVIEW

In this chapter presents the critical literature review of regulatory and accounting qualities in term of corporate governance (CG) and earnings management (EM), CG and cost of capital (CoC) and EM and CoC. This chapter is organized as an introduction of CG and EM. Section 3.1 presents the review of CG and EM Stage-I of the study; section 3.4 presents CG and CoC of Stage-II and section 3.10 review EM and CoC of Stage-III. Moreover, section 3.3 reports the summary of Stage-I. Detail explanations are provided in the following sections.

3.1 Literature Review of Stage-I

Literature reveals that in recent years’ CG and EM received much attention from academicians, regulators and market participants (Uadiale, 2012). Attention from researchers and regulators is due to the failure of large businesses. For instance, some prominent companies such as Enron, HealthSouth, Rite Aid, Subeam, Tyco, WorldCom, Waste Management, Xerox, and HIH around the world collapsed. Moreover, these firms are involved in the accounting scandals. Such failures either resulted from accounting manipulation or were due to inefficient and ineffective mechanisms of CG because the existing mechanisms of CG failed to restrict such opportunistic behaviors of management. Therefore, issues are raised by investors about the effectiveness of monitoring devices to protect their interests (Khalil, 2010). Hence, after corporate failures, the importance of CG mechanisms increased. CG and EM practices are discussed in several previous studies of developed and developing economies and the results show that if CG is weak, then management manipulates earnings information easily. Therefore, they achieve their desired results in the form of increasing their compensation and bonuses (Alghamdi, 2010; Basiruddin, 2011; DeAngelo, 1988; Dechow et al., 1996; Healy, 1985). The undeniable importance of CG mechanisms is explicitly investigated in the literature. The results conclude that CG mechanisms can detect management involvement in practices of EM. Furthermore, mechanisms of CG are used as a safeguard tool against EM and manipulation of accounting numbers to protect investors (Pornupatham, 2006). In the
similar vein, Gul and Tsui (2001) find that CG is an effective tool for the monitoring system in corporations. Others show that CG is used as a mechanism of monitoring to prevent the practices of EM. These studies demonstrate that awareness is increasing about the importance of CG practices that play its role to prevent the activities of EM (Kelimeler & Sınıflandırmasi, 2016). However, the existing CG system is not efficient. Therefore, these weak CG mechanisms enhance management towards the manipulation of firms’ earnings information (Jiraporn et al., 2008; Rezaei & Roshani, 2012). The inefficiency of CG systems activates the experts to deeply concentrate on CG systems in recent decades. The recent literature demonstrates that the implementation of CG practices such as smaller board size, more independent directors, BoD financial expertise and more frequent meeting of BoD can make the monitoring role more effective (Alzoubi & Selamat, 2012). Further, to thoroughly understand the CG and EM relationship, Alzoubi and Selamat (2012) suggest that senior management need to concentrate on the practice of CG and manipulation of accounting information to enable firms to establish quality financial reporting. Hence, the activities of EM should be in decline. In summary, conclude that EM is the practices of managers to mask the true picture of firm performance and reduces the investors’ protection if the CG system is weak. Hence, CG is used as a tool to control management such malpractices. Moreover, reveals that CG ensure strong protection because it limits the insider’s activities of getting private benefits and ultimately management provide reliable information because the CG system strengthens the accounting reporting system.

3.1.1 Corporate Governance and Earnings Management

This section presents the previous studies that investigate CG and EM. CG mechanisms are either internal or external. Internal and external mechanisms effect on EM activities is investigated in previous research. Such as Ikechukwu (2013) examines the relationship of EM and CG practices in Nigeria and use the internal and external mechanism of CG. The results demonstrate mix findings that due to internal mechanisms such as high level of ownership concentration (OC) and smaller board size then managers manage earnings more explicitly. However, if implemented, external mechanisms of CG then EM activities are curtailed.
In another study, the CG and EM relationship is investigated in listed firms in the US. The results show that firms having small board size, annually elected boards, having independent 100 percent nominating committees and compensation engage less in EM practices (Epps & Ismail, 2008). Similarly, others study the effect of CG on practices of EM in listed companies of Nairobi and the results show that CG is negatively associated with EM practices (Iraya et al., 2015). Further, Tanjung et al. (2015) show that good CG reduce the EM activities and in turn, it leads to a higher performance of firms which is reflected in the stock prices of firms.

CG not only prevent the practices of EM but it improves the quality of financial statements. In a study of listed Turkish companies, the relationship of CG and EM is investigated, the results show that CG prevents the practices of opportunistic EM. Additionally, consistency and reliability of financial statements become effective, thus the trust of shareholders increases on CG mechanisms and their implementations because these mechanisms play an important role in the prevention of EM (Turegun & Kaya, 2016). Similarly, Lakhal (2015) examines 170 French firms and finds that CG practices improve the disclosure of financial information and this leads to a reduction in EM. Other report similar results of a negative association of CG and EM. For example, Klein (2002b) and Xie et al. (2003) show that CG mechanisms reduce manipulation practices of management in listed firms of US. In addition to this, Lee (2006) reports that CG reduces the incidence of error or manipulation in the accounting system in the US.

Another strand of literature investigates the relationship of CG and EM proxied by discretionary accruals. For example, Shamimul et al. (2014) examine Bangladeshi firms and find a negative association between general public ownership and accruals. The results reveal that a corporate manager mindset plays an important role because managers are involved in the production of fraudulent financial statements. Consequently, opportunistic EM behavior in Bangladeshi listed firms is high. Hence, the role of the corporate board becomes imperative to provide accurate information to shareholders. Similarly, Patrick et al. (2015) examine the impact of CG on the activities of EM in Nigerian listed firms from 2011 to 2014. They find that CG

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15 EM practices that management used for their private benefits is called opportunistic EM.
16 Discretionary accruals represent EM.
significantly affects EM activities. On the bases of these findings, they recommend that there is still need for some necessary steps for the improvements in the code of CG in Nigeria. Mulyadi and Anwar (2014) also investigate the impact of CG on EM. They conclude that CG attributes significantly affect practices of EM. They finally recommended to management to implement the attributes of CG because its mechanisms significantly affect the corporate tax and EM.

Many researchers stress that strong CG system is of utmost importance for the controlling of EM activities. EM practices are restricted through various factors. The literature demonstrates that through good CG system, the opportunistic behavior of management can be curtailed such as reported in studies that high quality CG significantly reduces the activities of EM (Barghathi, 2014; Uadiale, 2012). Therefore, quality of earnings as well as better disclosure of information, becomes possible through implementations of good governance system (Xiaoqi, 2013). The existence of strong CG mechanisms in a firm can lead to improvements in professional conduct in business transactions. Moreover, it limits the opportunities for EM. In contrast, the existence of weak CG may encourage manipulation, corruption, and mismanagement in the business (Clarke, 2007; Karamanou & Vafeas, 2005; Leventis & Dimitropoulos, 2012). In addition, other researchers conclude that firms which adopted good monitoring systems then the management opportunistic behavior reduces and management produce high quality reliable information (Dechow, et al., 1996; Wild, 1996). However, activities of earnings management are high in firms’ where CG mechanisms are weak (Pornupatham, 2006).

Studies demonstrate that besides CG mechanisms the regulatory authorities are responsible to play their role to avoid EM activities. Habbash (2010) demonstrates that CG is a monitoring mechanism to control the activities of earnings manipulation and regulators of stock market work for the enhancement of CG practices. Therefore, the enhanced governance system reduces the management involvement in earnings manipulation because regulators closely observe it.

Another strand of literature investigates the CG code instead of the separate factor of CG and its relative effect on the EM. For example, Mikoa and Kamardin, (2015) examine the pre and post comparison of CG codes in Nigeria. The results conclude that the 2011 code of CG and EM are negatively related and this effect of
the negative association of 2011 code of CG is higher than the CG code of 2003. Moreover, reveal that the association of audit fee, big 4 auditors, audit committee independence, a financial expert in audit committee and auditor tenure with EM are negative in the pre-CG code of 2011 as well as in post-CG code of 2011.

Others investigate that the newly introduced mechanisms of CG into CM can also affect EM. For example, Habbash (2012) study a sample of all listed firms on Saudi Stock Market for the period of 2006-2009 and finds that six major mechanisms of CG affect the earnings quality because these attributes play important role in the integrity of financial reporting. Further, the results substantiate that the impact of board independence and size on EM is significantly negative.

Key (1997) examines the relationship of regulations and discretionary accruals in the industry of cable television in the US. Results of the study reveal that as compared to low prices firms’ high prices firms involve in negative EM. However, others report that the association of CG and EM is unclear. Barghathi (2014) finds mix results of CG and EM.

Yet another strand of literature investigates this association of CG and EM on a cross-country level. For example, Shen and Chih (2007) study Asian economies to empirically examine the effect of CG on EM. The results show that firms which follow good CG system in their respective country are less engaged in EM than weak CG countries. This evidence provides information that good CG can lessen EM activities. In the similar vein, Leuz et al. (2003) examine the EM systematic differences in a sample of 31 countries. The results find that insiders try to protect their private benefits through EM. Therefore, they do not show a true picture of firm performance to outsiders. Moreover, the study concludes that due to the practices of EM investor protection is reduced. Furthermore, it is added that CG and reported earnings quality are endogenously related.

A number of research studies investigate to determine whether firms with high OC involve in EM. For example, a sample of 195 listed firms on the Amman Stock Exchange are investigated and the results conclude that CG and EM are not associated. Researchers argue that this non-associated relationship is rather a unique finding of the study of CG and EM and might be due to the majority identifiable
group ownership in these firms. Therefore, the role of CG is less needed for such type of firms (Abed et al., 2012). In addition, Choi and Kim (2012) examine EM activities in firms which are affiliated with business groups. For this purpose, Korean Chaebols are selected during 1993-2007 and the result reveals that firms that are affiliated with a group have less involvement in EM as compared to non-group affiliated firms. Further, they add that group affiliated firms use EM based on more real cash flow instead of discretionary accruals management.

Others investigate OC in terms of family ownership and its association with CG to determine whether EM is high or low in these family controlled firms. The studies reveal that in family control firms where the over independence of the board members and CEO being a member of the family, then the impact of CG mechanisms on EM become lesser. These studies recommend that for family control firms’ academicians and regulators need to reevaluate models of CG, especially when selecting board members (Bar-Yosef & Prencipe, 2009). Another study investigates the CG practices in family and non-family listed firms for Malaysia (Mansor et al., 2013). They find that in family owned firms the only number of board meetings held is termed as a CG indicator. However, they observe a number of CG mechanisms in non-family owned firms such as non-duality, audit committee size, independence of directors, in-house internal audit function and quality differentiated auditors. Their results demonstrate that by implementing CG mechanisms EM activities are minimized. However, this is also revealed from previous literature that in family control firms EM practices are low and the performance of these firms is increasing. Similarly, Ishak, Haron, Salleh and Rashid (2011) investigate the relationship between family members’ proportion in board structure with EM. Using a sample of 236 listed companies on Bursa Malaysia for the year 2009. The results demonstrate that the association of these variables reflect that family members in corporate board reduce EM practices especially if this proportion is dominant. Moreover, they conclude that the size of BoD, internal audit committee and a number of audit committee meetings significantly affect EM. However, the independence of the board, financial expertise of audit committee, type of auditor and leverage are insignificantly associated with EM. In the same context, Paiva and Lourenco (2013) investigate the different EM level in small, large and non-family firms in the UK. The results
demonstrate that the level of EM is lower in large family firms. Moreover, the level of EM is higher in small family firms as compared to non-family firms.

In a study of Asian economies, the authors conclude that the Asian firms are largely run by families and their approach of EM is different from other firms. These firms instead of aggressive EM\textsuperscript{17} use informative EM\textsuperscript{18} style because such firm due to family reputation does not indulge in opportunistic EM. In addition, it is expected that CG mechanisms and EM practices weakly or positively associated in these economies (Habbash, 2010). Thus, he concludes that EM practices are present in almost all types of firms.

Literature also reports that sometimes mechanisms of CG instead of reducing or eliminating EM supports these activities. For example, Azzoz and Khamees (2015) investigate the impact of CG on EM and earnings quality in a sample of 73 listed firms in Jordan during 2007-2012. The analysis of this study reveals mix results because board size, BoD composition and audit committee size are positively related with EM. However, the duality of CEO, audit committee composition and its activities reduce EM. They also reveal that the size of the audit committee has a significant effect on EM, while board size, CEO duality, BoD composition and audit committee composition are insignificantly related with EM. In addition, Waweru and Riro (2013) investigate the impact of CG attributes on EM practices in a sample of 37 listed firms in Kenya. The analysis reveals that board composition and ownership structure significantly affect EM. Moreover, OC is positively associated with EM while board size association is negative with EM. The audit committee and EM are insignificantly associated may be due to the lack of expertise in the field of finance and accounting in developing countries. Moreover, CG and EM are also investigated in financial firms such as Keshteli and Fathi (2015) investigate the impact of CG mechanisms on EM in banks. They use a sample of 10 banks listed on Tehran Stock Exchange for the period 2009-2013. The results show that CG insignificantly affects EM.

\textsuperscript{17}To produce financial reports through accounting techniques in such a manner that presents an overly positive financial position and business activities.

\textsuperscript{18}“Treating discretionary accruals as a means for managers to signal private information to external stakeholders regarding the firm’s future cash flows or potential earnings” (Lin, Liu, & Noronha, 2016).
In summary, all these studies conclude that CG either positively or negatively affects the practices of EM. Hence, these results are controversial and inconclusive. Specifically, the developing countries portray a different setting. Thus, research is needed to investigate the association (effect) of CG and (on) EM from the perspective of another developing country like Pakistan.

3.1.2 Corporate Governance and Earnings Management in Pakistan

CG and EM practices investigation is largely missing in Pakistani listed firms. Kamran and Shah (2014) investigate the impact of CG and OC on EM in a sample of 372 listed firms on Karachi Stock Exchange (KSE) during 2003-2010. They find that EM practices are increased after implementation of CG code of 2002 in Pakistan. Furthermore, they add that EM is increased due to director ownership, their children, spouses, and other family members. The results also reveal that CEO duality, audit firm size, board size, and influence of OC effect on EM is not found. Therefore, the results of this study are controversial. They further add that if managers deeply involved in the organization activities then they manipulate accounting information. Therefore, they involve in corporate decisions to achieve their personal interests instead of shareholders’ wealth maximization. Another study investigates the relationship of CG and EM of Pakistani listed firms for the year 2006. They measure CG by assigning weights to a number of related variables. Their results conclude a positive relationship between CG and EM practices. The authors argue that these positive results may be due to the transitional phase of the CG code of 2002 of Pakistan (Shah et al., 2009). Additionally, Latif and Abdullah (2015) investigate the relation of CG and EM. They find that audit committee independence and EM is negative. However, institutional shareholding and duality of CEO are positively related with EM. Furthermore, their results show that in high and low growth firms the CG mechanisms effectiveness is different to reduce EM.

Others report mix and inclusive results (Iqbal, Zhang, & Jebran, 2015). For example, they used board size, the duality of CEO, managerial ownership and independence of the audit committee as mechanisms of CG. They find that relationship of independence of audit committee and EM is negative and significant,

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19 Now KSE is PSX.
while duality of CEO is positively and significantly related with EM. However, managerial ownership and board size insignificantly associated with practices of EM. Similar inclusive and mix results are also reported by other studies (e.g., Younis, Hashmi, Khalid, & Nazir, 2016). In this study investigates the impact of CG on EM and CoC; also examined the impact of EM on CoC. This study is different from previous studies of Pakistan because it used a large sample size and long time period as compared to them. Moreover, the current study covered three distinct areas which affect the CM and firms operated in developing economy like Pakistan.

3.2 Corporate Governance Sub-Indices and Earnings Management

This thesis uses a corporate governance index (CGI) instead of individual factors of CG. As reported in the introduction section and problem statement of this thesis that previous literature recommended using governance index instead of individual factors of CG. Therefore, in this study, the used index is adopted from Javid and Iqbal (2010) and its detail is reported in Chapter-5 research methodology section 5.16 of this thesis. However, the index is reported in Appendix-A of the current study. As reported in the previous section, the majority of studies use individual’s factors as proxies of CG but very few studies use CGI as a proxy of CG and then investigating its effect on EM. This study proposes to use one such CGI. The score of this CGI is based on three sub-indices namely i) the board of directors, ii) ownership and shareholdings and iii) transparency, disclosure, and auditing. Therefore, the next literature review section focusses on studies that used individual factors as proxies of CG.

3.2.1 The Board of Directors and Earnings Management

The first sub-index of CGI is “The Board of Director” and it is composed of seven factors. The score of this index is the average score of all these seven factors. This sub-index is explained in Chapter-5 of this thesis.

3.2.1.1 CEO Duality and Earnings Management

When a single person holds the position of chairperson of the BoD and position of CEO at the same time is considered as the duality of CEO.
Literature reveals the significant effect of the duality of CEO on various characteristics of firms. The study reports that in firms where CEO and chairperson positions are held by one person then the monitoring process is weak as compared to firms where these positions are held by different persons. The responsibility of CEO is the overall management of the corporation while chairperson act as the head of BoD (Pornupatham, 2006). OECD (2004) shows that firms where CEO and chairman are separate, these firms perform well. Moreover, the separation improves firm financial transparency and the EM activities of firms are decreasing. Others report that qualification of CEO may affect EM activities such as Caixing and David (2008) find that CEO qualifications negatively affect the EM activities. However, Iraya et al. (2015) investigate the effect of CG attributes on EM in listed companies in Nairobi. They used a sample of 49 firms for 2010 to 2012 and reveal that the duality of CEO positively affects EM. The literature further presents that incentives of CEO drive the management to manipulate earnings information. For example, Jiang, Petroni and Wang (2010) find that equity incentives of CEO encourage them and they indulge in earnings manipulation. Therefore, conclude that qualified CEO’s and its separation from chairperson is utmost important for the elimination of earnings manipulation practices of management. Further, reveals that instead of two voting rights with single person transferred to two persons and they cannot influence the board decisions.

Due to the utmost important role of separation of CEO and chairman authorities in Pakistan amended the code of 2002 to CG code of 2012. It reports to ensure that CEO and chairman should be separate individuals and this is mandatory for all listed firms (CG Code of Pakistan, 2012).

### 3.2.1.2 Board Characteristics and Earnings Management

Among responsibilities of the board organizing and monitoring are the main functions of the board, hence board is considered as the capital of the firm (Almasarwah, 2015). Gkliatis (2014) define the board as the capital of the firm; “The capital that the members of the board bring to the firm, and this capital is often divided into two categories the human and social capital (p. 30)”.

Hillman and Dalziel (2003) reveal that board capital has four benefits such as; first, it provides services of advice and counseling. Secondly, legitimize the actions of
the firm’s services. Thirdly, between firms and other external organization act as a channel of communication and information and fourth get critical resources from outside. Further, they add that these benefits are positively associated and alternatively the positive association leads to improvement in mechanisms of CG. Hence, the CG system alternatively reduces the EM.

The board role in large publically traded firms is different such as Ebaid (2011), Gkliatis (2014), Rahkman and Ali (2006) and Schulze, Lubatkin and Dino (2003) argue that these characteristics such as board size, board capital, board leadership structure, board independence, and compensation. However, these characteristics and EM are negatively associated such as Klein (2002) investigates the relationship between board characteristics and EM. The results show that independence of the board and outside directors’ in board reduces EM because due to their presences board act with responsibility to maximize the wealth of shareholders, hence they do not indulge in EM. Moreover, Vafeas (2005) reports that director tenure and EM are negatively associated because such lengthy tenured directors efficiently work. In a similar vein, Xie et al. (2003) find that in such firms where boards having the corporate expertise, the frequency of board meetings is high and presences of outside/independent directors in the board then EM activities are low. In addition, Siam et al. (2014) investigate board characteristics (BC’s) and EM relationship in listed firms on Amman Stock Exchange and the results conclude that these characteristics and EM are negatively and significantly associated. Other studies report the same results such as Hosseini and Abdoli (2012) and Waweru and Riro (2013) BC’s significantly affecting EM. However, BC’s insignificantly affect EM practices. The effect of BC’s on EM is investigated in listed firms of Indonesian Stock Exchange during 2004-2008 and find that these firms are actively involved in EM. Similarly, Nugroho and Eko (2011) reveal that independent directors, size, composition, and tenure of board, audit committee and managerial ownership are insignificantly associated with practices of EM. However, Schulze et al. (2003) find that in family owned firms in US board role is inactive and passive because boards in these firms do not supervise management efficiency. The literature reveals that BC’s either significantly reduce the management malpractices of earnings manipulation or insignificantly affect their actions of manipulation. Pakistan is an Islamic economy, hence find in this study that the CG system significantly affect the EM practices of
management and this is an important contribution of this study from the developing country perspective.

Another strand of literature reports that political activities can influence the activities of the board and in turn, the board affects the practices of EM. Studies report that firms in which directors have political affiliations than their CEO’s welcome former or current bureaucrats into the board as directors. However, they do not have relevant professional and experiences, hence overall board professionalism is very low. Further, they find that due to these unprofessional boards both market performance and accounting return of these firms are poor as compared to firms where the board is free from political influences (Fan, Wong, & Zhang, 2007). Furthermore, Shleifer and Vishny (1997) report that political influence firm supports the statement of “grabbing hands” which means that under their control politicians and bureaucrats use State Own Enterprises (SOE) resources to fulfill their own objectives instead of firm value maximization. Therefore, management engages in the manipulation of accounting information and mask the true picture of the firm performance. On the basis of above discussion of Fan et al. (2007) and Shleifer and Vishny (1997) reveal that Pakistan is a developing country and its political system easily influence the SOE. Therefore, this scenario is important to investigate from a developing country perspective.

3.2.1.3 Board Independence and Earnings Management

Independence of board of directors from the influence of senior management and controlling shareholders is known as board independence (BI) (Chen et al., 2009). Abed et al. (2012) report that according to agency theory if outside directors proportion in board is high then BI is also high. Fama and Jensen (1983) argue that an independent director in a better way control manages actions of portraying accounting information because they have more experiences.

BI and EM are negatively associated such as Beasley (1996) demonstrates that to successfully achieve and control their own responsibilities board needed to be free from management influences. Moreover, show that independent directors in the board reduce fraud in financial statements because they are free from management influence. Hence, management effectively manages their activities. This review shows
that the practices of earnings manipulation are significantly reduced. Further, Pornupatham (2006) demonstrates that independent directors protect shareholders’ rights by controlling the practices of EM. Moreover, find that the lengthy tenure of independent BoD reduces fraud in financial statements. Other Studies report in developed and developing economies that board independence and EM are negatively associated because transparency of earnings information is increases (e.g., Anglin, Edelstein, Gao, & Tsang, 2013; Benkel et al., 2006; Davidson, Goodwin-Stewart, & Kent, 2005; Dimitropoulos & Asteriou, 2010; Iraya et al., 2015; Jouber & Fakhfakh, 2012; Klein, 2002b; Niu, 2006; Osma, 2008; Patrick et al., 2015; Peasnell, Pope, & Young, 2005).

Others investigate the role of BI in family controlled firms such as Jaggi, Leung and Gul (2009) examine BI and EM in family owned businesses in Hong Kong. The results report that independent board act as a moderate effective monitoring tool to reduce activities of EM in family owned businesses.

Another strand of literature reports that BI does not affect EM at all. For example, Rahman and Ali (2006) examine the board effectiveness and EM in a sample of 97 Malaysian listed companies for the period of 2002-03 and find that BI and EM are insignificantly associated. Moreover, Bar-Yosef and Prencipe (2011) reveal that in family owned firms’ BI is weakly associated with EM. Moreover, report that this situation is found in firms where CEO is either board member or chairman of the board. However, Chtourou, Bedard and Courteau (2001) conclude that there is no association between BI and EM. Similarly, Siregar and Utama (2008) report that results do not show the association of BI and EM.

3.2.1.4 Outsider Directors and Earnings Management

The AT suggests that if outside directors’ proportion in board is high then BI free from management as well as from majority shareholders’ influences (Abed et al., 2012). In firms where boards are controlled by outside directors then monitoring and control of firm transaction is high and discretionary activities of managers are low in such firms (Beasley, 1996; Bikki & Tsui, 2009; Cornett, Marcus, & Tehranian, 2008). Similarly, Dechow et al. (1996) conclude that a higher percentage of outside directors in the board reduces the practices of EM. Therefore, the credibility of financial
reporting becomes high. It means that the outside directors have no personal benefits. Hence, they efficiently control and monitor the management activities. In addition, corporate governance code 2012 of Pakistan recommended for firms to keep outsiders in their board. Similarly, Craven and Wallace (2001) and Xie et al. (2003) argue that independent control mechanisms are created in board due to presences of outside member. This leads to a decline of the activities of EM. Others report the same results such as Agrawal and Knoeber (1996), Beasley (1996), Bushman, Chen, Engel and Smith (2004), Peasnell et al. (2005) and Uadiale (2012). However, Benkel et al. (2006) conclude that outside directors in board and EM are positively associated in listed firms of Australia. They add that time period of study is the potential reason for this unexpected association. Literature also reports that there is no significant association between outside directors and EM (e.g., Klein, 1998; Klein, 2002; Osma & Noguer, 2007; Yang, Chun, & Ramadili, 2009).

3.2.1.5 Board Size and Earnings Management

Dahya, Karbhari, Xiao and Yang (2003) report that the board performs the responsibilities of decisions making. Fama and Jensen (1983) and Iskander and Chambrou (2000) demonstrate that in large firms’ BoD monitor management performance and plays important role in decisions. Ebaid (2011) suggests that larger board size keenly observe the activities of senior management. Moreover, Lipton and Lorsch (1992) and Monks and Minow (1995) report that large board has more time and effort, while small board has less time and effort for monitoring the activities of management. Further, studies such as Xie et al. (2003) and Yermack (1996) demonstrate that a larger board size and EM are negatively associated. Moreover, Ahmed, Hossain and Adams (2006) examine board size and EM in listed firms in New Zealand during 1991-1997. The results conclude that board size and EM are negatively associated. In the similar vein, Alves (2011) and Ghosh, Marra and Moon (2010) conduct studies after SOX. Investigate board size and EM relationship in the US and conclude that larger board size discourages practices of EM. In another study, an investigation is made about the effect of CG factors on practices of EM in listed companies in Nairobi and the results demonstrate that board size is negatively associated with EM (Iraya et al., 2015). In the similar vein, in Kenya a sample of 37 listed firms are selected to investigate the impact of CG mechanisms on EM practices.
The analysis reveals that board size and EM are negatively associated (Waweru & Riro, 2013). Moreover, Abed et al. (2012) find a significant association between these variables. Similar results are reported by (Obigbemi, Omolehinwa, Mukoro, Ben-Caleb, & Olusanmi, 2016).

Another strand of literature reports that the association of board size and EM can be positive. For example, Kao and Chen (2004) report that large board size and EM are positively associated. In the similar vein, Alonso, Palenzuela and Iturriaga (2000) determine that firm with large board size face weak communication and coordination among their members. Therefore, large board size and EM are positively associated. Similarly, Rahman and Ali (2006) examine the board effectiveness and EM in a sample of 97 Malaysian listed companies for the period of 2002-03. The analysis concludes that board size and EM are positively associated.

Moreover, Yu (2008) suggests that small boards are failed to detect EM practices of management. Therefore, results of financial information are portrayed in the financial statements. Zahra and Pearce (1989) also conclude that small board is unable to detect EM, while the large board can easily monitor management activities because the large board is free from management and block-holders influence. Others report that board size insignificantly affects EM practices such as Firth, Fung and Rui (2007b) suggest that board size is insignificantly associated with discretionary accruals.

The literature cannot agree on a single number of board members either in developed nor in developing economies. The information of board members explained in the CG code of Pakistan are efficient. Hence, for the management recommended to follow these guidelines in true spirits.

3.2.1.6 Directors Meeting and Earnings Management

Meetings frequency of BoD negatively and significantly affects EM practices because Habbash (2010) suggests that directors meet frequently in meetings to discuss and solve problems such as conflict of interest, EM, and monitoring management activities. However, boards without frequent meeting cannot monitor such issues. Xie et al. (2003) demonstrate that there is a significant and negative association between a
number of board meetings and EM activities. However, meetings of the board and EM are positively and insignificantly related. Firth et al. (2007b) reveal that the numbers of board meetings are insignificantly associated with discretionary accruals. Moreover, observe this phenomenon during the last three decades and conclude that frequent meetings of the board are controversial because of preparation fees, hotel and travel expenses. These expenses, in turn, add to the expenses of firms and reduce the profit of shareholders. However, the frequency of board meeting depends on two factors such as strong mechanisms of CG and the qualified board members of the firm (Vafeas, 1999). In another study, Gulzar and Wang (2011) investigate the board meeting frequency effect on EM. The results demonstrate that board meeting and EM practices are positively and significantly associated. They argue that this positive association is due to weak CG system.

Anglin et al. (2013) and Xie et al. (2003) conclude that when CG system is strong then EM practices are reduced because in strong CG system economies board meetings are held more frequent. However, when CG mechanisms are weaker then frequent meetings and EM are positively associated because in such economies boards are controlled by nonqualified directors.

Due to the important role of board meetings and its high frequency Pakistani code of 2012 explain such as board meetings records and member attendance are compulsory to disclosed in companies’ annual reports.

3.2.1.7 Board Quality and Earnings Management

Hazarika, Karpoff and Nahata (2012) demonstrate that quality of board supervision reduces top management activities to show aggressive earnings through accruals base EM. Firth et al. (2007b) conclude that discretionary accruals are reduced through a large and active supervisory board. Therefore, the quality of financial statements becomes higher according to the view of auditors.

3.2.2 Ownership, Shareholding and Earnings Management

This is the second sub-index of CGI used in this study and it is the combination of seven factors. The score of this index is the average of these seven
factors. The theory of ownership structure means the separation of ownership and control (Fan & Wong, 2002). Firth et al. (2007b) conclude that the level of discretionary accruals depends on the structure of ownership and board of firm. Further, reveal that manager discretionary choice of accounting method is influenced by these factors. Almasarwah (2015) shows that ownership structure of the firm plays a very significant role to curtailed the activities of EM such as Ramadan (2015) and Usman and Yero (2012) conclude that OC and EM are negatively and significantly associated because in concentrated ownership firms the reliability of the reported earnings is high as compared to dispersed ownership firms. In concentrated ownership firm’s shareholders at any cost monitor the activities of the management while the dispersed ownership firms do not monitor management. Hence, reveals that Pakistani listed firms cannot indulge in the earnings manipulation because the large number of firms listed on PSX are controlled either by families or State. They cannot damage the image of their families and firms. Results of the current study also support this phenomenon.

3.2.2.1 Block-holders Ownership and Earnings Management

Literature reports that ownership structure exists in various forms as managerial, board, government, family, foreign and institutional ownership (Almudehki & Zeitun, 2012; Gurunlu & Gursoy, 2010). However, sometimes the ownership of firms is concentrated in the hands of only founders. He further adds that ownership structure is either concentrated or dispersed. OC means holding the highest portion of ownership by a small number of banks, financial institutions, holding companies, individuals and families. OC discourage the activities of fraud and mismanagement because they observe keenly the actions of managers. However, they exploit the rights of minority shareholders. However, dispersed ownership means a number of people held a small number of company’s shares. Due to small incentives of the small shareholders, the effectiveness of board members and management cannot be monitored. Therefore, management can easily involve in activities of EM and ultimately this creates a high agency cost (Pornupatham, 2006). OC leads to Block-holders which is defined as follow;
Those shareholders who own at least 5 percent of a firm’s outstanding common stocks while they serve neither as the firms’ executive officers nor on the board directors (Zhong, Gribbin, & Zheng, 2007, p.43).

Literature reports that the association of block-holders and EM is either positive or negative. However, others report that there is no association of block-holders and EM. Studies report the positive association are; Habbash (2010) reveals that block-holders pressurize management to show high performance of the firm through increasing income accruals, Zhong et al. (2007) investigate block-holders effect on EM and find block-holders and EM are positively associated and similarly, Persons (2006), Wang (2006), Waweru and Riro (2013) and Yu (2008) report the same results of positive association of block-holders and EM because members of board and managers concentrate only on the benefits of controlling shareholders. Moreover, Claessens, Djankov and Lang (2000) demonstrate that OC in Asian companies leads to poor CG system and disclosure of accounting. Thus, management engages in EM and problems arise due to ownership structure and monitoring activities of the board.

Another strand of studies reports that OC reduces the EM activities such as Shleifer and Vishny (1997) find that high OC increase the efficiency of a firm and in turn, management cannot manipulate accounting information. Moreover, Hu and Izumida (2009) suggest that OC reduces the problem of agency and alternatively it leads to efficient CG system which reduces EM practices. Similarly, Yang and Krishan (2005) demonstrate that OC significantly affects the activities of EM. Alves (2011) investigates OC and EM and find that OC is negatively associated with discretionary accruals. Same results are reported by Dechow et al. (1996), Fan and Wong (2002), Iraya et al. (2015), Klein (2002b) and Veprauskaite and Adams (2013).

Mitton (2002) demonstrates from his research work that during East Asia financial crisis large/block shareholders act as a beneficiary because they protect the rights of minority shareholders. Moreover, this protection is possible when block-holders are not involved with management. Further, Jensen and Meckling (1976) demonstrate that block-holder reduce agency costs. OC is also investigated in the family owned firms and its effect on EM practices, such as Anderson et al. (2003)
reveal in case of family ownership agency cost is reduced because of a low level of debts. Moreover, family concentrated firms carefully evaluate and select investment projects due to family and firm reputation.

