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Earning Management and Cost of Capital: Empirical Evidence of selected non-financial firms in Pakistan.

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ABSTRACT:
Earnings management hides the organisations underlying performance from shareholders and other stakeholders, making earnings a less reliable indicator of performance. The purpose of this study is to evaluate the influence of earning management on the cost of capital of 139 non-financial sector companies traded on the (PSX) from 2008 to 2019. Accruals are utilised as an earning management proxy. Discretionary (DAC) and non-discretionary (NDAC) accruals are used to calculate earning management. Data estimation technique in Stata using GMM assumptions, employing Arellano-Bond dynamic panel (GMM). Empirical evidence revealed a significant and inverse association between DAC and COC, the higher the discretionary accruals, the lower the company COC. Furthermore, NDAC also influences the capital cost of manufacturing enterprises in Pakistan. Managers can exploit the NDAC to inflate the earnings.

Keywords: Discretionary accruals, Non-Discretionary accruals, Earning Management, Cost of Capital, Pakistan Stock Exchange.

1. Introduction

Earnings management is a technique for influencing a company's actual results. Although precise financial data is relevant for investment decisions, business managers are more concerned with maximizing management profits. One of the motives for management to engage in unethical conduct could be to raise their financial efficiency, It can only happen in the immediate period since the market penalize manipulative corporations in the long run and reduces' corporate performance is valued. As per Healy and Wahlen (1999),

"Earnings management occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying the economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers".
According to this definition, earning management comprises the intentional manipulation of accounting data, meaning that senior management has a strong desire to succeed. In the same way, earning management hides the organisations underlying performance from shareholders and other stakeholders, making earnings a less reliable indicator of performance. In comparison to low-quality organisations, companies that delivered high-quality information had lower-earning management (Mezerji et al., 2013). Globally, GAAP phased out in favour of domestic IFRS. Since, in many nations, the practice of earning management has fallen dramatically (Situmeang et al., 2018), however, this may not be the reality in Pakistan. Baig and Khan (2016) look at the consequence of International Financial Reporting Standards (IFRS) on earning management in Pakistan's publicly traded enterprises. The data show that earning management in Pakistan has not changed considerably because of two factors: 1) Pakistan has used an IAS/IFRS-based system from its inception. 2) Because of a reason 1) the data aspects are equivalent for measuring the efficiency of IFRS, although between 2001 and 2009, the implementation of IFRS led to fewer earnings management.

Because of a surge in accounting fraud in the region, studying the management of earnings in Pakistan would be extremely beneficial. Asian economies are developing and attracting foreigners to invest in this environment. Specially to sustain an influx of foreign investment, investors should feel free from exploitation and fraud. Indeed to take quick action on investment, the investors rely exclusively on publicly available financial information; therefore, authorities are obliged to protect these stakeholders' interests. Further, Investor protection is predicted to deteriorate when strong protection reduces executives' capacity to receive personal influence, lowering their motivations to conceal company performance. (Leuz et al., 2003).

Earning management can be accomplished by manipulating either discretionary accruals (DAC) or real activities. Accrual-earning management is a primary accounting method employed by most businesses. We employ accruals as a substitute for earning management in this study. The gap between expected cash flows from corporate operations and profits recorded in the income statements is known as non-discretionary and discretionary accruals (Yuniarsih and Indrawati, 2019). To extract discretionary accruals, total accruals (TA) are classified as discretionary and non-discretionary accruals. Managers can have an impact by reporting results that are closer to their desired earnings to get the most reward from higher authorities (Dechow et al., 1995) despite this, NDAC has no jurisdiction over managers when it comes to postponing or cancelling business operations (Mashayekhi et al., 2006). Researchers have created and analysed several models for detecting unethical earning management practices. To calculate discretionary accruals, we use the modified Jones model proposed by Dechow et al. (1995), in fact this model is famous for detecting earning

management. A similar strategy was employed by (Subramanyam, 1996); (Patro and Kanagaraj, 2016); (Chen, 2010); (Dechow et al., 1995).

