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The Influence of Cash Flows Volatility on The Relationship Between Leverage and Accruals Earnings Management

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Abstract

This study examines how cash flow volatility affects leverage and accruals earnings management. The research objective achieves by analyzing a sample of non-financial Pakistani enterprises from 2004 to 2018. The paper examines leverage and earnings management in business risk, specifically cash flow volatility. The leverage includes short term, long term, and total debt, while cash flows volatility is used as business risk. The earnings management level is measured by accruals earnings management also by using John Modified Model that suggests measuring earnings management approach by using discretionary accruals. This analysis uses agency and positive accounting theory. This study uses two-step system Generalized Method of Moment (SYS-GMM) dynamic panel estimators to examine leverage and earnings management. The study also examines how business risk affects this relationship for Pakistani enterprises. Endogeneity between variables motivates the adoption of SYS-GMM. The study found that leveraged managers use accruals earnings management. Leverage and accruals earnings management are positively correlated. The firm managers deliberately eschew accruals-based earnings management and leverage long-term debt. This choice is predicated on the unfavorable link between long-term debt and accruals earnings management. The leverage impacts negatively on accruals earnings management in the presence of cash flows volatility that discourage the managers to manipulate the financial statements. When seeking external finance, managers are less likely to use accruals-based earnings management when facing cash flow instability.

Keywords: Leverage, Accruals earnings Management, Cash Flows Volatility

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1. Introduction

This study examines leverage and accruals earnings management. It examines how cash flow volatility affects this connection. The packing order hypothesis emphasizes the firm's debt-equity financing options. Debt and equity finance are provided to firms. The packing order approach stresses separating debt and equity by features. The cost of capital associated with debt financing refers to the repayment of both interest and principal upon loan maturity. Management is under less pressure when financing through stock issuance. Equity-financed firms generally face shareholder performance expectations, which can lower stock values if operations are poor. Debt financing retains control rights, but equity financing diminishes creditors' monitoring power, conferring to agency theory. The firm's management can change leverage based on positives and downsides. The opportunistic behavior of managers and earnings management are driven by leverage to prevent bankruptcy.

Changes in leverage market dynamics affect earnings management significantly. Earnings management affects leverage and long-term prospects. To increase leverage, a corporation must meet debt covenants with steady earnings and operations. Before implementing financial rules, the corporation may use cost-based earnings management methods. After setting financial policies, investors evaluate the firm's value. They generally overestimate the firm's operating performance. Creative accounting includes earnings management. Comiskey and Mulford (2002) define creative accounting techniques as the deliberate and aggressive selection and execution of principles of accounting, financial reporting frauds, or earnings manipulation. The descriptions of earnings management suggest it could be fraudulent, yet it's not. This is because managers can control earnings while following GAAP, making it legitimate.

Although earnings management may not include fraud, its potential for opportunism makes it a worry. Opportunistic earnings management involves choosing accounting choices to misrepresent stakeholders about economic success of the company (Healy & Wahlen, 1999). Opportunistic earnings management—manipulating financial outcomes for personal gain, can mislead stockholders (Rezaei & Roshan, 2012). Thus, it is reflected the downside of earnings management. Additionally, excessive profits management might lead to fraud. Authors claim earnings management has benefits despite its poor reputation. They say it can boost earnings information value by communicating confidential evidence to the public and stockholders. Efficient earnings management describes this (Jiraporn et al., 2008). Academics and practitioners continue to investigate earnings management, whether opportunistic or efficient.

Many authors have studied earnings management. These studies examine the motivations that lead to earnings management. The contracts of Compensation, debt contracts, political and regulatory constraints, and equity incentives are examples. Dechow et al. (1996), Healy (1985), Jones (1991) and Watts and Zimmerman (1986) are notable studies. The authors cited in the text have studied firm-specific aspects and earnings management including corporate governance variables (Osma & Noguer, 2007; Siregar & Utama, 2008; Xie et al., 2003). They investigated if IFRS standards can reduce earnings management (Barth et al., 2008; Cai et al., 2008; Hung & Subramanyam, 2007).

Due to leverage, earnings management has changed company earnings in developing and developed countries worldwide. In established countries like America and Europe and developing ones like Pakistan, earnings management is a major issue. Nalarreason et al. (2019) suggest that business size and leverage may encourage managers to improve and manipulate earnings management. This issue is not restricted to specific countries or regions. It impacts developed and underdeveloped nations worldwide. Internationally famous incidents like Enron, WorldCom, and Xerox demonstrate the global aspect of this issue. Earnings management pertains to the purposeful manipulation of financial reporting by management, undertaken with the purpose of attaining personal benefits (Schipper, 1989). Earnings management refers to the practice wherein managers deliberately manipulate financial statements in order to deceive stakeholders about the economic performance of the company or to exert influence on contractual outcomes by manipulating reported accounting information (Healy & Wahlen, 1999).