Other studies find that there is no association between ownership and EM such as Peasnell et al. (2005) reveal that block-holders and EM are not associated. Jara-Bertin and Lopez-Iturriaga (2007) find a non-linear association of OC and EM. Moreover, Alfayoumi, Abuzayed, and Alexander (2010) report that block-holders’ ownership is not associated with EM. Similarly, Halioui and Jerbi (2012) reveal that in Tunisia listed firms block-holders and EM are not associated.

3.2.2.2 Managerial/Insider Ownership and Earnings Management

Previous literature cannot clearly report whether the association of managerial ownership and EM is positive or negative (Nahum & Hoang, 2008; Ruan, Tian, & Ma, 2011; Warfield, Wild, & Wild, 1995). Insider or management holds a large number of shares then they reduce agency problems and align shareholders and management interests. However, if outsider possesses a large number of shares and they have the power to monitor management activities efficiently then activities of EM will be low (Habbash, 2010). Further, reveals that in Japanese listed firms’ high managerial ownership reduces EM (Teshima & Shuto, 2008). Similarly, Alves (2012) investigates managerial ownership, OC and institutional ownership effect on EM in listed firms of Portugal. The analysis demonstrates that managerial ownership is negatively associated with discretionary accruals.

Other studies report a positive association of managerial ownership and EM. For example, Hsu and Koh (2005) find that managerial ownership is positively associated with EM if firm face situations of income decreasing accruals. However, the association of managerial ownership and EM is negative if firm face situation of income increasing accruals. Warfield et al. (1995) investigate EM and managerial ownership. The findings determined that when managerial ownership is low then accounting adjustments are significantly higher. In another study by Koh (2003) examines managerial ownership and EM in listed firms of Australia. The results show that managerial ownership and EM are positively related. Same results are reported in
studies of Yang, Lai and Tan (2008), Yeo, Tan, Ho and Chen (2002), and Alfayoumi et al. (2010).

To reduce the influence of management and BoD Pakistani code of governance discourage their block or majority ownership. Moreover, reveals their high OC expropriate the minority shareholders’ rights.

3.2.2.3 Individual Ownership and Earnings Management

Individual ownership prevails in developing economies and it means ownership held by individuals rather than institutions such as insurance company or banks (Denisa & McConnella, 2003). Studies report that individual ownership does not affect the practices of earnings manipulation. Such as Alfayoumi et al. (2010) conclude no association between individual ownership and EM. Moreover, Ali, Salleh and Hassan (2008) conclude that in Malaysia listed firms’ individual ownership and EM are insignificantly associated.

3.2.2.4 State Ownership and Earnings Management

Shleifer et al. (1997) and Wang and Yang (2011) analyze the role of State ownership in CG. Further, Wang et al. (2011) conclude that in China listed firms State ownership and EM are negatively associated. However, Ding, Zhang and Zhang (2007) reveal that in State ownership firms’ activities of EM are high as compared firms owned by the general public and families owned businesses.

3.2.2.5 Institutional/Corporate Ownership and Earnings Management

Hosseini and Abdoli (2012) conclude that corporate ownership significantly affects EM activities. However, Alfayoumi et al. (2010) examine managerial, institutional and block-holders’ ownership effect on EM in a sample of industrial firms. Results reveal that institutional ownership is not associated with EM. In a similar vein, Alves (2012) investigates managerial ownership, OC and institutional ownership effect on EM in listed firms of Portugal. The analysis demonstrates that institutional ownership and discretionary accruals are insignificantly associated. Hence, such results support the statement that State and institutional ownership firms cannot manipulate their information, because these firms for the sake of their image.
cannot indulge in these malpractices. Moreover, the performance of these firms are efficient, therefore to sustain the level of confidence of their investors they cannot manipulate information.

### 3.2.2.6 Family Ownership and Earnings Management

Family ownership is a subset of individual ownership (Denisa & McConnella, 2003). In developing and in East Asian countries family ownership is more concentrated as compared to developed countries (Fan et al., 2002; Yang, 2010). Further, empirically find that the level of EM activities is low in family-controlled firms to keep its position at best level (Block, 2010; Jaggi et al., 2009; Jara-Bertin & Lopez-Iturriaga, 2011; Prencipe et al., 2011; Siregar et al., 2008).

### 3.2.3 Transparency, Disclosure, Auditing and Earnings Management

In this section presents the third sub-index of CGI, it is the combination of eight factors.

#### 3.2.3.1 Transparency, Disclosure and Earnings Management

If firms provide more transparent disclosures of their information then chances of EM detection become easy for shareholders and other stakeholders (Hirst & Hopkins, 1998). However, the empirical evidence suggests that managers provide less transparent disclosure to get their personal benefits because of less access of stakeholders to information to detect practices of EM (Hunton et al., 2006).

The relationship of voluntary disclosure and EM is investigated in listed firms on the Stock Exchange of Thailand in 2009. The results demonstrate no association of disclosures and EM because firms with voluntary and involuntary disclosures in a similar manner manipulate their earnings. These finding also help regulators that voluntary disclosure is an ineffective tool through which EM activities can be controlled (Kiattikulwattana, 2014). Besides voluntary disclosures, the mandatory disclosures also affect firm value. Therefore, mandatory disclosure impact on company value in U.K listed firms is investigated from 2006 to 2010 (Popova, Georgakopoulous, Sotiropoulous, & Vasileiou, 2013). They find that managers in U.K companies do not consider mandatory disclosure as an obligation of routine because
they imposed strict complaint against reporting requirement that imposed by regulatory authorities.

Disclosure frequency also affects the activities of EM such as Jo and Kim (2007) find that the frequency of disclosure and EM are inversely related. Others study investigates the relationship of disclosure frequency and EM in Tunisian listed firms and the results reveal the significantly negative association of disclosure frequency and EM (Riahi & Arab, 2011).

3.2.3.2 Auditing and Earnings Management

Auditors examine the financial information to verify that either such information is according to the stated standard and principles or not.

3.2.3.2.1 Audit Committee and Earnings Management

Audit committees ensure the accuracy and transparency of financial reports. Therefore, the audit committee is the most important mechanism of CG (Abbott, Park, & Parker, 2000; Beasley & Salterio, 2001; Buchalter & Yokomoto, 2003). The internal audit committee is one of the most important component of the CG system. It plays a very important role in monitoring processes and it makes sure that firms operations are according to their internal policies. Similarly, takes corrective actions if find any ambiguity and suggests corrective actions for the elimination of weaknesses. The internal audit committee also identifies the exposure risk due to any action or activity (Pornupatham, 2006). Internal control in term of financial information quality and financial reporting manage through a committee of audit (Man, 2013). Abdullatif (2006) and Turley and Zaman (2004) reveal that in the last decades’ audit committee role is becoming one of the well-known mechanism of CG. Moreover, worldwide regulatory and professional authorities recommend acceptance and wide role of the audit committee. Moreover, Patrick et al. (2015) investigate the impact of CG mechanisms on the activities of EM and demonstrate that the audit committee significantly affects the EM activities. Further, DeZoort (1997) concludes that due to a strong audit committee negative effects of litigation and damage to firm reputation becomes less intensive. Beasley (1996), Chang and Sun (2009), Dechow et al. (1996), Klein (2002) and Xie et al. (2003) report that audit committee effectively reduce the
frauds in financial reporting. Moreover, the committee of audit also plays its role to prevent the activities of EM. In this context, Xie et al. (2003) investigate the role of the audit committee, executive committee, and BoD to prevent EM. The analysis reveals that the audit committee and BoD activities and financial sophistication of their members are important factors to reduce or eliminate EM activities of managers.

### 3.2.3.2.2 Characteristics of Audit Committee and Earnings Management

Bedard and Gendron (2010) explain the characteristics of the audit committee. They list three characteristics such as; Independent audit committee reduces the agency problem because this committee has no personal/ economic concerns in a firm. Secondly, through the expertise of audit committee financial reporting quality is improved and lastly, audit committees have the expertise, diversity of views, skills, and experience. Therefore, increase the monitoring and controlling effectiveness. Moreover, Rittenberg and Nair (1993) and Verschoor (1993) explain three types of audit committee responsibilities such as monitoring the financial statements to ensure disclosure of financial and non-financial information. Secondly, monitor appointment, withdrawal, and remuneration of external auditors. Further, oversee external auditor work and independence and thirdly, evaluate a firm internal control system. In addition, Baxter and Cotter (2009) demonstrate that characteristics and structure of the audit committee reduce EM.

### 3.2.3.2.3 Audit Committee Size and Earnings Management

The literature demonstrates that size of audit committee negatively or positively associated such as Saleh, Iskandar and Rahmat (2007) and Rahman and Ali (2006) conclude that larger audit committee reduces EM practices in listed firms of Malaysia. In addition, Lin, Li and Yang (2006) conclude that in America audit committee size and EM are negatively associated. However, if the size of the audit committee is large and the board having the more financial expertise, solely independent and is more active than the monitoring function of the board is high and in turn, EM practices are reduced (Alzoubi & Selamat, 2012). Further, investigates the effect of audit firm size on EM in 342 listed firms from 2006 to 2011 in Nigeria. The results reveal that audit firm size impact on EM is significantly negative (Okolie, 2014). However, Alhaddad et al. (2011) conclude that EM and audit committee size
are positively related to each other in the listed firms of Jorden. Azzoz and Khamees (2015) report that the size of the audit committee is utmost important. Therefore, its role is investigated but reveals that audit committee size is positively related with EM. On the other hand, Bedard, Chtourou and Couteau (2004) and Xie et al. (2003) conclude that in USA audit committee size and EM are not associated. Moreover, Baxter and Cotter (2009) find the same results in listed firms of Australia. On the bases of these findings reveals that in developed economies they create a good standard of CG systems in term of auditing that prevents management from earnings manipulation.

3.2.3.2.4 Audit Committee Independence and Earnings Management

A well-qualified, more experienced and independent audit committee indicated the strong internal CG system. Therefore, in turn, it reduces the level of EM (Davidson et al., 2005). Independence of audit committee and EM are negatively associated (Latif & Abdullah, 2015). Moreover, audit committee independence significantly affects the EM activities (Patrick, Paulinus, & Nympha, 2015). Furthermore, DeZoort and Salterio (2001) find that audit strong independent committees positively affect their effectiveness and efficiency. In addition, Jennings (2002) shows that an independent audit committee main aim is to provide high quality assurance of firm activities to shareholders’. In the similar vein, Madi, Ishak and Manaf (2014) find that in Malaysian listed firms that independence of high audit committee and size of the large audit committee are positively associated with voluntary disclosure. Further, Klein (2002) reports that EM practices are reduced through an independent audit committee. Moreover, Abbott et al. (2000) and Saleh et al. (2007) conclude in their research works that audit committee independence and EM activities are negatively associated. Paik and Selby (2011) conclude the same results that an independent audit committee reduces the discretionary power of managers. Bradbury, Mak and Tan (2006) investigate the role of an independent audit committee at a broad level in Malaysia and Singapore. The results reveal that accounting quality improves with the independent audit committee. In addition, Bugshan (2005) concludes that independence of audit committee and abnormal accruals are negatively associated.
3.2.3.2.5 Meetings of Audit Committee and Earnings Management

The previous research conclude that the audit committee meeting and EM are either positively/negatively or significantly/insignificantly associated such as Jenny and Lois (2007) explain the role of audit committee meeting frequency and report that audit committee meeting frequency help management to resolve conflicting issues and alternatively, audit committee meeting frequency improves internal control mechanism of firms. Baxter and Cotter (2009), Bedard et al. (2004), Davidson et al. (2005) and Xie et al. (2003) conclude that EM and audit committee meeting number are negatively associated. However, Rahman and Ali (2006) and Saleh et al. (2007) reveal the positive relationship of EM and audit committee meeting numbers. Further, Thoopsamut and Jaikengkit (2009) demonstrate that in Thailand EM and numbers of an audit committee meeting are not associated.

3.2.3.2.6 Expertise of Audit Committee and Earnings Management

Baxster and Cotter (2009) conclude that the expertise of audit committees improves the quality of financial reports. Lo, Wong and Firth (2004) investigate audit committee expertise in 266 listed firms in China and the results demonstrate that EM activities are low when the expertise of audit committee is high. Nelson and Devi (2013) conclude that in a sample of 300 listed firms on Malaysian Stock Exchange that expertise of audit committee significantly related with the level of EM. Uadiale (2012) concludes that if audit committee members possess financial competence then EM practices significantly reduce. However, Rahman et al. (2006) conclude that in Malaysian listed firms there is no association of audit committee expertise and EM. In a similar vein, Lin and Hwang (2010) conclude that in U.S listed firms audit committee members’ expertise and EM are not associated.

Further, in research find that audit committee and EM are insignificantly associated. This insignificant association is backed by the argument that due to the lack of expertise in the field of finance and accounting in developing countries audit committee cannot perform its job (Waweru & Riro, 2013). In another study, the audit firm size effect on EM is investigated in Chinese listed firms during 2001-2009. Selected firms are placed into two groups (Firms audited by top 10 and non-top 10 auditors) and the results conclude that level of discretionary accruals is different in
firms audited by top 10 and non-top 10 audited firms. Moreover, the study reveals that in firms audited by top 10 accounting firms the opportunistic EM activities are controlled as compared to non-top 10 audited firms (Chen, Kong, & Wang, 2014).

3.2.3.2.7 Audit Quality and Earnings Management

Theoretically and empirically tested that audit quality control practices of EM such as Ebrahim (2001) reveals that audit quality is one the factor that affects the financial information reliability. The effect of auditing quality on EM is investigated and the analysis concludes that auditing quality is inversely related with EM. Ahmadi Soumehsaraei and Gholizadeh (2014) show that the relationship of audit quality and EM is negative and significant. Similarly, Jordan, Clark and Hames (2009) investigate the effect of audit quality on EM in U.S firms. Use big four and non-big four audited firms as the proxy of auditor size and quality. Results reveal that audit quality restrict significantly the attempts of EM activities. Big-4 firms restrict their clients from rounding figures of earnings per share (EPS) while non-big 4 firms’ clients round their EPS figure to increase digit by one immediately to decimal left side. In addition, Prawitt, Smith and Wood (2009) internal audit quality and EM is investigated and the results conclude that the internal audit function and EM are negatively associated. However, Yasar (2013) investigates the audit quality and EM in manufacturing sector listed firms on the Istanbul Stock Exchange during 2003-2007. The analysis concludes that the effect of audit quality on EM is insignificant.

3.2.3.2.8 Role of Auditor and Earnings Management

Role of the auditor is also important and that can reduce the earnings manipulation. Ismail, Zakaria and Sata (2015) examine the auditor role towards earnings manipulation practices. During 2010-2012 used 1002 firms-year observation of listed firms of Bursa Malaysia. The results conclude that EM is significantly reducing due to big 4 auditors. However, EM became positive and significant of firms when they switch to big 4 auditors from non-big 4 auditors. Turley and Zaman (2004) find that strong audit committee characteristics generate good CG mechanisms.
3.3 Summary of Stage-I

This chapter explains the literature review of the CG and EM. CG acts as a mechanism to reduce the earnings manipulation behaviors of management. Attention from researchers and regulators is due to failure of large businesses. For instance, some prominent companies such as Enron, HealthSouth, Rite Aid, Subeam, Tyco, WorldCom, Waste Management and Xerox around the world collapsed. However, the extent literature reports that the association of CG and EM is controversial because sometimes CG instead of eliminating or reducing the EM practices support such behaviors of the management. Others report that CG mechanisms also act as a monitoring mechanism in family owned firms. CG and EM are also investigated in the Pakistani listed firms but the results are also controversial in this market because these studies used small sample size and a short period of time. Moreover, the literature reveals that the regulatory, political, economic and other factors like the discretionary power of management affect the earnings manipulation practices of management. Hence, reveals that the political, economic and changes in the social system of Pakistan are uncertain, these systems and other systems either positively or negatively affect the business performance and earnings manipulation. After the literature review found that CG and EM are important to study from developing country perspective like Pakistan because the literature shows that the CG system of developed economies is developed but in developing economies still need improvement. In this study instead of individual factors of CG used the CG index, therefore the sub-indices and EM are reviewed and report that these factors either reduces or increases the EM. The positive and negative association/effect of CG on EM shows that there is still controversial exist, therefore research finds that to investigate this issue in the developing country context.

3.4 Literature Review of Stage-II

The second stage of this thesis investigates the impact of corporate governance (CG) on earnings management (EM). Moreover, in the third stage examine the impact of EM on the CoC of listed sample firms on Pakistan Stock Exchange (PSX). This section presents the relevant literature on stage two. This section is further organized as follows; Section 3.5 shows concepts of capital structure (CS) and risk, section 3.6.
summarize literature of CG and CoC, section 3.7 presents the literature review of CG and cost of equity (CoE), section 3.8 reports literature of CG and cost of debt (CoD), section 3.9 presents the theories of CS. Moreover, section 3.11 reports the summary of Stage I and II.

3.5 Capital Structure, Level of Risk and Probability of Bankruptcy

The concept of CG and its attributes is presented in Chapter-3 of this thesis. However, this section reviews the CS, risk and bankruptcy cost. In all types of businesses decision related to CS is crucial because it maximizes the return of all stakeholders to operate successfully in a competitive environment. Moreover, report that in the literature of finance, a long debate is available on the CS decision (Kwansa & Cho, 1995).

The CS is defined as;

“mix of a company's long-term debt, specific short term debt, common equity and preferred equity, it is how a firm finances its overall operations and growth by using different sources of funds” (Onsomu, 2013, p.3). Moreover, Horne and Wachowicz (2008) define it as;

“The mix (or proportion) of a firm’s permanent long-term financing represented by debt, preferred stock, and common stock equity” (p. 464).

Cuong and Canh (2012) demonstrate that the combination of debt and equity of a firm use for its operation is CS. Moreover, Abor (2005) explains that the combination of different securities represents the CS of a firm. Therefore, firms can choose any combination of securities such as lease finance, convertible bonds, warrants, forward and future contract and swaps etc., but firms select the right combination to maximize their market value.

Further, the research reveals that the amount of debt in CS of firms’ might be limited by bankruptcy cost. To raise the level of debt the firm may be unable to pay the promised amount. Therefore, the ownership of the assets ultimately transfers to bondholders from shareholders. Moreover, firms become bankrupt according to principles when debts value become equal to assets value and in this situation, the
value of equity become zero. However, if CS maximizes the value of a firm then it
minimizes the CoC. Further, they explore that when debt level is increasing then
initially the CoC decline because the after tax CoD is cheaper than CoE. However,
after an optimal level due to increasing in debt the WACC increases and then due to
high debt level firm bankruptcy chances increases (Ross, Westerfield, & Jordan,
2010). Further, they demonstrate that firms facing the greater risk of financial distress
will borrow less as compared to firms of lower risk of financial distress. Moreover,
the greater the volatility in operating profit of a firm the lesser will be the borrowing
of funds. However, to get advantages in the form of tax shield managers highly
engage in debt financing but such engagements are not always generating fruitful
results. Olaoye, Ayeni-Agbaje and Alaran-Ajewole (2015) argue that tax saving will
lead to an increased cost in form of bankruptcy. On the other hand, Barbuta-Misu and
Tudor (2009) report that firm managers trying to get advantages in term of firm value
maximization and to minimize the CoC to use more debts. But a highly increased
level of debt firm goes to default. Therefore, a small level crisis at the operation level
or at management level becomes difficult to control.

The research investigates that how bankruptcy and its cost affect
organizations. Wruck (1990) demonstrates the effect of financial distress on the
efficiency of firms. The results determine that conflict of interest among capital
providers and IA affects financial distress. He further, reports that IA creates
uncertainty and alternatively uncertainty increases the CoC of companies. Moreover,
financial distress is either beneficial or costly.

Others report that besides cost, there are other determinants that affect
bankruptcy. For example, CG attributes also affect the financial distress Elloumi
and Gueyie (2001) investigate Canadian firms for the relationship of CG attributes
and status of financial distress. The analysis reveals that besides reliability on
financial indicators composition of BoD explain financial distress. Moreover, outside
directors in board and their ownership and change of CEO can also affect the financial
distress of firms. Similarly, Fich and Slezak (2008) investigate that how CG practices
affect firms to avoid bankruptcy and power of financial information to predict
bankruptcy. The results conclude that in financially distressed firm CG attributes
significantly affect the probability of bankruptcy. Moreover, firms, where board size
is small, has a high level of an independent board, a high ratio of outside directors in board and majority ownership of insider directors lead to high level bankruptcy avoidance. Therefore, CG attributes have high monitoring power and such governance characteristics also improve the bankruptcy predicting the power of financial accounting models.

Investors make the investment for positive return but the risk of losing money is also existing. Therefore, it is important to take into account the risk factor during investment decisions. Risk and return are either positively or negatively associated. Fisher and Hall (1969) demonstrate that risk and return are either linearly or positively related. However, Mcnamara and Bromiley (1999) find that risk and return are negatively associated. In this regard, Bowman (1980) reports that the relationship of risk and return are significantly negative in selected sample firms either they perform well as well as poor. Fiegenbaum and Thomas (1990) suggest that association of risk and return are explored on the basis of the prospect theory of behavioral decision. The findings reveal that in industries where expected return is below the targeted level the association between risk and return is negative. However, this association is positive in firms that perform above their targeted level of return.

On the other hand, studies such as Chang and Thomas (1989) find a curvilinear relationship between risk and return as taking more risk increases level of return to a certain limit and after an optimal level, an increase in risk reduces the return on the investment.

The generally observe phenomenon rather may result in a loss that if the risk is high then the cost of financing for a firm is expected to be high. Therefore, empirical findings of Modigliani and Miller (1958) demonstrate that in the process of business decision making the CoC has numerous applications. Modigliani and Miller (1963) relax their conceptual view and add that CoC can affect the CS (leverage) of firms and in turn, this affects the firm value. Due to relaxation of the unrealistic assumption that tax factor cannot affect the CS of a firm, however, others observed its effect in the form of tax shield. Therefore, cost of borrowing decreases and on the other hand the performance of the firm is maximized (Olaoye et al., 2015). Moreover, CoC is explained in literature in terms of WACC which is the combination of costs of debt and equity.
Managers are continuously trying to minimize the CoC. Hence, they use different determinants to control the CoC. For example, firms of better scores of corporate social responsibility avail cheaper financing (Ghoul, Guedhami, Kwok, & Mishra, 2011) and Lambert, Leuz and Verrecchia (2007) report that the high level of cash flows of firms increase the information quality and alternatively the CoC of a firm’s decline. One such determinant is the application of CG both at firm-level but as well as country-level. Moreover, CG and CoC are investigated in different forms such as CG and CoD, CG and CoE and in some research work CG and CoC.

Further, reveals that CoC is a well-known topic of discussion in the field of corporate finance though little research work is performed about the CoC in emerging markets and in relation to CG (Barry et al., 1998). To get the external capital at lowest possible costs firms adopt the rules and mechanisms of CG. Research demonstrates that if there is a good CG system then the CoC should be low (Shleifer & Vishny, 1997). Moreover, firms that have good governance system then lenders and investors are more willing to make the investment in these firms as the risk of losing money in these firms become low then leading to a low CoC resulting in better performance of firm (Shah et al., 2009). The next section discusses the CoC and CG literature in detail.

### 3.6 Corporate Governance and Cost of Capital

This section presents the literature review of CG and the CoC. Studies show that the relationship between CG and CoC is negative (Bozec & Bozec, 2011). Moreover, reported that the stronger CG characteristics reduce the level of CoC significantly (Pham et al., 2013). Similarly, Claessens and Yurtoglu (2013) find that better CG practices increase firm performance and thus reduces the CoC. Moreover, firms become an attractive avenue of investment for investors and in countries where governance system is weak then the CG mechanisms become less effective and CoC increases.

Studies investigate the relationship of earnings quality and CoC such as Hassanzadeh et al. (2012) conclude that relationship of earnings quality and CoC is negative in listed firms on the Tehran Stock Exchange. Further Upadhyay and Sriram (2011) report that board and its attributes as factors of CG affect the CoC. The analysis
reveals that board size and information transparency are positively associated. Moreover, due to a larger size of the board the WACC is lower. They conclude that investors perceive that the larger board is better for firms because they provide more transparent information and CoC of these firms become lower. However, some studies show that CG does not affect significantly the CoC, for example Opperman (2009) investigates the relationship of CG and CoC of listed companies in South Africa and find that there is no relationship of CG and CoC because in the sample firms the CG value is increased in a non-linear manner then the conflict of interests are also increases.

3.6.1 Disclosure and Cost of Capital

Information and its transparent disclosure are one of the most important components of the CG system. Klai and Omri (2011) show that financial institutions and states are the concern authorities to monitor financial disclosure quality. Moreover, they argue that information can affect the CoC. Easley and Ohara (2004) examine the role of information and its effect on the CoC and report that the information composition is different between private and public sector firms and such differences affect the CoC of firms. Due to a high level of private information, investors demand a high return on their investment because investors having private information can change the portfolio of their investment. Therefore, uninformed investors remain at a disadvantage position. They also find that CoC of the firm is affected by coverage of analyst, treatment of accounting and microstructure of market. Similarly, Lambert et al. (2007) argue that increases in information quality reduces the CoC unambiguously because the quality information increases the confidence of investors. The relationship of voluntary disclosures and CoC is also investigated and the results conclude that firms that engage in voluntary disclosures then their CoC are lower as compared to non-voluntary disclosure firms. Moreover, CoC is reduced due to risk sharing or efficiency of investment (Cheynel, n.d.). Others demonstrate the negative relationship between voluntary disclosures and CoC (Bertomeu, Beyer, & Dye, 2011). In addition, Diamond and Verrecchia (1991) find that firms which provide more information to public reduces IA and in turn, the CoC declines because the liquidity of securities is increased and a large number of investors are attracted. Moreover, it reveals that large firms disclose more
information. Hence, these firms enjoy the lower CoC. Furthermore, Leuz and Schrand (2009) reveal that disclosure reduces the CoC. Finally, on the basis of review concludes that information disclosure reduces the level of uncertainty among stakeholders, thus investors make informed decisions at calculated risk. It reduces the level of CoC of firms. In addition, reveals that the CG code 2002 of Pakistan introduced the enforcement manner of voluntary disclosures (CG Code of Pakistan, 2002). Moreover, in amended CG code 2012 introduce the option even for private and unlisted public firms to adopt this code (CG Code of Pakistan, 2012). Therefore, this is expected that the information disclosure policies of Pakistan CG Code ensure the lower possible level of CoC. The results of this study ensured the CG code that it reduces the CoC.

3.6.2 Auditing and Cost of Capital

In CG literature auditing is an important factor. Auditing practices and its implementations are considered as one of the mechanisms of the CG system. Prior literature reveals that higher quality of audit lower CoC. Li, Stokes, Taylor and Wong (2009) reveal that quality of auditing and CoC is negatively associated because of the auditor reputation and auditor industry specialization. In another study, Gerayli, Yanesari and Maatoofi (2011) report that the size of the audit and tenure of auditors significantly and negatively affect CoC for Iranian firms. However, the association between industries specialized auditor and CoC of firms is insignificant. Investigate the effect of auditors’ specialty in their particular industry on the CoC and the analysis reveal that big 4 auditors significantly lower the CoC as compared to firms that are clients of non-industry specialist auditors (Ahmed, Rasmussen, & Tse, 2008).

3.7 Corporate Governance and Cost of Equity

This section presents the review of the CG and CoE. Mojtahedi (2013) explains that the amount that stockholders receive in return for their investment or the price that firms pay for the use of equity capital is called the CoE. He investigates the effect of CG mechanisms and disclosures on the CoE and the results find that mechanisms of CG and disclosure significantly and negatively affect the CoE. Further, the disclosure and non-disclosure effect is compared such as Chen, Chen and Wei (2003) conclude that the effect of the non-disclosure CG mechanisms is more
intense than that of disclosure mechanisms on the CoE. Furthermore, they demonstrate that CG at the firm level and at the country level is the important factor to reduce the level of CoC.

Further, studies report that the codes of CG designed and these codes explore and describe all aspects which affect the firm performance. Disclosure is one of the CG factor which can affect CoE. Therefore, the effect of disclosure on CoE is most important for financial reporting. In this context Botosan (1997) examines the association of disclosure level and CoE, for this purpose, he selects a sample of 122 firms from manufacturing sectors of the US market. The results conclude that due to greater disclosure level the CoE level becomes lower in 1990. Moreover, Skaife et al. (2004) investigate the impact of CG attributes on the CoE. The analysis shows that the attributes of CG significantly affect the CoE. In the similar vein, Ernawati, Purnomosidhi and Widyap (2015) investigate the impact of CG on the CoE in the manufacturing sector of Indonesia in 2012. The analysis concludes that size of the audit committee and earnings quality is positively associated and that the audit committee size does not affect the CoE.

Further, others such as Chen et al. (2009) examine the firm level CG effect on the CoE for 17 emerging economies. The results of the study reveal that the relationship of firm level CG with CoE is negative and significant. The study further shows that firm level CG and legal protection at the country level are substitutes of one another. The regulations of CM play an important role in controlling CoC/CoE.

Research further investigates that capital market index also affects the CoC. In this regard, Daouk et al. (2006) study 10 markets from emerging economies for the period 1969-1998 and find that improvement in the capital market index can reduce the CoE because the results demonstrate that the effect of capital market governance index on CoE capital is significant and negative. However, the study adds that this relation holds when controlled for other factors. Moreover, Hail and Leuz (2006) investigate the effect of securities regulations and legal institutions of countries on the CoE for a sample of 40 countries for 1992 to 2001. The results find that in countries where the legal system is effective, extensive disclosure requirements are there and regulations of securities are strong than the CoE capital is smaller.
Transparency of accounting information act as an important tool of CG. Therefore, transparency in accounting information and its disclosure is of utmost importance and it can affect the CoE. Previous literature shows that if firms provide less transparent information than the CoC should be high. Skaife et al. (2004) find that if firms report earnings less transparently and mention larger non-normal accruals then the CoE is high. Nuryaman (2014) study the combined effect of IA and EM on CoE is investigated in Indonesian listed firms during 2010. The analysis reveals that IA positively and significantly related with EM and CoE. Embong, Mohd-Saleh and Hassan (2012) examine the relationship between disclosure and CoE for Malaysian firms for the period of three years from 2004 to 2006. The results show that disclosure and CoE are significantly and negatively associated for large firms. However, in small firms this relationship is insignificant. The overall findings lead to the conclusions that managers take into account that large size firms take advantages because CoE reduces as firm size increase. Moreover, large firm gets benefits from size due to lower proprietary cost and economies of scale. In the similar vein, Diamond and Verrecchia (1991) show that firms which provide more information to the public then their CoC decline because the IA is reduced. Additionally, the investor demand for firm securities is increased because the liquidity is high and hence the prices of securities are increased. Benefits from disclosure of large firms are high as compared to small firms. Further, reveals that a high level of disclosure reduces the risk bearing capacity of investors.

Furthermore, some studies examine auditing as a component of the CG system and CoE such as Li et al. (2009) conclude that the quality of the audit, directly and indirectly, affects the CoE. In this regard, Houqe, Ahmed and Zijl (2015) investigate the impact of audit quality on the CoE and earnings quality for 1998-2009. The analyses reveal that firms which adopt high quality auditors enjoy lower CoE and higher earnings quality. Moreover, they conclude that CoE is lower and earnings quality is higher in firms owned by business groups as compared to non-business groups. They also change the proxies and demonstrate that after changing the proxies for audit quality, earnings quality and CoE the results remain the same. In another research study, the audit quality effect is investigated on CoE and EM. For this purpose, they select two groups (State and Non-State Owned Enterprises) of listed firms from 2001 to 2004. Characteristics of these two groups are different, therefore
the effect of audit quality is different on CoE and EM. The results of the study reveal that if high quality auditors are employed in both groups then in Non-State Owned Enterprises the activities of EM are reduced to a great extent as compared to SOE. Moreover, if high quality auditors are serving these firms then in Non-State Own Enterprises CoE is significantly reduced to a greater extent than SOE (Chen, Chen, Lobo, & Wang, 2011). Similarly, the relation of an independent audit committee is negative with CoE. Results reveal that the more independent the audit committee the lower is the CoE. Moreover, the relationship of CoE and independence of BoD is also negative. However, shares held more by block-holders then the CoE is high. Further, demonstrates that the quality of information of the firm is negatively associated with the CoE (Skaife et al., 2004). Moreover, previous studies explore that those excess rights of shareholders also affect CoC such as Guedhami and Mishra (2006) investigate the relationship of excess control in term of ownership rights on cash flow and voting power with CoE. Results show that due to excess control the CoE increases. Another study investigates the relationship between executive compensation and CoE. The analysis concludes that there is a negative relationship between executive compensation with the CoE (Sanoran & Wong, n.d.).