It is critical to comprehend the relationship between earnings management and the cost of capital. One of the many motivations for companies to manage profitability is the cost of capital. Managers use capital costs to plan capital expenses, identify the appropriate capital structure and manage operating capital. Companies use numerous techniques to minimise capital costs while seeking to increase the expected rate of return, which is perceived as a decrease in the value of the economic entity, if the expected return is well below capital cost (Patro and Kanagaraj, 2016). The relationship between debt costs (interest costs) and equity costs (dividend pay-out) is unique; the impact of equity on earnings management is lower. Strobl (2013) reveals that low-cost company managers are more prone to manipulate their results in soaring stock markets. Moreover, Investors believe only a few companies will be encouraged to manipulate their financial reports in favourable circumstances and the high profitability of the majority of companies. Hence, their reported earnings strongly affect the equity value of a company.

However, it is hardly surprising that practitioners and academics alike have offered a diverse set of suggestions to assist businesses in lowering this cost. Several of the recommendations aim to improve the quality of accounting data provided to investors. For example, (Levitt, 1998) the former chairman of the Securities and Exchange Commission, claims that high-quality accounting standards foster investor trust, lowering capital costs. Likewise, numerous empirical data indicates that enterprises with more informative earnings announcements have lower capital costs (Beyer et al., 2010). Additionally, (Easley and O'hara, 2004) emphasises the importance of accounting precision in lowering capital costs by reducing the information risk that unsophisticated investors suffer due to information asymmetry among investors.
This study intends to see whether there is a link between earnings management and capital cost of companies quoted on (PSX) to provide a platform for policy-makers to focus on earning management practices of Pakistani listed enterprises. Because the data used in this study is a panel in nature, we chose 139 firms for the period 2008-2019 and employed a panned data approach.

The document reminds you: The second segment reviews past research and develops testable predictions about the relationship between earning management and capital costs. In section three, the Methodology is described, and in section four, the hypotheses are evaluated and the data analysis results are given. Part five of the study concludes with a discussion of the findings' ramifications.

2. Literature review and hypothesis development

This section will include historical studies from the previous year and fresh hypotheses based on current scientific literature. Researching corporate earnings management is among the most complicated initiatives for academics since its typically concealed.
Distinguishing between discretionary and non-discretionary accruals aids in determining better earning management. Healy (1985) was the first to discover earning management by

making discretionary accruals, with the presumption that discretionary accruals must be subject to management discretion, and when profit is unregulated, non-discretionary accruals are used. According to the literature, DAC could be utilised as a management tool. Dechow et al. (1995) discovered that when DAC rises, the possibility for earning management rises as well. The financial status of the company so improves, and its cost of capital decreases.
According to agency theory, managers might not always act in the best interests of their owners, potentially leading to conflicts of interest and information asymmetry, as well as the appearance of agency costs (Jensen and Meckling, 1976). Corporate disclosures, including financial reports, are critical in alleviating information asymmetry and avoiding agency conflict between principals and the agents in this context. Earnings are, likewise, stronger predictors of future cashflows than present operating cashflows because accruals relocate the recognised operational cashflow across time to alleviate mismatching and timing complexities involved in cashflows. (Dechow and Dichev, 2002); (Ghosh and Moon, 2010).
Conforming with signalling theory, managers are encouraged to disclose more information to the stock markets in order to obtain investors' confidence, strengthen the earning potential of their securities, and reduce their capital cost (Healy and Palepu, 2001); (Mahadeo et al., 2011). According to Diamond (1991) and Vurro and Perrini (2011) financial information transparency alleviates information asymmetry and lowers a firm's cost of capital. On the other hand, opportunistic managers are more inclined to interact with earning management to emphasize valuable information about the firm's long-term potential and drive down the cost of capital by exaggerating earnings around the time of the meeting (Demirtas and Cornaggia, 2013)

Prior studies on the interaction between earning management and cost of capital in context of developed and developing market provide divergent findings. Accrual quality and both equity and debt costs in Australia are examined by (Gray et al., 2009). He discovered that Australian companies had a favourable influence on debt and equity because of innate accruals but not by discretionary accruals. According to Francis et al. (2005), the capital cost in US companies is connected to both innate and discretionary accruals. Both research conclusions vary because Australian companies depend more on private finance than public finance relative to US companies. Private lenders have more accessibility to the company's overall financial information than public lenders. Hence, the level of information asymmetry around debt holder is more likely to be lower in Australian compared to US. This improves the accuracy and decreases the asymmetry of private lenders' access to information. Therefore, the information risk of managers related to discretionary reporting can be avoided and their impact on debt cost may be mitigated (Gray et al., 2009).