Increased leverage might also motivate managers to manipulate earnings. If the accounting procedures of the firm violate the loan arrangement, the manager can adopt an accounting procedure that shifts the reported profit from the current period to the present. As shown by the correlation between earnings manipulation and debt contract behavior, Lazzem and Jilani (2018) imply a link between earnings management and debt policy. Positive accounting theory emphasizes earnings management hypothesis, which includes political cost, debt covenants, and management compensation contracts (Watts & Zimmerman, 1986). Leverage and earnings management raise the firm's risk. The motivation behind earnings management is to influence the perception of business risk inside the financial market. Earnings management may raise business risk. Business risk can affect earnings management by increasing or decreasing it. Even across categories, Neffati et al. (2011) found a favorable relationship among earnings management and risk. This shows that earnings management reduces risk. Importantly, excellent governance can reduce risk. Business risk may affect leverage and earnings management.

Earnings, cash flows, and returns can cause market uncertainty, which is a business risk. The considerable business risk from share price fluctuations causes market leverage (Welch, 2004). Market leverage is affected by equity price fluctuations. When financing high-risk businesses, financial institutions charge a premium. These firms' high cost of capital causes investors to devalue fresh share offerings. Investors risk losing money and earnings. The decline in their ability to make loan payments in this situation raises default risk. Thus, high-risk enterprises may incur higher distress and bankruptcy costs.

Financing as leverage, accruals earnings management and cash flow volatility are well known. However, no study has examined accruals earnings management in leveraged finance settings. Cash flows volatility may moderate the link between leverage and accruals earnings management, which is untested. Past study has neglected this gap; thus, our research addresses it. This study examines how cash flow volatility affects leverage and accruals-based earnings management. The association between leverage and earnings management may be seen via the lens of positive accounting theory and agency theory. Positive accounting theory investigates several factors that contribute to earnings management, including debt covenants, political costs, and management compensation contracts. The debt covenants hypothesis posited by positive accounting theory proposes that managers are inclined to choose accounting methods that manipulate the timing of reported earnings, specifically shifting them from future periods to the present, particularly in situations when the company is subject to strict scrutiny through accounting-based credit arrangements (Watts & Zimmerman, 1986). Lazzem and Jilani (2018) imply that debt policy may influence earnings management due to the linkage between debt contracts and opportunistic earnings manipulation. The phenomenon of leverage and profits management may be elucidated via the perspective of agency theory. The agency theory provides an explanation for the difference of interests between management of a firm acting as agents, and creditors, acting as principals. The agent, who has more information than the principal, will make decisions that may affect performance and reporting. Business risk increases leverage, which can lead to bankruptcy. The corporation manages earnings out of fear of bankruptcy. The presence of business risk makes operating a firm more complicated, creating a large imbalance between financial providers and managers.

Global dynamics have shifted from advanced to emerging economies in recent years. After different crises, developing economies drive global growth. Pakistan is growing and developing, but it also faces many challenges. Pakistan is an emerging market and developing nation, according to Khwaja and Mian (2008). The non-financial sector dominates Pakistan's market capitalization. It has significant stock returns volatility and earnings management. The company is vulnerable to financial problems and default due to the high cost of capital. Stock return uncertainty protects the financial sector's ability to lend to businesses. The debt market is quiet and financial institutions are lending less due to the scenario. Global leverage and earnings management have boosted business momentum. Growth has also increased corporate risk. Over time, stock volatility risk grows and changes. The frequency of earnings management in Pakistani listed corporations needs extensive discussion and investigation. Pakistan's weak economy is forcing companies to use leveraging tactics to traverse a challenging economic environment and reduce earnings management. Debt in leverage and business risk management dilution can avoid earnings manipulation.

The strategic use of diverse monies by a firm to finance operations and expansion is also called leverage. The management deliberately changes leverage to lower funding costs and maximize business value. The report has major consequences for regulators and stakeholders. The importance of excellent accounting information has grown, making it a global concern in Pakistan. Risk, profits, and leverage management are crucial in business today. The study at hand investigates the impact of leverage on earnings management within the context of firm risk. This analysis can help investors and academics predict and understand earnings management policies. Earnings patterns differ in emerging economies like Pakistan.