### 3.8 Corporate Governance and Cost of Debt

This section presents the review of previous empirical research works examine the CG and CoD separately. The literature reveals that a limited number of studies investigate the effect of CG attributes on the CoD. The research investigates CG impact on the CoD for Portuguese listed companies and used CGI instead of individual factors of CG. The analysis demonstrates that the impact of CG on CoD is statistically significant and negative. This negative association is backed by the argument that CG practices affect the risk related perceptions of debt-holders and lenders because due to low risk investors demand the low rate of returns on their investment and ultimately the CoC is become low (Gomes, 2014). Similarly, find that after an improvement in CG mechanisms in Dutch firms CoD is reduced (Arping & Sautner, 2009). Another study examines the relationship of CG characteristics and CoD in a sample of S&P 500 firms and the results find that board size and its independence negatively affect the CoD. This may be due to the debts covenants on which creditors rely and this is observed that debtors are concerned with
characteristics of BoD. In addition, the study reveals that BoD affects the financial accounting procedures (Anderson et al., 2003). In this regard, another study examines the impact of CG and mechanisms of shareholder monitoring on the CoD for firms in Malaysia during 2003-2007. Using a CGI and the results conclude that the relationship between CoD and quality of CG is negative. Moreover, theoretically, this is an observed phenomenon that due to a conflict of interest between manager and shareholder debt providers are affected. If managers follow their own interests and they concentrate on their personal motives through opportunistic behaviors. Thus, conclude that they perform opportunistically at the cost of debt providers. The opportunistic behavior push managers to manipulate the financial reports of firms. Moreover, such opportunistic behavior of managers, IA, and accounting questionable practices increase the chances of default risk. Similarly, the CGI is negatively and significantly related to the CoD financing (Klock et al., 2005). Another study investigates the effect of CG on the CoD. Using firm level data and classifying firms into strong management and strong shareholders. The results conclude that in firms where antitakeover provision is strong then the CoD is lower (Klock et al., 2005).

Besides CGI, its individual factors, the audit committee and its quality of disclosure also affect the cost level of debt financing. Studies presume that firms having a high level of disclosure quality then the effective CoD can be low. Sengupta (1998) finds that the result of this work consistent with the existing literature that detail and timely disclosure about firm reduce underwriter and lender default risk perception. Therefore, ultimately this perception of default risk leads to low CoD. Moreover, he argues that the importance of disclosure is a high when there is high level of uncertainty of firm stock prices. Anderson et al. (2004) investigate the association of IB and board size with CoD in a selected sample of S&P 500 firms. They find that BI and board size are negatively associated with the level of debt financing.

Others examine the effect of CG and quality of audit on the CoD in a sample of large level listed companies in France during 1999 to 2001. The results demonstrate that debt holders in France focus on the quality of monitoring tools and financial reporting standards. Therefore, the analysis concludes that high quality CG reduces the CoD significantly (Piot & Missonier-Piera, 2007). Another study
investigates the effect of the audit committee on the CoD and the results show that independent audit committee and CoD are inversely related (Anderson et al., 2003).

The literature further reveals that some researchers conclude that there is a positive relationship between CG and CoD, while others conclude that CoD may or may not decrease due to CG. The empirical evidence of some studies demonstrates that there is a negative relationship between CG and CoD (Gomes, 2014). They argue that this negative association is due to lower default risk perception of debt holders about firms of high scoring CG practices (Schauten & Blom, 2006).

Another study investigates the relationship of CG attributes and CoD of a sample of 86 firms listed on the Tehran Stock Exchange during 2005-2011. The analysis demonstrates that large board attracts more debt at lower cost. However, the proportion of outside directors in board and CoD positively and significantly related (Hajiha, Abadi, & Maher, 2013).

In the previous few decades’ researchers are concerned to investigate the audit quality effect on CoD. Findings conclude that up to some extent external auditors and high audit quality reduce the firm risk and IA. Therefore, CoD becomes lower (Eskandari, Rasid, Basiruddin, & Hosseini, 2014). A similar study investigates the characteristics of auditor and CoD using 8,525 sample firms during 1971-98. The results reveal that the characteristics of auditor and CoD are negatively associated (Mansi, Maxwell, & Miller, 2004).

### 3.9 Theories of Capital Structure

Modigliani and Miller (1958) report that capital structure (CS) of a firm does not affect its firm value and the overall CoC. However, Markopoulou and Papadopoulos (2009) argue that Modigliani and Miller support their statement that CS cannot be at the optimal level and further add that WACC cannot be at the minimum WACC. However, in a subsequent research by Modigliani and Miller (1963) argue that in a World of corporate tax the financial leverage affects the value of a firm and the overall CoC. Thus, Markopoulou and Papadopoulos (2009) conclude that companies which have more debt in their CS then they get advantages in the form of tax deduction and alternatively this maximized value of the firm. They also argue that
CS decisions have two aspects, for example, to maximize investors return and to enable firms to face the challenges of competitions and survival in the highly competitive environment.

Literature reports that a number of theories are evolved in the field of CS and such theories are classified into traditional, tax benefit, trade-off, market timing, and cost-based theories. This study incorporates the cost based theories of CS because, in stage two and three, this study investigates the impact of CG on CoC and the impact of EM on CoC respectively. Cost based theories used in this thesis are the agency costs theory (ACT), signaling cost theory (SCT) and bankruptcy cost theory (BCT). The relevant theoretical and empirical pieces of evidence are summarized in the following sections.

3.9.1 Agency Cost Theory

The ACT reports that an increase in the level of debts (leverage) in firms CS reduces the equity level and alternatively can increase the insider ownership (Jensen & Meckling, 1976). Moreover, Jensen (1986) reports that debts act as binding mechanisms between the company and creditors. However, debts decrease the free cash flows of the firm which alternatively reduces the corporate resources. He further argues that cash payout creates conflict between shareholders and managers because cash payout reduces the resources under the control of managers and also reduces their power. On the other hand, managers try to work for the growth of their businesses in order to increases the resources of the firm. Alternatively, firms having more resources increases the power and compensations of managers. Managers invest in the projects whose returns are low then organizational efficiency is declined.

Moreover, Papa and Spedale (2007) reveal that lender monitoring activities increases due to an increase in the level of debt. Hence, management use the firm’s assets in an efficient way and the CoC should be decline. In addition, Easterbrook (1984) reports that debt financing act as an external monitoring mechanism. Subsequently, management focus on firm value maximization instead of their personal benefits. Furthermore, reports that managers try to perform in an efficient way. Alternatively, a high value of a firm and efficient utilization of funds reduces the CoC. Similarly, Grossman and Hart (1882) conclude that debt financing monitor
management activities and they act efficiently to meet debt payments and to avoid the chances of firms’ bankruptcy. Furthermore, Ang, Cole and Lin (2000) investigate that debts act as a monitoring tool. Hence, management efficiently makes decisions for firm performance because the lenders safeguard their investment and accept the monitoring costs. Hence, the confidence of investors increases and alternatively they demand a lower rate of return which shows low CoC. In addition to the above findings, Jensen (1986) demonstrates that debt financing force management to pay their obligations. Hence, managers cannot pursue their personal desires through available free cash flows but they concentrate on stakeholders’ interests.

The overall findings of the ACT and relevant literature in the context of CS\textsuperscript{20} show that ACT reduces the conflict of interests and encourage management to efficiently utilize the available resources. Moreover, creditors monitor the activities of management that compel them to report the actual performance of the firm and hence increase the accounting quality and lowering the practices of earnings manipulation and CoC.

### 3.9.2 Signaling Cost Theory

This theory is based on the problem of IA between investors and managers. Managers being stewards and ethically disclose financial information to outsiders to portray the actual performance of the firm. This leads to an increase in the investors’ confidence and thus they take informed decisions while making investments. Such a situation can lower the practices of EM and the CoC of listed firms. On the other hand, reported that management cannot provide good news to outside investors. Hence, they create the suspicious environment and the level of probability of risk is increased. Consequently, the level of CoC becomes high (Ross, 1977).

Further, Markopoulou and Papadopoulos (2009) demonstrate that to solve the problem of IA management needed to send a positive signal in term of information to CM and accordingly adopt the required financial policy. High level of leverage creates a good signal because management believes that a firm performs well in future and they can pay the firm obligation easily. Moreover, the debt covenants force management to maintain a stable level of cash flows during the contract period of the

\textsuperscript{20} In case of creditors and management.

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loan. Management discloses actual information to investors that is more credible during the time period when the false disclosure of information is costly for the firm. Bhattacharya and Dittmar (2004) argue that sending good news into the CM firms increase the level of leverage. Veronesi (2000) also argues that the accuracy of the signal is highly significant. Others such as Ross (1977) and Leland and Pyle (1977) demonstrate that the combination of the CS of firm’s act as a signal for the external users. Moreover, Noe (1998) demonstrates that a firm that raises debt financing convey the message that it is better than firms which rely on equity financing and thus the stock prices of these firms’ decline. Similarly, Heinkel (1982) shows that high quality firms issue more debts for their projects financing. Thus, these firms due to their high quality level of performance get financing at the lowest possible cost. In addition, Saring (1988) examines that debts in the CS increases the value of the firm and it acts as a positive signal in the CM. The results conclude that due to the positive association of debt and firm value ensure the low level of risk. Therefore, investors’ demand for a high-level return decline and the CoC alternatively reduces. However, Markopoulou and Papadopoulos (2009) argue that high level of leverage indicates the greater chances of bankruptcy. The next section of bankruptcy theory of CS explains in details how a high level of debt may increase the chances of bankruptcy.

3.9.3 Bankruptcy Cost Theory

Heinkel (1982) reports that a high level of debt in the CS increase the chances of bankruptcy. Moreover, Kwansa and Cho (1995) conclude that a high level of leverage increases the fixed interest charges. Alternatively, high payments of interest during the time period of low earnings create the financial distress situation. Therefore, the high probability of financial distress position increases the CoC of the firm. Moreover, Baxter (1967) concludes that the CoC curve decline at a low level of debts in CS and this curve rises at a high level of debt. Moreover, they report that beyond an optimum level the additional leverages of firm raise the required rate of return of creditors and shareholders and the capacity of the firm to pay its obligation becomes difficult. The tax advantages of firms from debts in their CS are eliminated because leverage creates the risk of failure. Additionally, Kraus and Litzenberger (1973) conclude that bankruptcy cost due to leverage in the CS affects the value of the firm. Others such as Grossman and Hart (1982) demonstrate that a firm uses leverage
for financing their projects. If firms become unable to pay its obligation, then they become bankrupt. Therefore, debt financing becomes costly because the manager loses their benefits in the form of reputation and control over the business. Ross (1977) demonstrates that leverage and the probability of bankruptcy of firms are positively associated. Thus, a high level of debt increases the risk that may result in bankruptcy and the CoC of firms’ increases.

Others report that CS does not affect the CoC such as Harris and Raviv (1991) show that the ratio of debt and equity is directly associated with firm profitability. Therefore, they conclude that high profitability reduces the chances of bankruptcy and in turn, reduce the CoC. Similarly, Ross (1977) reveals that high quality firms get a high level of debts due to low chances of bankruptcy. Moreover, Ravid and Sarig (1991) examine that level of debt and dividend depending on the financial quality of the firm. Haugen and Senbet (1978) argue that bankruptcy cost become irrelevant because firms which publicly traded and cannot pay their debt then they have the option of equity financing in form of issuing new stocks in the market. Moreover, the raising capital from equity can be used to repurchase the debt from the market. Finally, Warner (1977) reveals that tax saving on the debt of firms is high as compared to the bankruptcy cost of debt financing. Therefore, all these studies conclude that bankruptcy cost does not affect the CoC.

In summary, reports that theory makes sure the thorough investigation of an issue. In this study uses a number of theories in the background of CG, EM and CoC. CG theories concentrate on the rights of stakeholders such as the AT. Moreover, the stakeholder theory defines the rights of all stakeholders and further identify the responsibility of management to do best in their interests. The same view is consistent with the stewardship theory. Moreover, political, transaction cost, institutional, institutional and ethical theories from their own perspective concentrate on the rights of stakeholders and avoid the practices of the manipulation of accounting information. Discourage the IA to reduce the uncertainty and untimely the CoC. On the other hand, conclude that the agency, signaling, and bankruptcy cost related theories of the CS suggest reducing the IA. Provide accurate information to the capital market because these information act as signal according to investors perception and affect the required return of the investors and CoC of firms.
3.10 Literature Review of Stage-III

As reported in the introduction section of Chapter-1 that the third stage of this thesis is concerned to investigate the impact of EM on CoC. Hence, section 3.10.1 presents the critical review of previous research that investigates EM and the CoC. The remaining sections are organized as follow; section 3.10.2 reports EM and CoE and section 3.10.3 explain EM and CoD.

3.10.1 Earnings Management and Cost of Capital

One strand of research examines the relationship of EM and CoC. For example, Kim and Sohn (2013) study EM and CoC in US listed firms and the results show that EM and CoC are positively associated because the management involves in opportunistic behavior. Further, they add when the market turns down then the CoC becomes high. Hence, the level of fake information increase with the passage of time and in turn, the risk of losses become high. Investors demand higher return and the high level of extra demand of investors’ leads to higher CoC of firms. Similarly, Strobl (2013) investigates and find that EM significantly affects the CoC of listed firms. In the similar vein, Lambert et al. (2007) reveal that quality of accounting information affects the CoC.

However, in another study EM and CoC relationship is investigated in listed companies at Tehran Stock Exchange during 2003-2009. The results conclude that CoC and EM are inversely and significantly associated (Salteh et al., 2012). In addition, Patro and Kanagaraj (2016) demonstrate that EM and CoC are negatively and significantly associated. So, on the basis of previous research findings conclude that the association of EM and CoC could either be positive or negative. The positive association represents that the manipulation process increases the uncertainty and reduce the confidence of investors in reported information. Thus, to secure their investment they demand a higher return and ultimately increases the CoC of firms. However, the negative association view that CoC act as a monitoring tool to produce quality information and increase the investors’ confidence. Hence, this decreases the CoC of firms. Further, the findings of the literature review concluded that there is still a gap to reveal the true picture of EM and CoC causal relationship in developed and
developing economies. Hence, this thesis consider the capital market listed firms of Pakistan as developing economy to fill the identified gap.

3.10.2 Earnings Management and Cost of Equity

This section presents the review of EM and CoE. The relationship between EM and CoE is investigated for Indonesian firms and the results demonstrate that EM and CoE are positively and significantly associated (Scott, 2003). In another research work of listed firms on Indonesia Stock Exchange investigated the effect of EM on CoE and earnings persistence. The results conclude that EM and CoE are positively associated (Meini & Siregar, 2014). Further, Ben-Nasr and Al-Dakheel (2015) examine the effect of earnings quality on the CoE for industrialized and developing economies using privatized firms as a sample. The results reveal that non-normal accruals and CoE are positively associated. Moreover, firms of lower earnings quality have the higher CoE.

Along the small-scale studies researchers also examine EM and CoE in a number of economies such as Bhattacharya et al. (2003) selected 34 countries. EM is measured through three dimensional measurements of accounting earnings such as earnings smoothing, loss avoidance, and earnings aggressiveness. The results demonstrate that an increase in the EM practice increases the CoE. They argue that due to the practices of EM, the stock market trading decrease significantly. The positive association shows that the fake information deceives the investors, therefore the prices of companies’ stock decline. The returns of the investors reduce and they demand high returns.

On the other hand, studies demonstrate that EM and CoE can be negatively associated. The relationship of EM and CoE is investigated in listed firms of Malaysia during 2000-2011. The results demonstrate that the relationship between EM and CoE is weakly negative (Mojtabahedi, 2013). In the similar vein, earnings quality and liquidity effect on the CoE in listed firms of Taiwan and Greta is investigated. The results show that CoE and EM are inversely related (Hsu & Yu, 2015). However, others demonstrate that there is no relationship between EM and CoE (Anthony, 2008). Further, Wiyadi, Putra, Trisnawati and Sasongko (2016) investigate EM and CoE for Indonesian listed firms. The results conclude that EM insignificantly affects
the CoE. Hence, the overall findings of previous studies reveal that association of EM and CoE is either positive or negative. Some reveal no association at all. Therefore, this issue still requires research to clearly determine the association of EM and CoE for a developing country such as Pakistan.

3.10.3 Earnings Management and Cost of Debt

This part discusses the previous studies of EM and CoD. The impact of EM on CoD and credit ratings are investigated in the banking industry of 85 countries. The results reveal that due to EM the level of CoD increases. Moreover, they find that in countries where the regulations of banking are effective and extensive then the EM activities are significantly low. However, in countries where banking regulations are not effective then the EM practices are high (Shen & Huang, 2011). In addition, Abaoub et al. (2013) examine EM determinants such as operational risk, loan loss provision, total risk, systematic risk and dividend per share in 10 banks in Tunisia during 1999-2010. The results show that operational risk and EM are positively and significantly associated. Moreover, these studies find that loan loss provision and EM are inversely related. However, they conclude that total risk, systematic risk and dividend per share insignificantly affect the EM. Moreover, they report that the practices of EM are investigated in bankrupt and non-bankrupt firms. The results show that EM practices are different in bankrupt and non-bankrupt firms. Li et al. (2011) investigate the choice of EM practices in bankrupt and non-bankrupt firms and conclude that bankrupt firms preferably use opportunistic EM approach. However, non-bankrupt firms choose the approach of efficient EM. In addition, they conclude that to predict the future profitability, EM is a better predictor than earnings quality.

Finally, the literature review of EM and CoC, as well as CoE and CoD, reveals that this area needs attention from developing economies perspective. Hence, this thesis takes into account the importance of this area and investigated.

3.11 Summary of Stage II and III

For every type of business require capital such as debt and equity to finance their operations. Literature reveals that the combination of debt and equity is the capital structure of the firm. Hence, firm pay return to their investors and this return
of the investors is known as CoC of the firm. Amount of debt in capital structure either beneficial for the firm or negatively affect the value of the firm. However, the efficient CG system significantly reduces the CoC because the confidence of investors is increased because it ultimately reducing the level of uncertainty. Hence, investors demand a lower rate of return on their investment. Some studies report a negative association of CG and CoC because the governance system reduces the information asymmetry. In addition, the literature reports that audit practices reduce the CoC because auditors verify the financial information of the firm, hence management presents the true financial performance. However, others report a positive association between these variables. Further previous studies show that attributes of CG affect the cost of debt and equity. The effect of EM on CoE and CoD is either positive or negative, hence this discussion is still controversial. This unclear and unresolved area of investigation opens a room for further research in the context of developed and developing economies. Moreover, the cost based theories of the capital structure such as ACT, SCT, and BCT reveal that the efficient CG system significantly reduces the level of CoC. Finally, conclude that CG attributes increase the confidence of investors and they invest in a stable business environment, hence they provide financing at the lowest possible cost.

3.12 Hypotheses Development

On the basis of theoretical and previous research work, the following hypotheses are developed to test the above mention phenomenon and answers the research questions to achieve the objectives for the current study.

3.12.1 Corporate Governance and Earnings Management

The first stage of the current study investigates the impact of CG on EM practices of listed on PSX. Previous literature reveals mix findings of CG system and EM activities. Mansor, Che-Ahmad, Ahmad-Zaluki and Osman (2013) examine that through implementations of CG mechanisms EM activities are minimized. Additionally, Shen and Chih (2007) demonstrate that firms that follow good CG system are less engaged in practices of EM. In addition, Ikechukwu (2013) reveals that CG mechanisms are either internal or external but it reduces the EM activities. Similarly, Kelimeler and Simflandirmasi (2016) report that CG practices prevent the
activities of EM. However, other studies demonstrate a positive relationship between CG and EM such as Kamran and Shah (2014) examine that EM and CG practices are positively associated. Further, Shah et al. (2009) find the positive relationship between CG and EM. However, Abed, Al-Attar and Suwaidan (2012) conclude that CG and EM mechanisms are not associated at all. Similarly, Nugroho and Eko (2011) reveal that board characteristics are not significantly related to EM. Therefore, on the basis of these inconclusive findings in previous literature the following hypothesis is developed;

**H1:** There is no association of earnings management with corporate governance.

### 3.12.2 Corporate Governance and Cost of Capital

The second stage of the study investigates the impact of CG on the CoC of sample firms listed on PSX. Studies reveal that if good CG system is implemented then the CoC should be low (Claessens & Yurtoglu, 2013; Shleifer & Vishny, 1997). Similarly, other studies reveal that the relationship of CG and CoC is inverse (e.g., Bozec & Bozec, 2011; Hassanzadeh, Samadiyan, & Aga, 2012; Pham et al., 2013). However, this is also demonstrated that CG is not associated with the CoC (Opperman, 2009). The literature reveals that CG and disclosures affect the CoE negatively (Anderson, Mansi & Reeb, 2003; Byun, 2007; Chen, Chen, & Wei, 2003; Chen, Chen, & Wei, 2009; Gomes, 2014; Piot & Missonier-Piera, 2007; Skaife, Collins, & LaFond, 2004). In the similar vein, further add that CGI is negatively and significantly affect the CoD (Klock, Mansi, & Maxwell, 2005). However, many researchers conclude that the relationship between CG and CoD is positive. In summary, conclude the inconclusive and inconsistent results, therefore on the basis of these previous studies findings develop the following hypothesis;

**H2:** Corporate governance and cost of capital are not related with each other.

### 3.12.3 Earnings Management and Cost of Capital

The third stage of the current research work examines the impact of EM on the CoC of listed firms on PSX. The extent literature reports that WACC and EM are inversely related (e.g., Mojtahedi, 2013; Salteh, Valipour, & Zarenji, 2012). However,
others report that EM and CoC are positively associated (e.g., Bhattacharya et al., 2003; Kim & Sohn, 2013; Scott, 2014; Shen & Huang, 2011). On the other hand, Anthony (2008) reports that there is no significant association between EM and the CoE for countries with good or bad CG mechanisms. Therefore, on the basis of inconclusive findings of previous literature the following hypothesis is developed:

H3: There is no association of earnings management and cost of capital.

3.13 Theoretical/Conceptual Frameworks

Conceptual framework of a research can help the researcher in a number of ways. It explains the questions like how and why a phenomenon is incurred. Furthermore, it also explains how much a phenomenon is effective (Barghathi, 2014).

3.13.1 Theoretical/Conceptual Framework of Stage-I

Based on the above comments in Figure 3.1 the conceptual framework of EM and CG is developed. The theories of CG are reported in Chapter-2 of the current study. This framework explains that this stage of the study investigates the impact of CG on EM while controlling for firm size, leverage (capital structure), firm performance in term of return on assets (ROA), capital expenditure (CE) and cash flows from operations (CFO).

Figure 3.1: Theoretical/Conceptual Framework Stage one of the Study
Figure 3.1 represents the theoretical framework of stage one of the current study. It explains that in this stage of the study, the impact of CG on EM is investigated after controlling for firm size, capital structure, ROA, CFO and CE that affect the reporting behavior of the manager. CG is the independent variable in the first stage and EM\textsuperscript{21} is taken as dependent variable.

### 3.13.2 Theoretical/Conceptual Framework of Stage-II

The above discussion can be summarized in figure 3.2 of the second stage of the current study. It explains the association/impact of CG with/on CoC. CG is taken as an independent variable and is proxied by an index developed based on Javed and Iqbal (2010) while EM is taken as a dependent variable and is measured using four different proxies taken from the extant literature. Size of firm, leverage, ROA, Beta, and gross domestic product growth (GDPG) rate are taken as control variables.

![Diagram of Theoretical/Conceptual Framework Stage Two of the Study](image)

**Figure 3.2: Theoretical/Conceptual Framework Stage Two of the Study**

### 3.13.3 Theoretical/Conceptual Framework of Stage-III

The stated discussion leads the study to propose the framework in figure 3.3, which shows that the impact of EM is investigated on the CoC of the firms listed on

\textsuperscript{21} EM is proxied by four different models such as Jones Model, Modified Jones Model, Performance Matched Model and Discretionary revenue model.
PSX. EM is used as an independent variable and is proxied through four measures as discussed in stage one while CoC is dependent variable and it is measured though WACC as reported in stage two. The framework also reports control variables like size of firm, leverage, ROA, CE, Beta, and CFO.

Figure 3.3: Theoretical/Conceptual Framework Stage Three of the Study
CHAPTER-4

RESEARCH METHODOLOGY

This chapter reports discussion on research methodology and methods of this thesis to test the developed hypotheses as presented in Chapter-3. Specifically, this chapter focus on methods and methodology of the current study on the basis of previous empirical evidence. Such as section 4.1 presents research approaches and its assumptions, section 4.2 reports population, sample size, and the sampling technique. Moreover, section 4.3 explains the nature and sources of data collection. Section 4.4 presents data analyses such as univariate and multivariate analyses. Section 4.6 reveals panel data approaches, section 4.9 reports models of the study and last sections present variables such as earnings management, cost of capital and corporate governance. Moreover, empirically explained control variables and at last summarized the overall findings of the current chapter.

4.1 Research Approaches/Methodology and Paradigm of the Research

Prior research reports two most popular paradigms such as positivism and interpretivism. These are the important philosophies in the research of social sciences (Bryman, 2008; Hussey & Hussey, 1997). Moreover, Kumar (2005) reveals that these two approaches are different in term of methods applied, analyses of data and communication of findings. Further, Bryman (2008) reports that an interpretivism is an approach that essentially explains the natural phenomena and is based on qualitative nature of the investigation, while positivism is the more concern approach of quantitative methods of research. On the other hand, Blaikie (2007) reveals that in Positivism approach the quantitative nature of data reveals patterns to produce general laws and can also predict the future behavior of patterns. Moreover, reveals that positivism approach rests on the assumption that “social reality is singular and objective and not affect by the act of investigation” (Collis & Hussey, 2009, p. 38). Neuman (1997) demonstrates that positivism approach is used in quantitative, deductive, scientific and experimental works. The process is to get quantifiable
observations, use statistical tools and even sometimes experimental tools to test the hypotheses.

Others report that positivist approach is more preferred in finance studies as this philosophy uses deductive approach, which is concerned with the development of theory or hypothesis and then subsequently validates the theory or hypothesis (Habbash, 2010). The current research uses the quantitative and deductive approach because previous studies demonstrate that quantitative method enables researchers to investigate a large sample size and test theories easily with the help of sample data (Pornupatham, 2006).

4.1.1 Assumptions of Research Approaches in Social Sciences

The positivism and interpretivism have four assumptions such as ontology, epistemology, human nature, and methodology. However, all these assumptions are different in both these approaches (Burrell & Morgan, 1979). Grix (2004) adds that ontology is the starting point of all kind of research as Moses and Knutsen (2007) define the word ontology as the study of being. This initial stage is followed by epistemological and methodological. In addition, Barghathi (2014) describes that after knowing the ontology the next assumption is epistemology. It is based on the view that how individuals understand the world and how this understanding phenomenon is communicated to other people. Moreover, Gribch (2007) explains that epistemology is the evidence of nature and questions such as what is accepted to be true and how it is constructed.

The third assumption is human nature. Barghathi (2014) reports that this assumption is based on the human life and the human life is one of the most important elements of knowledge. Last philosophical assumption is methodology. The methodology is defined as:

“The strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes” (Crotty, 1998, p.3).
Moreover, the methodology of research means; “The process of how to conduct a research” (Barghathi, 2014, p.139).

He further reports that methods and methodology have different meanings. He defines “methods as process of data collection and analysis” (p.140). Similarly, Payne and Payne (2004) explain the concept of the method as:

“The technical practices used to identify a research question, collect and analyze data and present findings” (P.149).

Walliman (2011) argues that the research problem is identified through methods that easily determine the required data and the procedures of the data analysis. Furthermore, the literature reveals that method of research study either qualitative or quantitative in nature.

Payne and Payne (2004) also define methodology as the science or study of methods. However, methods are specific techniques used in research on social research. Further, they add that method is either quantitative or qualitative in nature. Moses and Knutsen (2007) define methodology as:

“An investigation of the concepts, theories and basic principles of reasoning on a subject” (p.85).

4.2 Population, Sample Size and Sampling Technique of the Study

This thesis investigates the impact of corporate governance (CG) on earnings management (EM) and cost of capital (CoC). Moreover, examine the impact of EM on CoC in listed firms on PSX for the period 2006-16. Thus, all listed non-financial firms are the population of the study. The study period is from 2006-2016. This period is selected since data of annual reports prior to 2006 of firms are not available because data of CGI are collected from respective companies’ annual reports. Annual reports of a number of companies are not available, thus only 144 listed companies of non-financial nature are selected as the sample of the study. Moreover, the final time period of this study is from 2007 to 2016\(^\text{22}\). However, firm-year observations are 1440

\(^{22}\) In measurement of EM models used lagged values of variables, hence the study loss one-year data.
and these observations are large as compared to the previous studies the context in listed firms on PSX.

4.3 Nature and Sources of Data

The thesis empirically examined CG, EM and CoC. For this purpose, the data used is secondary and panel in nature, moreover the data are collected from various sources. Data for the study are download from websites of the companies in the form of annual reports, State Bank of Pakistan (SBP) balance sheet data analysis (BSA), open doors website and PSX historical data. This research work uses annual data for variables as Xiaoqi (2013) recommend that annual data are more appropriate for analysis due to a number of factors such as some variables are explained and its data are detailed in nature. Moreover, Guthrie and Sokolowsky (2010) demonstrate that 40% information which shows EM publish in the annual reports.

4.4 Procedures of Data Analysis

To use different methods for data analysis the accuracy of the results increase (Pornupatham, 2006). Hence, to achieve the objectives of the thesis, the current study uses univariate analysis such as descriptive statistics, bivariate analysis as correlational analysis and multivariate analysis such as panel data approaches.

4.4.1 Descriptive/Summary Statistics

Summary statistics explain the dataset characteristics. Moreover, the descriptive statistics is the combination of various elements such as mean, median, standard deviation, values of minimum and maximum, skewness and kurtosis and it report variables in the organized form. Moreover, the mean, median and standard deviation are the measure of the variable central tendency. However, skewness and kurtosis are used to explain the shape of the data/series distribution. Particularly, skewness explains the normality of the data and kurtosis provides information that the data either having a shape as peaked or flat (Hair, Black, Babin & Anderson, 2010). In addition, report that the central tendency and dispersion of the data are important parameters which explain the data nature in detail (Levin & Rubin, 2006).
4.4.2 Bivariate Analysis

Multivariate analysis investigates the correlational and regression analysis models.

4.4.2.1 Correlation Analysis

The correlational matrix presents the relationship between the two variables. The relationship between variables is either theoretically or empirically justified. The values of correlation are lying between ±1. If a value of correlation is close to the extreme points, it represents the perfect linear relationship between variables (Basiruddun, 2011). Moreover, report that the previous studies find that the correlation matrix is used to examine the relationship between variables (e.g., Pornupatham, 2006; Roychowdhury, 2006; Xiaoqi, 2013).

4.4.3 Multivariate Regression

In literature reveals that ordinary least square (OLS) regression is used as a tool of multivariate regression analysis to investigate the relationship of the dependent variable with a number of independent variables (Basiruddin, 2011). In addition, report that to start the analysis for a given set of data OLS is used. However, Habbash (2010) suggests that OLS is used when the data fulfill the assumptions such as normality, serial independence, homoscedasticity and if independent variables are not correlated with each other. If these assumptions are violated then regression may provide biased results (Chen et al., 2003; Gujarati, 2003; Hair et al., 2010). In this regard, the literature suggests diagnostic tests for testing the OLS assumption such as for normality used skewness, to detect serial correlation use Durbin and Watson (DW) (1950) test. Moreover, to check heteroscedasticity (if data has not homoscedastic then it has the problem of heteroscedastic) used Breusch and Pagan Lagrangian Multiplier (LM) test and to detect collinearity in the data used techniques such as variance inflation factor (VIF), Tolerance and correlations matrix. The details are given in the following paras.

4.5 Assumptions of Ordinary Least Square

The following section explain the assumptions of the OLS.
4.5.1 Test of Normality

Normality is the essential requirement of the data for OLS estimation. The literature reveals that a number of tests such as the Jarque-Bera test, the Kolmogorove-Smirnov test of normality, Shapiro-Wilks test, D’Agostino test etc are conducted to check normality in data series. However, in this thesis used skewness to check normality in the data as used for by Mark (2008). Habbash (2010) reports that if skewness is in the range of ±1.96 then the data are considered to be normal. The skewed distribution shows that the data are not normally distributed. However, kurtosis is used for the identification of peakedness and flatness in the dataset and it represents the distribution shape in the data. If the data are not normally distributed then OLS generate biased results (Hair et al., 2010). Moreover, Greene (2007) shows that OLS estimators become inefficient and test statistics also become biased and inconsistent if the normality assumption is violated.

4.5.2 Homoscedasticity

The second assumption of the OLS is the homoscedasticity. Asteriou and Hall (2007) report that the disturbances of a distribution have a constant variance independent of the time period. Hence, these disturbances are considered as homoscedastic. On the other hand, if the data cannot fulfill this assumption, then the data are considered as heteroscedastic. It is reported that this problem of heteroscedasticity is common in the regression analysis. Additionally, heteroscedasticity in data generates unbiased and consistent estimators in OLS. However, the estimators of the OLS become inefficient and higher value of t-statistics than the expected value. In turn, it affects hypothesis testing and generates unreliable t-statistic. To detect the hetero problem, use the Breusch and Pagan LM test if the p-value is less than the significance level (0.05) then the data has heteroscedasticity problem.

4.5.3 Serial Correlation/Autocorrelation

It assumes that error terms are independently distributed. However, if this assumption is not meet, then the error terms are serially correlated or auto-correlated. If autocorrelation is found in the data, then the estimators of OLS are still consistent
and unbiased. Though their estimators are inefficient and hypothesis testing is not valid. To test the assumption of no serial correlation or serial independence the DW test is used (Asteriou & Hall, 2010). Moreover, they add that DW test has its own assumption and the models of current study fulfill these assumptions. The assumptions are; 1) the regression model has a constant, 2) first order serial correlation is assumed and 3) in the list of explanatory variables there should not include the lagged of the dependent variable.

