

# The Impact of Corporate Governance on Earning Management of Non-Financial Firms: Evidence from Pakistan

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## Abstract

*The main objective of the firm is to maximize the shareholder's wealth; to achieve this objective the management indulges in earnings management practices such as manipulation practices which reduce investors' confidence. Furthermore, a hypothetical dispute recommends that a better quality of financial reporting reduces the information asymmetry, by refining the corporate governance compliance, results in reducing earnings management practices. Thus the main aim of this study is to explore the impact of corporate governance on earnings management by using panel data sample of 257 non-financial firms listed in Pakistan stock exchange for the period of 2012 to 2019 through Fixed effect model along with control variables. The results disclose that the CG system of Pakistan negatively and significantly impacts the EM activities of the companies registered in Pakistan stock exchange. Hence, it concludes that the CG system is more effective to prevent the EM process. The entire results are seamless with prior research work that the effective CG scheme of the firms controls the EM and collapse of businesses.*

**Keywords:** Earnings Management, Corporate Governance, Corporate Governance Index.

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## Introduction

Corporate governance (CG) becomes a critical issue after failure of the largest business such as Xerox, Enron, Parmalat around the world. Such failure reduces the confidence of investors on quality of financial reporting. Further documented that management comprises in obscuring the actual economic performance of firms through manipulating earnings. Earnings are the starting point used by investors to take decision whether to invest in the stock of the firm's (Saona et al., 2017). Furthermore, earnings are one of the criteria used to measure the managers' performance and reward is paid. So, business runners manipulate the earnings using different techniques (Shayan-Nia et al., 2017). The manipulation of the financial reports is called earnings management (Zhang et al., 2018). Earnings manipulation practices are offered in literature by different terminology such as big bath and window dressing (Stolowy & Breton, 2004). Earnings management (EM) is defined as:

“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 & Wahlen, 1999).

EM practices exaggerate the reports of the company that results inequity in financial system. In conclusion, such practices cause businesses collapse (Habbash, 2010). These Collapses created an international attention on how to systematically implement improved CG practices to prevent fraud and questionable managing of earnings. The company was running a scheme from which it was able to receive huge amounts of illegal deposits. Since the company’s fraudulent activities emerged almost 20 years ago, more than twenty-five thousand investors lost their confidence on company financial reporting and still waiting for the recovery of the investments that they made in the company (Dar et al., 2011; Javeed & Yaqub, 2015). For the purpose to restore the confidence of investors on stock market numerous countries introduced changes by like Sarbanes-Oxley Act 2002 by US government, Malaysian government revisited the governance system and UK also introduced different changes. Furthermore, Pakistan launched corporate governance code 2002 and then CG code 2012 with amendments because of National Bank and Mehran Bank scandal etc... the reasons behind these scandals were due to mismanagement or more specifically, bad governance. In regards to such scandals governance system needs to improve the quality of financial information and restore the confidence of investors on stock market.

In Pakistan, to further improve the CG system like with the advancement in the local and international markets, the codes were revised and re-released in 2012 and further update in 2017. Strong CG system helps in improvement the disclosure of firm fundamentals information. Furthermore, a strong governance system and providing a complete firms financial information help management to decrease the asymmetry information among inside and outside investors, result in reducing EM practices around the world. Based on the above discussion, the purpose of this study is to explore the impact of CG on firm’s EM with evidence from non-financial firms operating in Pakistan.

## Literature Review

CG and EM get a serious attention from academician and regulators in recent years because of large numbers of corporate failure around the Globe (Uadiale, 2012). The major reason behind such corporate failure is manipulation in accounting information. Moreover, investors were against the weak CG system. In another study on Turkish companies strong CG practices showed improvement in mala fide EM practices. That further improved the trust level of shareholders on financial system (Turegun&Kaya, 2016). Furthermore, Lakhal (2015) check 170 firms in France and observed improvement in CG practices in reducing EM in the firms.

Previous accounting research has studied the association among different CG aspects and EM (Peasnell et al., 2005). In addition, Bradbury, Makand Tan (2006) examined the relationship between the board size and earnings management and assert that earnings management has a negative relationship with the size of the board, that is, a large size of the board controls the opportunistic behavior of the management. Even though, board size has gained great attention in the literature and evidence has been put forward for the importance of board size in the reduction of earnings management. However, ignoring other board characteristics as well as audit committee characteristics, external audit quality and ownership structure gives serious concern as these factors are equally important in determining the level of earnings management.