Most research show managers use accruals earnings management. According to Shu and Chiang (2014), larger enterprises choose accruals earnings management to improve external financing. External auditors must review internal controls' effectiveness and reveal serious control gaps under Section 404 of the Sarbanes-Oxley Act of 2002. This restriction may prevent managers from manipulating earnings via discretionary accruals. Regulators and auditors focus on accruals earnings management. Accounting standards drive accruals earnings management, which is obvious. When considering debt and company risk, accruals earnings management should be considered. Our analysis found that leveraged organizations use accruals earnings management. We also found a negative relationship between accruals earnings management and long-term debt leverage. We also investigated a strong relation among volatility of cash flows and accruals earnings management. When cash flows are volatile, managers are more prone to use accruals to control results. Cash flow volatility worries external shareholders, according to the research. Because accruals can limit managers' earnings manipulation. Our investigation confirms that leverage positively affects accruals-based earnings management (Hoang & Phung, 2019; Murni et al., 2023; Tonye & Sokiri, 2020). Our analysis also shows how business risk affects this relationship.

Additionally, company risk may affect leverage and accruals-based earnings management. Emerging economies have overtaken advanced nations in recent years. Emerging economies have driven global growth since the crisis. Pakistan, a growing nation, has faced many challenges and changes. Pakistan is a growing nation with a burgeoning stock market (Khwaja & Mian, 2008). Pakistan's Stock Exchange had crises in 2000, 2002, 2005, 2006, and 2008. These crises caused the PSE 100 Index to move greatly during this time. Cash flow volatility is a firm-specific metric that measures cash flow deviation from average value. It often indicates operating danger. The earnings of firm and debt obligations are affected by cash flow fluctuations. The Pakistani Stock Exchange must analyze how cash flow volatility affects leverage and accruals earnings management.

Financial leverage is also important in Pakistan, a growing market. Amplified asymmetric information helps managers with incentives hide economic performance. This limits self-interest. The Pakistan market is suitable for studying leverage, earnings management, and cash flow volatility. Pakistani data shows that financial leverage hurts accruals earnings management owing to cash flow unpredictability. The study's conclusions affect pay quality and management opportunism for regulators. This part provides a comprehensive analysis of the existing literature and formulates hypotheses based on the following findings.

2. Literature Review

3. Earnings Management and Leverage

The notion of earnings management is well-known in corporate accounting and finance, and it influences financing decisions. Accounting and finance researchers study earnings management and its components extensively. The Modified Jones Model by Dechow et al. (1995) is a key method for computing earnings management using discretionary accruals. Jones suggested a discretionary accrual earnings management concept in 1991. Dechow et al. (1995) modified Jones' model to address speculation propensity. The change accounted for revenue managers' judgment errors to appropriately assess discretionary accruals. In addition, corporate managers use accruals earnings management to alter and portray financial accounts to their advantage. Financial statements are important to stakeholders, yet they can be misinterpreted.

Financial statements help banks decide whether to lend to companies. To maintain financial institution confidence, managers use accruals earnings management to accomplish targeted benefits. The association between leverage and accruals earnings management is unclear in the accounting literature.

The empirical findings regarding the impact of leverage on earnings management exhibit inconsistency. Previous research indicates that there may be either a positive or negative relation between leverage and earnings management (Masri, 2018). Researchers say a lot of evidence supports the debt idea. A positive relation between leverage and earnings management is suggested by the literature (Alzoubi, 2016; Beatty & Weber, 2003; Becker et al., 1998; DeAngelo et al., 1994; DeFond & Jiambalvo, 1994; Dichev & Skinner, 2002; Fung & Goodwin, 2013; Jaggi & Lee, 2002; Jha, 2013; Kim et al., 2010; Lazzem & Jilani, 2018; Sweeney, 1994; Zamri et al., 2013). However, some researchers support the control idea. A negative correlation was shown between leverage and earnings management. As leverage rises, earnings management falls, Daniel et al. (2008), Jelinek (2007), Jensen (1986), and Wasimullah and Abbas (2010) validate these findings. Both good and negative data exist on the association among financial leverage and earnings management.