4.5.4 Multicollinearity

It is assumed that the independent variables are not correlated. However, if they are correlated then this creates the problem which is known as multicollinearity. Thus, to examine the problem of multicollinearity in the data set a number of procedures such as correlation, VIF and tolerance are used. Moreover, Hair et al. (2010) demonstrate that if independent variables are highly correlated with each other then there is a high chance of collinearity. Further, add that ±0.90 correlation value creates a highly problematic situation. Similarly, Habbash (2010) and Mark (2008) report that if tolerance value is near to zero and VIF greater than 10, then these values indicate the problem of multicollinearity.

If all of the above assumptions are met, then OLS is the suitable method of analysis. If not then the analyses are being tested using non-parametric approaches such as Pooled OLS (common constant method), the fixed effect model (FEM) and random effect model (REM). The coming sections elaborate each approach in detail along with its assumptions.

4.6 Panel Data Analysis Approaches

The data used in this thesis are panel in nature, therefore the study uses the panel data analyses techniques. Balian (1982) and Habbash (2010) demonstrate that if the data sets violated the assumptions of simple regression, then parametric tests are inappropriate for analyses. Hence, non-parametric tests are used for data analyses. Judge, Griffiths, Hill, Lakepohk and Lee (1985) report that non-parametric tests demand no assumptions as compared to parametric tests and also suggest that no need of normality and homogeneity of variance in parametric methods are required. In this
regard, Chen et al. (2003) and Hamilton (1999) conclude that instead of OLS use generalized least square (GLS) if the OLS assumptions are not met. Moreover, Adkina and Hill (2007) and Gujarati (2003) add that in the presence of serial correlation and heteroscedasticity the most suitable method is GLS. In addition, Greene (2007) also suggests preferring GLS over OLS if the data have heteroscedasticity and serial correlation. Furthermore, reports that GLS has the advantage to correct the problem of omitted variables in pooled time series autocorrelations and heteroscedasticity. Furthermore, Javid and Iqbal (2010) report that the problem of endogeneity and firm specific effects are control through the panel data. Asteriou and Hall (2007) report that panel data techniques are the most efficient estimation because the panel data approach has advantages over other types of data estimators. Moreover, report that the advantages of panel data such as the sample size of the cross-section are increased because this technique allows N cross sections and T time periods. The empirical results obtained from previous literature demonstrate that panel data generates better estimations and more meaningful information. In addition, the dynamic behaviors of the parameters are investigated through panel data and thus samples are more extensively tested and answered the causality issues more successfully. Panel data technique do not generate biased estimates of an omitted variable as compared to individual regression analysis. Additionally, the panel data approach is based on pooling assumptions. Pooling assumption pooled all individuals into a single data set and apply a common set of parameters across these pooled individuals.

The common linear model of panel data is as follow.

\[ Y_{it} = \beta_0 + \beta_1 X_{it} + \mu_{it} \]

Here:

i represents N cross sections and t represents T number of time periods under investigations.

In addition, Brooks (2008) demonstrates that in financial research, two types of approaches are used; they are FEM and REM. Similarly, Baltagi (2001) reveals to examine the relationship within the cross-section or between cross-sections two approaches are used such as fixed and random effects. However, Asteriou and Hall
(2010) report that there are three different approaches of panel data estimations such as common constant, fixed and random effects methods. The detail of these approaches is given in the following paras.

4.6.1 Panel Unit Root Test

Before going to check that which panel data model can use for analyses run the tests of data stationarity. Asteriou and Hall (2007) report that the tests of stationarity in panel data are ignored until the recent past. However, after the greater appearance of macroeconomic applications in the panel data and its importance the panel unit root tests are introduced. The decision is taken on the basis of p-value if this value is less or equal to 0.05 then there is no issue of unit root. In this thesis used The Levin and Lin (LL) (1992) unit root test.

4.6.2 Common Constant Method/Pooled OLS

Greene (2007) demonstrates that to get constant coefficients over time pooled regression become more efficient. Moreover, Asteriou and Hall (2010, p.345) report that a common constant estimation method assumes that “there are no differences among the data metrics of the cross-sectional dimension (N). In other words, the model estimates a common constant for all cross-sections”. This means that the estimated cross sections are not different from each other. However, a common constant method (CCM) estimations are more efficient and unbiased in situations if prior homogeneity exists in the dataset but this method of estimation is more restricted. Therefore, the fixed and random effects methods of estimations are developed as techniques of panel data approaches.

4.6.3 The Fixed Effect Model

Greene (2007) reports that to analyze the panel data fixed and random effect approaches are to be used. Fixed effect (FE) assumes that an individual constant is a group specific constant. Brooks (2008, p. 490) explained FE that “the simplest types of fixed effects models allow the intercept in the regression model to differ cross-sectional but not over time, while all of the slope estimates are fixed both cross-sectional and over time”. Similarly, Asteriou and Hall (2007) assume that in FEM the
constant is group specific, which means that every group has its own constant. Moreover, FEM estimators are also known as least square dummy variables because each group has a dummy variable. Finally, report that to make a selection between CCM and FEM apply the F-test/Chow test (1960). Furthermore, Asteriou and Hall (2007) and Gujarati (2004) reveal that a mathematical model of this test is developed. This model is explained as follows;

$$ F = \frac{[(R^2_{\text{Fixed Effect}} - R^2_{\text{Common Effect}})/(N - 1)]/ [(1 - R^2_{\text{Fixed Effect}})/(N*T - N - K -1)]}{N} $$

Here;

$R^2_{\text{Fixed Effect}}$ is the $R^2$ of the fixed effect model

$R^2_{\text{Common Effect}}$ is the $R^2$ of the common effect model

$N$ is the number of included cross sections in the model

$T$ is the number of selected time period

$K$ is the number of used independent variables

Moreover, F-test having the hypothesis that all constants are the same. If the statistical value of F-test is higher than the critical F-value, then reject the null hypothesis. In addition, suggests that if the p-value of the F-test is significant then pooled OLS applications are invalid for the model (Gujarati, 2003).

Further, Asteriou and Hall (2007) add that FEM has its own limitations such as very slowly changing variables cannot fit into the model easily. This model also estimates a large number of parameters and such large numbers show its inefficiency. Another limitation of FE estimation is that explanatory variables that do not change with the passage of time are ignored. Therefore, during analysis cannot use other dummies whatever we want and it is required. Therefore, keenly observations are needed when the FE approach is selected and implemented even if F-test recommends to use it. These limitations open a door for the random effect (RE) method of estimation and it leads researchers to use REM for estimation.

### 4.6.4 Random Effect Model

Greene (2007) reports that RE is the GLS approach and it assumes that individual constant is group specific disturbance such as error term. Moreover, Brooks (2008) reports that “the random effects approach proposes different intercept terms for each entity and again these intercepts are constant over time, with the
relationships between the explanatory and explained variables assumed to be the same both cross-sections and temporally” (p. 498). In this context, Asteriou and Hall (2007) report that for each cross section constant are not fixed but are taken as random parameters. They report that as compared to FEM the REM estimates few numbers of Parameters. Moreover, it allows adding dummies when required in the model. They further reveal that REM is superior as compared to FEM due to its GLS nature. The fixed model assumes each cross-section differs in its intercept while REM assumes that each cross-section differs in its error term. Therefore, if explanatory variables are highly correlated and unobserved group-specific effects exist then inconsistent and biased estimates will be generated.

It is noteworthy to mention that certain diagnostic tests are developed to decide which model best suits the analyses of the study. FEM and REM both are used for panel data analysis. However, as mentioned above, this is confirmed through certain diagnostic analyses. Detail of the diagnostic test used for this purpose is follow;

4.7 Hausman Test

Asteriou and Hall (2007) conclude that to make the right selection between FEM and REM use Hausman (1978) test. Hausman test assumes no correlation. This test checks the exogeneity and it is based on the correlation testing of X’s variables with individual RE error term. If the results conclude small value of Hausman statistics or the p-value is greater than the significance level of 0.05 then REM is the appropriate technique of analysis.

4.8 Breusch and Pagan Lagrang Multiplier Test

Breusch and Pagan Lagrang Multiplier test is used for the selection between REM and Pooled OLS. Akbar, Imdadullah, Ullah and Aslam (2011) explain if the p-value of Breusch and Pagan LM test is less than the standard level (0.05) of significance, then REM is recommended for data analysis otherwise use pooled OLS.
4.9 Models of the Study

This thesis is investigated in three stages, thus for every stage used specific model.

4.9.1 Empirical Model of Stage One

As reported previously that the first stage of this thesis investigates the impact of CG on EM practices of listed firms on PSX. Hence, the regression model that investigates the impact of CG on EM is followed:

\[ \text{EM}^{23}_{it} = \beta_0 + \beta_1 \text{CGI}_{it} + \beta_2 S_{it} + \beta_3 \text{Lev}_{it} + \beta_4 \text{ROA}_{it} + \beta_5 \text{CFO}_{it} + \beta_6 \text{CE}_{it} + \varepsilon_{it} \] ......... I

Where:
\( \text{EM}_{it} \) is Earnings Management of firm i at time t
\( \text{CGI}_{it} \) is CG Index of firm i at time t
\( S_{it} \) is Size of firm i at time t
\( \text{Lev}_{it} \) is leverage of firm i at time t
\( \text{ROA}_{it} \) is Return on Assets of firm i at time t
\( \text{CFO}_{it} \) is the ratio of operating cash flow to total assets of firm i at time t
\( \text{CE}_{it} \) is Capital Expenditure of firm i at time t
\( \varepsilon_{it} \) is error term of firm i at time t

4.9.2 Empirical Model of Stage Two

The second stage of the thesis investigates the impact of CG on the CoC of listed firms on the PSX. Therefore, the following regression model is developed to check it empirically.

\[ \text{CoC}_{it} = \beta_0 + \beta_1 \text{CGI}_{it} + \beta_2 S_{it} + \beta_3 \text{Lev}_{it} + \beta_4 \text{GDPG}_{it} + \beta_5 \text{Beta}_{it} + \beta_6 \text{ROA}_{it} + \varepsilon_{it} \] ......... II

Where:
\( \text{CoC}_{it} \) is the cost of capital of firm i at time t.
\( \text{GDPG}_{it} \) is the Gross Domestic Product Growth rate of Pakistan at time t.
\( \text{Beta}_{it} \) is the systematic risk of firm i at time t.
Other variables are same as explained in equation (I).

23 This is the general model of stage one because EM is measured through four models/proxies such as Jones model (JM), modified Jones model (MJM), performance matched model (PMM) and discretionary revenue model (DRM). Hence, investigate the effect of CG on EM in term of JM, MJM, PMM and DRM.
4.9.3 Empirical Model of Stage Three

The third and final stage of the thesis investigates the impact of EM on the CoC of sample listed firms. Thus, the following model is developed and tested to achieve the designed objectives of the study.

\[ \text{CoC}_{it} = \beta_0 + \beta_1 \text{EM}_{it} + \beta_2 \text{S}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{ROA}_{it} + \beta_5 \text{CFO}_{it} + \beta_6 \text{Beta}_{it} + \beta_7 \text{CE}_{it} + \varepsilon_{it} \]

All variables are same as explained in models I and II of this study.

4.10 Variables and Measurement Approaches

4.10.1 Earnings Management Models

The first stage of this study investigates the impact of CG on EM and the third stage examines the impact of EM on the CoC. Hence, one of the important concept of this study is EM.

The previous literature reports that EM measuring techniques are improving yet an accurate measurement of EM has not been developed that are generally accepted. Healy and Wahlen (1999) present that “despite the popular wisdom that earnings management exists, it has been remarkably difficult for researchers to convincingly document it” (p.370). Moreover, Balvers (2009) shows that EM practices vary from industry to industry. They also argue that even EM practices are different in the firms even they operating within the same industry.

The extant literature reports that a number of methodologies and models are evolving to detect the firm engagements in EM activities. Hence, this section briefly discusses several models that are adopted to measure EM such as Jones model (JM) (Jones, 1991), modified Jones model (MJM) (Dechow, Sloan, & Sweeney, 1995), performance matched model (PMM) (Kothari, Leone, & Wasley, 2005) and discretionary revenue model (DRM) (Stubben, 2010). Earnings management is used as the dependent variable in the first stage of the current study and four different EM measurement techniques are adopted. The following sections provide these four proxies of EM measurement. However, the specific models’ discussions and proxies explained the general concepts of these models.
4.10.2 Total Accruals

Total accruals are divided into discretionary and non-discretionary accruals (DeAngelo, 1986; Healy, 1985; McNichols, 2000; Subramanyam, 1996). The differences of reported earnings and cash flow from operation is the proxy of total accrual (DeAngelo, 1986; Firth et al., 2007b; Habbash, 2010; Healy, 1985; Mohanram, 2003; Roychowdhury, 2006). Moreover, report that total accruals are scaled by total assets (Roychowdhury, 2006). Similarly, Dechow et al. (1995) report that to calculate the discretionary accruals the total accruals act as a starting point.

4.10.2.1 Measuring Approaches of Total Accruals

Total accruals measurement approaches are the balance sheet approach (BSA) and cash flow approach (CFA). These approaches produce different figures of total accruals. The literature documents that the most common approach is CFA. In addition, researchers recommend that measurement error in this approach is lower as compared to BSA. A similar conclusion is drawn by Habbash (2010) that BSA is an old technique but in recent years’ modern research commonly use the CFA. The following section provides detail discussion of BSA approach.

4.10.2.1.1 Balance Sheet Approach

Total accruals calculation according to BSA is follow.

\[ TA_t = \Delta CA_t - \Delta C_t - \Delta CL_t + \Delta DCL_t - DA_t \]

Where:

- \( TA_t \) is total accruals at time \( t \).
- \( \Delta CA_t \) is the change in current assets at time \( t \).
- \( \Delta C_t \) is the change of cash and cash equivalent at time \( t \).
- \( \Delta CL_t \) is the change of current liability at time \( t \).
- \( \Delta DCL_t \) is the change of debts included in current liability at time \( t \).
- \( DA_t \) is the depreciation and amortization expenses at time \( t \).

This approach includes current accruals and omits non-current accruals except depreciation and amortization. Further, the omitted non-current accruals from current earnings transfer the accruals to future earnings, thus BSA does not capture this. However, CFA takes into account both current and non-current accruals (Habbash, 2010).
4.10.2.1.2 Cash Flow Approach

The CFA is calculated as follow.

\[ TA_t = EBEOI_t - CFO_t \]

Where:

- \( TA_t \) is total accruals at time \( t \).
- \( EBEOI_t \) is the earnings before extra-ordinary items of firm \( i \) at time \( t \).
- \( CFO_t \) is the cash flow from operation of firm \( i \) at time \( t \).

Studies test the power of EM approaches such as Collins and Hribar (2002) test the detection power of these two approaches and conclude that CFA more efficiently presents the total accruals as compared to BSA because of BSA face measurement errors. In addition, Habbash (2010) investigates to determine more efficient EM measure and the results reveal that the research works of Asian and Western studies demonstrate different results. She concludes that the differences in EM are not due to the measurement techniques rather is due to the sample size of the studies. She also reports that the Asian economies are held by family owned businesses and their approach of EM is different as compared to other firms. These firms instead of aggressive EM use the informative EM style.

4.11 Discretionary Accruals

Discretionary accruals are the difference between total accruals and non-discretionary accruals estimated in the particular period (Ashbaugh, Laond, & Mayhew, 2003; Khalil, 2010). Further, Ashbaugh et al. (2003) add that EM represents discretionary practices of management in the long term. In this regard, Habbash (2010) adopted the approach of discretionary accruals in her own study. Similarly, Pornupatham (2006) reveals that discretionary accruals represent EM. Xiaoqi (2013) also measure EM through discretionary accruals. All these studies argue that in accounting and finance literature the discretionary accrual is the standard measure of EM. They also report that the manipulation of earnings is either positive or negative depending on the desired level of a firm. In the similar vein, Mohanram (2003) reports that discretionary accruals as a proxy of EM and it is calculated as the residuals of the regression model of EM. Moreover, Subramanyam (1996) reports that the
discretionary component of the total accruals captures the value relevant information and such information represents the fundamental value of a firm.

4.12 Techniques of Earnings Management

If the pattern of earnings is broken, then premium receive either to reduce or eliminate it. There are different EM techniques which managers use for earnings manipulation. First is the income smoothing that is used when firms’ managers postpone profit of a profitable year to the period of loss and may postpone the loss of a year to the profitable year. The second technique is the big bath, which shows that when a firm face loss in the form of material and if it is unable to recover those losses, then firms use this technique. Moreover, a firm also uses accounting choices and other accounting manipulation techniques such as a number of techniques available for same accounting practice. Therefore, firm manager avails this flexibility and use practices of their own judgment. For example, a number of techniques are available for recording inventory management and depreciation (Pornupatham, 2006). Moreover, he reports that off the balance sheet liabilities method is also used for earnings manipulation as managers try to hide liabilities on the balance sheet when the contract is tied with the amount of liability.

In addition, Mohanram (2003) identify that there are two approaches of EM detection i.e. qualitative and quantitative. The qualitative approach is concerned with the descriptive analysis of firms’ accounting policies while quantitative approach deals with the accruals analysis. Studies conclude that quantitative approach is the concern to identify EM in term of discretionary accruals. Use statistical tools to identify the existence of EM. Furthermore, a quantitative approach is most commonly used in academic literature. Therefore, sometimes it is known as an academic approach. The current study also proposes to use the quantitative approach of EM.

4.13 Models of Earnings Management Measurements

Barghathi (2014) shows to understand EM practices require to know how to detect it. Moreover, Khalil (2010) find that for the appropriate measurement of EM different methodologies are evolved such as accrual and non-accrual based models. In addition, Pornupatham (2006) demonstrates that there are a number of accrual based
models such as Healy Model, DeAngelo Model, Industry Model, Jones model, modified Jones model, Kasznik Model and Margin Model to detect EM practices.

Healy (1985) use total accrual as a proxy of EM. However, Xiong (2006) finds that this model does not provide a specific measure, which is used for managing earnings by firms. However, it provides information about EM existence and it is the easy way to indicate that firms involved in EM activities without using of sophisticated statistical models. However, Kaplan (1985) concludes that in any given period the expected value of non-discretionary accruals is not zero. According to economic situations of firm non-discretionary accruals expected level fluctuates. DeAngelo (1986) also developed an EM model. However, Dechow (1994) and Kaplan (1985) argue that this model is based on the assumption of constant non-discretionary accrual over time. Therefore, changes in total accruals are due to changes in only discretionary accruals components. Furthermore, Beneish (2001) reveals that this model fails to differentiate accruals from the economic performance of a firm and managerial discretion. Another model is the Industry Model of Dechow and Sloan (1991) but this model has limitations such as it is only applied to the event studies.

Further, Almasarawah (2015) explains the use of various models of EM in the last three decades. These models are aggregate and specific accruals models such as discretionary revenues model, distribution of earnings model and model of earnings informativeness. These models are used for EM proxies of total, single, discretionary and non-discretionary accruals. Similarly, Siregar and Utama (2008) use JM (1991), MJM (1995), Kasznik (1999) and Dechow and Dichev (2002) models for measurement of EM.

Healy (1996) concludes the major problems of existing EM models such as these models are unable to incorporate the effects of changes in the fundamental information of the business. Though MJM includes growth, historical rates of business, applied research methods other than regression etc., to resolve such issues. Moreover, Peasnell et al. (2000b) test the performance of Jones, modified Jones and Margin Models and conclude that the performance of JM and MJM are best when applied to a sample of random nature. Moreover, they also demonstrate that in the manipulation of bad debts account and in the case of revenue based manipulation JM
and MJM are more powerful to detect EM practices. These models are explained in details in the following sections.

### 4.13.1 Jones Model of Earnings Management

Jones (1991) develop a model to estimate the non-discretionary accruals. Jones (1991) demonstrates that the discretionary component of total accruals is used as a proxy of EM.

The Jones Model is as follow;

\[
\frac{TAC_t}{Alag} = \alpha_1 \left( \frac{1}{Alag} \right) + \alpha_2 \left( \frac{\Delta R_t}{Alag} \right) + \alpha_3 \left( \frac{PPE_t}{Alag} \right) + \varepsilon_t
\]

Where:
- \( TAC_t \) is the total accruals at time \( t \).
- \( Alag \) is the previous value of total assets at \( t-1 \).
- \( \Delta R_t \) is the change in revenue of firm \( i \) at time \( t \).
- \( PPE_t \) is the property, plant and equipment of firm \( i \) at time \( t \).
- \( \varepsilon_t \) is the error term at time \( t \)

The residuals of regression in the Jones model represent the discretionary power of management (EM).

Discretionary accruals are the difference between total accruals and non-discretionary accruals. The items of the model are scaled by total assets lagged value to reduce the problem of heteroscedasticity (Pornupatham, 2006). However, this model is also criticized by experts that it is based on the assumption that all revenues are non-discretionary. Therefore, to generate discretionary accruals through this model may result in a low value.

### 4.13.2 Modified Jones Model

MJM is the most powerful model used for the detection of EM activities. Dechow et al. (1995) present the MJM and they include the change in receivable during the event period. Therefore, this model becomes different from the original Jones (1991) Model. This model further assumes that there are no systematic earnings and they recommend that recognition of manipulation in credit sales is easier as compared to sales made on cash. The changes made in credit sales may be a source of
EM activities. The model reveals that for the recording of revenue at year-end cash which is not yet received also add to the receivables and this in turn, leads to total accruals increase. MJM is designed to control firm policy of credit and economic transactions. Firth et al. (2007b) find all factors of the model is deflated by lagged total assets to reduce the chances of heteroscedasticity.

Dechow et al. (1995) conclude that as compared to the Healy, DeAngelo and Industry Models, MJM is more powerful to detect earnings manipulation. These other models are based on capturing sales based manipulations. Further, they note that the non-discretionary portion is overestimated in JM. However, the discretionary portion is underestimated due to the assumption that all revenue is non-discretionary in nature. Young (1999) argues that MJM has relatively more explanatory power. However, Peasnell et al. (2000b) and Kothari et al. (2005) recommend that if JM and MJM are used to detect the EM practices in firms which are at the stage of extremely good financial performance then these models are poorly specified. Therefore, they conclude that these models are not error free. Moreover, they demonstrate that previous empirical research shows that MJM fails to detect EM practices. Islam, Ali and Ahmad (2011) used the MJM to detect EM practices in listed firms of Bangladesh and conclude that this model fails to detect EM activities. Moreover, Yoon, Miller and Jiraporn (2006) conduct the same type of research in Korean listed firms and conclude the same results.

Regression Model of Modified Jones Model is given as;

\[ \frac{CA_{it}}{A_{Lag}} = \beta_0 \left( \frac{1}{A_{Lag}} \right) + \beta_1 \left( \frac{\Delta R_{it}}{A_{Lag}} \right) + \varepsilon_{it} \]

Here:

\( CA_{it} / A_{Lag} \) is the total accruals of firm i at time t.
\( A_{Lag} \) is the lagged value of total assets of firm i.
\( \Delta R_{it} \) is the change in total revenue of firm i at time t.
\( \varepsilon_{it} \) is error term.

Non-discretionary portion is estimated by the following equation.

\[ ND_{it} = \beta_0 \left( \frac{1}{A_{Lag}} \right) + \beta_1 \left( \frac{\Delta R_{it} - \Delta AR_{it}}{A_{Lag}} \right) + \beta_2 \left( \frac{PPE_{it}}{A_{Lag}} \right) \]

\( ND_{it} \) is non-discretionary component of total accruals of firm i at time t.
\( \Delta AR_{it} \) is the change in total account receivables of firm i at time t.
Other variables are same as discussed above.
Discretionary accrual is obtained as:
\[ \text{DA}_{it} = (\text{CA}_{it}/\text{A}_{it}) - \text{NDC}_{it} \]

\( \text{DA}_{it} \) is total discretionary accruals of firm \( i \) at time \( t \).

Other variables are same as discussed above.

The residual of regression represents EM.

### 4.13.3 Performance Matched Model

Beslic, Beslic, Jaksic and Andric (2015) investigate the detecting power of the existing EM models and the results reveal that the JM, MJM and Kasznik Model do not have sufficient explanatory power. They report that the explanatory power of these models are 5.4%, 2.6% and 37% respectively. Therefore, the further modification is required in the existing EM models. Others conclude that discretionary accruals of JM and return on assets (ROA) are positively and significantly associated (Dechow et al., 1995; Kasznik, 1999). Moreover, this correlation of normal accruals and firm past performance leads to misspecification of the model (Barth et al., 2001; Dechow et al., 1995; Healy, 1996). Therefore, to remove the misspecification problem of previous models, the performance matched discretionary model is developed (Kothari et al., 2005). The problems of misspecification and biases produce inaccurate/biased results about the EM detection. They conclude that in discretionary accruals models, unusual performance factors are ignored. They demonstrate that they develop the powerful and well-specified measure of discretionary accruals. Further, they argue that matching is made on the basis of industry and ROA, thus an association of performance and accruals are controlled in the model.

Firms with high earnings ability have positive shocks of earnings and in turn, leads to discretionary accruals in the positive direction. However, firms with low earnings have negative shocks in their earnings and these negative shocks push the discretionary accruals in the negative direction (McNichols, 2000). Moreover, JM and MJM estimate discretionary accruals that may produce critical measurement error in discretionary accruals. Therefore, these models require to control for the company prior to performance. For this purpose, they developed a model which use lag value of ROA to solve the problem of misspecification and to avoid the problem of heteroscedasticity in JM and MJM of discretionary accruals. They test these models and conclude that EM does not vary with performance. They further add that MJM
has two approaches such as for the estimation of discretionary accruals add ROA or lagged value of ROA and firm discretionary accruals are adjusted through the process of matching each sample in the same industry with another firm current or previous year ROA (Kothari et al., 2005). They further add that empirically the discretionary accruals are estimated through performance matched discretionary accruals model.

Performance Matched Discretionary Accruals model is explained as follows.

\[ TA_{it} = \beta_0 (1/Alag) + \beta_1 (\Delta R_{it} - \Delta AR_{it})/Alag + \beta_2 (PPE_{it}/Alag) + \beta_3 (ROAlag) + \epsilon_{it} \]

Where:

- \( TA_{it} \) is total accruals of firm \( i \) at time \( t \).
- \( Alag \) is the lagged value of total assets.
- \( \Delta R_{it} \) is the change in Revenue of firm \( i \) at time \( t \).
- \( \Delta AR_{it} \) is the change in Account Receivable of firm \( i \) at time \( t \).
- \( PPE_{it} \) is the property, plant and equipment of firm \( i \) at time \( t \).
- \( ROAlag \) is the lagged value of return on assets.
- \( \epsilon_{it} \) is error term of firm \( i \) at time \( t \).

### 4.13.4 Discretionary Revenue Model

The literature reveals that DRM is the recent model of EM detection. Accruals models are criticized because these models are noisy in nature and generate biased discretionary estimates. However, DRM provides more conclusive and reliable results as compared to accruals models. The revenues are a logical first step in examining individual components of earnings. Moreover, investigate the power of detection of accruals and discretionary revenue models and the results show that revenue model is better specified, less biased and more powerful in detecting EM activities as compared to accrual based models. To test these models, he used simulation procedure for comparison of these models. The results reveal that this approach provides more convincing and reliable estimates than previously used models. He further argues that the revenue model also detects revenue and expense manipulation (Stubben, 2010).

Model of DR is as follow.

\[ \Delta AR_{it} = \beta_0 + \beta_1 \Delta R_{it} + \beta_2 \Delta AR_{it} \times Size_{it} + \beta_3 \Delta AR_{it} \times Age_{it} + \beta_4 \Delta AR_{it} \times Age^2_{it} + \beta_5 \Delta AR_{it} \times GRRP_{it} + \beta_6 \Delta AR_{it} \times GRRN_{it} + \beta_7 \Delta AR_{it} \times GRM_{it} + \beta_8 \Delta AR_{it} \times GRMSq_{it} + \epsilon_{it} \]
Here:

$\Delta AR_{it}$ is change in accounts receivable of company i at time t.

$\Delta R_{it}$ is the change in revenue/sales of company i at time t.

$\Delta R_{it} \times Size_{it}$ is the product of change of revenue/sales and size of company i at time t.

$\Delta R_{it} \times Age_{it}$ is the product of change of revenue/sales and age of company i at time t.

$\Delta R_{it} \times GRRP_{it}$ is the product of change of revenue/sales and industry-median-adjusted revenue growth (0 if negative) of company i at time t.

$\Delta R_{it} \times GRRN_{it}$ is the product of change of revenue/sales and industry-median-adjusted revenue growth (0 if positive) of company i at time t.

$\Delta R_{it} \times GRM_{it}$ is the product of change of revenue/sales and industry-median-adjusted gross margin of company i at time t.

$\Delta R_{it} \times GRMSQ_{it}$ is the product of change of revenue/sales and square of industry-median-adjusted gross margin of company i at time t.

$\varepsilon_{it}$ is error term.

This model uses the industry-median-adjusted growth rate of revenue both positive as well as negative. It also uses the industry-median-adjusted gross margin. Additionally, he shows that the growth rate of revenue is calculated by the differences in the growth rate of revenue of firm and industry-median-adjusted growth rate of revenue. Moreover, the industry-median-adjusted gross margin is calculated by the differences between a firm gross margin and the industry median adjusted gross margin (Stubben, 2010). Moreover, Xiaoqi (2013) reported the procedures of industry adjusted median such as the difference of firm and industry-median-adjusted factor. Hence, this study adopted these procedures for measurement.

### 4.14 Cost of Capital

As reported that this study investigates the impact of CG on CoC and the impact of EM on CoC in stage two and three respectively. Hence, the important concept of CoC measurement is needed careful attention.

Cost of capital is measured through weighted average cost of capital (WACC) in the current study. It is very important for the companies because it represents the efficiency of a firm and plays a very key role in wealth creation for shareholders. Further, studies reveal that practitioners and researchers through the optimal capital structure link capital structure to shareholders’ wealth and with the CoC (Rad, 2014).
4.15 Cost of Capital Model

WACC is the combination of cost of equity (CoE) and cost of debt (CoD). Due to its advantage, WACC is one of the fundamental concepts in corporate finance (Farber, Gillet, & Szafarz, 2006). Literature reports that WACC is the most widely used technique of CoC calculation in the real world (Massari, Roncaglio, & Zanetti, 2007; Pierru, 2009). In addition, WACC is used as a proxy for the measurement of CoC (Bozec & Bozec, 2011). It is explained as:

\[ WACC = W_d R_d (1-T_c) + W_e R_e \]

Here:
- \( W_d \) is the proportion of debts in the capital structure of a firm.
- \( W_e \) is the proportion of equity in the capital structure of a firm.
- \( T_c \) is the rate of corporate tax of a firm.
- \( R_d \) represents the CoD on the firm’s outstanding debts.
- \( R_e \) shows the CoE (calculated through CAPM).

In the equation above weighted/proportion of debts is the ratio of debt to debt plus equity and weighted/proportion of equity is calculated as the ratio of equity to debt plus equity. Moreover, the standard treatment is \((1-T_c)\) in the WACC equation which reflects interest payments deductibility. Therefore, interest payments as the CoD will reduce that will lead to a low CoC (Rad, 2014).

4.15.1 Cost of Equity

Various techniques are used to calculate the CoE. However, Capital Asset Pricing Model (CAPM) is a widely accepted and employed model in literature to calculate CoE (Chen, 2009; Da, Guo, & Jagannathan, 2012; Rad, 2014). CAPM is used in application worldwide to calculate the CoE and performance of portfolios (Fama & French, 2004). Therefore, on the basis of the above empirical evidence, this study uses CAPM to calculate the CoE of selected firms.

\[ \bar{R}_{it} = RFR + (R_m - RFR) \beta \]

Here:
- \( \bar{R}_{it} \) is the cost of equity of firm i at time t.
- RFR is the risk free rate.
- \( R_m \) is the market rate of return.
R_m – RFR is the risk premium.
β shows the market sensitivity (Systematic risk).
Moreover, the Beta is measured as follow.
\[ \beta = \frac{\text{CoV Mkt & Stk Rts}}{\text{Var of Mkt Rtn}} \]
Here:
CoV is the covariance between the Market and Stock Returns.
Var shows the variance of market return.

4.15.2 Cost of Debt

The second component of the CoC is the CoD. CoD is the interest that firms pay on their long term bonds. In other words, the amount the company pays on its debts is known as CoD. If such information is not available, then interest paid on the long term borrowings is used as the proxy of the CoD. However, CoD is sometimes computed through the rate on a risk-free bond (Rad, 2014). However, Santosuosso (2014) compute the CoD as the ratio of the interest expense to the financial leverage. Moreover, Ross, Westerfield and Jordan (2010, p.443) report that CoD is “the return that lenders require on the firm’s debt” or in other words “simply the interest rate the firm must pay on new borrowing”. Hence, this study uses the ratio of interest expense to financial debts.

4.16 Corporate Governance and its Measurement

The literature reveals that the efficient CG system is required to control the management of discretionary power. However, others report that due to inefficient CG system the management of a firm indulges in the practices of EM.

Corporate governance index (CGI) is used as a proxy of CG and used as an independent variable in first and second stages. In previous studies, CG is measured by different proxies. A large number of studies examine the effect of CG but these studies used general proxies such as BoD, independent director, gender diversity etc. While a few studies used CGI. Moreover, the studies recommended to used index in future studies such as Kamran and Shah (2014) and Lakhal (2015). Hence, Javid and Iqbal (2010) developed a CGI for the first time in Pakistan but they used it to examine its effect on the firm performance. This study adopted the same index but investigates its impact on EM and CoC. Moreover, this index is the combination of three sub-
indices and this index is based on 22 indicators/factors which are related to CG mechanisms.