Similarly, Aldamen and Duncan (2013) evaluated the link between innate and discretionary accruals and corporate debt pricing in Australia. Findings demonstrate that higher innate accruals lift loan cost, adhering to earlier findings (Francis et al., 2005); (Gray et al., 2009) and reveal that higher accruals of discretion lower debt costs contrast with preceding evidence (Francis et al., 2005), and no affiliation (Gray et al., 2009). Discretionary accruals signal performance information and thus, reduce information risk and offsets the increased cost of debt. In addition to this, Oluoch et al. (2017) carried a test similar to (Gray et al.,

2009); (Francis et al., 2005), but firms in Kenya. The results of a study reported that the innate factor of accrual quality dominated the discretionary component of accrual quality, so that, accrual quality is determined by the innate attributes of the business climate in Kenya. This point to a stringent regulatory environment for Kenya's listed companies.

In contrary to Gray et al. (2009), (Francis et al., 2005), Candra and Ekawati (2016) exhibited that the cost of capital (equity and debt) of manufacturing companies in Indonesia is not influenced by innate (non-discretionary accruals), but only affected by discretionary accruals. According to the findings of this study, Indonesian investors may be unaware of the practice of earning management, which affects accrual quality in reported earnings. Another study that was conducted by Patro and Kanagaraj (2016) examined the connection between capital cost and earning management in Indian firms. Earning management was measure through DAC and NDAC. The findings show that DAC significantly affects the Cost of Capital, while NDAC has little impact. This could interpret that company with poor performance has financial incentives for earning management. To prevent under-estimating their stock, management tries to boost profits and hence minimize the capital cost.

Through discretionary accruals, investors seem to be unaware of earning management (Subramanyam, 1996). Ilyas et al. (2019) evaluated the impact of earning management on the cost of capital in 144 Pakistan stock exchange-listed enterprises over a period (2006-2016). The findings demonstrate that companies involved in earning management have a high capital cost because manipulated information undermines the public trust and makes them seek a greater rate of return. Increasingly firm size and ROA have a significant and negative effect on capital costs. Ghosh and Olsen (2009) voiced the same sentiment, stating that managers tend more to exercise discretion to eliminate pay disparities. Earnings forecasting errors can cause information risk, forcing investors to seek higher returns and, thus, boost the stock's cost.

Cyril et al. (2019) also studied the opportunistic behaviour of managers of Nigerian-quoted enterprises who have the opportunity to manipulate results and thus stock values. According to the findings, a misalignment of incentives between the manager and the shareholder can also produce distortions in financial reports; this may motivate managers to take advantage of accrual accounting's flexibility to make timely adjustments to results. Moreover, Khalid et al. (2015) demonstrate that discretionary accrual is positive, predicting a positive market valuation of discretionary accruals, which does not involve opportunistic earning management when the market is effective.

Strobl (2013) says that earnings manipulation diminishes the corporate value and changes in the level of economic cycle manipulation systematically affect a company's cash flow. In this line, Ghazali et al. (2015) analyse the link between opportunistic behaviour (free cash flow and profitability) toward earning management. He found a positive relationship between profitability, which means that if the company's present profit were large, the management can be motivated to manipulate their earnings to take advantage of the favourably reported earnings. Meanwhile a negative relation between free cash flow and earning management, when cash flow is poor, managers will use earning management to keep the company and going concern afloat.

Additionally, Prevost et al. (2008) conducted an additional study on earning management and the cost of debt, finding evidence that earning management (abnormal discretionary accruals) escalate the managerial debt cost. Subramanyam (1996) shows that share price fluctuations affect discretionary accruals. He contends that managers employ discretion to increase earnings' capacity to reflect actual values, resulting in the prising of discretionary accruals. Demirkan et al. (2012)Demirkan, Radhakrishnan (24) show that multi-segment companies have higher capital costs for equal discretionary accruals of quality than the single segment firm. Bertomeu (2013) shows that cost of capital will increase with more earning management; this relationship depends on the level of managerial ownership and enforcement that are important testable detriments. Maranjory et al. (2013) present an empirical investigation that how firms manage earnings via DAC and NDAC. According to the findings, in comparison to low variation enterprises, high variation firms used discretionary accruals. Handoko and Ahmar (2016) demonstrate that in the presence of earning management, accrual-earning management has a stronger impact on ROA and market performance.