Most of the managers engage in earnings management in order to avoid the violations of debt contracts, secure favorable terms for future debt contracts, and maintain relationships for increased debt (Rodríguez-Pérez & Hemmen, 2010; Watts & Zimmerman, 1986). Managers engage in earnings management because they expect financial rewards from financial institutions. Naue et al. (2023) and Rodríguez-Pérez and Hemmen (2010) studied the association among debt, diversity, and accruals-based earnings management in Spanish enterprises. The study revealed that an increased level of debt may potentially incentivize managers to engage in earnings manipulation. Evidence suggests high-leveraged enterprises may adjust profitability to evade debt covenants. This is supported by several research (Becker et al., 1998; DeAngelo et al., 1994; DeFond & Jiambalvo, 1991; Lemma et al., 2013; Mohrman, 1996; Sun & Rath, 2009). Firms may alter earnings to avoid violation of debt contracts due to penalties. Increased leverage has the potential to decrease opportunistic earnings management (Jelinek, 2007). Companies with debt usually have spending limits set by lenders. When enterprises with increasing leverage confront constraints on free cash flow, managers will be incentivized to spend the remaining discretionary resources to permissible projects to generate shareholder value. Additionally, higher leverage might lead to stricter lender scrutiny of organizations. This may reduce profits management. Jelinek (2007), López-Iturriaga and Saona (2005) and Zamri et al. (2013) support this. Past studies on leverage and earnings management indicate mixed results.

The DeAngelo et al. (1994) studies debt financing, debt covenants, and accruals earnings management in US corporations. The findings imply managers alter earnings to improve creditors' image of the company. To reduce debt contract commitments, this manipulation is done. Accounting practices that boost current revenue to prevent debt covenant violations are likely for enterprises with larger leverage, according to Mohrman (1996). A set of US corporations was studied by Becker et al. (1998). The data show that managers of high-debt enterprises manipulate discretionary accruals. This practice boosts reported earnings to avoid debt covenant violations. Tonye and Sokiri (2020) examine how financial leverage affects earnings management in listed Nigerian manufacturing companies, specifically loan covenant violation. The study sample includes 29 NSE-listed enterprises. The Ordinary Least Square method was employed to analyze secondary data from financial accounts. The study found that financial leverage improves accruals earnings management. Financial and total leverage hurt genuine earnings management.

The NARSA (2020) study examines how corporate size, debt, and return on assets affect earnings management. The study sample includes 2014–2018 Indonesia stock exchange-listed enterprises. The study uses quantitative and descriptive methodologies. The analysis found no correlation between company size (measured by total assets) and earnings management. This suggests that a company's overall assets do not affect its profits manipulation. The research shows that leverage and return on assets affect earnings management. The company's earnings management reports might be affected by leverage and return on assets. The Return on Asset variable improves earnings management. The separation of net income and total assets affects the ability of the firm’s earnings management. It immediately affects the earnings of the firm, increasing or decreasing them. The earnings of firm management techniques are affected by these changes. Christiana et al. (2020) explore Perum Perumnas Regional I Medan's earnings management. The researchers examine the company's 2014–2017 leverage and profitability ratios. The researchers used the Jones Modified Model to quantify earnings management by discretionary accrual (DA). Return on assets (ROA) reflected profitability, whereas debt to assets (DAR) represented leverage. The study uses quantitative data analysis and documentation. This study used descriptive time series analysis. The study found that Perum Perumnas Regional I Medan managed earnings by growing profits in 2014, 2016, and 2017. The study found that excessive leverage drives earnings management.

Kalgo et al. (2019) examined real and accrual earnings management (AEM) in Malaysian IPO enterprises. The study also inspects how leverage distresses earnings management discretion in these organizations from 2003 to 2013. The Dechow et al. (1996) cross-sectional modified Jones model calculated discretionary accruals. Additionally, Roychowdhury (2006) cross-sectional models examined anomalous actual activity discretionary behavior. The findings imply on IPO of Malaysian firms demonstrate real and accrual discretion. Graphical representations of earnings management proxies show that high-leverage enterprises have more real and accrual earnings management. The multivariate study shows a favorable association between leverage and earnings management. This supports the agency theory for free cash flows, packing order theory for leverage and debt hypothesis. Sercu et al. (2006) discovered a strong correlation between accruals earnings management and leverage in a sample of non-listed firms in Belgium. The study also demonstrated that debt causes different levels of earnings management. The findings indicate that bank debt worries the firm more than trade credit. Earnings management and bank credit are strongly correlated, indicating that banks are less financially resilient than suppliers. Since banks have harsher loan terms than suppliers, corporations are more prone to distort earnings when it comes to bank debt. The firm's increased focus on earnings management implies a preference for bank loan risk mitigation over trade credit vulnerability.