1. The Board of Directors (It is the Combination of 8 Factors).
   i. Board Size (Number of Directors).
   ii. Board Composition (Job Description of all Board Members).
   iii. Chairman CEO Separation (If not any lead Director).
   iv. Outside Directors Available to Board (Independent Directors, Nominee Directors).
   v. Board Attendance (Board Meetings).
   vi. Outside Director Attendance in Meetings.
   viii. Directors Representing Minority Shareholders.

The board plays a very important role in the survival and performance of firms such as CG Code of Pakistan 2012 reports that the board shall exercise its powers and efficiently perform their fiduciary duties. The board design the appropriate corporate strategies, policies, and procedures for the acceptable code of conduct. Further, the 2012 Code reports that the board evaluates its own performance while the performance evaluation is not reported in the Code of 2002. The above sub-index presents the board characteristics such as board size i.e. how many members are in the board. The board size is either small or large. Small boards are efficient because decisions are taken in less time and the costs are also low. However, the large board has many members and diversity, therefore the decision and policies take more time and the conflict of interests is high. Alternatively, this affects the overall performance of the firm. On the other hand, the diversity of the firm generates more innovative ideas and an efficient monitoring system and may have a positive effect. Secondly, the existence of job description explains the authority and responsibility of the members. If the companies implement this policy, then the board work in an efficient way otherwise may perform less efficiently if job descriptions are not available. Thirdly, the BoD index reports that the Chairperson and CEO positions are held by different persons or the same such as directed in the revised CG Code of 2012. Hence, the efficiency of the board improves and the decisions are made unbiased. Fourthly, reports that the board should have an outsider and independent directors (CG Code,
2012). Such directors have no direct interests in the business, therefore they make policies that are beneficial to the firm. The CG Code encourage to have independent and non-executive directors with required skills, competency, knowledge, and experiences. Further, add that board has at least one independent director or one third of the total of company board members. The fifth and sixth points explain the meeting of the board and the independent directors’ attendance in meeting positively contribute to the firm performance because on the regular bases they evaluate the performance of the firm. The seventh point report that the CFO position is held by finance director because the financing or capital structure decisions play a very crucial role in the performance of the firm. Thus, this position requires a qualified and experienced person to manage such activities. In CG Code of 2012, the CFO appointment is made compulsory. The last point provides information such as the board should have the director(s) to represent the minority shareholders to prevent the expropriation of minority shareholders’ funds. The CG code of 2012 encourages the board to have a representative of minority shareholders. Moreover, the representative must have competency, experience, knowledge and required skills.

II. Ownership & Shareholdings (It is the Combination of 7 Factors).

i. Presence of Outside Block Holder (More than 10 Percent Shareholdings).

ii. Does the CEO own shares?

iii. Directors’ Ownership (Block Ownership) other than CEO and Chairman.

iv. Chairman or CEO is Block Holder (10 percent).

v. Concentration of Ownership (Top five).

vi. Dividend Policy.

vii. Staff Benefits other than Wages and Salaries.

The CG code of 2012 encourages to disclose the pattern of shareholders along with name and number of shares held by all parties. Moreover, 5% and more ownership shall be reported with name and share wise details. Firm also need to disclose if they issue bonus shares or they do not distribute dividends. Similarly, also management required to report the benefits payments of staff and the remuneration packages of the director to encourage the value creation in the firm (CG Code of Pakistan, 2012).
III. Transparency, Disclosure and Auditing (it is the combination of 7 factors).

i. Does the Company have full Disclosure of CG Practices?

ii. Does the Company Disclose how much it paid to its auditor for Consulting and other work?

iii. Does the Company Disclose Full Biographies of its Board Members?

iv. Disclosure of Internal Audit Committee.

v. Disclosure of Board of Directors and Executive Staff Members’ Remuneration.


vii. Information of the Executive Management Staff Members’ Ownership (Employees’ Ownership).

The transparent disclosure of financial and operating information is encouraging to reduce the level of uncertainty of the investors. If firms disclose more information, then investors’ confidence is increased and they get information about firm performance and expenditures. Moreover, it reduces IA and ultimately they make informed decisions. Firms are also required to disclose audit fee as well as the formation of the audit committee as explained in the CG Code.

The company further need to disclose the payments paid to auditors. Companies report the internal audit committee such as the audit committee is chaired by one of the independent director and at least one member has the financial skill and experiences. Further, the internal audit reports and the payments made to the audit parties for their services disclosure is encouraged.

The above discussed sub-indices are combined to complete composite CGI as reported in Appendix-A. Javid and Iqbal (2010) report that the multifactor CG rating system is applied in the composition of this index. Experts assigned a weight to each factor which is based on the subjective judgment of experts. Moreover, the subjective judgments and weighting system are based on the expertise of financial experts and on empirical literature. The maximum level of the score is 100 and minimum is zero. If a factor is observed in the annual reports of companies, then 100 score is assigned to it. Moreover, in a largely observed factor the assigned score level is 80. If the factor is partially observed then the assigned score level is 50 and additionally, if the factor
is not observed at all then a 0 score is assigned. Hence, due to variation in the assigned scores these individual factors scores are summed and divided by the number of factors in each sub-index to get the average score of each sub-index. The average value is a valid representative of all factors of the sub-index. All the three sub-indices scores are added and then divided by three to calculate the single value of CGI of a particular firm during a particular time period24.

4.17 Control Variables of the Study

The literature reveals that if CG and EM are investigated without including control variables in the model then problems of misspecification and heteroscedasticity will arise (Habbash et al., 2013; Jaggi et al., 2009; Kothari et al., 2005). Moreover, control variables also mitigate statistical issues such as endogeneity problem. Therefore, on the basis of previous research works in this study include a number of control variables to avoid the above mentioned problems. Moreover, concluding that a number of characteristics of firms affect EM activities and these characteristics are firm size, capital structure (CS-leverage) and performance of a firm (Cohen & Zarowin, 2010; Fan et al., 2007; Firth et al., 2007b). In this study not only these but other control variables such as capital expenditures (CE), gross domestic product growth (GDPG) rate, Beta and cash flows from operation (CFO) activities are also included in the models. These characteristics are described in the following subsections of 5.17 sections.

4.17.1 Firm Size

Studies conclude that internal CG mechanisms are adjustable or substitutable. Therefore, a firm with different structure needs different CG mechanisms. However, the corporate structure of a small and large firm is necessarily similar (Booth et al., 2001; Peasnell et al., 2005). Moreover, reported the measurement procedures that a large number of research work uses the natural logarithm of total assets as the proxy of size of firm (Barghathi, 2014; Cohen & Zarowin, 2010; Fan et al., 2007; Firth et al., 2007b; Habbash, 2010; Lee, 2009; Llukani, 2013; Pornupatham, 2006; Xiaoqi, 2013). The study reports that the size of a firm affects the structure of the BoD. They

24 such as year in this study.
report that the size of the board increases due to diversification in firm and when firm become larger in size (Boone et al., 2007). Empirically literature concludes that agency cost expects to increase with an increase in firm size. Therefore, this allows greater opportunist and discretion activities to management (Jensen & Meckling, 1976). Moreover, Bartov (1993) concludes that a larger firm and EM are associated. In this regard, Pincus and Rajgopal (2002) find that management of large firms faces more pressure to report more predictable earnings. In addition, political forces and size of a firm are associated such as Watts and Zimmerman (1990) demonstrate that the pressure of political costs on larger firms’ are high. Therefore, to reduce political risk these larger firms manage earnings. Similarly, Lobo and Zhou (2006) examine that large firms can easily manipulate their earnings because such firms have a complex operational system. Furthermore, Christie (1990) shows that the discretionary accruals (earnings management) is the outcome of accounting choices and accounting choices, in turn, is a function of firm size. Therefore, firm size and EM coefficient expected to be positive. In addition, firm size significantly affects the EM activities (Amertha, Ulupui, & Putr, 2014). The size of the firm is included in the model to control for the differences in reported earnings based on small and large firms and it is proxied by the log of total assets of firms. This control variable is used in stage one, two and three of the current study according to the literature (theoretical and empirical justifications).

### 4.17.2 Firm Performance

Performance indicator represents the management ability that how efficiently they utilize organization resources and these resources ultimately show the ownership of shareholders. ROA is used as a proxy of firm performance as reported in the previous studies (e.g., Almasarwah, 2015; Barghathi, 2014; Cohen & Zarowin, 2010; Fan et al., 2007; Firth et al., 2007b; Habbash, 2010; Xiaoqi, 2013).

Performance of firms and EM are positively associated in Brazilian listed firms (Rezaei & Neghabi, 2016; Sircerre, Sampaio, Fama, & Santos, 2016). However, EM and firm performance are negatively associated in listed firms in Pakistan (Tabassum, Kaleem, & Nazir, 2014).
The lower CoC creates the opportunities for listed firms to empower themselves and in turn, the empowerment increases the profit of firms. Moreover, the good performance of the companies allied with the good CG systems and such performance increases the wealth of shareholders. Moreover, managers sometimes manipulate the firm performance to hide the inefficiency of management and to get their high remunerations (Rad, 2014). ROA is included in the model to control for the difference in reporting earnings based on firm performance. ROA as a control variable used in stage one, two and three of the current study according to the literature (empirical and theoretical justification).

4.17.3 Leverage

Leverage represents the CS of a company because it is the combination of debt and equity (Habbash, 2010). Previous studies report that they used leverage and measured as the ratio of total debts to total assets (Barghati, 2014; Cohen & Zarowin, 2010; Fan et al., 2007; Firth et al., 2007b; Lee, 2009; Pornupatham, 2006; Xiaoqi, 2013). In this study adopted the proxy of leverage as the ratio of total debts to total assets.

Literature reports that leverage is expected to be positively associated with EM (Bassiouny, Soliman, & Ragab, 2016; Habbash, 2010; Pornupatham, 2006; Sincerre et al., 2016; Waweru, & Riro, 2013; Yero, 2010). However, others report that EM and financial leverage are negatively associated (Alsharairi & Salama, 2015). Other studies report that leverage and EM are not associated at all (Ardison, Martinez, & Galdi, 2012). Finally, also find that leverage is not significantly affected EM activities (Amertha et al., 2014). Leverage is included in the model to control for the differences in reporting earnings based on the firm performance. The expected association of leverage and EM is either positive or negative. The same relationship is also expected for leverage and CoC. In addition, reveals that theoretically the CS and CoC of listed firms are significantly associated such as in this study used the theoretical perspective of CS theories. Leverage as a control variable used in stage one, two and three of the current study according to the literature (empirical and theoretical justification).

25 Theories such as ACT, SCT and BCT.
4.17.4 Cash Flows from Operating Activities

Firms’ performance is different in different industries. Hence, to capture the performance differences of the firm in different industries use the CFO as a control variable. CFO controls the effect of economic activities on EM practices and this ratio also controls the relationship between operating cash flow and abnormal accruals (Habbash, 2010). Similarly, demonstrate that firms with low operating cash flows manage their earnings upward as compared to firms with high operating cash flow. Therefore, they conclude that firms of high operating performance are less likely involved in the discretionary activities due to already high performance (Becker, Defond, Jiambalvo, & Subramanyam, 1998; Lobo & Zhou, 2006; Jiang et al., 2010). Banimahd and Aliabadi (2013) argue a positive association of CFO and EM is due to the potential power of every firm to produce more benefits and in turn this show that the firm performs well in future. Moreover, Rad (2014) reveals that investors during their investment decisions take into account the potential future performance of firms. Moreover, the CoC of firms is low which generate more cash flows from operations because the level of confidence of investors is high.

Cash flows from operating activities is measured in the current study as the ratio of cash flows from operating activities to total assets. This proxy is based on the measurement of cash flow from operating activities used by previous studies (e.g., Alghamdi, 2012; Basiruddin, 2011; Habbash, 2010; Peasnell et al., 2005). CFO as a control variable used in stage one and three of the current study according to the literature (theoretical and empirical justification).

4.17.5 Gross Domestic Product Growth Rate

One of the most significant objective to achieve in any country is to improve the GDPG rate (Smith, 1776) and to increase GDPG rate, each section of the economy should work efficiently. Tahir, Shehzadi, Ali and Ullah (2015) demonstrate that the positive changes in the level of goods and services as well as in national income in a country over a defined time period are considered as economic growth. Moreover, Rad (2014) reports that business sector especially the companies and enterprises are important sectors that efficiently contributed to GDPG rate. Therefore, authorities and policymakers are more concern about business sector performance. This control
variable is used in stage two of the current study according to the literature (theoretical and empirical contribution).

4.17.6 Capital Expenditure

Conyon and He (2011) investigate and find that the growth in a firm demand expansion in the CE. Increase in the CE requires more monitoring mechanisms to protect the wealth of shareholders’. Thus, when the monitoring process strengthens the CE then CoC may decrease as investors confidence increase, thus leading to make informed decisions. Chances of losses or risk of the investment losses are reduced. Since reveals that as high level expenditure demand the high monitoring from management and CG become strong. Therefore, the activities of EM are also decreasing. Other reports like Zahra and Pearce (1989) and Pfeffer (1978) that firm growth and CE are positively associated. Hence, the increase in CE reduces the manipulation practices of management. CE is measured by the percentage of total CE to firm total assets. CE as a control variable used in stage one and three of the current study according to the literature (empirical and theoretical justifications).

4.17.7 Beta

The most commonly accepted measure of risk is Beta (Fama & French, 1992). Beta represents the risk level of a firm. Moreover, reveals that risk and financing cost of firms are associated. If a firm risk increases then investors demand a higher level of return and alternatively the CoE is increasing (Johnson, 1999) and the overall CoC also increasing. Previous research studies use Beta as a measure of systematic risk and they postulate a positive association between risk and CoC (e.g., Botosan, 1997; Bozec, Laurin, & Meier, 2014; Shah et al., 2009). To calculate the value of Beta, daily stock prices and market index data are used. This model is adopted from the previous literature of Bozec et al. (2014), Shah et al. (2009) and Botosan (1997).

\[ R_{it} = \beta_0 + \beta_1 R_{M_it} + \epsilon_{it} \]

Here:
- \( R_{it} \) is the daily returns of firm \( i \) at time \( t \).
- \( R_{M_it} \) is the market return of KSE-100 Index.
- \( \epsilon_{it} \) is error term.
Finally, reported Beta as a control variable used in stage two and three of the current study according to the literature (based on empirical and theoretical justification).

4.18 Summary of the Chapter

This chapter presented the research methodology and methods of the thesis. The methodology of the study is quantitative and deductive in nature. The study is conducted in three stages and used a sample of 144 firms listed on the Pakistan Stock Exchange for the time period during 2006 to 2016. Data used is secondary and panel in nature. For analysis used univariate analysis such as summary statistics, bivariate analysis like correlation and multivariate analysis such as panel data approaches. Moreover, for the assumptions of OLS used their relevant tests. The first stage examined the impact of CG on EM, second stage study the impact of CG on CoC and the final stage investigates the impact of EM on CoC. EM is measured through four different models such as Jones model, modified Jones model, performance matched model and discretionary revenue model; corporate governance is proxied by corporate governance index and it is adopted from Javid and Iqbal (2010) and the CoC is measured through WACC. For the analyses developed three main models and controlling for firm size, the performance of firms (ROA), CS (leverage), CFO, CE, Beta, and GDPG rate.
CHAPTER-5

RESULTS AND DISCUSSION

In this chapter presents the empirical results of the analysis of this study. Earnings management (EM) is calculated through four proxies named as Jones model (JM), modified Jones model (MJM), performance matched model (PMM) and discretionary revenue model (DRM). However, cost of capital (CoC) is proxied by the weighted average cost of capital (WACC) and the corporate governance (CG) is proxied by the corporate governance index (CGI). In addition to these main concepts, a number of control variables are used to demonstrate the important characteristics of firms and to observe their effect on the dependent variables of the respective models.

The chapter is organized as; section 5.1 reports the descriptive/summary statistics. Section 5.2 presents the correlational results of the study, sections 5.3 and 5.4 report results of panel data approaches, section 5.5 presents the results of CG and CoC, section 5.6 reports results of EM and CoC and finally summarize the chapter.

5.1 Descriptive/Summary Statistics of the Study

Descriptive statistics summarize the nature and various characteristics of the data/series. The summary/descriptive statistics of all variables used in this study reported in table 5.1.

<table>
<thead>
<tr>
<th>Table 5.1: Descriptive Statistics of the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>JM</td>
</tr>
<tr>
<td>MJM</td>
</tr>
<tr>
<td>PMM</td>
</tr>
<tr>
<td>DRM</td>
</tr>
<tr>
<td>CoC</td>
</tr>
<tr>
<td>CGI</td>
</tr>
<tr>
<td>LEV</td>
</tr>
<tr>
<td>Size</td>
</tr>
</tbody>
</table>

133
<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Median</th>
<th>St. Dev</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE</td>
<td>0.708</td>
<td>0.716</td>
<td>0.335</td>
<td>0.000</td>
<td>0.932</td>
<td>0.167</td>
<td>2.79</td>
</tr>
<tr>
<td>ROA</td>
<td>0.063</td>
<td>0.057</td>
<td>0.112</td>
<td>-0.539</td>
<td>0.297</td>
<td>-0.234</td>
<td>4.08</td>
</tr>
<tr>
<td>CFO</td>
<td>0.088</td>
<td>0.066</td>
<td>0.133</td>
<td>-0.193</td>
<td>0.39</td>
<td>0.471</td>
<td>3.05</td>
</tr>
<tr>
<td>Beta</td>
<td>0.741</td>
<td>0.744</td>
<td>0.614</td>
<td>0.976</td>
<td>1.997</td>
<td>0.125</td>
<td>2.89</td>
</tr>
<tr>
<td>GDPG</td>
<td>3.452</td>
<td>3.507</td>
<td>1.151</td>
<td>1.607</td>
<td>4.833</td>
<td>-0.323</td>
<td>1.74</td>
</tr>
</tbody>
</table>

Note: Variables report in table 5.1 are explained in research methodology Chapter-4 of this study. Time period is used from 2006 to 2016. JM, MJM, PMM and DRM are used as dependent variables in stage one of the current study. However, in stage three these variables are used as independent variables. Moreover, CoC is used as dependent variable in stage two and three of the current study and CGI is used as independent variable in stage one and two. Finally, other variables are used as control variables such as leverage, size of the firm, CE, ROA, CFO, Beta and GDPG rate.

Table 5.1 shows the nature of the dependent, independent and control variables used in this thesis. Descriptive statistics are used to investigate the data nature (Habbash, 2010; Pornupatham, 2006; Roychowdhury, 2006; Xiaoqi, 2013). For the calculation of EM four methods are used. The first proxy for it is JM and its mean value is -0.029 and the median value is -0.017. The median and mean values are very close. Further, demonstrates that the standard deviation of it is 0.784. Hence, this is concluded that these observations are not highly dispersed from its mean value. Moreover, this argument is supported by the minimum and maximum values of JM because these values show small differences. On the bases of minimum & maximum values and standard deviation reveal that the listed firms in Pakistan follow the same standards of accounting manipulation techniques as portrayed in the descriptive statistics of all these variables. Hence, the manipulation practices of management are not high in these firms. The second proxy used for EM is MJM. The minimum and maximum brackets of the MJM proxy in this study fall in the range of -1.970 and 1.970 respectively. The range of values reveals that there is a small gap in the data extreme levels. However, the mean value of the variable is -0.004 and the median value is 0.061. Hence, the closeness of these values reveals that the series is unbiased to use in the model. The standard deviation of the JMM is 0.831 and it shows that the series is not highly dispersed values around its mean value. Moreover, the third proxy of the EM is calculated through PMM. The value of PMM fall in the brackets of -1.799 and 1.893 as minimum and maximum respectively in this research study. Moreover, this research demonstrates that mean of PMM is -0.018 and the median value is -0.012. Further, add that the standard deviation of the PMM is 0.841 and there is not much variation in the observations from their mean value. Moreover, the
fourth proxy of EM in this study is measured through the DRM. The values of this proxy are in the minimum and maximum brackets of -2.354 and 2.441 respectively in the current study and the same results reveal from this proxy that the extreme values are not far away from each other. Further, this is demonstrated that the mean and median values are 0.000 and 0.098 respectively and this shows that the series follows a content trend. However, the standard deviation of EM in term of DRM is 1.000 and this report that this value is close to the mean and median values. Hence, this dispersion is not high and the series arguments of mean and median values are supported. Moreover, as reported in table 5.1 that the values of skewness are low and these reveal that the data of all EM proxies are normally distributed. Similarly, the values of kurtosis show that all series of EM proxies follow the trend of peakness of distribution. The overall results of EM proxies reveal that the governance system of Pakistan is effective, the regulatory system is efficient and the companies follow the standard procedures of accounting principles. Therefore, management of firms cannot highly engage in the manipulation practices. This information further strengthening the governance mechanisms and the confidence of investors and other stakeholder’s confidence are also increasing. Such information attracts the new investors from local and international markets. Ultimately, the performance of the market improves which positively contributed to the economic performance and its growth.

In the second and third stages of the current study used the CoC as a dependent variable. The descriptive statistics reveal that the minimum and maximum limits of observations of the CoC are -5.037 and 9.742 respectively. The mean and median values of the CoC is 1.560 and 1.110 respectively. The means value presents the average cost of sample firms. Hence, conclude the level of investors’ confidence is high because investors perceive that the market is efficient and their returns are certain. Hence, the CoC on average is low for a firm. The standard deviation of the CoC is 3.123. Skewness and kurtosis of the CoC are 0.398 and 3.04 respectively. These statistics show that the variable is normally distributed.

CG is measured through CGI adopted from Javid and Iqbal (2010). In the first and second stages of this study, CGI is used as an independent variable. The minimum value of CG is 57.143 and maximum is 100. Finally, the data period used in this thesis is 2007-2016 and the code of CG of Pakistan was developed in 2002 and
then amended in 2012. The amended code made a number of mechanisms mandatory. Therefore, these maximum values show that the application of CG is increased with the passage of time and this is a positive sign of CG system implementation. This phenomenon is also reported by the extent literature that the CG mechanisms are improved with the passage of time (Henry, 2008; Ntim et al., 2012a). Similarly, in Pakistan CG mechanisms are improved such as reported in the current study and the CG code encourage firms through voluntary and mandatory disclosure principles. Moreover, the data demonstrates that the mean and median values are 78.114 and 78.571 respectively which is almost the same. The mean value shows the average score of CGI of all sample firms. Hence, this is can be concluded that on average the adoption and implementation of the CG mechanisms procedures are same of all listed firms because the revised Code of CG of 2012 made it mandatory. The standard deviation of the CG is 7.812. This shows that all listed firms follow the rules and regulations of the capital market and SECP in the same manner as mandated by the Pakistan code of CG. The skewness and the kurtosis value show that the CGI values are normally distributed.

The descriptive statistics of leverage (CS) conclude that the listed firms largely depend on debt financing as compared to equity financing. The descriptive statistics of the variable size shows that sample firms are not too different with respect to size. Similarly, CE is also used as a control variable that shows that sample firms make expansion in their businesses with the passage of time revealing a positive message to all stakeholders. Moreover, the ROA descriptive values reveal that on average all firms show positive performance which conveys a positive signal for the stakeholders of the capital market. All statistics of CFO variable show that on average the overall cash generating ability of all sample firms listed on PSX are high. It is also a positive sign for the industries as well as for the Pakistan capital market. Moreover, the statistical values show that the average risk of specific firms which is this case is less than the market risk. The gross domestic product growth rate is being a positive indicator of the market. The summary statistics of the control variables used in the study reveals that all these variables are normally distributed.
Taking all the dependent and independent variables in a wholesome, all these indicators show either a low value in the case of EM, CoC, and firm risk while a high value for CGI, ROA, CE and CFO.

5.2 Correlations Results

The correlations matrix shows that the variables are positively or negatively associated. Moreover, the measure of correlation is also used to detect the problem of multicollinearity in the dataset such as Gujarati (2003) reports that correlation value greater than 0.80 shows that the dataset has a problem of collinearity.

Table 5.2 presents the correlation results of the variables used in this study. The table shows that the JM is strongly positively associated with MJM and PMM because all these proxies are representing the EM and these models are based on the accrual based measurement of the EM. Hence, demonstrate that the power of detection of these models is also almost the same. However, the association of JM, MJM and PMM with DRM is weakly positive that show that the DRM model is representing EM in a different form such as it used the revenue.

The JM is negatively associated with CGI, CE, firm performance and CFO. The results of negative association of JM and CGI is consistent with previous literature findings like (e.g., Epps & Ismail, 2008; Ikechukwu, 2013; Iraya et al.,2015; Lakhal, 2015; Tanjung et al., 2015; Turegun & Kaya, 2016). The negative association between firm CE and EM shows that firms do not need to manipulate earnings information. The negative correlation of capital expenditure and earnings management is also evident from the previous research (Conyon & He, 2011). In addition, on the basis of these findings reveal that as a high level of expenditure demand the high monitoring from management and CG become strong. Therefore, the activities of earnings management are decreasing.

A positive performance of the firm is negatively associated with the activities of managers’ EM. Further, find that the negative association of CFO and JM shows that high level of CFO decrease the manipulation practices of management because firms generate more cash due to their efficient performance. The same findings are reported in previous studies such as (Becker et al., 1998; Jiang et al., 2010; Lobo & Zhou,
However, leverage and size of the firm are positively associated with earnings management. This reveals that the high leveraged firms more engage in earnings management practices to avoid the violation of covenants. The positive association is consistent with previous studies (e.g., Bassiouny et al., 2016; Habbash, 2010; Pornupatham, 2006; Sincerre et al., 2016; Waweru & Riro, 2013; Yero, 2010). Large size firms are involved in the activities of EM to a great extent. The association of these variables are consistent with the previous studies such as (e.g., Ali, Noor, Khurshid, & Mahmood, 2015; Bartov, 1993; Christie, 1990; Kim, Liu, & Rhee, 2003; Lobo & Zhou, 2006; Pincus & Rajgopal, 2002; Watts & Zimmerman, 1990).

The association of MJM with PM, DRM, CoC, CGI, LEV, ROA, Beta, CFO, CE and GDPG rate is the same as reported above with the JM. However, MJM is negatively associated with the size of the firm. In addition, as compared to JM and PMM size is negatively associated with MJM. It means that small size firms are more engage in earnings manipulation as compared to large firms to avoid the negative or small level of decreases in earnings. The results of size and EM are consistent with previous studies (e.g., Debnath, 2017; Jahmani & Niranjan, 2015; Llukani, 2013; Swastika, 2013).

Moreover, the association of the PMM with PM, DRM, CoC, CGI, LEV, ROA, Size, Beta, CFO, CE and GDPG rate are the same as JM having with these variables. Further, report that DRM relationship is same as of the MJM having with other variables. The explanation of these findings are same as reported in the above paras.

Further, reports that JM, MJM, PMM and DRM are positively associated with the cost of capital. Firms that involved in the practices of EM then their CoC are high because the investors’ confidence in the reported information is declining with the passage of time. Hence, they demand a higher rate of returns on their investment. Moreover, reports that CoC and CG mechanisms are negatively related. The good governance systems increase the confidence of the investors and reduce the chances of uncertainty.
<table>
<thead>
<tr>
<th></th>
<th>JM</th>
<th>MJM</th>
<th>PMM</th>
<th>DRM</th>
<th>CoC</th>
<th>CGI</th>
<th>LEV</th>
<th>ROA</th>
<th>Size</th>
<th>Beta</th>
<th>CFO</th>
<th>CE</th>
<th>GDPG</th>
</tr>
</thead>
<tbody>
<tr>
<td>JM</td>
<td></td>
<td></td>
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<tr>
<td>MJM</td>
<td>0.832</td>
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<tr>
<td>PMM</td>
<td>0.984</td>
<td>0.819</td>
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<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>DRM</td>
<td>0.055</td>
<td>0.074</td>
<td>0.052</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>CoC</td>
<td>0.044</td>
<td>0.037</td>
<td>0.038</td>
<td>0.037</td>
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<td></td>
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<tr>
<td>CGI</td>
<td>-0.053</td>
<td>-0.070</td>
<td>-0.049</td>
<td>-0.049</td>
<td>-0.025</td>
<td></td>
<td></td>
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<tr>
<td>LEV</td>
<td>0.076</td>
<td>0.110</td>
<td>0.065</td>
<td>0.049</td>
<td>-0.217</td>
<td>0.024</td>
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<tr>
<td>ROA</td>
<td>-0.058</td>
<td>-0.060</td>
<td>-0.071</td>
<td>-0.060</td>
<td>-0.106</td>
<td>0.081</td>
<td>-0.482</td>
<td></td>
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</tr>
<tr>
<td>Size</td>
<td>0.213</td>
<td>-0.113</td>
<td>0.218</td>
<td>-0.012</td>
<td>-0.285</td>
<td>0.046</td>
<td>0.036</td>
<td>0.048</td>
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<tr>
<td>Beta</td>
<td>0.088</td>
<td>0.017</td>
<td>0.081</td>
<td>0.026</td>
<td>0.768</td>
<td>-0.061</td>
<td>0.179</td>
<td>-0.182</td>
<td>-0.2875</td>
<td></td>
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</tr>
<tr>
<td>CFO</td>
<td>-0.049</td>
<td>-0.124</td>
<td>-0.033</td>
<td>-0.03</td>
<td>-0.023</td>
<td>0.033</td>
<td>-0.239</td>
<td>0.534</td>
<td>0.0303</td>
<td>-0.071</td>
<td></td>
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</tr>
<tr>
<td>CE</td>
<td>-0.178</td>
<td>-0.140</td>
<td>-0.174</td>
<td>-0.137</td>
<td>-0.058</td>
<td>0.037</td>
<td>0.265</td>
<td>0.213</td>
<td>0.2169</td>
<td>0.057</td>
<td>0.0367</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDPG</td>
<td>-0.004</td>
<td>-0.008</td>
<td>-0.006</td>
<td>0.030</td>
<td>-0.103</td>
<td>0.069</td>
<td>-0.071</td>
<td>0.048</td>
<td>0.051</td>
<td>-0.060</td>
<td>0.0497</td>
<td>0.009</td>
<td></td>
</tr>
</tbody>
</table>

Note: Earnings management is proxied through four models such as Jones model (JM), modified Jones model (MJM), performance matched model (PMM) and discretionary revenue model (DRM). However, CoC represent the cost of capital and corporate governance is measured by corporate governance index. LEV represents capital structure, ROA is used for the firm performance, Beta shows the systematic risk of a firm, CFO is the cash flows from operations, CE is the capital expenditure of firm, GDPG is the growth rate of gross domestic product and size the log of total assets of firms.
Hence, the CoC is declining. In the similar vein, leverage, ROA, size the of firm and GDPG rate are negatively associated with the CoC. The negative association of leverage and CoC is consistent with Claessens et al. (2003) that in companies’ efficient corporate governance mechanisms implementation help to get capital at lower cost. Further, Embong et al. (2012) report that in large firms’ corporate governance in term of disclosure negatively and significantly affect the CoE. Further, add that negative association of ROA and CoC shows that high profit reduces the chances of bankruptcy and in turn, it reduces the CoC. In addition, Harris and Raviv (1991) find that the debt to equity ratio positively associated with profitability. Hence, the CoC is decline because the chances of bankruptcy are reduced. Moreover, find that large size firms having a low level of CoC as compared to small size firms. The results are consistent with previous studies of Khurana and Raman (2003) and Bhojraj and Sengupta (2003) such as conclude that credit rating of large companies is high. Therefore, the market risk of large size companies can be low and these firms face a lower rate of CoC. Moreover, report that GDPG rate is negatively associated with the CoC of listed firms on PSX. Hence, GDPG rate act as an important indicator of the overall economy. Moreover, demonstrates that businesses are the important sector of the economy and they efficiently utilized the resources. In addition, the systematic risk is positively associated with the CoC of sample listed firms. Hence, this association is in line with Kwansa and Cho (1995) and Markopoulou and Papadopoulos (2009) that a high probability of financial distress position increases the CoC of firms.

Corporate governance index positively associated with CE, Leverage, ROA, CFO, Size of the firms and GDPG rate. The good governance systems create a favorable environment and the level of CE and leverage is increased because they get positive returns projects as investment opportunities and the confidence of creditors become high. In addition, the ROA and CFO of firms are increasing because the management efficiently utilizes firm resources. Further, report that large size firms easily accept and implement the governance systems regulations. In this study reveals that the GDPG rate and CGI association creates a favorable environment for the business sectors. However, the CGI and Beta are negatively associated in listed firms. The CGI mechanism increases the confidence of the investors and this alternatively reduces the level of risk of investment.
Finally, reveals that control variables are either positively or negatively associated with each other such as reported that CEs’ are positively associated with leverage, ROA, CFO and the size of the firm. It means the increase in CEs’ demand more financing and the creditors provide it in soft conditions due to the favorable business environment. Further, reveals that the positive association of CE and ROA shows that high performance firms make expansion in their business. Additionally, the CFO creates an avenue for the business to make an expansion, hence the positive association indicates the favorable and stable conditions of firms. Similarly, the positive relationship of CE and the size of the firm presents that large listed firms on PSX can easily extend their operations as compared to small size firms. The leverage is negatively associated with ROA and CFO. It shows that an increase in firm performance indicates that firms reinvest their internal resources instead of taking additional debts. Similarly, a high level of CFO reduces the level of debts in the capital structure of listed firms on PSX. However, leverage is positively associated with the size of the listed firms. The large size firms can easily get the debts from the creditors because the chances of bankruptcy are low in large listed firms as compared to small size firms. Moreover, demonstrates that ROA has a positive association with CFO and the size of the firm. Increasing the performance indicates the high level of CFO and large size firms are generating a high level of profit as compared to small size firms listed on PSX. Finally, Table 5.2 reports that size and CFO are positively associated. Hence, reveals that large size firms efficiently operate and alternatively generate high cash flows from operations. Moreover, the highest value of correlation is 0.534 of ROA with cash flow from operations. In the similar vein, the correlational value of ROA with leverage is -0.483 and this represents that high performing firms get a lower level of debts because they use their internal sources for financing. The overall results of the correlation table conclude that there is no high correlation between the variables. Hence, these correlational values show that there is no issue of multicollinearity in the data of this study.