AmerandAbdelkarim (2011) investigate how board independence effect the earnings management practice using sample of 22 listed companies. The result reveal that board independence was positively associated with earnings manipulation.

Furthermore, the Audit committee (AC) size is another important factors for observing EM. to Xie et al. (2003) documented that AC size is three to four normally, any size that is too small or too large can affect the director performance and monitoring effectiveness (Vafeas, 2005). Previous studies proposed that companies with large AC are more effective in control the management (Alzoubi, 2016). The previous studies which were conducted to examine the association between AC size and accruals EM revealed negative results (Fodio et al., 2013; Juhmani, 2017; Mishra & Malhotra, 2016). The implication of this result is that larger ACs are better at reducing EM as larger ACs have more resources and capabilities and therefore, are better in performing the required duties.

Further aspect of research explored the relationship among concentrated ownership, CG and EM, the findings illustrate that a company where executives, their family or relatives hold large ownership engage in EM. Their findings also disclose no effect of duality of CEO, audit firm size, board size and impact of ownership meditations on EM (Kamran & Shah, 2014). Others studies like Klien (2002) inspected the associations among the function of the board and EM. And reported that when audit committee work independently the EM will be decreases and increases the EM when CEO itself member of the board. These consequences propose that the board would be more effective in controlling accounting processes if it is independent from the CEO. A research done by Xie et al. (2003) and recognized the reality that the function of the board of directors plays a crucial role in avoiding the decision makers from earnings manipulation.

Institutional investors are often regarded as sophisticated investors who are better able to acquire and process information than individual investors (Bartovet et al., 2000). Institutional ownership (INTO) means that a portion of a firm equity is in the hand of financial institutions and non-financial corporations, which represent both private and public owned institutions. The previous studies which were conducted to analyze the association between INTO and accruals EM revealed negative results (Aygün et al., 2014; Eze, 2017; Memis & Cetenak, 2012). The results revealed that firms with greater level of INTO have lower EM. This result supports efficient monitoring hypothesis that proposes that large number of institutional investors bring more capital and have abilities to monitor managers than a single individual investor. Other study like KlaiandOmri (2011) explore the correlation among CG and quality of financial reporting in Tunisia by taking Ten years' data of 22 non-financial firms. Results discloses that state and institutional ownership has positive relationship with earnings quality and further documented that public and institutional ownership are effective to restrict the opportunistic performance of managers which is a signal of greater earnings quality.

In Pakistan the analysis about CG and EM relationship needs to be explore. However, a few investigators have attempted to examine this relationship, but they report different outcomes. For instance, Kamran and Shah (2014) explore the consequences of CG and proprietorship concentration on EM. Their outcomes reveal that EM practices improved in that company where board of directors and their family or relatives hold large portion of proprietorship. Further their results show that duality of CEO, Audit size, board size and impact of proprietorship concentrations have no effect on EM. One more study explore the association between CG and EM of listed firm in Pakistan stock exchange. The outcomes of the study conclude that CG and EM have a positive relationship with each other. The author further explains that the reason behind the positive relationship between CG and EM may be due to provisional stage of the 2002 CG code (Shah et al., 2009).

Furthermore, in Pakistan the revised Code of corporate governance 2012 introduced key changes to the governance of firms, particularly in the areas of independent director requirements, board's statements, chief executive officer (CEO) and chief financial officer (CFO) certifications on financial statements, internal and external auditor role and functions and reporting and compliance of the Code. Therefore, research in this particular subject creates a prospective area for further investigation. Thus the aim of this study is to investigate the impact of CG on firms EM with evidence from non-financial firms operating in Pakistan.

## Data and Methodology

The aim of this study is to explore the impact of CG on firms EM evidence from non-financial firms in Pakistan. The present study population is all non-financial firms listed on Pakistan stock exchange. The availability of Annual reports of large number of companies is a big issue, therefore the sample size of this study is restricted to only 257 non-financial registered firms on Pakistan stock exchange. The period of the study is from 2012 to 2019. Panel and secondary data are used and download from SBP and websites of the companies.

Most of the studies used Abnormal Accruals as a proxy for EM and considered as dependent variable. Previous studies show that the existing discretionary accrual measures are miss specified when applied to corporation having extreme performance. For instance, Beslic, Jaksic and Andric (2015) explore the credibility influence of the current EM models and they reported that Jones Model, Modified Jones Model and Kasznik Model don't have satisfactory illustrative influence, and also determine that in Jones Model discretionary accruals and return on assets are absolutely related with each other. Thus, performance matched discretionary accrual (PMDA) model is developed to remove the misspecification problem of previous models (Kothari et al., 2005).