According to Lee et al. (2012), debt covenants may reduce discretionary accruals as leverage increases. The researchers found a negative correlation between discretionary accruals and debt to assets ratios in Taiwanese firms. Zamri et al. (2013) found that leverage controls as well as monitors earnings management in Malaysian enterprises. The study reveals a negative association between leverage and real earnings management. According to Isha and Mangala (2023), Nadilla et al. (2019) and Waweru and Riro (2013) organizations may use earnings management to develop reports that attract capital at favorable rates. Earnings-based management and leverage are positively correlated with Kenyan-listed enterprises. Lee et al. (2012) found a negative correlation between accrual earnings management and leverage for the firms listed on the Tehran Stock Exchange. The authors contend that liabilities limit managers' access to free cash flows since they pay off liabilities and interest. As most obligations increase, accruals earnings management decreases. Financial leverage and accruals earnings management were positively correlated in Egyptian enterprises by Bassiouny (2016), Kalbuana et al. (2021) and Murni et al. (2023). Jordanian and Tunisian enterprises have a favorable relation among accruals earnings management and leverage, according to Abbadi et al. (2016) and Lanouar et al. (2013). The association between earnings management and leverage in established and developing economies is equivocal.

H1. A firm's financial leverage effect accruals earnings management of Pakistan listed firms.

4. Cash flows Volatility and Accruals-Based Earnings Management

Cash flow volatility increases business risk by fluctuating and diverging cash flows. Increased company risk drives market leverage. Market leverage allows financial firms to charge larger risk premiums. Due to a large 2023risk premium, enterprises must pay higher fixed costs, causing distress and bankruptcy. The relationship between cash flow volatility and accrual earnings management has been the focus of research. Osisioma et al. (2020) investigated the relationship between free cash flow and earnings management in Nigerian banks. The study examined 15 Nigerian banks from 2010 to 2019 using an Ex Post Facto approach. 2010 to 2019. The investigation used bank annual financial reports and accounts. The hypothesis was investigated by using regression analysis in E-view 9.0. The data imply that cash flow volatility and discretionary accruals are positively correlated. One could claim that Nigerian banks' operating cash flow variability does not affect earnings management.

Hung and Wakayama (2005) also show a favorable association between accruals earnings management and cash flow volatility. This shows that accrual earnings management increases cash flow volatility. A corporation with a high debt cost is usually financially risky. This shows that the firm's debt may cause cash flow instability. A firm's performance depends on cash flow volatility. Accruals are important in accounting research since they indicate a firm's performance and can reveal earnings management difficulties. Cash flow volatility and accruals earnings management are examined to determine their importance in analyzing a firm's success. Patel (2020) study analyzed earnings management aspects. They found that cash flow volatility positively correlated with earnings management. Most of them used Modified jones and DeAngelo models to examine cash flows volatility and earnings management. A significant positive association between the factors was regularly found.

H2. Cash flow volatility positively affects accruals-based earnings management.

Numerous academic interpretations exist on financial leverage and accruals earnings management. The Managers can modify financial data and use their firm knowledge with accruals earnings management. This is done to deceive investors and get loans. After obtaining the firm's goal debt level, the manager reassesses its performance, which lowers investor trust. Earnings management may explain cash flow volatility. From the prior discussion, leverage and accruals earnings management are positively correlated. Cash flow volatility and accruals earnings management are also positively correlated. Business risk, leverage, and accruals earnings management have a considerable negative association. Leverage, cash flow volatility, and accruals earnings management are linked. As leverage rises, managers avoid accruals earnings management, and vice versa. This is due to financial institutions and substantial managerial ownership influencing shareholders. The results show that accrual earnings management negatively affects business risk (cash flow volatility) and leverage.

H3. Business risk is a significantly positive factor that moderates the relationship between accrual earnings management and leverage.

5. Methodology

To test the hypothesis, we will collect annual independent and dependent variable data from Pakistani non-financial enterprises' financial statements. The data covers 2004–2018. Additional 2003 data was acquired to create a comprehensive sample of change factors, including financing activities, receivables accounts, and sales revenue. Most enterprises experienced earnings and cash flow variations over the survey period. These changes caused high earnings and cash flow volatility. Additionally, the stock market was inconsistent during this period. This period's funding decisions were also linked to considerable financial distress expenses. Many stocks exchange-listed companies use earnings management to motivate investors and reduce distress costs and bankruptcy risks. Many corporations were delisted from the stock market and struggled to survive due to default. Data from this time was used for empirical estimation.