It aimed to envisage whether earning management incorporates Pakistani firms to reduce capital costs. If a correlation is found, more research will be conducted to determine whether the DAC or NDAC has anything to do with the sort of accruals, for the companies listed on (PSX), we test the following hypotheses:

H_1= Discretionary accruals significantly affect the weighted average cost of capital (WACC).

H_2=Non-discretionary accruals significantly affect the weighted average cost of capital (WACC).

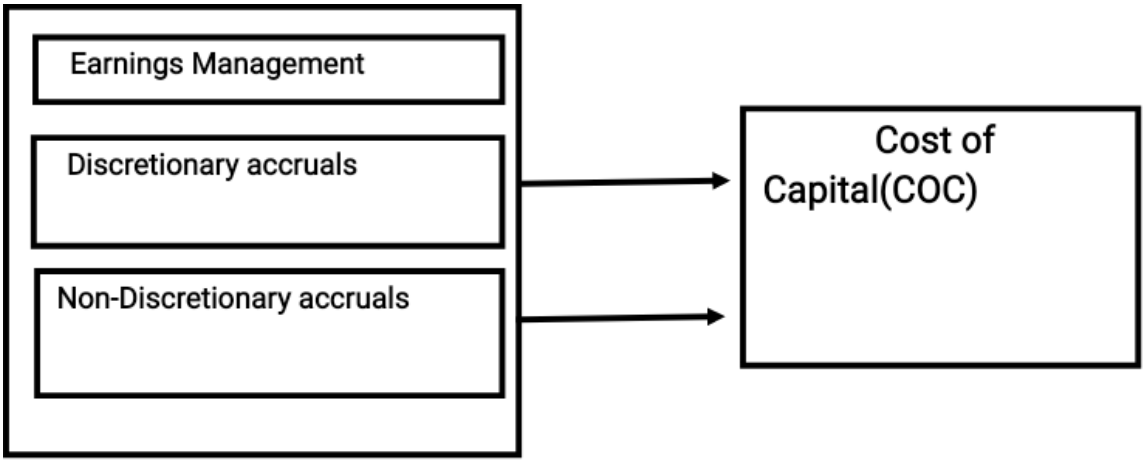

Figure *1. Theoretical Framework*

3. Research Methodology

3.1. Sample selection

The motive of this study is to conduct an empirical analysis of the relationship between earnings management and capital costs. To cover the period 2008-2019, the study employs a data set of 139 companies that were recognised and listed on the Pakistan Stock market. After imposing data and sample limitations, the initial sample frame of 200 listed enterprises was

reduced to 139 enterprises. Firms from Banking, insurance and financial sectors are excluded. Annual reports and database information is used to compile the data.

3.2. Accruals as a Means of Earning Management

Accounting earnings consists of cash flow and accrual, and while managers have some leeway with accruals, certain accruals are the consequence of adapting to changes in the industry and operating environment. For this reason, we split accruals into two categories: 1) discretionary accruals (DA) and 2) non-discretionary accruals (NDAC). These are the techniques used by the managers to manipulate the earnings. The Jones (1991) and Modified Jones model seems to be the most effective methods of earnings management detection.

A similar approach was used by (Subramanyam, 1996); (Patro and Kanagaraj, 2016); CHEN, 2010; and (Dechow et al., 1995). According to Jones (1991) property, plant and equipment (Francis et al.) are NDA detective elements and sales revenue may serve as a proxy for the NDAC event. Dechow et al. (1995) suggested the revised Jones (1991) technique by addressing essential inadequacies. He identified that managers can use credit sales to manage earnings. Therefore, we considered a (Dechow et al., 1995) that is used to deduct the variance of receivables (REC).