Following is the PMDA model.

$$TA_{it} = \beta_0(1/A_{t-1}) + \beta_1(\Delta Rev_{it} - \Delta ARec_{it})/A_{t-1} + \beta_2(PPE_{it}/A_{t-1}) + \beta_3(ROA_{t-1}) + \varepsilon_{it}$$

Where:

TA,  $A_{t-1}$ ,  $\Delta Rev$ ,  $\Delta ARec$ , PPE,  $ROA_{t-1}$  and  $\varepsilon$  represent Total accruals, total assets lagged value, change in revenue, change in account receivable, property, plant and equipment, return on assets and error term respectively. Furthermore,  $i$  indicate firm and  $t$  indicate time, thus for measurement of abnormal accruals the above model is used in this study.

The other interest variable is CG. A strong CG mechanism is required to control the discretionary power of firm's management, because most of studies reported that a weak CG provide opportunity for management of the firms to spoil in EM practices. This CGI is the combination of 70 broad set of CG provisions containing Pakistani CG code 2002 and 2012. Further these 70 set of CG Provisions divided in to 5 sub-set i.e., Board of Directors, Committees and Auditing, Shareholders Rights, Transparency and disclosure and Internal Control, External Auditor & Risk Management. The binary code procedure is used for constructing the CGI and data is taken from firm's annual report, according to this method 1 is awarded to a CG provision if it has been published in annual report of the firms and otherwise 0.

## Control Variables

In addition to the main variables, previous works provide evidence that recognizes the variables which affect the relationship of EM and CG, such as firm size, Leverage, GDP Growth, Firm age, and firm performance. For example, large firm size affects the board of director's structure due to diversification in firms. Furthermore, large firms have complex operational system which provide opportunity to management to manipulate their earnings. Size of the firm normally measure through log of total assets (Alzoubi, 2016). The second control variable used in this study is leverage, leverage represent capital structure of the firm which is measured as ratio of total debt to total assets (Barghathi, 2014; Xiaoqi, 2013). The other important variable used as a control variable in this study is GDP growth rate. The significant objective of every country has to improve the GDP growth rate and for this purpose each section of the country should need to work efficiently. Furthermore, Rad (2014) explores that commercial sector like corporation and enterprises are significant sector that contribute efficiently to GDP rate. Additional important control variable is firm performance. The management capability is measure through

performance of the firms, that how efficiently they utilize organization resources. Previous literature i.e., Almasarwah, (2015) and Barghathi, (2014) reported that ROA is used as a proxy for firms' performance. The last control variable used in this study is age. All these control variables effect the EM practices of management empirically as well as theoretically.

## Results and Discussion

The result of descriptive statistical test for the sample companies are given in table 1 which describes Mean, Standard deviation, Minimum, maximum, skewness and kurtosis of all variables used in this study.

Table No: 1

Variables,	Mean	St.Dev	Min	Max	Skewness	Kurtosis
AEM	-0.012	0.131	-0.5	0.551	0.862	4.362
CGI	0.017	0.982	-3.46	1.972	-0.53	2.838
Leverage	3.438	0.453	1.508	4.585	0.704	4.314
Size	6.758	0.741	4.115	8.823	0.09	2.932
GDP Growth	4.916	0.763	3.507	6.836	-0.321	2.394
age	35.803	15.011	2	86	0.444	2.645
ROA	1.374	1.05	-4.319	3.835	-0.962	4.722

Descriptive statistics are used to explore the data nature (Xiaoqi, 2013). Performance match model is used to calculate EM. The mean of EM is -.012 and standard deviation is .131, which is not considerably change from the mean. In addition, the minimum value is -.50 and maximum value .55. Therefore, this descriptive value of EM demonstrate that all the firms listed in Pakistan stock exchange follow the standard procedure of accounting principle and the management of firms can not involve in earnings management activities. Furthermore, the minimum value of CG is -3.46 and maximum value is 1.972. The highest value 1.97 illustrate that the CG application is improved after the implementation of corporate governance code. The mean and standard deviation values are very close to each other; therefore, the implementation mechanisms of CG are same usually. Furthermore, descriptive of leverage illustrate that firms taken for the study depends on debt financing. In addition, the result show Size of the sample firms are not too different. Furthermore, the GDP growth rate descriptive value shows a positive indicator of the market. In addition, ROA the mean value of ROA is 1.374 and Standard deviation is 1.05, maximum and minimum value is -4.319 and 3.835 respectively, which demonstrate that ROA perform positively for given sample of firms.