The researchers excluded enterprises with missing numbers and included the non-financial sector to assure empirical study accuracy, this method reduces study bias (Frank & Goyal, 2009; Keefe & Yaghoubi, 2016; Strebulaev & Yang, 2013). So, in this study missing values are omitted from the sample due to missing financial and insurance values. The financial industry was also excluded from the analysis due to capital reserve rules that affect their capital structure. The financial characteristics and capital structure of these firms differ from non-financial firms. Ariff et al. (2008), state that enterprises must meet central bank capital requirements and follow central bank regulations.

To examine the relationship between leverage and accruals-based earnings management and the moderating role of cash flows volatility in this relationship. Accruals earnings management is the net income-cash flow gap. Managers usually increase financial statement accruals when leverage rises. Leverage motivates managers to manipulate accruals earnings, according to Lazzem and Jilani (2018). Debt drives earnings management strategy commencement and manipulation. The amplified influence of total earnings on a company's common stock income due to fixed bond payments and preferred stock is called leverage. High leverage has a high debt ratio, which can boost owner returns. It also increases the chance of financial issues. According to Baker (1973) research, a firm's leverage decision is directly tied to its financial risk. When risk and leverage rise, business profitability frequently fall. Managers may use accruals earnings management to retain investor confidence. The equation in the text compares accruals earnings management (dependent variable) to leverage (independent variable), using risk as a moderator. The equation has control variables. Earnings management is best measured with discretionary accruals. The user discusses Dechow et al. (1995) Modified Jones model. Jones suggested an earnings management approach using discretionary accruals in 1991. Dechow et al. (1995) modified Jones' initial model in 1995 to eliminate bias and appropriately compute discretionary accruals, considering managers' revenue reporting inaccuracies.

The Modified Jones (1991) model was used to estimate discretionary accruals by comparing a firm's actual accruals to its usual accruals (Zang, 2011). Asim and Ismail (2019) examined accruals earnings management to measure earning management. The Modified Jones Model by Dechow et al. (1995) quantified discretionary accruals.

Where:

〖NDACC〗_it = the non-discretionary accruals

A_(it-1) = the total assets

∆〖REV〗_it= the change in sales revenue

〖∆REC〗_it= the change in account receivable

〖PPE〗_it= the total gross amount of property, plant, and equipment assets

In regression, the following equation was used to incorporate the firm's specific parameters into the above formula.

Where,

= Total accruals, therefore, it is possible to calculate TACC by the following formula,

$TACC = (\Delta CA - \Delta CASH - \Delta CL + \Delta STDEBT - DEPN)$

Where,

TACC=total accruals

ΔCA=change in current assets

ΔCL=change in current liabilities

ΔCASH=change in cash in hand

ΔSTDEBT=change in short term debt

DEPN=depreciation

Discretionary accruals DACC then calculated by measuring the difference between total accruals TACC and non-discretionary accruals NDACC which is the proxy of AEM.

Business Risk = BR2

Leverage= Short, long, total and market leverage

6. Data Analysis and Findings

Business risk, accrual-based earnings management, and leverage decisions in Pakistani enterprises are examined in this section. The standard deviation of corporate cash flows quantifies business risk. Book leverage ratios, which consider short-term, long-term, and total debt, can determine leverage. Also used to assess leverage are market leverage ratios. Accrual-based earnings management regresses all factors. Business risk affects accrual-based earnings management and firms' leverage decisions, as seen in Table 4.1. The lagged dependent variable is used as an independent variable in a dynamic panel model. The existence of the lagged dependent variable in all columns supports a dynamic panel model and the generalized method of moments. Previous earnings management affects current earnings management.

Table 1: Descriptive Statistics

Variables	Obs	Mean	Std.Dev	Min	Max
AEM	6825	-0.5987	0.4740	-1.0608	0.2917
SDT	6825	0.3113	0.1201	0.05	0.4444
LTD	6825	0.4212	0.1210	0.2001	0.6597
TD	6825	0.5196	0.0806	0.3798	0.7081
MKTL	6825	2.1695	1.7607	0.5	5.8995
BR2	6825	0.5421	0.2587	0.1002	0.9998
STD*BR2	6825	0.1691	0.1086	0.0053	0.4438
LTD*BR2	6825	0.2270	0.1279	0.0205	0.65
TD*BR2	6825	0.2822	0.1442	0.0419	0.6924
MKT*BR2	6825	1.1801	1.1960	0.0563	5.8495
SIZE	6825	9.3285	4.0962	2.5694	21.976
PROF	6825	0.3341	0.4334	-0.4997	1.5055
TANG	6825	0.4265	0.1059	0.3	0.7
MBR	6825	1.4841	0.7361	0.7	2.9995

The descriptive statistics show the distribution of data and average behavior of the variables used in the study. It shows the summary statistics of the overall data. All the variables in these descriptive statistics are winsorized at 1% and 99% in both tail distributions, hence no outliers. The results related to the descriptive statistics are presented in the Table 1.