3.2.1. *Model of Discretionary Accruals*

Total accruals (TA) are calculated according to prior earning management studies (Healy, 1985) and (Jones, 1991): $TACC_{i,t} = \Delta CA_{i,t} - \Delta CL_{i,t} - \Delta Cash_{i,t} + \Delta STDEBT_{i,t} - DEPTN_{i,t}$ (1)

Where:

$\Delta CA_{i,t}$ = Current assets change over period t;

$\Delta CL_{i,t}$ = Current liabilities change over period t;

$\Delta Cash_{i,t}$= Cash and cash equivalent change over the period t;

$\Delta STDEBT_{i,t}$ = Changes in long-term and short-term debt maturities;

$DEPTN_{i,t}$ = Expenses for depreciation and amortisation over the period t;

To derive DAC and NDAC from TA, the modified Jones model (Dechow et al., 1995) is employed. This model indicates that revenues (Prevost et al.) changes can be offset by changes in receivables (REC). The following formula used to calculate the NDA component:

$$NDAC_{i,t} = \alpha_0 \left(\frac{1}{A_{i.t-1}}\right) + \alpha_1 \left(\frac{\Delta REV_{i,t-1} - \Delta REC_{i,t-1}}{A_{i,t-1}}\right) + a_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) \quad (2)$$

Where:

$\Delta REV_{i,t-1}$ = Revenue change over period t divided by total assets in year t-1;

$\Delta REC_{i,t-1}$ = Receivable change over period t divided by total assets in year t-1;

$PPE_{i,t}$ = Property, plant and equipment in year t divided by total assets in year t-1;

The Delta value is a change in variables during one year. (α) Represents the estimated coefficients used to compute the NDAC component. To estimate these coefficients, the following formula is used:

$$\frac{TA_{i.t}}{A_{i,t-1}} = \alpha_0 \left(\frac{1}{A_{i.t-1}}\right) + \alpha_1 \left(\frac{\Delta REV_{i,t-1} - \Delta REC_{i,t-1}}{A_{i,t-1}}\right) + a_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}}\right) + e_{i,t}$$

Where:

TA = Total accruals t / total assets t-1

Finally, the difference between both TA and NDAC yields DAC:

$$DAC_{i,t} = \frac{TA_{i,t}}{A_{i,t-1}} - NDAC_{i,t} \quad (3)$$

3.3. Cost of Capital

We calculate WACC as follow:

$$WACC = \left(\frac{L_t}{L_t} - E_t\right) * K_d(1-t) + \left(\frac{E_t}{L_t} + E_t\right) * K_e$$

Where:

L_t : Total interest expense overtime-period *t;*

E_t : Total shareholder's equity overtime-period *t;*

K_d : Interest rate calculated overtime-period *t;*

K_e is determined following the Gordon model:

$$K_e = \left[\frac{D_0(1+g)}{P_0}\right] + g$$

Where:

D_0: The prior year's dividend earned per share;

P_0: share value at the start of the period t;

g: Earnings growth rate. `

3.4. Control variable:

When it comes to the cost of capital and earning management, other factors that influence capital cost must consider. **ROA** – Return on the asset; net income to total asset ratio, **SIZE** – the size of firm; the natural logarithm of the total asset value, **GROWTH** – Revenue Growth; (revenue $_{t}$ – revenue $_{t-1}$)/ revenue$_{-1}$.

3.5. Regression Models

The regression model used for hypothesis testing conducted on a whole sample in the following structures:

$$WACC_{i,t} = \beta_0 + \beta_1 DAC_{i,t} + \beta_2 ROA_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 GROWTH_{i,t} + \varepsilon_{i,t} \quad (4)$$

$$WACC_{i,t} = \beta_0 + \beta_1 NDAC_{i,t} + \beta_2 ROA_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 GROWTH_{i,t} + \varepsilon_{i,t} \quad (5)$$

Where

The subscripts "I" and "t" denote firm and year; WACC weighted cost of capital; DAC – Discretionary accruals, NDAC – Non-discretionary accruals, ROA – return on the asset; net income to total asset ratio, SIZE – Firm size; the natural logarithm of the total asset value, GROWTH – revenue growth.