Table 5.2 further presents that the control variables either positively or negatively affect the cost of capital. Further, add that Beta is positively associated with the CoC. High level of risk increase probability of business failure, therefore investors demand a high rate of return and alternatively the CoC is increasing. Others report the same results (e.g., Botosan, 1997; Bozec et al., 2014; Francis et al., 2004;
Shah et al., 2009). However, CoC is negatively associated with leverage, ROA, CFO, size and CE. High level of leverage according to signaling theory convey good news about the firm. Therefore, the CoC of the sample firms is declined. In addition, more profitable and high level of cash flows from operations reduces the cost of capital of firms. These results are consistent with (Bozec et al., 2014; Zhu, 2009; Zhu, 2012). In addition, Habbash (2010) reports that high level of CFO reduces the involvement of management in earnings manipulation. Similarly, large size firms get external financing at the lowest possible cost of debt such as others report the negative association (e.g., Bhojraj & Sengupta, 2003; Bozec & Bozec, 2010; Khurana & Raman, 2003; Pham et al., 2012; Zhu, 2009; Zhu, 2012). Further, concludes that CE negatively affects the EM practices. It means that due to this negative association investor perceive that these firms make expansion in its business. Therefore, they demand a low rate of return on their investment. Moreover, the association of other variables is either positive or negative. Earnings management is positively associated with systematic risk (Beta). Management involves in the earnings manipulation to reduce the negative effect of a high level of risk. Further, add that EM is positively related with leverage and size of the firm. Therefore, reveals that large firms are more engage in earnings manipulation and to avoid the violation of covenants and management manipulate information to reduce the effect of unfavorable situations. In addition, reveals that EM is negatively associated with ROA, CFO, and CE. Profitable and more generating cash flows from operations firms less engage in the activities of earnings manipulation because they already fulfill their obligations. Moreover, high level of CE shows that the firm has more resources and opportunities, therefore management less likely manipulate information because the firm already performing well. Further, conclude that systemic risk is positively associated with leverage and CE. It shows that more debts in capital structure increase the probability of bankruptcy. However, the risk is negatively associated with ROA, CFO, and firm size because the risk level is low for profitable firms because such firms also generate more cash flows from operations. Moreover, it reveals that large size firms have a low level of risk as compared to small firms and CE also increase the level of risk. Further, add that leverage has a negative relationship with ROA and CFO because profitable and more generating cash flows from operations are less likely depend on the debt financing. However, leverage has positively associated with size and CE of firms. Large size depends on debt financing as compared to small size firms and firms.
have more debts can easily expand their businesses. Similarly, high cash flows generating firms are highly profitable and large size firms generate more profits or in other words, such as firms perform well as compared to small firms. In addition, firms having the opportunities to expand and make more CE their profit is increasing as compared to low or no investment making in CE firms. Moreover, demonstrates that large size firms generate more CFO and CE of more generating CFO firms are high. Finally, reveals that large size firms make more CE as compared to small firms listed on PSX. Similarly, leverage is positively associated with CoC, it shows that the uncertainty of paying obligations of highly leveraged firms are high, hence investors demand a high level of returns. However, ROA, CFO, size of the firm and capital expenditure are negatively related to the cost of capital. All control variables are weakly either negatively or positively associated with each other. Therefore, demonstrate that weak associations among these variables cannot generate the biased association between dependent and independent variables of the model.

Moreover, control variables are positively or negatively associated with each other. The association of these variables are weak and cannot affect the true association of dependent and independent variables. CGI is negatively associated with systematic risk (Beta). Hence, the good governance system reduces the chances of bankruptcy. Further, due to a good governance system, the level of leverage is increased because the investors’ confidence is become high to get their return with lower risk. Further, a good governance system is responsible for the high performance of firms. In the similar vein, reveals that CG and the size of firms are positively associated it shows that large size firms easily accept laws and regulations as compared to small size firms. Finally, concludes that in good governance systems firms are positively contributed to the economy in terms of positive GDPG rate. In addition, systematic risk and leverage are positively associated. High level of leverage increases the chances of the bankruptcy of firms. However, the risk is negatively associated with ROA, the size of the firm and GDPG rate of Pakistan. It shows that highly profitable firms, large size firms as compared to small firms listed on PSX and positive rate of GDPG rate reduce the level of systematic risk of firms. In the same context reveals that leverage is negatively associated with ROA and GDPG rate. High level of leverage in the capital structure of firms increases the chances of bankruptcy and alternatively, it reduces the profitability of firms. Further, add that increase in
leverage push businesses into bankruptcy, therefore such firms affect the overall performance of the economy because the businesses make their contribution to the gross domestic products (GDP) of the country. However, finds that large size firms and leverage are positively related because the large firms can easily get debts financing because investors perceive them as less costly due to their large resources. ROA is positively associated with the size and GDPG rate. Large size firms are efficiently managing their resources and they are produced or provides large scale services. The highly profitable firms more contribute to the economy as compared to lower profitable firms. Size and GDPG rate are positively related. It shows that large firms are more contribute into the economy as compared to small size firms in term of GDPG rate.

5.3 Results of Panel Data Approaches

As reported that this thesis investigates EM, CoC, and CG in a sample of 144 firms listed on the PSX for the period 2006-2016 in three distinct stages. The data are panel in nature, thus panel data techniques are used. For analyses as a starting point, the thesis started the investigation by using OLS. However, the assumptions of the OLS do not meet, therefore panel data approaches are proposed. Moreover, the findings of the OLS assumption are reported in the Appendix-B of the current study. Hence, used the panel data approach for further and appropriate analysis to get unbiased results. Habbash (2010) reports that to apply parametric tests, the data need to meet OLS assumptions. Moreover, Gujarati (2003) reports that if OLS assumptions are violated then parametric tests are not valid for the data analysis, therefore non-parametric tests are recommended for analysis. Since firm characteristics are different for each firm but remain the same over time and these characteristics are not captured by the OLS estimations. Similar arguments are also presented by Chung and Zhang (2011).

To investigate the three distinct areas of this study such as EM, CoC, and CGI, the panel data approaches as pooled OLS, fixed and random effect models are proposed. Moreover, for the selection of a right model of analysis used diagnostics tests and results of these diagnostic tests recommended random effect model for data

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26 OLS assumptions are reported in the Appendix-B.
analysis except for the panels/models D and I as reported in the Appendix-B. For panels D and I diagnostic tests result recommended to apply fixed effect approach. Hence, in the majority of regressions used random effect model. The detail discussion of diagnostic tests and their recommended regression models are explained in the following sections.

### 5.4 Empirical Results of Panel Data Techniques

As reported in Chapter-4 research methodology of the current study that investigates EM, CoC, and CGI in three stages. In the first stage of analysis, the thesis investigates EM and CG. The thesis uses four proxies for earnings management; Jones model (Jones, 1991), modified Jones model (Dechow et al., 1995), performance matched model (Kothari et al., 2005) and discretionary revenue model (Stubben, 2010) as dependent variables in the first stage and in the third stage these proxies are used as independent variables. CGI is used as an independent variable in stage one and two. However, CoC used as dependent variable in stage two and three against CGI and CoC respectively. Control variables such as capital structure (leverage), firm performance (ROA), size of the firm, Beta, cash flows from operations, capital expenditure and gross domestic product growth rate are used to control the effect of these characteristics of firms.

#### 5.4.1 Unit Root Test of Panel Data

Before applying the panel data approaches, the current study uses the unit root test. As reported in the methodology Chapter-4, section 4.6.1 of this study that to start the analysis of panel data approaches, the thesis tests the variables for possible stationarity and for this purpose using Levin and Lin test (1992). Results of this test are reported in table 5.3.

<table>
<thead>
<tr>
<th>Variables</th>
<th>p-values</th>
</tr>
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<tbody>
<tr>
<td>EMJ</td>
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<tr>
<td>EMJM</td>
<td>0.000**</td>
</tr>
<tr>
<td>EMP</td>
<td>0.000**</td>
</tr>
<tr>
<td>EMS</td>
<td>0.000**</td>
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</table>
Table 5.3 presents the results of the panel unit test of Levin and Lin (1992). Results of all variables accepted the null hypothesis that these variables are stationary at level. The p-values of all variables are less than the standard level of significance (0.05). Therefore, the data used in this study fulfill the requirement of no unit root in the variables. Moreover, the results conclude that all variables are normally distributed and the findings are consistent as suggested by Asteriou and Hall (2007).

5.4.2 Corporate Governance and Earnings Management

In the first stage of analysis, the impact of CG on EM is investigated. As already reported above in the thesis, EM is measured by four different proxies such as JM, MJM, PMM and DRM. For CG the study uses CGI adopted from Javid and Iqbal (2010). The diagnostic tests are run to determine the panel data approach. F-test is used to determine the appropriate test between pooled OLS and fixed effect model, while the Hausman test used to suggest the suitable model between fixed effect and random effect models. However, to decide between random and pooled OLS run the test of Breusch and Pagan Langrange Multiplier. The results of F, Hausman and Breusch and Pagan tests are reported in table 5.4.

Model of the stage two is as follow;
EM_\textsuperscript{27}it = \beta_0 + \beta_1 \text{CGI}_it + \beta_2 \text{Lev}_it + \beta_3 \text{CE}_it + \beta_4 \text{ROA}_it + \beta_5 \text{CFO}_it + \beta_6 S_it + \epsilon_it \\

Table 5.4: Results of Model Selection of Stage-I

<table>
<thead>
<tr>
<th>Panels/ Models</th>
<th>Value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel-A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F-Test Results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>24.32</td>
<td>0.000**</td>
</tr>
<tr>
<td><strong>Hausman test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chi2(6) = (b-B)'<a href="b-B">(V_b-V_B)^(-1)</a></td>
<td>8.95</td>
<td>0.176</td>
</tr>
<tr>
<td><strong>Breusch and Pagan test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chibar2(01)</td>
<td>29.84</td>
<td>0.000**</td>
</tr>
<tr>
<td><strong>Panel-B</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F-Test Results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>25.63</td>
<td>0.000**</td>
</tr>
<tr>
<td><strong>Hausman test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chi2(6) = (b-B)'<a href="b-B">(V_b-V_B)^(-1)</a></td>
<td>11.29</td>
<td>0.079***</td>
</tr>
<tr>
<td><strong>Breusch and Pagan test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chibar2(01)</td>
<td>31.53</td>
<td>0.000**</td>
</tr>
<tr>
<td><strong>Panel-C</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F-Test Results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>14.20</td>
<td>0.000**</td>
</tr>
<tr>
<td><strong>Hausman test</strong></td>
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<td></td>
</tr>
<tr>
<td>chi2(6) = (b-B)'<a href="b-B">(V_b-V_B)^(-1)</a></td>
<td>6.39</td>
<td>0.380</td>
</tr>
<tr>
<td><strong>Breusch and Pagan test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chibar2(01)</td>
<td>24.45</td>
<td>0.000**</td>
</tr>
<tr>
<td><strong>Panel-D</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F-Test Results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>10.37</td>
<td>0.000**</td>
</tr>
<tr>
<td><strong>Hausman test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chi2(6) = (b-B)'<a href="b-B">(V_b-V_B)^(-1)</a></td>
<td>31.01</td>
<td>0.000**</td>
</tr>
</tbody>
</table>

Note: Table 5.4 reports the model selection criteria to choose the appropriate model for each panel of table 5.5. Panel-A, Panel-B, Panel-C and Panel-D in table 5.4 presented the model selection procedures of Panels/Models A, B, C and D of the table 6.5 respectively. ** p<0.01 and ***p<0.1.

---

\textsuperscript{27} This model is the general model of EM and CG. In the first stage four model/panel are used because the EM is proxied by four different approaches such as Jones Model (JM) (Jones, 1991), Modified Jones Model (MJM) (Dechow et al., 1995), Performance Matched Model (PMM) (Kothari et al., 2005) and Discretionary Revenue Mode (DRM) (Stubben, 2010). These four models are used as dependent variables in Panel-A, B, C and D respectively in first stage of the thesis. The model selection procedures are given in table 6.4 and the final results are reported in table 5.5.
In table 5.4 reports the diagnostics tests result such as F, Hausman and Breusch and Pagan tests. F-test results demonstrate that for all panels/models fixed effect model is an appropriate choice instead of pooled OLS because the p-value is 0.000. Similarly, Gujarati (2003) reports that if the F-test value is significant then pooled OLS applications are invalid. It reports that the cross sections are not homogeneous as assumed in pooled OLS. However, the Hausman test results of Panels A, B and C show that the appropriate model of analysis of Panel-A, Panel-B and Panel-C of Table 5.5 are random effect as compared to fixed model because the p-value of Hausman test is greater than the standard level of p-value (0.05). Hence, the assumptions of the cross-section specific constant are violated and accept the assumptions of the random effect model that the constant is not fixed for each section but it has the random parameter. Asteriou and Hall (2007) report that if results show the small value of Hausman statistics then decided to use the random effect model for analysis instead of the fixed effect model. In addition, Habbash (2010) reveals that if results of Hausman test show that p-value is greater than the significant level of 0.05 this is considered insignificant and the assumptions of random effect model are not violated. On the other hand, Panel-D of table 5.4 reports that instead of the random effect model fixed effect approach is the suitable technique to use for analysis of Panel-D of table 5.5. In addition, the table 5.4 reports that Breusch and Pagan LM test results show that random effect model is the appropriate model of analysis for Panel-A, B, and C as compared to pooled OLS because the p-value is less than the standard level of the p-value (0.05).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>z-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.960</td>
<td>-2.64</td>
<td>0.008</td>
</tr>
<tr>
<td>CG</td>
<td>-0.006</td>
<td>-2.02</td>
<td>0.043*</td>
</tr>
<tr>
<td>LEV</td>
<td>0.284</td>
<td>2.35</td>
<td>0.019**</td>
</tr>
<tr>
<td>CE</td>
<td>-0.432</td>
<td>-5.94</td>
<td>0.000**</td>
</tr>
<tr>
<td>ROA</td>
<td>-1.063</td>
<td>-4.38</td>
<td>0.000**</td>
</tr>
<tr>
<td>CFO</td>
<td>-0.931</td>
<td>-5.24</td>
<td>0.000**</td>
</tr>
<tr>
<td>Size</td>
<td>0.224</td>
<td>5.56</td>
<td>0.000**</td>
</tr>
</tbody>
</table>
Adjusted R-Square: 10.03%
F-Statistic: 17.16 (p-value 0.000***)

Panel-B Dependent Variable; Modified Jones Model (EM)

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
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<tr>
<td>Constant</td>
<td>0.243</td>
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<td>0.513</td>
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<tr>
<td>CG</td>
<td>-0.006</td>
<td>-2.15</td>
<td>0.032*</td>
</tr>
<tr>
<td>LEV</td>
<td>0.433</td>
<td>3.53</td>
<td>0.000**</td>
</tr>
<tr>
<td>CE</td>
<td>-0.250</td>
<td>-3.16</td>
<td>0.002**</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.001</td>
<td>-2.2</td>
<td>0.028*</td>
</tr>
<tr>
<td>CFO</td>
<td>-1.087</td>
<td>-5.95</td>
<td>0.000**</td>
</tr>
<tr>
<td>Size</td>
<td>-0.027</td>
<td>-0.65</td>
<td>0.519</td>
</tr>
</tbody>
</table>

Adjusted R-Square: 5.04%
F-Statistic: 12.02 (p-value 0.000***)

Panel-C Dependent Variable; Performance Matched Model (EM)

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-1.032</td>
<td>-2.65</td>
<td>0.008</td>
</tr>
<tr>
<td>CGI</td>
<td>-0.006</td>
<td>-2.09</td>
<td>0.036*</td>
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<tr>
<td>LEV</td>
<td>0.261</td>
<td>1.99</td>
<td>0.046*</td>
</tr>
<tr>
<td>CE</td>
<td>-0.450</td>
<td>-5.72</td>
<td>0.000**</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.008</td>
<td>-3.44</td>
<td>0.001**</td>
</tr>
<tr>
<td>CFO</td>
<td>-0.743</td>
<td>-4.03</td>
<td>0.000**</td>
</tr>
<tr>
<td>Size</td>
<td>0.249</td>
<td>5.83</td>
<td>0.000**</td>
</tr>
</tbody>
</table>

Adjusted R-Square: 9.16%
F-Statistic: 16.75 (p-value 0.000***)

Panel-D Dependent Variable; Discretionary Revenue Model (EM)

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
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<td>3.01</td>
<td>0.003</td>
</tr>
<tr>
<td>CG</td>
<td>-0.008</td>
<td>-2.51</td>
<td>0.012**</td>
</tr>
<tr>
<td>LEV</td>
<td>0.672</td>
<td>4.91</td>
<td>0.000**</td>
</tr>
<tr>
<td>CE</td>
<td>-0.519</td>
<td>-6.19</td>
<td>0.000**</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.788</td>
<td>-2.55</td>
<td>0.011**</td>
</tr>
<tr>
<td>CFO</td>
<td>-0.213</td>
<td>-0.91</td>
<td>0.363</td>
</tr>
<tr>
<td>Size</td>
<td>-0.089</td>
<td>-2.1</td>
<td>0.036*</td>
</tr>
</tbody>
</table>

Adjusted R-Square: 37.08%
F-Statistic: 6.69 (p-value 0.000***)

Note: Panel-A in table 5.5 reports results of Jones model, Panel-B presents results of MJM, Panel-C explain results of PMM and Panel-D reports results of DRM. Moreover, reports on the basis of model
selection procedure of panel data analysis as reported in table 5.4 recommended that panel-A, B and C results are based on the random effect model. However, Panel-D results is based on the fixed effect approach; *p < 0.05 and ** p < 0.01 present that variables are significant at 5% and 1% respectively. However, *** of F-statistic presents that the F-statistic recommend that models of Panel-A, B, C and D are significant at 1% and these are valid models of analysis.

To answer the first objective and testing the developed hypothesis on the basis of the literature of CG and EM from developed and developing economies perspective. The results conclude and answer the first question to achieve the first objective of the study that CG negatively affect the EM practices of sample firms listed on PSX. Hence, the findings of the stage support the view of previous studies (e.g., Ikechukwu, 2013; Kelimeler & Sınıflandırmasi, 2016; Mansor et al., 2013; Shen & Chih, 2007) that the efficient CG mechanisms curtail the manipulated practices of management of listed firms of PSX.

Table 5.5 reports results of panel data techniques of stage one of the thesis. In Panel-A EM is measured through JM. The results show a negative and statistically significant association of CG and EM. Thus, the results conclude that CG act as an efficient monitoring tool to reduce the manipulation of accounting information. Thus, the confidence of investors not only become high but it also reduces conflict of interest between management and stakeholders. The results imply that the management act for the benefits of shareholders instead of their private benefits. The association of CG and EM is consistent with the view of Baydoun and Willett (2000) that Pakistan is an Islamic country and the Shariah law and culture of Pakistan encourage BoD to provide quality CG information to all stakeholders. In turn, the earnings manipulation practices of the management are reduced. Moreover, in the CG code of Pakistan a number of Islamic concepts are incorporated such as transparency, accountability and responsibility. In addition, reported that the management of Pakistani listed firms follow the CG code in true spirit because they already have the concepts of accountability and transparency according to the Islamic religion and culture. Moreover, reported that CG positively affect the level of disclosure and compliance (Abu-Tapajeh, 2009; Ahmad, 2011a). Hence, the disclosure practices of management reduce the EM activities. In addition, the Hesab and Taklif Islamic models and a number of CG theories such as stakeholder, stewardship and the resource dependency support the findings of the current study. In context of Hesab, the directors act as a trustworthy (they cannot utilize the resources for their personal
benefits) to utilize the firm resources under their control in the best interests of stakeholders (Bhatti & Bhatti, 2010). Furthermore, directors are accountable for their actions and they are either rewarded or punished (Abu-Tapanjeh, 2009; Ahmad, 2011b). In addition, the Taklif shows that managers of a firm are responsible and trustees to use firm resources as agents and guardians of the stakeholders (Hearn, Piesse, & Strange, 2011; Iqbal & Mirakhor, 2004; Rahman, 1998). Hence, reveals that the values and norms of the Islam act as the governance mechanisms to guide disciplinary action of management as well as mitigate the agency problems. Ultimately, the management involvement in information manipulation is reduced.

The findings of this thesis are further supported by agency theory. CG mechanisms help to ensure the reduction in agency problem as well as agency cost (Black et al., 2006; Chen et al., 2009). Moreover, Mallin (2004) reports that mechanisms of CG reducing the agency problem that arises due to principal and agent relationship. Since, CG acts as a controlling tool to ensure that management use financial performance information in the financial statement in actual form, hence they cannot mislead the stakeholders of the firm. Moreover, CG is used as a controlling tool to keep a balance between the management and shareholders of the firm. For example, Habbash (2010) and Paiva and Lourenco (2013) argue that BoD, independent directors and OC are CG tools. These tools are used by shareholders and other stakeholders to keep the management within legal boundaries of their job. These mechanisms also stopped the management of firms to control the expropriations of minority shareholders. Managers, due to regarding their jobs and knowing that the CG system is strong then they refrain their self from manipulating the accounting information. Furthermore, the management also tries to reduce EM activities to avoid costly litigation (Bhattacharya et al., 2003). Moreover, Ajinkya et al. (2005) report that CG mechanisms reduce agency problems and this in turn, reduces the agency costs. Hence, at this level reveals that the management manipulation practices of earnings of listed firms are declined. In addition to agency theory Crane and Matten (2007) report that social contract theory suggests that executives of firms are expected that they act as socially and ethically due to intrinsic principles of the religion. Hence, in Pakistan management cannot expropriate the rights of stakeholders because it is an Islamic country and Islam thought the knowledge of other rights. Donaldson and Dunfee (1999) reveal that management is interested to meet the macro-social
contracts in form of expectations of the local community. However, for micro-social contracts businesses are trying to meet the specific type of contracts. In addition, Albrecht et al. (2004) report that the sociological and psychological approach tend to align the interests of corporate executives, management, and owners, thus minimizing the manipulation practices of the management. Finally, add that the association of CG and EM is supported by stewardship theory, Albrecht et al. (2004) demonstrate that stewardship theory is based on a sociological and psychological approach to align the interest of corporate executives, owner, and management. On the basis of this statement reveals that the sociological and psychological elements prevent the acts of management earnings information manipulation. Furthermore, Habbash (2010) also support the stewardship theory because the management is not opportunistic but managers and directors’ acting as a steward and maximize the wealth of shareholders. Finally, Donaldson and Davis (1991) reported that to sum the view of those who support this theory that executives on the basis of internal knowledge and information make informed decisions. Moreover, their decisions are quick and independent, therefore the value of the firm increases and they run the firm efficiently. Alternatively, management does not manipulate earnings because they act as a steward for the wealth maximization of shareholders.

These results are further supported by the political theory of CG such as Hawley and Williams (1996) suggest that political theory is related to corporate power allocation that may in turn effect governance system development. Alternatively, resulting in controlling the EM activities. Further, this study concludes that as the political influence of bureaucrats and political affiliation cannot help management to use the SOE resources for their private benefits and to manipulate true financial information. Similarly, the transaction cost theory is also effected the CG and EM association such as Gales and Kesner (1994) find that to reduce the uncertainty BoD bring together important constituents and resources. Therefore, they reveal that BoD through governance system directed management to utilize resources efficiently and keep control of earnings manipulations. In the similar vein, the theory of stakeholder of CG support the results of the current model likewise, Abrams (1951) reports that corporates focus on balancing the interest of all these stakeholders. On the basis of these findings reveal that to meet the expectations of all stakeholders’ management cannot deceive them by manipulation practices. Moreover, Sanda et al.
(2005) report that the stakeholder theory concentrates on a number of issues such as information flow from top to lower management, working environment, and interpersonal relations. Hence, the managers who adopted the principles of this theory then the earnings manipulation practices should be reduced. Moreover, the findings are supported by the institutional theory that management cannot manipulate earnings because the governance system ensures information disclosure for all stakeholders. Therefore, reveals that management cannot manipulate information.

The results are consistent with the previous studies findings such as Epps and Ismail (2008) conclude that in US listed firms’ CG and EM are negatively related. Others also report similar results (e.g., Amertha et al., 2014; Iraya et al., 2015; Nekhili, Amar, Chtioui, & Lakhal, 2016; Tanjung et al., 2015). Moreover, Abbad, Hijazi and Al-Rahahleh (2016) report that quality of CG mechanisms is increasing over time and create more constraint for management to indulge in the EM.

Doidge et al. (2007) conclude that country economic and financial development acts as incentives for the adoption of good CG mechanisms. Previous literature concludes that family-owned firms avoid earnings management practices as try to maintain the reputation of their families and cannot manipulate the earnings. Moreover, the similar results are reported in other studies as Ishak et al. (2011) conclude that family-owned businesses are less engaged in the activities of EM. In addition, Paiva and Lourenco (2013) demonstrate that large family firms are less involved in the practices of EM in UK as compared to small family-owned firms. Moreover, they report that if the CG system is strong then the activities of EM become low. Therefore, conclude that in Pakistan majority businesses are owned by large families and they cannot indulge in practices of EM due to secure their family image and reputation.

Moreover, these findings are consistent with the findings of Ikechukwu (2013) that the CG mechanisms curtail the management involvement in EM. Similarly, Lee (2006) reports that CG reduces the manipulation of earnings information. This is also reveals that regulatory authorities such as SECP, PSX, SBP and government agencies also play their role to avoid the earnings manipulation activities of management. Habbash (2010) reveals that stock market working to enhance the CG system of their respective country. Shen and Chih (2007) reveal that firms who belong to good CG
system are less engage in EM activities as compared to those firms who are from weak governance system countries.

As stated at the start of the analysis that leverage (capital structure), CE, firm performance (ROA), cash flow from operations and size of the firms are used as control variables. The results reveal that leverage positively and significantly affect the activities of EM. Hillman et al. (2000) find that directors create a link with external resources that reduce the level of uncertainty of a firm for these resources. Thus, to survive the company need the effective management of resources during an extremely uncertain environment. Since leverage is an external source of finance and management required capital for financing, therefore they manipulate earnings to get these resource at the lowest possible cost. Creditors are also interested in their return and are more interested in true and reliable accounting information of firms. Thus, a manager is trying to ensure the external finance and indulge in EM. Hence, this view is backed by the legitimacy theory, such as Ramanathan (1976) demonstrates that profit is the function of firm legitimacy. Similarly, other studies demonstrate that management for this purpose manipulates the earnings (e.g., Bassiouny et al., 2016; Habbash, 2010; Pornupatham, 2006; Sincerre et al., 2016; Waweru, & Riro, 2013; Yero, 2010). In addition, others find that highly leveraged firms engage more in the activities of EM because they try to avoid the violation of covenants (e.g., Beatty & Weber, 2003; DeFond & Jiambalvo, 1994; Dichev & Skinner, 2002).

Further, reported that CE is negatively and significantly associated with EM. An increase in the CE indicates that firms are growing and make expansion in their operations. Thus, managers have no incentives to manipulate the earnings information. All stakeholder, specifically creditors are also interested in the expansion and growth of firm to get their promised return within stipulated time. Therefore, management provides true information to investors and do not manipulate earnings figure.

Firm performance in term of ROA is negatively associated with EM and this association is statistically significant at 0.05 significance level. Firm performance plays a critical role in shareholders’ wealth. Therefore, managers and shareholders
should take care of firms in order to perform well. High performance means that firms generate sufficient funds from its operations and there is no need to manipulate firm’s accounting information. Therefore, high performance reduces the practices of earnings management. The findings of firm performance and EM of the study are supported by the results of the extent literature (Donaldson & Preston, 1995; Freeman, 1984; Freeman et al., 2004; Klein, 2002). Further, Abrams (1951) shows that corporates focus on balancing the interests of all stakeholders in order to get their satisfaction. Managers through performance maximize profit and protect shareholder wealth. Therefore, profit maximization improves dividend and share prices of firms’. Prior literature also supports similar results (Habbash, 2010; Rangan, 1998). ROA acts as an indicator of efficient utilization of firms’ assets by management. Therefore, conclude that negative association between EM and firm ROA support the view that management less likely manipulate their earnings if firms generate a high return on their assets. Likewise, Tanjung et al. (2015) conclude that firm performance reduces the management involvement in EM practices and Debnath (2017) investigates the impact of firm performance on EM in listed firms in India during 2007-2015. The results of the study conclude that firm performance and EM practices are negatively and significantly associated.

Further, report that CFO is negatively and significantly related to EM practices. High level of CFO represents that the firm performs well. Therefore, management is less likely to involve in the practices of EM. High level of cash flow means firms are efficiently engaged in their activities and generating enough cash from its resources and performing well, thus management cannot have needed to engage in EM activities. In addition, report that the high level of profit is based on the high level of cash flow from operations. In the similar vein, other studies also report that high cash flow from operating activities and EM are significantly associated (Dechow et al., 1995; Graham et al., 2005). However, it is also demonstrated that firms with low operating cash flow manage their earnings upward as compared to firms with high operating cash flow. Thus, firms with high operating performance are less likely to involve in discretionary activities (Becker et al., 1998; Habbash, 2010; Jiang et al., 2010; Lobo & Zhou, 2006). Moreover, Tanjung et al. (2015) reveal that

28 The performance is calculated by the ratio of Net Income to Total Assets. Total assets are the combination of total equity and liabilities of firms. On total assets firms generate sufficient funds in term of net income and management pay their obligations.
the CG system reduces EM and in turn, firms’ management is trying to make efficient utilization of resources and generate more cash flows from their operations.

Additionally, size positively and significantly affects EM practices. It means that large firms engage in their accounting information manipulation. Large firm size may have a higher IA because these firms are more complex in nature and detecting EM in their accounting information is expected to be difficult. Bartov (1993) concludes that in large firms, the potential of EM practices is greater as compared to small size firms (Lobo & Zhou, 2006).

Finally, reported in table 5.5 that the adjusted R-square of Panel-A is 10.03% showing that explanatory variables explain that much of the variation in the dependent variable. Moreover, the F-statistic value is 17.16 and its p-value is 0.000, which is less than the standard significance value of 0.05 and that shows that the model is significant and valid for analysis.

Table 5.5 Panel-B results report that EM is measured through the modified Jones model of Dechow et al. (1995). The results demonstrate that CG negatively and significantly affects EM as reported and explained in Panel-A. However, the size of the firm is negatively but insignificantly related to EM practices. Hence, the results show that small and large firms manipulate their earnings in the same manners. The association of size of firm and EM is consistent with the findings of Burgstahler and Dichev (1997) that small and large firms do EM in the same manner to avoid small profit decline or small level losses. In the similar vein, Llukani (2013) also reports that small as well as large firms involve in earnings manipulation to avoid the negative earnings or a small decrease in their profits. Moreover, Debnath (2017) concludes that firm size and EM practices are negatively associated. Additionally, others studies report the same results (e.g., Jahmani & Niranjan, 2015; Swastika, 2013). Overall findings of the Panel-B reveal the same results same as explained in Panel-A except the size is insignificantly related. However, this insignificant effect is supported by previous empirical studies such as Bassiouny et al. (2016) report that firm size and earnings management activities in Egyptian listed companies are insignificantly associated. The value of the adjusted R-square of Panel-B is 5.04%. Moreover, the overall model is also significant as is evident from the F-statistic p-value < 0.05.
In Panel-C of the first stage, EM is measured through performance matched model. On the basis of overall findings of this panel, report that the overall findings are same as compared to the JM results of Panel-A. The adjusted R-Square is 9.16% and the F-statistics value shows that the overall model is significant (p-value < 0.05).

Finally, Panel-D presents the results of CG and EM. In this panel EM is proxied by DRM developed by Stubbren. The results demonstrate that corporate governance and earnings management are negatively and significantly associated. Moreover, leverage significantly and positively affects the EM. However, CE, ROA, and size of the firm are negatively and significantly related to EM. Moreover, CFO is negatively associated with EM but this association is statistically not significant. This finding is different from the previous panels results. It means either CFO are high or low this has no effect on management engagement in EM practices. These results are supported the postmodern theory of business ethics such as Balasubramaniam (1999) argues that management focuses on the achievements of their goals instead of taking interest in their firm value which may cause the harmful long term effect. Moreover, Fan and Wong (2002) show that shareholders rights of voting are high as compared to rights on firm cash flow. Therefore, CFO does not affect the management practices of earnings manipulations. The overall findings of this panel are same as of previous panels. Furthermore, report that the value of adjusted R-square is high as compared to previous panels which is 37.08%. F-statistic is statistically significant which shows that the model is valid for analysis.

5.5 Corporate Governance and Cost of Capital

The second stage of the study investigates the impact of CG on CoC. The CG is proxied by CGI, while for the measurement of CoC used WACC and it measures the weighted value of the cost of debt and equity. CGI is measured as an average score of the three sub-indices adopted from Javid and Iqbal (2010).