The correlation analysis shows the strength and direction of the relationship between the study variables. This direction may be positive or negative. The results of Correlation analyses are noted and reported for brevity reasons; however, they are aligned with respect to the study's objectives.

Table 2: Correlation Analysis

Variables	AEM	STD	LTD	TD	MKTL	BR2	STD *BR2	LTD *BR2	TD* BR2	MKT *BR2	SIZE	PROF	TANG	MBR
AEM	1													
SDT	0.0083	1												
LTD	-0.0054	-0.0183	1											
TD	0.0243	0.022	-0.0293	1										
MKTL	0.0325	0.0046	-0.0202	0.0391	1									
BR2	0.013	0.0126	-0.0438	0.0235	0.0089	1								
STD*BR2	0.0084	0.6101	-0.0445	0.0353	0.0116	0.2745	1							
LTD*BR2	0.0134	0.0005	0.4746	-0.0022	-0.0028	0.1823	0.2605	1						
TD*BR2	0.0205	0.0208	-0.054	0.3275	0.0198	0.0941	0.1709	0.4654	1					
MKT*BR2	0.0278	0.0126	-0.0367	0.0414	0.1802	0.4712	0.3556	0.3759	0.4553	1				
SIZE	-0.035	0.205	0	-0.0714	0.0515	0.0263	0.1442	0.0191	0.001	0.0672	1			
PROF	-0.1922	0.0119	-0.0123	-0.1289	-0.1489	-0.0053	0.0073	-0.01	-0.043	-0.1204	-0.0119	1		
TANG	-0.0951	0.0296	-0.0157	0.0232	0.0643	-0.0093	0.0134	-0.0112	-0.0032	0.0429	-0.025	0.0391	1	
MBR	-0.0059	0.018	-0.0432	0.0111	-0.1105	-0.0329	-0.008	-0.0512	-0.0259	-0.1036	0.0066	0.0833	-0.0192	1

Table 3: Cash Flows Volatility on the relationship between Leverage and Accruals Earnings Management

Variables	PANEL A	PANEL B	PANEL C	PANEL D
AEM $_{t-1}$	.0325***	-.5412***	.0449***	.0310***
	.0104	.1331	.0129	.0108
LEV	1.1483***	-1.9392***	1.3251**	.0560***
	.3309	.6103	.6542	.0205
BR2	.4681***	-1.0637***	1.2143***	.2392**
	.1394	.4121	.5365	.1094
LEV*BR2	-1.4516***	3.0011***	-2.1813***	-.1094***
	.4434	.9395	1.0086	.0369
SIZE	-.0443***	-.0120	-.0197***	-.0412***
	.0045	.0082	.0073	.0044
PROF	-.4029***	-.1957***	-.2398***	-.4072***
	.0455	.0474	.0527	.0473
TANG	-1.1344	.6071**	-.6778***	-.7915***
	.1933***	.2760	.0661	.0550

MBR	.0040	-.0854***	.0111	.0048
	.0071	.0378	.0078	.0072
CONS	.0627	.1126	-.7851**	.1338*
	.1530	.3112	.3626	.0779
AR (1)	0.0000	0.0000	0.0000	0.0000
AR (2)	0.579	0.507	0.500	0.519
Sargan/Hansen	0.160	0.490	0.322	0.309
Instruments	158	150	206	158
No of groups	455	455	455	455

7. Discussion

The data indicate that leverage significantly increases accrual-based earnings management. The results show that high leverage improves accruals-based earnings management in enterprises. This analysis supports Nalarreason et al. (2019) results that leverage improves earnings management. These findings follow agency theory and positive accounting theory. Tonye and Sokiri (2020) found that financial leverage improves accrual-based earnings management. The user advises financial statement users to consider financial leverage when assessing reported results. Low or high expectations, which are influenced by leverage, might affect earnings reliability. According to Mendoza et al. (2020), enterprises with high leverage and short-term debt likely to have positive discretionary accruals. NARSA (2020) states that leverage strongly influences earnings management.