4. Results and Discussions

4.1. Descriptive Statistics

Table 1 provides statistical descriptions, covering all the variables used in the study. For the sake of brevity, we ignore a complete examination of selected factors. Depending on respective means, all of the variables in the table display a wide range of variables. The

present sample is designed to yield enough variance, limiting the potential to choose a biased sample. The mean result for DAC, NDAC and WACC are represented by -0.628, 0.591 and 0.089, respectively. When the value of accrual is zero, it means that the earnings are managed using an income-smoothing pattern. The positive number implies that earnings management is carried out following an income-increasing pattern. The negative number implies that earning management is carried out by an income decreasing pattern (Sulistyanto, 2008).

Table 1. ***Descriptive Statistics***

Variable	Mean	Median	Max	Min	SD
Weighted Average Cost of Capital	0.0890	0.0650	1.3370	2.4950	0.1390
Discretionary accruals	0.6280	-0.5720	3.9940	35.6610	1.1340
Non-Discretionary accruals	0.5910	0.5510	12.3990	-4.2030	0.7000
Return on Assets	0.0470	0.0380	1.7510	-3.2130	0.1840
Firm Size	22.2770	22.2520	27.2250	16.2700	1.7170
Growth Rate	0.6110	0.0570	323.1720	-1.0000	11.0400
Observations	1668	1668	1668	1668	1668

Note: N= 139 non-financial sector firms were selected and 1668 firms year observations.

4.2. Correlation Analysis

Table 2 illustrates Pearson Correlations between variables from 2008 to 2019. As expected, the data reveal that DAC is inversely associated with WACC. The correlations between the explanatory variables are not particularly strong. (The strongest correlation is -0.667 around NDAC and DAC). If a coefficient of correlation surpasses a threshold value of 0.700, there is multi-collinearity. The results reveal that none of the explanatory factor correlations reaches the same level, implying that multi-collinearity does not occur in our study.

Table 2. ***Correlation Matrix***

Variables	1	2	3	4	5
Weighted Average Cost of Capital (1)	1				
Discretionary accruals (2)	-0.0200	1			
Non-Discretionary accruals (3)	0.0240	-0.6670**	1		
Return on Assets (4)	0.2110***	0.0540**	0.0260	1	

Firm Size (5)	0.1030***	0.1260**	-0.0990*	0.1630**	1
Growth Rate (6)	-0.0170	-0.0160	0.0160	-0.0230	0.0260

Note: The statistical significance of a result is shown by the symbols ***, **, and * at 1, 5, and 10%, respectively.

4.3. Analytical statistics

Table 3 provides a summary of the Arellano Bond dynamic panel estimation of the effects of DAC and NDAC on the WACC under GMM basic assumptions. Arellano-Bond dynamic panel data analysis is ideal for achieving robustness and generalizability in results for unnoticed heterogeneity, simultaneous and dynamic endogeneity (Arellano and Bond, 1991). The explanatory factors may be recognised using past and current outcomes but not future outcomes. The Sargan test and serial correlation test were employed to assess the instrument's validity. Using the Sargan test and AR (2) terms, the nominal p-values confirm that there is no serial correlation in the data and the instrument used. The description of the analysis explained in table no 03.

Table 3. ***Results of the Arellano-Bond Dynamic Panel models 1 and 2 for (WACC)***

Variables	**Dynamic Panel for Model 1**		**Dynamic Panel for Model 2**	
	Coefficients	Standard Error	Coefficients	Standard Error
Lagged variable	0.4790***	(0.0280)	0.4810***	(0.0280)
Discretionary accruals	-0.0130***	(0.0030)		
Non-Discretionary accruals			0.0040***	(0.0020)
Return on Assets	0.0180**	(0.0050)	0.0160***	(0.0040)
Firm Size	-0.0110***	(0.0020)	-0.0110***	(0.0020)
Growth Rate	0.0010***	(0.0000)	0.0010***	(0.0000)
Industry Effect		YES		YES
Years Effect		YES		YES
Arellano –Bond				
AR(1) in diff. (m1) p-value		0		0
AR(2) in diff. (m2) p-value		0.2780		0.3220

Over identification test		
Sargan test p-value	0.2170	0.2350

The dependent variable in Table 3 above shows weighted average capital cost (WACC) whereas DAC and NDAC are the independent variables of the study, as control factors; the study also inspect the return on assets, firm size, and growth rate. Table 3 shows the econometric findings of these variables with dynamic panel models from Arellano-Bond. The dynamic model covers the lagging of the dependent variable and each regressed equation's industrial and annual impacts The statistical significance of a result is shown by the symbols 10%, 5%, and 1% is indicated by *, ** and ***.