5.5.1 Results of Corporate Governance and Cost of Capital

Model of the stage two is as follow;
\[ \text{CoC}_{it} = \beta_0 + \beta_1 \text{CGI}_{it} + \beta_2 \text{Beta}_{it} + \beta_3 \text{Lev}_{it} + \beta_4 \text{ROA}_{it} + \beta_5 \text{GDPG}_{it} + \beta_6 S_{it} + \epsilon_{it} \]
Table 5.6: Results of Model Selection of Stage-II

<table>
<thead>
<tr>
<th>Tests</th>
<th>Test Value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel-A F-test result</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>331.09</td>
<td>0.000**</td>
</tr>
<tr>
<td>Panel-B Hausman test Results</td>
<td></td>
<td></td>
</tr>
<tr>
<td>chi2(6) = (b-B)[(V_b-V_B)^{-1}](b-B)</td>
<td>3.24</td>
<td>0.778</td>
</tr>
<tr>
<td>Panel-C Breusch and Pagan LM test result</td>
<td></td>
<td></td>
</tr>
<tr>
<td>chibar2(01)</td>
<td>305.97</td>
<td>0.000**</td>
</tr>
</tbody>
</table>

**p <0.01

Table 5.6 reports the results of the F, Hausman and Breusch and Pagan LM tests in panel A, B, and C respectively. The panel-A reveals that the fixed effect technique is more appropriate for the analysis of Model-II as compared to Pooled OLS because the F-test value is less than the standard value of probability. However, Panel-B presents the Hausman test result, it shows that the suitable approach for the analysis is random effect model as compared to fixed effect model because the p-value of the test is greater than the standard p-value. Moreover, Panel-C explains that Breusch and Pagan LM test. It suggests that p-value is less than the standard value of probability (0.05). Therefore, on the basis of this evidence reported that random effect model is a more suitable model to use for the analysis. The results of the random effect model are explained in table 5.7.

5.5.2 Results of Random Effect Model

Table 5.7: Results of Panel Data Approach of Stage-II

<table>
<thead>
<tr>
<th>Dependent Variables; Cost of Capital (WACC)</th>
<th>Variables</th>
<th>Coefficient</th>
<th>z-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Constant</td>
<td>9.492</td>
<td>7.89</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>CG</td>
<td>-0.018</td>
<td>-1.94</td>
<td>0.053*</td>
</tr>
<tr>
<td></td>
<td>Beta</td>
<td>3.805</td>
<td>36.69</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>LEV</td>
<td>-1.397</td>
<td>-3.86</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>ROA</td>
<td>-0.003</td>
<td>-1.89</td>
<td>0.058*</td>
</tr>
<tr>
<td></td>
<td>GDPG</td>
<td>-0.138</td>
<td>-3.17</td>
<td>0.001**</td>
</tr>
</tbody>
</table>
To answer the second objective and testing the developed hypothesis on the basis of the literature of CG and CoC in developed and developing economies. Results of the current study conclude in Table 5.7 to answer question two and achieve the second objective of the study. The findings of the second stage support the view of previous studies (e.g., Bozec & Bozec, 2011; Claessens & Yurtoglu, 2013; Hassanzadeh et al., 2012; Pham et al., 2013; Shleifer & Vishny, 1997).

Table 5.7 presents the results of CG mechanisms and the CoC. The results find that CG index significantly and negatively affects the CoC of listed firms on PSX. Cost of capital reflects the required rate of return and this return is based on the firm risk exposure level. The results are consistent with the previous literature in developed and developing economies as reported above. The agency theory presents that debt financing acts as an external monitoring mechanism (Easterbrook, 1984). Subsequently, management focus on firm value maximization instead of their personal benefits. Thus, management does not engage in manipulation of accounting information. Further, managers try to perform in an efficient way. Therefore, these monitoring practices reduce significantly the CoC because the confidence of investors is increased and the level of uncertainty declining. Leuz and Schrand (2009) reveal that disclosure reduces the CoC. Similarly, Ang et al. (2000) argue that due to debts in firms’ capital structure they perform efficiently because the lenders in order to safeguard their investment and they accept the monitoring costs. Moreover, Mande et al. (2012) find that firms which adopt and implement the CG system then the costs of debt and equity can be significantly reduced because it increases the value of the firm. High value firms show that these firms can pay debts and equity obligations in future, therefore investors’ confidence increases and they demand low rate of returns. Others studies like Ajinkya et al. (2005) report that CG mechanisms reduces agency problems and this in turn reduces the agency costs. Hence, at this level reveals that the management manipulation practices of earnings and the CoC of listed firms are declined. Moreover, the stakeholder theory concentrates on a number of issues such as

<table>
<thead>
<tr>
<th>Size</th>
<th>-0.367</th>
<th>-2.49</th>
<th>0.013**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted R-Square:</td>
<td>57.86%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-Statistic:</td>
<td>261.52 (p-value 0.000***)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.05, **p < 0.01 variables are significant at 5% and 1% significant levels respectively. Moreover, ***p < 0.05 show that the model is significant.
information flow from top to lower management, working environment and interpersonal relations (Sanda et al., 2005). Hence, the managers who adopted the principles of this theory then the CoC should be reduced.

Like the agency theory of CG, the capital structure signaling theory reported that top-level management of firms having more information and they want to transfer it to the outside investors (Ross, 1977). This statement is supported by the disclosure of information according to compliance statement of CG code of Pakistan. IA between insiders and outsiders is reduced. Thus, investors make informed decision on the basis of disclosed accounting information and ultimately the CoC of the firm decline. Hillman et al. (2000) argue that the BoD creates a link with external resources that reduce the uncertainty level of firm for these available resources. For the survival of the company, management of the resources in effective way in uncertainty is utmost important. Therefore, conclude that during the highly uncertain situations governance system plays its important role to encourage investors’ investment decisions and build their trusts and they demand a low level of return on their investments. In addition, Albrecht et al. (2004) demonstrate that stewardship theory is based on the sociological and psychological approach to align the interest of corporate executives, owner, and management.

These results are in line with prior research as Claessens et al. (2003) show that in companies, efficient CG mechanisms help to get capital at a lower cost and improve the financial performance. Tanjung et al. (2015) conclude that good CG system improve the firm performance and ultimately the firm CoC decline because the stock prices show bullish trend and this is the sign of investors’ confidence that firms pay their obligations on time. However, weak and inefficient mechanisms of CG lead to higher CoC and poor firm financial performance. Further, Embong et al. (2012) report that in large firms, CG in term of disclosure negatively and significantly affect the CoC in term of cost of equity. Hence, concludes that good governance systems of Pakistan (CG Codes of 2002 & 2012 of Pakistan) increased the confidence of investors because the level of risk becomes low. Thus, they demand a low level of return on their investments. On the basis of reported results conclude that CG mechanisms in context of Pakistan create efficient and good capital market
for the investment because like world developed capital market the Pakistani capital market plays its important role in the economic development of Pakistan.

Table 5.7 also presents the findings of CoC and control variables. Beta positively and significantly affects the CoC of sample listed firms on PSX. Beta represents the sensitivity of the market in term of systematic risk. Therefore, investors demand a higher rate of return when uncertainty increases. On the other hand, the higher rate of return represents the CoC for the firm. Such findings are theoretically supported by the bankruptcy cost theory of capital structure such as Kwansa and Cho (1995) reveal that high probability of financial distress position increases the CoC of the firm. In addition, Ross (1977) demonstrates that leverage and the probability of bankruptcy of firms are positively associated. Therefore, this high probability of bankruptcy shows the level of risk and in turn the high level of risk increasing the CoC of firms. Similarly, Markopoulou and Papadopoulos (2009) argue that high level of leverage indicates the higher chances of bankruptcy. Therefore, they conclude that this high chances of bankruptcy increases the CoC. Moreover, the results of the current study are consistent with the previous studies (e.g., Botosan, 1997; Bozec et al., 2014; Francis et al., 2004; Pham et al., 2012; Shah et al., 2009; Zhu, 2009).

The theories make an important contribution to research because it mostly concentrates on the behaviors of individuals. Mukherji, Desai and Wright (2008) find that individuals are rational in their decision-making process to maximize their returns. In this regard, Ross (1973) shows that agency theory is the foremost theory and it is based on the rational behavior assumptions of investors. Thus, Aaker and Jacobson (1987) conclude that risk and return are positively associated. Moreover, Bettis (1981) support the positive association between risk and return. However, Fisher and Hall (1969) demonstrate that some investors are risk-averse. Therefore, they demand low return at low risk. However, they demand a high return to compensate high level of risk. Therefore, alternatively, the level of risk affects the CoC of listed firms.

The level of debts on capital structure plays its important role. The results reported that leverage is negatively and significantly associated with CoC of listed firms on PSX. High level of leverage reduces the cost of capital. Theoretically, these results are supported by signaling theory such as Bhattacharya and Dittmar (2004)
show that on the basis of sending good news into the capital market firms increase the level of leverage in their capital structure. The level of increasing leverage in the capital structure of the firms reflects that the firms can easily pay their obligations. Hence, this action acts as a good news/signal for the firms in the capital market. Similarly, Ross (1977) and Leland and Pyle (1977) reveal that a combination of the capital structure of firms’ act as a signal for the external users. Moreover, Ross (1977) adds that the best signals convey by the debt financing. In addition, Noe (1998) demonstrates that a firm that raises debt financing convey the message that it is better than firms which rely on equity financing because the stock prices of these firms are declined. Similarly, Markopoulou and Papadopoulos (2009) reveal that a high level of leverage creates a signal that management believes that the firm performs well in future and it allows them to pay obligation easily. Therefore, firms with high leverage have a low cost of capital. Moreover, Gruber and Warner (1977) show that tax saving on debts of firms is high as compared to the bankruptcy cost of debt financing. Therefore, they conclude that the expected bankruptcy cost cannot affect the cost of capital. Empirically these findings are supported as George (2003) investigates the impact of leverage on the cost of capital of listed firms on Nairobi Stock Exchange during 1990-2001 and concludes that the cost of capital varies from firm to firm. The different effects of leverage on the cost of capital are due to different debt contracts of these listed firms. Therefore, these firms paying the different cost of debts. Further, they add that whenever the cost of debt is more than the overall cost of capital then a high level of leverage increases the cost of capital. However, if the cost of debt financing is low then the overall cost of capital then increases in leverage level reduce the overall cost of capital. Moreover, Khadka (2006) investigates the leverage and cost of capital in listed firms on the Nepalese Stock Exchange and results demonstrate that leverage and cost of capital are negatively associated. Similarly, Rad (2014) demonstrates that a high level of leverage in capital structure reduces the cost of capital to a significant level. Same results are found in the research of Weston (1963) that leverage negatively and significantly affects the cost of capital. Further, this significant relationship is consistent with prior CG literature (e.g., Zhu, 2009; Zhu, 2012). Finally, the association of leverage and cost of capital shows that the listed firms on PSX to a great extent rely on the debt financing. Such as reported in table 5.1 of descriptive statistics that average level of debt financing is 55.1%.
In addition, firm performance (ROA) also significantly and negatively affects the cost of capital. It means that high firm performance reduces the CoC. Hence, a firm gets external debt and equity financing at a lower cost because the level of risk is low in such firms and creditors and investors trust increases. Harris and Raviv (1991) argue that the ratio of debt and equity is directly associated with firm profitability. Since high profitability reduces the chances of bankruptcy and in turn, it reduces the cost of capital. The steward theory postulate that management act as steward and work for the maximization of shareholders’ wealth. They are interested in the performance of firms to satisfy the interests of all interested parties. Thus, they act on behalf of shareholders by reducing IA between insiders and outsiders and thus investors make informed decisions (Smallman, 2004). Moreover, Davis et al. (1997) report that managers through performance maximize profit and protect shareholder wealth. Therefore, profit maximization improves dividend and share prices of firms, thus resulting in lower CoC.

Another control variable such as GDPG rate significantly and negatively affects the CoC of sample firms listed on PSX. The results increase the level of confidence of investors because of GDPG rate act as an important indicator of the overall economy. Moreover, demonstrates that businesses are the important sector of the economy and they efficiently utilized the resources. In addition, an increase in the level of GDPG rate shows that the economy is performing well. This becomes a positive signal for investors and builds their trust, thus they demand a lower rate of return on their investment. Rad (2014) further concludes that the size of the firm also significantly and negatively affects the CoC of listed firms in Pakistan. It shows that large size firms get financing at a lower rate as compared to small size firms listed on the PSX. Agustini (2015) reveals that firms having a large size of assets face the lower risk as compared to firms with a small level of assets. Moreover, Banz (1981) concludes that small firms have a high level of risk than larger firms because large firms are complex and take a lot of expertise and time to understand its reporting. Investors being risk averse demand for higher return, thus increasing the CoC. Therefore, investors demand a high rate of return on their investment in small firms as compared to large size firms. Additionally, Khurana and Raman (2003) demonstrate that firm size and CoC are negatively and significantly associated. On the other hand, Bhojraj and Sengupta (2003) conclude that the credit rating of large companies is
high. Therefore, the market risk of large size companies can be low and these firms face a lower rate of CoC. Further, reveals that this negative and significant relationship between firm size and CoC is consistent with prior CG literature (e.g., Bozec & Bozec, 2010; Pham et al., 2012; Zhu, 2009; Zhu, 2012). The overall explanatory power of the model represented by adjusted R-square is 57.86%. Moreover, the F-statistic is highly significant, suggesting the validity of the appropriate model.

5.6 Earnings Management and Cost of Capital

The third stage of the thesis investigates the impact of earnings management on the cost of capital of the same sample firms listed on the PSX. The same procedures are also applied for the analysis and appropriate model selection as explained in stage one and two.

Model of the stage three is follow;

\[
\text{CoC}_{it} = \beta_0 + \beta_1 \text{EM}^{29}_{it} + \beta_2 \text{Beta}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{CE}_{it} + \beta_5 \text{ROA}_{it} + \beta_6 \text{CFO}_{it} + \beta_7 \text{S}_{it} + \epsilon_{it} \ldots \ldots \ldots \text{III}
\]

5.6.1 Appropriate Model Selection for Analysis among Pooled OLS, Fixed and Random Effect Models

<table>
<thead>
<tr>
<th>Tests</th>
<th>test values</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel-A F-test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>318.14</td>
<td>0.000**</td>
</tr>
<tr>
<td>Hausman test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{chi}^2(7)=(b-B)<a href="b-B">(V_b-V_B)^{(-1)}</a>)</td>
<td>11.88</td>
<td>0.104***</td>
</tr>
<tr>
<td>Breusch and Pagan test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>29.35</td>
<td>0.000**</td>
</tr>
<tr>
<td>Panel-B F-test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>370.17</td>
<td>0.000**</td>
</tr>
</tbody>
</table>

29 The third model of the study investigates the effect of EM on CoC. Like stage one in third stage also uses four models/panels because EM is measured through four different models.
**Hausman test**

\[
\text{chi2}(7) = (b-B)'[(V_{b-V_B})^(-1)](b-B) = 13.17
\]

0.068***

**Breusch and Pagan test**

F-value

28.32

0.000**

**Panel-C**

F-test

F-value

1122.11

0.000**

**Hausman test**

\[
\text{chi2}(7) = (b-B)'[(V_{b-V_B})^(-1)](b-B) = 11.52
\]

0.117

**Breusch and Pagan test**

F-value

29.21

0.000**

**Panel-D**

F-test

F-value

1126.14

0.000**

**Hausman test**

\[
\text{chi2}(7) = (b-B)'[(V_{b-V_B})^(-1)](b-B) = 49.33
\]

0.000***

Note: Panel-A of table 6.8 reports the model selection procedure results of Panel-A of table 5.8. However, Panel-B, C and D explain the procedures of model selections of Panel-B, C and D of table 5.9. Moreover, Panel-A, B and C recommended that the appropriate model is random effect for analysis of Panel-A, B and C of table 5.9 and the Panel-D reports that the appropriate model is the fixed effect for the Panel-D of table 5.9. **p< 0.01, ***p< 0.001.

Table 5.8 reports the step by step process of the appropriate model selection among pooled OLS, fixed and random effect models. The results of panel-A, B, C, and D report that the F-test results show that the appropriate model is fixed effect as compared to pooled OLS because F-test p-value is less than 0.05. However, in panel A, B and C Hausman test report that for these panels the suitable model is the random effect model because the p-value of the test is higher than 0.05. The same model is recommended by the Breusch and Pagan LM test for Panel A, B, and C because the p-value is less than 0.05. Further, the table reports that the panel D results of Hausman recommended that the suitable model for the analysis is the fixed effect model. Hence, on the basis of these findings reveal that the recommended models are used for the analysis of Panel-A, B, C and D as reported in table 5.9.
5.6.2 Results of Panel Data Approaches of Stage-III

Table 5.9: Results of Panel Data Approaches of Stage-III

<table>
<thead>
<tr>
<th>Panel</th>
<th>Dependent Variable; Cost of Capital (WACC)</th>
<th>Variables</th>
<th>Coefficient</th>
<th>z-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel-A</td>
<td></td>
<td>Constant</td>
<td>9.251</td>
<td>9.11</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>JM</td>
<td>0.139</td>
<td>2.14</td>
<td>0.032*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Beta</td>
<td>3.732</td>
<td>39.06</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LEV</td>
<td>-1.760</td>
<td>-4.88</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CE</td>
<td>-0.141</td>
<td>-0.67</td>
<td>0.502</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ROA</td>
<td>-1.769</td>
<td>-2.83</td>
<td>0.005**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CFO</td>
<td>-0.554</td>
<td>-1.25</td>
<td>0.211</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Size</td>
<td>-0.539</td>
<td>-3.81</td>
<td>0.000**</td>
</tr>
<tr>
<td></td>
<td>Adjusted R-Square</td>
<td></td>
<td>59.63%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F-Statistic</td>
<td></td>
<td>250.41</td>
<td>(p-value 0.000***</td>
<td></td>
</tr>
</tbody>
</table>

| Panel-B | Dependent Variable; Cost of Capital (WACC) | Constant  | 16.636      | 13.46       | 0       |
|         |                                              | MJM       | 0.165       | 2.07        | 0.046*  |
|         |                                              | Beta      | 10.257      | 79.11       | 0.000** |
|         |                                              | LEV       | 9.257       | 19.23       | 0.000** |
|         |                                              | CE        | -0.050      | -0.18       | 0.861   |
|         |                                              | ROA       | -0.014      | -5.14       | 0.000** |
|         |                                              | CFO       | -2.415      | -4.11       | 0.000** |
|         |                                              | Size      | -1.0897     | -6.27       | 0.000** |
|         | Adjusted R-Square                            |           | 84.29%      |             |         |
|         | F-Statistic                                  |           | 970.22      | (p-value 0.000*** |         |

| Panel-C | Dependent Variable; Cost of Capital (WACC) | Constant  | 9.273       | 9.11        | 0.000   |
|         |                                              | PMM       | 0.135       | 2.24        | 0.025*  |
|         |                                              | Beta      | 3.730       | 39.04       | 0.000** |
|         |                                              | LEV       | -1.750      | -4.85       | 0.000** |
|         |                                              | CE        | -0.141      | -0.67       | 0.502   |
|         |                                              | ROA       | -1.743      | -2.78       | 0.005** |
|         |                                              | CFO       | -0.552      | -1.25       | 0.213   |
|         |                                              | Size      | -0.544      | -3.84       | 0.000** |
|         | Adjusted R-Square                            |           | 59.54%      |             |         |
|         | F-Statistic                                  |           | 250.44      | (p-value 0.000*** |         |
Panel-D Dependent Variable; Cost of Capital (WACC)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>33.1637</td>
<td>11.21</td>
<td>0.000</td>
</tr>
<tr>
<td>DRM</td>
<td>0.4787</td>
<td>5.86</td>
<td>0.000**</td>
</tr>
<tr>
<td>Beta</td>
<td>10.122</td>
<td>71.65</td>
<td>0.000**</td>
</tr>
<tr>
<td>LEV</td>
<td>8.57089</td>
<td>12.73</td>
<td>0.000**</td>
</tr>
<tr>
<td>CE</td>
<td>-1.0711</td>
<td>-2.98</td>
<td>0.003**</td>
</tr>
<tr>
<td>ROA</td>
<td>-1.8727</td>
<td>-2.07</td>
<td>0.039*</td>
</tr>
<tr>
<td>CFO</td>
<td>-1.9584</td>
<td>-3.19</td>
<td>0.001**</td>
</tr>
<tr>
<td>Size</td>
<td>-3.297</td>
<td>-7.97</td>
<td>0.000**</td>
</tr>
</tbody>
</table>

Adjusted R-Square: 81.23  
F-Statistics: 76.34 (p-value 0.000***)

Note: Table 5.9 reports the results of stage three. In panel-A, B, C and D CoC is uses as dependent variable. However, Panel-A, B, C and D reports the results of JM, MJM, PMM and DRM respectively. Moreover, Panel-A, B and C results are based on random effect while Panel-D results is based on fixed effect model; *p < 0.05, **p < 0.01. However, ***p < 0.05 shows that the Panels/Models A, B, C and D are significant.

To answer the third objective and testing the developed hypothesis on the basis of the literature of EM and CoC in developed and developing economies. Results of table 5.9 answer the third question to achieve the third objective of the study. Findings of the third stage support the view of previous studies (e.g., Mojtabehdi, 2013; Salteh et al., 2012)

Table 5.9 presents the results of stage three of the thesis. Panel-A reports that EM is measured through the JM and the results conclude that it positively and significantly affects the CoC of sample listed firms on PSX. The activities of EM increase the risk perception of investors and they demand a high return on their investment. Firms may overstate or understate their earnings in bad and good times and due to the state of the economy EM practices of management affect the CoC. However, Williamson (1996) concludes that managers acts as opportunists and arrange transactions of firms in favor of their own interest. Therefore, the cost of capital increases. The similar findings are reported in the previous studies such as Salteh et al. (2012), they conclude that EM significantly affect the CoC. Further, Balvers (2009) shows that among the incentives of EM one is the CoC. Leuz et al. (2003) show that EM reduces the level of investor protection, hence the CoC of firms are increasing. However, reveals from the previous literature this association is expected to be positive and significant. Moreover, Balvers concludes that the cost of
capital and earnings management are significantly associated. In addition, Strobl (2013) finds that activities of earnings management are different across the business cycle. However, reveals that if management follow the principles of stewardship theory, then to sum the views of those who support this theory that executives on the basis of internal knowledge and information make informed decisions. Moreover, their decisions are quick and independent, therefore the value of the firm is increases and they run the firm efficiently (Donaldson & Davis, 1991). Alternatively, management do not manipulate earnings because they act as steward for the wealth maximization of shareholders and firm get external financing at cheaper cost, therefore CoC reduces. According to agency theory of CG Fama and Jensen (1983) add that agents when act on behalf of owners then shareholder’s wealth can increase and ultimately reduces the practices of EM and CoC. Moreover, reported that if there is a strong CG system, managers on the basis of strong performance and wealth maximization gets bonuses and owners get dividend. However, if agent does not act in the best interest of shareholders then rise IA and this leads to high EM and high CoC.

In light of institutional theory reported that if firms who follow similar accounting conventions as reported by this theory then they have lower EM and CoC and a strong CG system while those who follow local accounting standards, results in low accounting quality showing a high EM, CoC, and a weak CG system. Moreover, according to transaction cost theory; the transaction acts as a unit of analysis, which pushes managers to act as opportunists and arrange transactions of firms in favor of their interests. If the level of the cost of transactions is high, then management engage in the activities of EM and additionally, the CoC may also increase because the high cost creates uncertainty. Therefore, investors demand a high return from the business. In summary, this theory postulates that transaction cost may also work as a determinant of EM that leads to a high CoC.

Moreover, the resource dependency theory postulate that strong governance mechanisms can create links with external resources that reduce the uncertainty of firm for their required resources and the linkage of a firm with its external environment reduces the level of uncertainty. Alternatively, the transaction costs of the firm are declined (Hillman et al., 2000). Hence, managers do not need to
manipulate the resources/information of the firm, thus lowering EM. Ultimately, this leads to a trusted environment and investors’ make informed decisions based on these resources that leads to a low CoC. Moreover, based on the rules of resource dependency to reduce uncertainty, BoD bring together important constituents such as public policy decision makers, social groups, suppliers and buyers, resources as skills and information and legitimacy (Gales & Kesner, 1994).

This is also observed that if management concentrate on social contract theory perspective than creditors make the informed decision based on the actual reported performance of the firm. Thus, this results in higher accounting quality and leads to low EM and CoC. Moreover, demonstrates that according to the political theory of CG, political system can influence the firm governance system and also trying to develop a system that allocate the power and privileges of business. Hence, if the political system facilitates the business practices, then management avoid manipulation of accounting information that tends to reduce the CoC.

Moreover, risk in form of Beta is positively associated with the cost of capital. Literature supports the above statement that risk increases the required rate of return of the investors and alternatively the positive association between risk and return increases the level of CoC of sample firms. Leuz et al. (2003) show that EM reduces the level of investor protection and the level of risk is also increasing.

Leverage negatively and significantly affect the CoC of listed firms in Pakistan. Moreover, the theoretical and empirical justification is the same as described in the results of stage two of CG and CoC. In addition, find that the CE is negatively but insignificantly affect the cost of capital. It means that CE shows that due to it investors perceive firms make expansion in their businesses. Therefore, they demand a low rate of return on their investment. Management makes the investment in the projects which has a positive NPV, therefore CE reduces the level of CoC of firms. Transaction cost theory empirically supports this association that for the expansion of firms, management needs additional resources. Further, Pfeffer and Salancik (1978) demonstrate that BoD link firms with those external factors to get the resources which are needed for the firm survival. Similarly, Mcconnell and Muscarella (1985) investigate that corporate CE is planned by management to
increase the stock market prices. Therefore, they conclude that an increase in stock prices gain investors trust and in turn, the CoC tends to be declined.

In addition, conclude that firm performance (ROA) and CoC significantly and negatively associated. When the performance become high than the level of risk reduced and confidence of creditors and shareholders become high. Therefore, they demand a lower rate of return. This effect and association are the same as discussed in stage two results of CoC and CG.

Cash flow from operations is insignificantly and negatively affect the cost of capital. Cash flow from operations\(^{30}\) is used as a control variable to control the performance differences of firms because these sample firms selected from different industries. The negative association reveals that high cash flow attracts the investors for investment at lowest possible cost because of such firms are growing and expanding, and already perform well. Further added that the high level of cash flow from operations indicates that the firm future profit will increase and these high cash flows pay a high dividend to shareholders. Therefore, high-performance firms face a low level of uncertainty and shareholders demand a low rate of return on their investment and cost of equity capital become reduces. The contracts\(^{31}\) of the loan force management to have a stable level of cash flows during the contract period of the loan. In addition, taking new loan act as a signal of the expectations of high future cash flows and from this cash flows fulfill the debts created obligations of management. Hence, reveals that these findings are supported by the signaling theory of cost of capital. Moreover, agency theory also empirically supports the results of this study such as Jensen (1986) reveals that debt financing force management to pay their obligations. Therefore, managers cannot pursue their personal desires through available free cash flows. Similarly, Habbash (2010) demonstrates that high cash flow from operations reduces the involvement of management in earnings manipulation because these firm are already performing well. Therefore, they conclude that investor trust in firms that generate high cash flow from operations are high and they demand lower rate of return. Therefore, the cost of capital decline due to increasing the cash flows from operations.

\(^{30}\) It is the ratio of total cash flows from operations divided by total assets of firms.

\(^{31}\) When firms get debt financing then they sign contract with creditors, known as covenant.
Further, reveals that the size of firms negatively and significantly affects the cost of capital of Pakistani listed firms on PSX. If the size of a firm is large then the cost of capital will be low. Large size firms easily get external financing at low cost as compared to small firms. On the basis of these results conclude that these findings are same as discussed in the explanation of stage two of this study.

Finally, demonstrate that the value of adjusted R-square is 59.63% and F-statistic of the model is also high and its p-value shows that the model is highly significant and valid to use for analysis.

In Panel-B earnings management is measured through the MJM. The results report that EM and CoC are significantly and positively related. Management of firms when involved in the activities of earnings manipulation than the uncertainty becomes high. Therefore, investors demand a high rate of return on their investment to minimize the level of risk created due to such unfavorable situation. Moreover, risk in term of Beta significantly and positively affects the cost of capital, these findings show that if the risk is high then investors demand a high rate of return on their investments as compared to situations when risk level is low. Leverage and cost of capital are also significantly and positively associated. The findings of leverage and CoC of this panel are different in association as compared to this association in Panel-A. Moreover, theoretically and empirically these findings are supported such as Modigliani and Miller (1963) state that in a world with corporate tax the financial leverage affect the value of the firm and the overall cost of capital of the firm. Moreover, Markopoulou and Papadopoulos (2009) report that high level of debts in capital structure indicates the greater chances of bankruptcy. Therefore, the CoC becomes high with increasing level of leverage in the capital structure. Same results are supported by bankruptcy cost theory as Kwansa and Cho (1995) conclude that a high level of leverage increases the fixed interest charges. In turn, high payment of interest during a time period of low earnings of a firm cause the financial distress situation. Therefore, the high probability of financial distress position increases the cost of capital of the firm. In addition, Baxter (1967) concludes that the cost of capital curve decline at a low level of debts in capital structure and this curve rises at a high level of debts. Further, Grossman and Hart (1982) demonstrate that the firm use leverage for financing their projects. If firms become unable to pay its obligation, then
they become bankrupt. Therefore, debt financing becomes costly because managers lose their benefits in form of reputation and control over the business. Further, Ross (1977) demonstrates that leverage and the probability of bankruptcy of firms are positively associated. Therefore, conclude that due high probability of firms’ bankruptcy investors demand a high level of return on their investments and ultimately, the cost of capital of firms become increases. Moreover, agency theory adds that Jensen and Meckling (1976) report that when managers invest in the low return projects than organizations perform inefficiently. Therefore, the inefficiency of management pushes the cost of capital upward. Horne and Wachowicz (2008, p.455) report that “leverage is a two-edged sword–just as a company’s profits can be magnified, so too can the company’s losses”.

Further, added that firm performance (ROA) and CoC significantly and negatively associated. In the similar vein, cash flow from operations significantly and negatively affects the cost of capital of listed firms. Moreover, the size of the firm significantly and negatively affects the cost of capital of the listed firms. Further, demonstrates that large size firms having a lower level of cost of capital. However, the effect of CE on the CoC is insignificant and negative. Hence, the overall results of this Panel are in line with the finding of Panel-A. At the last reports, the overall goodness of model and the adjusted R-square shows that explanatory variables explain the dependent variable 84.29% and F-statistics probability is less than the standard value (0.05) of probability. Hence, it proves that the model is appropriate and valid for analysis.

Panel-C results demonstrate that earnings management significantly and positively affect the cost of capital such as reported in panel A and B. However, in this panel earnings management is calculated through PMM. Moreover, demonstrates that capital expenditure and cash flow from operations are insignificantly affected the cost of capital as of Panel-A. However, changes in the value of Beta can significantly and positively affect the cost of capital. In this scenario, a large value of Beta demonstrates that the particular investment is riskier. Therefore, investors for greater risk taking approach demand greater returns to compensate it. In addition, leverage (capital structure) is negatively and significantly associated with the cost of capital in this model and the results are the same as discussed in Panel-A. Further, reports that
firm performance negatively and significantly affects the cost of capital. If the performance is high than the cost of capital is low. In a similar vein, if the size of a firm is large then the cost of capital is low because large size firms having more resources to pay their obligations on time. Thus, the investors demanded rate of return become low and this shows the lowest CoC. The overall findings of this model are same as concluded from panel-A of corporate governance and earnings management. Finally, demonstrates that the adjusted R-square is $59.54\%$ and it presents that the explanatory variables are explained the dependent variable $59.54\%$. Similarly, reveals that the probability value of F-statistics is significant. Hence, like other models this is also a valid model for the testing of concerned areas.

Panel-D presents the results of earnings management and cost of capital. Earnings management is proxied through DRM and the results demonstrate that earnings management significantly and positively affect the cost of capital of listed firms on PSX like accruals based models used in Panel- A, B, and C. Further, add that risk in term of Beta affect the cost of capital significantly. Leverage (capital structure) is positively and significantly affect the cost of capital. However, capital expenditure negatively and significantly affects the cost of capital. If the level of expenditure becomes high, it shows that business becomes expand and can generate positive returns for their investors. Therefore, they demand a low rate of return because it generates a signal of good news in the capital market. Moreover, firm performance, cash flow from operation and size significantly and negatively affect the cost of capital of listed firms. Due to the high performance of firms, the cost of capital becomes low. High level of cash flow operations leads to lower level of the cost of capital. In the similar vein, demonstrates that large size firms having a lower cost of capital. Further, demonstrates that adjusted R-square showing that explanatory variables having the power to explain dependent variable $80.23\%$ and F-statistic is also highly significant.

The overall results of the third stage of the current study demonstrate that the main independent variable is earnings management and the dependent variable is the cost of capital. All Panels reveal the same nature of findings that earnings management positively and significantly affect the cost of capital of listed firms on PSX. Finally, conclude that management manipulation process reduces the investors’
confidence. Alternatively, this leads to a high level of uncertainty. Therefore, they demand a high rate of return on their investments. The high rate of return alternatively shows the high cost of capital of these firms. Moreover, in line with theoretical and empirical evidence control variables affect the CoC variable.

5.7 Summary of the Chapter

In this chapter reported the results and discussions of all three stages of the current study. Hence, the results are presented in three stages. In the first stage present the CG and EM results. The results show that CG and EM are negatively associated that the efficient governance system of Pakistan significantly reduces the EM practices of management. Moreover, the controlling variables also significantly affect the practices of EM. The results are theoretically and empirically consistent with the previous studies of developed as well as developing economies.