Hung and Wakayama (2005) found a positive association between accruals-based earnings management and cash flow volatility. A firm's performance is measured by cash flow volatility. Accruals are important in accounting research since they indicate a firm's performance and can reveal earnings management difficulties. Cash flow volatility and accruals earnings management are examined to determine its importance in analyzing a firm's success. Patel (2020) study found a positive association between cash flow volatility and earnings management, suggesting that cash flow variations can affect earnings management. The researcher examined cash flow volatility and earnings management using the Modified Jones and DeAngelo models. The study found a substantial positive correlation between the factors.

Hirshleifer et al. (2012) say cash flow volatility increases operational risk. Executives may use earnings management to hide this uncertainty. Several studies have found that managers in firms with higher cash flow volatility and financial distress are more likely to manage earnings (Cheng et al., 2020; Frijns et al., 2013; Habib et al., 2013; Hirshleifer et al., 2012). Datta et al. (2017) evaluated idiosyncratic risk and accruals-based earnings management. A large and positive link between idiosyncratic risk and accruals-based earnings management supports our claim. As in our study, Bhundia (2012) study found a strong positive association between free cash flows and earnings management. The study implies that free cash flows encourage earnings management.

Management's earnings management is significantly reduced by cash flow volatility as a business risk and leverage. The decrease in cash flow volatility reduces organizations' leverage, which reduces earnings management. Firms with more cash flow swings have higher capital expenses. This can make reducing leverage difficult. Financial difficulty and insolvency are less likely with less leverage. This circumstance seems unjustified for earnings management or manipulation. Managers also avoid accrual-based earnings management. This is mostly due to financial institutions and managerial ownership affecting shareholders.

8. Conclusion, Implications, and Limitations

The earnings management hypothesis suggests that managers manipulate financial statements, both upward and downward, to deceive investors into believing the firm has a higher value and better performance than it did before financial policies were implemented. After investor funding, the corporation reverses earnings. However, the firm's operational performance declines, leading investors to review its financial performance and value. Thus, investment returns are negative. This study examines how managers use earnings management tactics and external financing. It also examines how cash flow volatility indicates corporate risk and earnings management approach. We found important consequences for regulators, researchers, managers, and other financial statement users. Leverage and accruals earnings management are favorably correlated. This shows that managers favor accruals earnings management for external finance. The findings show that leverage boosts accruals-based earnings management. This shows that high-leverage corporations handle accruals earnings more. Our study examines the relationship between accruals earnings management and leverage, with cash flows volatility as a moderating factor. Firm managers avoid accruals earnings management when cash flows are volatile. The results show that managers prefer accruals earnings management when leveraged, but they ignore cash flow volatility. According to the discussion, cash flow volatility changes the manager's earnings management strategy.

This study has considerable implications. The findings highlight the significance of managing leverage and having an awareness of cash flow volatility. Increased earnings management due to high leverage reduces openness in the financial statements. When evaluating a company's financial stability, investors should think about leverage and cash flow volatility. These results lay the groundwork for further study and better financial management in Pakistani businesses, which is invaluable.

The study tried to cover all the specific area regarding research. However, there are some limitations of the study that should be consider if the same research is doing by anyone in future. The study may lack the quality of the data as it relies on the financial data of non-financial companies which may subject to inconsistency and errors and that effects the validity of the data. The study also used different measures of variables by using different proxies that could yield different results. Moreover, the study is focusing and depending on the data of one country and that which may affect the generalizability of results as every country have different regulatory and practices of business.

Ethical Consideration

This article considered all the ethical standards and policies of AJSS while completing the article. The article also followed AJSS rules mentioned in the outline and the ethical standards. All the samples included in the article are for study purpose and for the addition in the existing literature by following the procedure according with the approved ethical standards. The ethical considerations are taken regarding transparency and accuracy in reporting research findings. So, while conducting the study on the influence of cash flows volatility on the relationship between leverage and accruals earnings management, all the ethical standards are taken according to journal ethics.

Informed Consent

The data taken from the secondary source considered all the precautions regarding informed consent. All the participants of firms are legally taken in order to find the influence of cash flows volatility on the relationship between leverage and accruals earnings management. So, there was no pressure on the firms' date and free from any pressure and coercion. In addition to that the data is free from any pressure the results are representing true and fair view and that was the purpose of the study.

Declaration of Interest Statement

Both the authors have no known competing financial interest or personal relationship that could have appeared to influence the work reported in this paper. So, I declared the statement mentioned above is representing true and fair view and don't have personal relationship with the participant and any other personal relationship with the participant.

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9. References

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