4.4. Discussions

According to H1, discretionary accruals have a negative and considerable influence on the WACC of firms listed on the PSX. WACC is reduced when discretionary accruals are higher, according to the results (Patro and Kanagaraj, 2016); (Aldamen and Duncan, 2013). The manager attempts to fabricate earnings to induce undervaluation of their stocks and, as a result, lower the WACC for the same. Opportunistic managers are more inclined to interact with earning management to emphasize valuable information about the firm's long-term prospects and drive down the cost of capital by exaggerating earnings around the time of the meeting (Demirtas and Cornaggia, 2013). This contradicts previous results that the discretionary and WACC relationships were positive (Francis et al., 2005), and no correlations are seen (Gray et al., 2009). H2 states that NDAC has a significant and positive effect on the WACC of publicly traded companies (PSX). These observations corroborate the findings of (Francis et al., 2005); (Gray et al., 2009); (Aldamen and Duncan, 2013). Results suggest that managers can exploit the non-discretionary accruals to inflate earnings. These findings contradict the findings of a previous study (Candra and Ekawati, 2016) that NDAC does not influence capital costs.

The size of the firm negatively and significantly affect the WACC, which shows that WACC becomes low. The significant and negative effect of firm size on WACC has matched with the findings of (Ilyas et al., 2019) that large corporations can acquire funding at the lowest potential cost. Furthermore, control variable growth is positively associated. If a company's growth rate falls below a certain threshold, the precision of public disclosure decreases. ROA is also positively associated with WACC.

5. Research Implications

Earning management is a conundrum science that has led to the failure of some of the world's top corporations. It may raise many concerns concerning the world's governance structure, legal system, and capital market. The study's findings indicate that customers have always had an incentive to engage in creative accounting to control the financing costs. Shareholders may indeed be inexperienced with specific earnings management strategies, as shown by the high accrual quality.

The research findings have substantial regulatory implications. Regulation could perhaps play an integral role in reducing impulse earning management by designing suitable criteria and

transparency requirements, encouraging professional accounting education, and resolving their accountancy profession-related concerns in emerging markets such as Pakistan. Regulators could perhaps judge the Effectiveness of services to acquire reasonable confidence regarding the relevance and reliability of financial reports for the company's financial users.

6. Conclusions

We designed this paper to investigate the effect of earning management and the weighted average cost of capital of 139 companies quoted on the PSX over 12 years, from 2008 to 2019. As a substitute for earning management, we employ accruals. Total accruals were classified as discretionary or non-discretionary, with the discretionary accruals being measured using the Modified Jones model. This study applied the dynamic panel estimate approach in Stata under general method assumptions Arellano-Bond (GMM).

The study's findings show that WACC and DAC have a negative and significant association. The coefficient has a negative value, meaning that the higher the discretionary accruals, the lesser the company's WACC. Companies that operate poorly have greater incentives for earning management; it is presumed that the manager seeks to fabricate earnings to induce undervaluation of their stocks and, therefore, the WACC is reduced. Dechow et al. (1995) found that as DAC rises, the likelihood of earning management increases as well. The financial status of the company thereby improves, reducing the capital cost. The research also looks into the correlation between NDA and WACC. The findings show that they have a favourable and significant association. It suggests that managers can use the NDAC to inflate profit margins. In contrast, Patro and Kanagaraj (2016) report that NDAC and WACC have no significant association. The outcomes of the study have significant regulatory consequences. Regulation can play a crucial function in minimising incentives for earning management by establishing proper standards and transparency requirements.

7. Limitations

The limitations of the study are, first limited sample size (Patro and Kanagaraj, 2016) used a sample of 840 firms. This data set may be overly aspiring in the Pakistani context, but a study on a greater sample would improve the results. Second, more independent variables and control variables should be included to obtain more significant results. The third limitation is that earning management is our goal, and we employ accruals to gauge earnings management techniques. The study could be expanded in the future to incorporate metrics of earnings management such as conservatism, persistency and predictability of earnings.

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