## Correlation Result

Table.2: Correlation Results

	AEM	CGI	Leverage	Size	GDP Growth	Age	ROA
AEM	1.0000						
CGI	-0.0085	1.0000					
Leverage	-0.0273	-0.0575	1.0000				
Size	0.1998	0.1274	-0.0845	1.0000			
GDP Growth	0.0922	0.2084	-0.0287	0.0893	1.0000		
age	0.0587	0.0500	-0.0616	-0.0025	0.1323	1.000	
ROA	0.0456	0.0743	-0.1091	0.0933	-0.0675	-0.0264	1.000

Table 2 shows the correlation coefficients between dependent variable i.e., earnings management with independent variables i.e., CG and control variables such as leverage, size, GDP growth rate, age and ROA. EM is negatively associated with CG and leverage. These results consistent with the study done by Tanjung

et al., (2015) and Turegun& Kay(2016). The negative relationship between EM and CG illustrate that efficient CG mechanism implementation reduce the earnings manipulation practices. However, the association of Size, GDP growth, age and ROA is positive with EM this reveals that the large firms size is extremely involve in EM activities.

**Hausman Test Result**

Table. 3: Results of Model Selection

Models	Test Value	P-Value
F-Test Results		
F- Value	12.15	0.00
Hausman Test $\chi^2(6) = (b-B)'[(V_b-V_B)^{-1}](b-B)$	13.75	0.03

Table 3 shows the Hausman test result, prior to explain the empirical result the study applied the hausman test to select the model among fixed and random effect model. The finding of hausman test illustrate that Chi-sq statistics value is significant at 5% level, which shows that Fixed effect analysis is suitable for given model.

**Results of Panel Data Analysis**

Table. 4: Fixed Effect Model (FEM) results  
Dependent Variable (AEM)

Variables	Coefficient	t-Value	P-value
Constant	-0.5426556	-7.07	0.000
CGI	-0.0113435	-3.18	0.002
Leverage	0.0163704	1.50	0.135
Size	0.0575764	6.45	0.000
GDPGrowth	0.0154088	3.69	0.000
age	0.0001361	0.29	0.774
ROA	0.0012251	3.55	0.000

Table above present the result of FEM for exploring the effect of CG on firms EM for the period 2012 to 2019. The result depict that CG is negatively associated with EM for given sample firms listed in Pakistan stock exchange. These finding consistent with previous studies like Ilyas et al., (2017) and Tanjungetal., (2015). Additionally, Paiva& Lourenco (2013) and Ishak et al. (2011) conclude that businesses owned by family members are less engaged in EM activities. Hence, conclude that in Pakistan mostly businesses are retained by big families and they cannot spoil in EM activities because of protected their family status. Furthermore, ROA, leverage, GDP growth, age and size are used as control variables. The result shows that most of the control variable have positive association with EM like leverage coefficient is 0.016, size is 0.05, GDP growth is 0.015, age is .000 and ROA is 0.001 and all are in expected according to theory. Moreover, when companies sustain larger levels of liability are more aggressively exercised earnings manipulation. These results depict that companies involve in more accruals based EM when increases their liability, which means that companies exaggerate the financial information’s to achieve the prescribed agreements. Furthermore, performance of the firm in term of ROA, GDP growth are significantly associated with EM. Managers see themselves encouraged to manipulate the statements to achieve this estimated performance evaluated through ROA(Mellado, C.,& Saona. P., 2019).

Furthermore, the study documented that there is positive and significant association among firm size and EM activities. In other words, that large size of companies mostly involves in manipulation their financial information because identifying EM in financial information of large size firms is probable to be difficult

(Lobo & Zhou, 2006). In conclusion, that according to the adjusted R-square of the model which is 10.26% and the F-statistics value shows that the model is significant at 5% level (p-value < 0.05).

## Conclusion

This research work explores the association among CG and EM of 257 non-financial firms listed in Pakistan stock exchange. The proxy is used for corporate governance is CGI the combination of 70 broad set of CG provisions containing Pakistani CG code 2002 and 2012 adopted from Khan M. Yar (2016) and earnings management is calculated from performance match model developed by Kothari et al., (2005). In addition, numerous control variables are used in this study. Panel data techniques are used for data analysis based on diagnostic test decide that FEM is appropriate. The results disclose that the CG system of Pakistan negatively and significantly effects the practices of earnings manipulation of registered firms in Pakistan stock exchange. Hence, conclude that the corporate governance structure is effectual to restrain the EM practice.

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