The second stage of the study reports the results of the CG and CoC. Results find that CG significantly and negatively affect the cost of capital of listed firms on PSX. The findings of the stage two are consistent with the theories of CG and CoC. The final stage reports the results of EM and CoC that these variables are significantly and positively associated. It reveals that if the EM practices mask the true position of the firm, then the cost of capital of firms’ increasing.

For the analysis total nine models/panels are used because for the earnings management used four different models as reported in Chapter-5 research methodology of the current study. The data are panel in nature and used panel data approaches. However, before non-paramedic tests examined the parametric tests assumptions but these assumptions are not meet. Hence, the non-parametric tests are used such as panel data approaches. To select the appropriate model among common constant, fixed and random effect used F-test, Hausman test and Breusch and Pagan tests. These tests are recommended that for panels A, B, C in stage one and three the suitable model for analysis is the random effect model. However, for panel D in stage one and three the suitable model is the fixed effect model. Further, reported that the diagnostics tests reveal that for stage two the appropriate model is the random effect

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32 Agency theory, institutional theory, stakeholder theory, political theory, stewardship theory and other CG theories.
model. The results of parametric test assumptions and OLS results are presented in Appendix-B and Appendix-C respectively.
CHAPTER-6

CONCLUSION, CONTRIBUTIONS, IMPLICATIONS, FUTURE RESEARCH AND LIMITATIONS OF THE STUDY

6.1 Conclusion

After a large number of corporate scandals and collapses of businesses such as Enron, WorldCom and HIH, the Asian Financial Crisis (AFC), the stock market crisis of 2002 and Global Financial Crisis (GFC) the regulatory and institutional authorities as well as governments agencies around the world took initiatives to revamp their respective corporate governance systems with the aim to initiate and take corrective measures to control such failures of the businesses. Such initiatives were not only taken in the developed world but in the developing economies as well. Studies conclude that such failures are the result of these weak regulatory systems, lack of implementation of the law, discretionary choices of accounting standards and its implementations, manipulation practices of the management and inefficient governance systems. Consequently, investors lost their confidence in these capital markets, thus firms started collapsing. To curtail the negative effects created in these situations and to improve the working of the respective capital markets, countries started revising their codes of corporate governance and regulatory environments also. For example, US incorporated SOX in the aftermath of Enron, Malaysia incorporated its code of CG and also revised her prudential regulation of the Central Bank; South Africa revised its CG code and even UK started updating their regulatory and intuitional rules. Pakistan also followed suit and enacted its code of corporate governance in March, 2002. However, initially, some of the sections of the code were mandatory while others were voluntary in nature. Then it was revised in 2012 wherein all the sections of the code were made mandatory and all the firms are required to follow all the sections but in case of non-adoptive of a particular section, the firm has to write for the exemption to SECP.
One of the main themes of strengthening these codes and rules and regulations were the free flow of information among all stakeholders. Studies conclude that a strong CG system not only ensures the protection of investors specifically the minority investors but also adds to the improvement in the quality of financial information. CG ensures that managers’ report the actual performance of the firm rather than presenting a distorted picture of the economic value. Managers may indulge in manipulating firm fundamental information to report performance that does not actually reflect the true value of the firm or try to hide their private benefits of control. They may do so to avoid litigation from investors and other creditors, to save themselves from dismissal (Job Security), and to avoid loss in a particular year. Thus, the manipulated information once released to the market present a lower quality of accounting information and investors try to avoid making decisions on the basis of such financial information. Hence, if they make the investment then they demand an increasing rate of return and ultimately the cost of capital become increasing. Thus, CG ensures that financial information is disclosed to the investors in a timely manner to enable them to make an informed decision about their investment. This in turn improves the accounting quality which is represented by low earnings management and low cost of capital.

This study investigated CG, EM, and CoC. The premise behind the study is that CG ensures the efficient utilization of resources helping both managers and investors to work together for the successful operations of a business. CG mechanisms also help in disclosing the relevant information to the stakeholders to reduce the information asymmetry between the insiders and outsiders. This reduction in IA leads to a low manipulation of accounting information and presenting a true picture of the firm to its stakeholders. Resultantly, the high quality information in the market improves the ability of the investors to make investment decisions with less risk and high return. Thus, firms gain an edge in acquiring capital at a lowest possible cost of capital.

The study is divided into three stages. The first stage investigates the impact of CG on EM. The second stage empirically examines the impact of CG on CoC. The last stage of this study investigates the impact of EM on the CoC. The population of the study is all the firms listed on Pakistan Stock Exchange (PSX). The time period
The sample firms are selected on the basis of the availability of complete data during the study period. This technique is used since the study requires firms to publish the data that are required in the analyses. Thus, the study is limited to the use of only 144 firms’ data and the total firm-year observations of the study are 1440. Data were collected from the annual reports of the respective firms, SBP balance sheet analysis, PSX and open doors website. World Bank was also used as a source of data. The data used in this study is panel and secondary in nature. The study used four different measurement proxies for earnings management. For CG, the study adopted a corporate governance index (CGI) initially developed by Javid and Iqbal (2010), which comprises of three distinct factors namely board of directors, ownership, and shareholding and the last one is transparency, disclosures and auditing. The CGI three different sub-indices is the combination of 22 features. Initially, this index was developed and used by Javed and Iqbal (2010) as an independent variable against firm performance. However, this study adopted the same index and used in a sample period of 11 years (2006-16) for 144 firms against EM and CoC.

The study used panel data techniques for analyses. For the first stage of study wherein, the effect of corporate governance is examined on the earnings management of the firms listed on PSX. As reported above, the study used four different proxies for EM, thus had to apply diagnostic tests on each of them to determine which nonparametric analysis tools need to be used. While investigating the effect of CG on EM, for the first three proxies of EM (i.e. Jones Model, Modified Jones Model, and Performance Matched Model), the thesis used random effect model. For the fourth proxy of EM; i.e. discretionary revenue model, the study used fixed effect model after the diagnostic tests. After controlling for firm size, leverage (capital structure), firm performance (ROA), cash flow from operations (cash flows from operations/total assets), and capital expenditure, the study finds a strong and negative association of CG and EM. This relation is statistically significant at the 5% level of significance.

The results support the view that an efficient governance system improves the accounting quality of firms through proper and timely disclosures of accounting information. These results indicate that firms need to follow an established method of reporting to improve and enhance their goodwill in the capital market to attract
investors. Thus, it not only provides capital at a low cost but also results in a good firm performance based on the true and fair economic value of the firm. Moreover, these results suggest that firms in Pakistan adopted the Code of Corporate Governance of 2012 in letter and spirit as it reduces the earnings manipulation activities of the firm’s management. The results also indicate that a strong governance system helps in removing all the allowable accounting alternatives that a manager enjoy while reporting accounting information and helps in limiting the managers’ discretion to manipulate accounting information. However, it has also been reported and observed that a mere presence or existence of law is not enough until it is enforced. For example, Lei et al. (2011) report that the accounting body International Accounting Standard Board (IASB) has no power to enforce the new accounting standards such as International Financial Reporting Standards (IFRS) and thus may not serve to improve the accounting quality if not enforced. Others report that firm and country specific institutional and regulatory environment affect the characteristics of financial reporting and thus suggest that enforcement is the key for achieving the desired outcomes of these revised rules and regulation (Ball et al., 2000; Leuz et al., 2003). These results are in line with the extant literature which reports a negative association of a corporate governance system with earnings management (Iraya et al., 2015; Shamimul et al., 2014; Tanjung et al., 2015; Turegun & Kaya, 2016; Xie et al., 2003).

The second stage of the thesis examines the impact of CG on the cost of capital of firms listed on PSX. As reported above, CG is measured through governance index developed by Javid and Iqbal (2010) while the cost of capital is proxied by the weighted average cost of capital (WACC), it is the combination of the cost of debt and equity. After applying the diagnostic tests for the analysis as the data are panel in nature, the results suggested using random effect model. The results show that CG is negatively associated with the cost of capital after controlling for firm size, leverage (capital structure), firm performance (ROA), Beta as a proxy of market risk, and Gross Domestic Product Growth rate. This strong negative relationship is statistically significant at the 5% level of significance.

The results support the view that an efficient governance system creates such an environment in which firms can expand their businesses because they make capital expenditures. Moreover, for the expansion of firms’ management use an effective and
efficient strategy resulting in the business performance and reduces the transaction cost. These results indicate that firms listed on PSX positively adopted the CG codes and disclosed the accounting information according to the given instruction in the code, hence the confidence of the investors’ increases on capital market information. They demand a low level of return on their investment due to a high level of disclosure of information investors make informed decisions and subsequently firm’s cost of capital decreases. These results also indicate that firms try to advantageously perform in the competitive environment because players in the capital market are interested in investing in such firms which generate high profits in the future. Hence, if a firm performs well and generate more profit then the investors and analyst perceive such firm as less risky and thus investors demand a lower return from them and subsequently the cost of capital decreases. Other reports that better governance system increases the value of the firm and limits the activities of insiders reporting discretion which they use for the expropriations of minority shareholders. Moreover, the increase in a firm value leads to lower risk and finally to lower cost of capital (Azam et al., 2011; Bozec & Bozec, 2011; Claessens & Yurtoglu, 2013; Yasser, 2011).

Firms follow an established method of reporting for timely disclosures to get external financing at the lowest possible cost of capital based on the true and economic values of the firms. Further report that CG system does not only reduce the cost of capital that results in increasing firm performance. Moreover, all the sections of the Pakistan revised code of CG 2012 are mandatory and all the firms are required to follow the entire code in letter and spirit that helped firms to control their cost of capital. One of the aspect of the revised code is the presence of independent directors who are assigned to oversee the affairs of the firm and monitor the performance of the firm as well as of management, thus restraining them from manipulating of the accounting information and presenting a true picture of the firm resulting in an increased accounting quality and lower cost of capital.

In the third stage of the thesis examined the impact of EM on CoC. As reported that in stage one and two of current study used panel data, therefore in this stage also used the same data of EM and CoC and the procedures of panel data approaches tests applied to determine which panel data model for analysis to be used.
Moreover, as explained in stage one that the thesis used four different models for EM measurement. The results report that for the first three proxies of EM (i.e. Jones Model, Modified Jones Model, and Performance Matched Model) used random effect model. However, the study used fixed effect model for the fourth proxy of EM; i.e. discretionary revenue model developed by Stubben. Additionally, controlling for firm size, leverage (capital structure), firm performance (ROA), cash flow from operations, risk as Beta of the firm and capital expenditure. The findings of the third stage of the study suggest that earnings management practices and CoC are positively associated, the association is statistically significant at a 5% significance level. The positive association is due to the involvement of management in earnings manipulation. Such action of management reduces the investor trust in such fraudulent information. Hence, they demand a high rate of return and ultimately the cost of capital of firms are increasing.

The results support the view that the differences between private and public information affect the cost of capital significantly because the information structure changes affect the decision of investors. Easley and Ohara (2004) report that such private information reflects the systematic risk in a new form and alternatively investors demand a higher rate of return to compensate this new form of risk. They further report that in firm where private information is more as compared to public information then their cost of capital is high then firms whose private information are low and public information is high. Moreover, Kim and Sohn (2013) find that due to opportunistic earnings management the cost of capital is increasing.

Finally, report that the results support the proposed theories of this study such as agency, stewardship, stakeholders, institutional, legitimacy, resources dependency, social contract, transaction cost, political and business ethics theories of corporate governance. Moreover, the association of control variables with earnings management is theoretical and empirically valid that these variables are played their role in earnings management mitigation practices of management. Moreover, the association of all variables with the cost of capital is theoretically and empirically justified. The findings of the thesis are theoretically consistent with previous literature and also having matched results with the empirical findings of other research studies. In
addition, the developed theories of CG and cost based theories of capital structures are applicable in the Pakistan capital market.

6.2 Contribution of the Study to Literature

This thesis contributes to the literature in a number of ways;

First, this study contributes to the literature in term of using CGI instead of using separate proxies of CG used in the extent literature. For example, Kamran and Shah (2014) use ownership concentration (OC), institutional and managerial ownership, audit quality, board size, CEO duality and Big five ownerships as indicators of CG for the period 2003-2010. Javid and Iqbal (2010) developed CGI and used this index to investigate the association between firm performance and this CGI. The CGI developed is based on three sub-indices namely the BoD, ownership & shareholding and transparency, disclosure & auditing. Hence, the current study filled the gap of literature from the developing economy context like Pakistan. This gap is identified in previous studies such as Kamran and Shah (2014) and Lakhal (2015). Hence, the previous studies in the context of Pakistan as a developing economy cannot provide a clear answer and the areas under considerations are still controversial. In this study clearly answered the controversial issues of previous studies in the context of Pakistan as a developing economy. Further, this study recommended their implications to policymakers and regulatory authorities/agencies.

Second, this study used CGI instead of individual(s) factors of CG with CoC and this is an important and most worthy contribution of this study from the developing countries perspective but this covered only Pakistan. Moreover, the author recommended implication of this issues to concern authorities and regulatory bodies of Pakistan to attract the investors by controlling the CoC.

Third, this study uses a recent discretionary revenue model for measuring EM. Stubben (2010) developed the discretionary revenue model and argue that this model is better to detect EM practices than other models. This is the empirical

33 Others models of earnings management are accrual based models such as Jones and Modified Jones models etc.
Fifth, contribution of this study is that in this thesis control for a number of variables which are not examined widely before in CG and EM studies even in the international studies such as CE and CFO. These variables are important and have a significant effect. Moreover, add that CFO represents the performances differences between firms in different industries. The empirical examination of these variables is significantly important in the context of Pakistan because the political and economic systems of Pakistan are highly unstable and uncertain. However, the findings of the study support that due to efficient governance system of Pakistan as a developing economy CFO and CE are increasing. This expansion attracts the investors from local and international markets. Moreover, find that local and foreigner investors contributed to the business and CM performance, alternatively businesses and CM contribute to the economic performance in term of high gross domestic products (GDP).

Six contribution of this study uses panel data on relevant approaches which has a number of advantages. Javid and Iqbal (2010), Larcker and Rusticus (2007) and Ntim (2016) panel data mitigate the statistical problems like endogeneity. Moreover, Gujarati (2003) and Wooldridge (2009) report that panel data increases the number of observation and consequently reduces the problem of multicollinearity.

Seven contribution of this study is that tested a number of CG and CoC theories such as in the first stage along with agency; stewardship, stakeholders, institutional, resource dependency, legitimacy, transaction cost, political and business ethics theories are tested as compared to the previous studies which either test single or cannot test all CG theories. Moreover, the cost related to specific theories of CoC like agency, signaling, and bankruptcy cost theories are tested in this study, which are not tested earlier.
Eight as compared to the previous studies in Pakistan this study contribute that the CG mechanisms and behavior of Pakistani listed firms are investigated in a number of research studies such as Mehar (2005), Ahmed and Javid (2009), Afzal and Sehrish (2010), Afza and Mirza (2011) examined the individual CG attributes and dividend policy in listed firms. Further, Shah et al., (2009), Butt and Hasan (2009), Rehman, Rehman and Raoof (2010) investigate the impact of CG on COE. In the similar vein, Mir and Nishat (2004), Nishat, Shaheen and Hijazi (2004), Javid and Iqbal (2008), Yasser (2011), Azam et al. (2011) and Tariq and Abbas (2013) examined CG and financial performance. However, CG and EM, CG and CoC and EM and CoC are not intensively investigated in these researches which is an attribute of this study in the perspective of Pakistan as a developing economy.

Nine this thesis investigated the proposed issues over a 10-years’ period because according to the general perception in the long period the relationship and casual effect scenario are clearly identified. Further, added that the outcome provides more accurate results as compared to short and medium period and such a long period is the contribution of this study to the Pakistani context. However, in previous research studies, a short time period is selected for investigations such as Afzal and Sehrish (2010) used only five years’ data. In addition, Shah et al. (2009) also used five years’ data. Moreover, Tariq and Abbas (2013) employ eight years’ period.

Ten this thesis investigates a large sample size as compared to previous studies in Pakistan such as Afzal and Sehrish (2010) investigate only 42 listed firms. Further, report that Tariq and Abbas (2013) examined only 119 listed firms and Shah et al. (2009) investigate a sample of 114 listed companies, whereas this study used 144 listed firms.

Eleven this thesis investigates the combined effect of CoC instead of CoE and CoD because the Pakistani firms used debt and equity sources for financing like other developing economies.

Twelve the time period used in the study is the potential reason that generates the unexpected association of variables/phenomenon (Benkel et al., 2006). Hence, reveals that in Pakistan the code of 2002 and 2012 are developed and implemented but the Pakistani economy passes through different phases of political, economic,
culture, and war & terror. Such as Shah et al. (2009) and Kamran and Shah (2014) cannot reveal the true association of CG and EM proxies. However, in this study covered a longer period of and pre and post time period of CG code of 2012. Moreover, also cover the political time of almost two democratic selected governments and non-democratic government.

6.3 Implications of The Study

The results reveal that the CG system of Pakistan plays its significant role to control the management actions of earnings manipulation. Hence, the CG code of 2017 further strengthen these mechanisms. In this study recommended to implement the code in true spirit and to curtail the chances of business collapses which were incurred in other countries around the world.

To allow firms to create and avail opportunities to expand their businesses because large size firms warmly welcome and implement the CG system. Large size firms less engage in earnings manipulations and investors can make an investment in large size firms at the lowest possible cost.

The results report that an increase in the level of leverage ratio increase the probability of firm bankruptcy. Therefore, this is recommended for the management of the listed firms of Pakistan to strictly focus on their debt level in the capital structure to avoid the chances of bankruptcy. Such as according to the going concern principle of business the businesses should be a continuing process.

As an Islamic country Pakistani firms’ management take into consideration the welfare of all stakeholders. However, for strengthening the CG code and its implementations it is also recommended that if regulators guide the management about the Islamic laws and practices then they should follow the standard rules and take care of all stakeholders.

This is recommended to policymakers to implement the rules of contacts (covenants) and the specific code laws (Bankruptcy laws in case of nonpaying their debts obligations) to get external financing at the lowest possible cost of capital. At the lowest cost of capital firms increases the wealth of their shareholders.
This is recommended for the authorities to developed such policies that reduce or eliminate a significant influence of political leaders and their followers on the business operations and policies. Such as reported in international studies of Fan et al. (2007) and Shleifer and Vishny (1997) that politically influenced firms manipulate their earnings information.

The political system of Pakistan over a long period remains unstable, therefore this uncertainty and instability significantly affect the business performances. Hence, this is recommended for the concern authorities to ensure the stability of policies even the governments or political culture of Pakistan is changing. As observe that in other countries like U.S, UK, Russia, Japan, and China etc. they continue their policies even the governments are changing. The continuity of policies is responsible for the success of their businesses and economies.

The results of capital expenditure show that expanding firms are less engage in earnings manipulation and get financing at the lowest cost. Therefore, recommended to management and policy makers to create opportunities for the largest portfolio of businesses.

The findings of the third stage reported that if firms are involving in earnings management then the cost of capital will be high. Therefore, recommended controlling the practices of earnings management because the high cost of capital negatively affect the overall performance of listed firms.

6.4 Future Research Recommendations

The current study attempt to investigate the impact of CG on EM and CoC; and the impact of EM on CoC of 144 listed firms on Pakistan Stock Exchange. The time period of the study is from 2006 to 2016. For CG used CGI, for EM used four largely recommended proxies and for CoC used WACC. Moreover, a number of control variables are used. The current study contributions and findings are reported in the introduction section (Main Findings of the Study) of the current thesis. However, a number of research gaps are still needed attention in the Pakistan capital market. The future research work can investigate the following areas;
1. Researchers can test these areas (CG and EM) through quarterly data instead of annual data because as reported Stubben (2010) that management manipulate the last quarter data as compared to the first three quarters.

2. Researchers can compare the effect of Pakistan CG code pre and post amended code of 2012 to address the strength of this code.

3. For future research in this area recommended to use advanced techniques of panel data analysis.

4. The country-based study can be expended to extensive study at cross-country level.

5. Future research in this context can adopt the 70 factors corporate governance index developed for the analysis of Pakistani listed firms by Khan (2016).

6. Future researches can use the cost of equity and cost of debt separately instead of WACC to identify the factors of debt and equity market development in Pakistan.

7. Future research studies can use the current issues specifically in family owned and State owned firms.

8. Finally, recommended to check the governance, regulatory, financial reporting, earnings manipulation and cost of capital areas of considerations in small and large firms.

9. This is also recommended for future studies to check the pre and post CG code 2012 effect on EM practices, CoC, firm performance and other factors such as dividend growth, firm value, and corporate diversity etc.

10. It is also recommended to do research in the area of governance system of private non-listed firms on the stock exchange.

6.5 Limitations of the Study

This study has certain limitations. For example, the study is limited to the use of the Corporate Governance Index adopted from Javed and Iqbal (2010) who developed it and investigated its effects on firm performance. They used data prior to the revised code of corporate governance. However, this study adopts the same procedures and format for constructing the CGI. The Code of Corporate Governance of Pakistan was initiated in 2002 wherein some of the sections of the code were voluntary and others were mandatory. However, after its revision in 2012, all the
sections of the code were made mandatory and every listed firm has to adopt in full spirit with no exemption yet a firm may opt for exemption from SECP. The weights/score assigned to the relevant factors considers a section the same both at pre and post level but in actual is different. Thus, future research may investigate the effect of CGI based on the pre and post revision on EM and CoC. Second, the study uses purposive sampling and include a company in the sample list if the data are available for the entire period of the study that limits the use of only 144 companies. Others may have a different sampling technique and use a more extended sample for their study. Another limitation or probable suggestion could be that since the sample includes most of the big firms in the market, results could also be biased to the level that the larger companies tend to avoid EM and market automatically have a trust on these companies due to their size as being one of the main covenants for a debt contract. Another limitation of the study is the single country CGI being locally developed. The extant literature provides indices developed based on regulatory environment and based on the international context that can also be used on future studies. However, important to note that the majority of the indices are developed for a single year and would require a lot of effort and time to construct one such index. Moreover, this study does not cover the real earnings management models rather have used accruals based model, which is used may have different results. Future research may consider using the legal tradition as a regulatory and institutional variable on the reported accounting quality in a pre and post revised CG code of Pakistan. The extant literature provides other measures of accounting quality such as value relevance, use of firm fundamental information etc. in both overall regulatory settings and also in a pre and post CG era as well pre and post revision era of the code of CG. Moreover, since the data for this study is not collected in a carefully controlled environment, it is almost impossible to control for all the effects that may affect the data. Macroeconomic effects are of particular concern. An important consideration in the data collection is the quality of the data available for Pakistan, which may not be comparable of a high quality as those of more advanced nations such as US, UK, Singapore, and Canada. Another important consideration could be the use of IFRS adoption and its effects on the CoC and EM both at pre and post adoption level. An important aspect of the study the investigation of the effective enforcement of the code of corporate governance and other regulatory and institutional environment changes since this institutional support has an important role in financial reporting quality. These changes are time invariant,
costly and are time consuming but in fact, these variables are changing over time as some countries have substantially renewed their enforcement systems to support the adoption of IFRS. Next, we acknowledge that many institutional factors link and interact with each other, adding noise to the models. It is difficult to fully control for the potential impact of these institutional factors and separate them from the direct effects of enforcement on earnings management of individual firms. We conduct some additional tests, such as canonical correlation analysis (results are consistent) in this regard, but these are only at the country-level. We suggest further research on identifying the aspects of enforcement that directly affect earnings management at the firm-level.
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APPENDIX-A

COMPONENTS OF CORPORATE GOVERNANCE INDEX

Sub- Index 1: The Board of Directors
  i.  Board Size (number of directors).
  ii. Board Composition (cut job description of all board members).
  iii. Chairman CEO Separation (if not any lead director).
  iv. Outside directors available to board (independent directors, nominee directors).
  v.  Board attendance (board meetings).
  vi. Outside director attendance in Meetings.
  vii. Existence of the position of CFO.
  viii. Directors representing minority shareholders.

Sub- Index 2: Ownership and Shareholdings
  i.  Presence of outside block holder (more than 10 percent shareholdings).
  ii.  Does the CEO own shares?
  iii. Directors’ ownership (block ownership) other than CEO and Chairman.
  iv.  Chairman or CEO is Block Holder (10 percent).
  v.  Concentration of ownership (Top five).
  vi.  Dividend Policy.
  vii. Staff benefits other than wages and salaries.

Sub-Index 3: Transparency, Disclosures, and Auditing
  i.  Does the company have full disclosure of corporate governance practices?
  ii.  Does the company disclose how much it paid to its auditor for consulting and other work?
  iii. Does the company disclose full biographies of its board members?
  iv.  Disclosure of internal audit committee.
  v.  Disclosure of board directors and executive staff members’ remuneration.
  vi.  Disclosure in the company’s annual report) of share ownership according to the requirement of Code.
  vii. Information of the executive management staff members’ ownership (employees’ ownership).
### APPENDIX-B

**Table A1**  
*Normality test Results*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Skewness</th>
<th>Kurtosis</th>
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<tbody>
<tr>
<td>JM</td>
<td>-0.047</td>
<td>3.13</td>
</tr>
<tr>
<td>MJM</td>
<td>-0.277</td>
<td>3.26</td>
</tr>
<tr>
<td>PMM</td>
<td>0.039</td>
<td>2.97</td>
</tr>
<tr>
<td>DRM</td>
<td>-0.339</td>
<td>2.80</td>
</tr>
<tr>
<td>CoC</td>
<td>0.398</td>
<td>3.04</td>
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<tr>
<td>CGI</td>
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<td>2.81</td>
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<td>LEV</td>
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<td>Size</td>
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<td>2.76</td>
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<tr>
<td>CE</td>
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<td>ROA</td>
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<tr>
<td>CFO</td>
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<td>3.05</td>
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<td>Beta</td>
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</tr>
<tr>
<td>GDPG</td>
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**Table A2**  
*Results of Autocorrelation*

<table>
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<tr>
<th>Models</th>
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<tr>
<td>Model-I</td>
<td>1.75</td>
</tr>
<tr>
<td>Model-II</td>
<td>1.71</td>
</tr>
<tr>
<td>Model-III</td>
<td>1.82</td>
</tr>
<tr>
<td>Model-IV</td>
<td>1.17</td>
</tr>
<tr>
<td>Model-V</td>
<td>1.25</td>
</tr>
<tr>
<td>Model-VI</td>
<td>1.20</td>
</tr>
<tr>
<td>Model-VII</td>
<td>1.19</td>
</tr>
<tr>
<td>Model-VIII</td>
<td>1.18</td>
</tr>
<tr>
<td>Model-IX</td>
<td>1.26</td>
</tr>
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</table>
Table 3A

Breush and Pagan test of Heteroscedasticity

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<tr>
<th>Models</th>
<th>Prob-Value</th>
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</thead>
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<td>0.0002</td>
</tr>
<tr>
<td>Model-II</td>
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</tr>
<tr>
<td>Model-III</td>
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</tr>
<tr>
<td>Model-IV</td>
<td>0.267</td>
</tr>
<tr>
<td>Model-V</td>
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</tr>
<tr>
<td>Model-VI</td>
<td>0.000</td>
</tr>
<tr>
<td>Model-VII</td>
<td>0.000</td>
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<tr>
<td>Model-VIII</td>
<td>0.000</td>
</tr>
<tr>
<td>Model-IX</td>
<td>0.000</td>
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Table A4

Multicollinearity tests results

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<th>Variables</th>
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<tr>
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<td>1.11</td>
<td>0.901358</td>
</tr>
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<td>1.06</td>
<td>0.94726</td>
</tr>
<tr>
<td>PMM</td>
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<td>0.90365</td>
</tr>
<tr>
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</tr>
<tr>
<td>CGI</td>
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<td>LEV</td>
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<td>0.72596</td>
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<tr>
<td>Size</td>
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<td>0.93913</td>
</tr>
<tr>
<td>CE</td>
<td>1.18</td>
<td>0.84597</td>
</tr>
<tr>
<td>ROA</td>
<td>1.80</td>
<td>0.55627</td>
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<td>Beta</td>
<td>1.17</td>
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</tr>
<tr>
<td>CFO</td>
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<td>0.69012</td>
</tr>
<tr>
<td>GDPG</td>
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<td>0.9816</td>
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</tbody>
</table>
## APPENDIX-C

**Table C1**
Results of OLS of EM with CG. EM is earnings management and is proxied by four different measurements. CG is CGI which is a governance index based on BoD, OS and Disclosures. In Panel A, EM is proxied by Jones Model. Panel B is of MJM. Panel C is for PMM and Panel D uses DRM. Size, CE, CFO, RoA, and Leverage are control variables.

### Panel-A  **Dependent Variable: Jones Model (EM)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.924</td>
<td>-3.08</td>
<td>0.002</td>
</tr>
<tr>
<td>CG</td>
<td>-0.006</td>
<td>-2.58</td>
<td>0.001**</td>
</tr>
<tr>
<td>LEV</td>
<td>0.331</td>
<td>3.19</td>
<td>0.001**</td>
</tr>
<tr>
<td>CE</td>
<td>-0.478</td>
<td>-7.50</td>
<td>0.000**</td>
</tr>
<tr>
<td>ROA</td>
<td>-1.045</td>
<td>-4.46</td>
<td>0.000**</td>
</tr>
<tr>
<td>CFO</td>
<td>0.985</td>
<td>5.54</td>
<td>0.000**</td>
</tr>
<tr>
<td>Size</td>
<td>0.225</td>
<td>6.99</td>
<td>0.000**</td>
</tr>
</tbody>
</table>

Adjusted R-Square: 0.0988  
F-Statistic: 27.28***

### Panel-B  **Dependent Variable: Modified Jones Model (EM)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.95872</td>
<td>2.95</td>
<td>0.003</td>
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<tr>
<td>CG</td>
<td>-0.0069</td>
<td>-2.53</td>
<td>0.011**</td>
</tr>
<tr>
<td>LEV</td>
<td>0.37246</td>
<td>3.32</td>
<td>0.001**</td>
</tr>
<tr>
<td>CE</td>
<td>0.1626</td>
<td>2.36</td>
<td>0.018**</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.6948</td>
<td>-2.74</td>
<td>0.006**</td>
</tr>
<tr>
<td>CFO</td>
<td>1.2245</td>
<td>6.37</td>
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<td>Size</td>
<td>-0.11776</td>
<td>-3.38</td>
<td>0.001**</td>
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Adjusted R-Square: 0.0611  
F-Statistic: 16.61***

### Panel-C  **Dependent Variable: Performance Matched Model (EM)**

<table>
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<th>p-value</th>
</tr>
</thead>
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<tr>
<td>Constant</td>
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<td>-0.006</td>
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<td>0.020*</td>
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<tr>
<td>LEV</td>
<td>0.257</td>
<td>2.31</td>
<td>0.021*</td>
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<tr>
<td>CE</td>
<td>0.489</td>
<td>7.15</td>
<td>0.000**</td>
</tr>
<tr>
<td>ROA</td>
<td>-1.248</td>
<td>-4.95</td>
<td>0.000**</td>
</tr>
<tr>
<td>CFO</td>
<td>0.972</td>
<td>5.09</td>
<td>0.000**</td>
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<td>Size</td>
<td>-0.252</td>
<td>-7.32</td>
<td>0.000**</td>
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</table>

Adjusted R-Square: 9.59%
Panel-D  
**Dependent Variable: Discretionary Revenue Model (EM)**

<table>
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<tr>
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<td>1.89</td>
<td>0.059</td>
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<td>CG</td>
<td>-0.008</td>
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<td>0.012**</td>
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<tr>
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<td>0.654</td>
<td>4.70</td>
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<td>-0.491</td>
<td>-5.78</td>
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<td>ROA</td>
<td>0.782</td>
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<td>1.00</td>
<td>0.318</td>
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<td>-0.47</td>
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Adjusted R-Square: 0.0348  
F-Statistic: 9.64***

Panel-E  
**Dependent Variable: Cost of Capital (WACC)**

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<th>p-value</th>
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<td>-0.023</td>
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<td>0.001**</td>
</tr>
<tr>
<td>Beta</td>
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<td>ROA</td>
<td>0.003</td>
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<tr>
<td>GDPG</td>
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<td>Size</td>
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Adjusted R-Square: 0.5792  
F-Statistic: 331.09***

Panel-F  
**Dependent Variable: Cost of Capital (WACC)**

<table>
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<tr>
<th>Variables</th>
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<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
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<td>EMJ</td>
<td>0.169</td>
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<tr>
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<tr>
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<td>-1.735</td>
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<tr>
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Adjusted R-Square: 0.6067  
F-Statistic: 318.14***

Panel-G  
**Dependent Variable: Cost of Capital (WACC)**

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255
Adjusted R-Square: 0.8450  
F-Statistic: 1122.11***

**Panel-H**  
**Dependent Variable: Cost of Capital (WACC)**

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Adjusted R-Square: 0.6067  
F-Statistic: 318.07***

**Panel-I**  
**Dependent Variable: Cost of Capital (WACC)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>p-value</th>
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</thead>
<tbody>
<tr>
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<td>EMS</td>
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<td>-3.06</td>
<td>0.002**</td>
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<tr>
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<td>1.92</td>
<td>0.056*</td>
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<td>ROA</td>
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<tr>
<td>CFO</td>
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<td>-3.03</td>
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<tr>
<td>Size</td>
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<td>-6.94</td>
<td>0.000**</td>
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</tbody>
</table>

Adjusted R-Square: 0.8455  
F-Statistic: 1126.14***

*p<0.05, **p<0.01 show the significant level at 5% and 1% respectively. *** shows that all panel/models are significant.