

The Impact of Earnings Management on the Efficiency and Stability of Islamic and Conventional Banks: Evidence from Pakistan

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Abstract: *This study investigates the impact of earnings management (EM) on the efficiency and stability of Islamic and conventional banks in Pakistan. A dataset comprising 6 Islamic and 13 private commercial banks from 2002 to 2022 was analyzed. Efficiency was proxied by return on equity (ROE) and return on assets (ROA), while stability was measured by Z-Scores. EM was represented by discretionary loan loss provisions. Regression models were employed, guided by Breusch-Pagan and Hausman tests. The findings reveal a significant disparity between the effects of EM on the efficiency and stability of Islamic and conventional banks. EM in Islamic banks does not significantly impact efficiency and stability, whereas EM in conventional banks has a negative effect. The study concludes that EM in Islamic banks is not detrimental to stakeholders in terms of efficiency and stability, warranting further research into the factors driving decreasing EM in conventional banks.*

Keywords: Earnings Management; Financial Institutes; Corporate Governance

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Introduction

Earnings management (EM) is employing different accounting techniques to manipulate the financial statements and conceal the actual financial position of a company within the rules and regulations of accounting standards. This manipulation can have far-reaching consequences for financial institutes. By concealing the company's financial reality, EM misleads stakeholders such as shareholders, investors, financial

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analysts, and regulators. The misinformation propagated through EM can sometimes have devastating impacts on stakeholders and the overall economy. The false performance figures of financial companies can further lead to financial crisis. For example the accounting misinformation of some big financial institutes in the US, such as Lehman Brothers, American International Group and Bear Stearns etc. created financial crunch in the US market in 2008. This was sooner spread to other countries by 2009 and huge losses and even bankruptcy were faced by financial institutes worldwide. Similarly, Enron Corporation was bankrupted in 2002 due to accounting frauds. The question however arises that why management of the financial institutes indulges in manipulation of accounting figures. Theories of EM in this regard document different reasons and causes.

The major cause of Earnings Management (EM) is private gain of the management. They manipulate the earning figures to obtain monetary and sometimes non-monetary benefits. Monetary benefits include their remunerations and incentives, while non-monetary benefits comprise their job security and good reputation in the market. This phenomenon causes a conflict of interest between insiders (managers) and outsiders (other stakeholders), as managers may prioritize their own interests over those of other stakeholders. This may benefit insiders, but on the other side, it can harm the interests of other stakeholders. Agency theory, as presented by Ross (1973), has explained this conflict in detail.

Burgstahler and Dichev (1997) presented threshold management theory where they documented three major reasons of EM. First, to demonstrate better performance of a financial institute, wherein managers may manipulate earning figures to show a weak positive gain or avoid reporting losses. Secondly, they may also be reluctant to demonstrate lesser earning figures from previous years and report small growth in current year from the previous year. Third reason is to overcome analysts' expectations because in big financial markets, the performance of financial institutions is often evaluated by the analysts. The performance expectation of these analysts is a major tool for stakeholders of financial institutions in their decision making. Therefore, managers of the financial institutes manipulate the earning figures to reach or overcome the analysts' expectations.

Signal theory was presented by Spence (1973). This theory is concerned with reduction of information asymmetry between insiders and outsiders. The insiders signal the market regarding their performance through financial statements. Sometimes they manipulate the earning figures and signal it to the market to attract investors. Positive accounting theory was presented by Watts & Zimmerman (1978). They argued that EM is performed for three reasons. 1st the managers intentionally show higher earnings of the organization to gain bonuses and monetary incentives. 2nd they drag the future expected earnings to the current year to avoid debt covenant violations. 3rd they push the current year profit to upcoming years to avoid political costs such as taxes.

Morck, Shleifer and Vishny (1988) presented entrenchment theory. They argued that management of the organization show the worst performance of the organization in their financial statements to reduce the stock prices of the organization in the capital market. When the stocks drops they purchase these stocks on lower prices and entrench themselves in the organization. They do it for monetary benefits and to gain power in the organization.

Since EM is performed under the shelter of accounting standards such as IAS and IFRS therefore, it cannot be declared illegal. In fact it is an illegal act performed legally by the management of financial institutes. While, there is no room for EM in Islamic financial institutes (IFIs). Because at one side they follow the accounting standard in their financial reporting system while on the other side they are also bound to follow the divine law “*Shariah*” in their transactional structure as well as reporting system. EM is against the transparency, truthfulness and loyalty therefore it can be considered illegal (*Haram*) act in the *Shariah*. The reporting of false increase or decrease in earnings of a financial institute can badly harm the interest of stakeholders.

The aim of this study is to investigate the impact of EM practices on the performance of conventional and Islamic banks in Pakistan. The financial market of Pakistan is perfect for this kind of investigation because both the conventional and Islamic banks are operating simultaneously under the same economic, political and social conditions. Specifically this study is unique because it compares the impact of managerial discretion on the efficiency and stability of conventional and Islamic banks.

Literature Review

The financial statements of banks are the only source of information for its stakeholders. Their performance is determined by these financial statements for the purpose of future investment decisions of investors. Therefore, accurate and transparent financial statements are very important. Kaliski (2001) argue that good financial statements are necessary for users in appropriate decision making. Since earnings management (EM) is manipulating the financial statements which conceal the actual position of bank therefore, it raises a big question mark on the quality of their financial statements.

Prior literature reported the existence of EM in banks. For example Ugbede *et al.* (2013) confirms the existence of EM in Malaysian and Nigerian banks by using Modified Jones Model. They found that practice of using accruals for EM is higher in Nigerian banks compared to Malaysian banks. Kumari and Pattanayak (2017) investigated the EM practices of Indian banks from 2003 to 2013. They found that management of these banks used EM techniques to show higher income which is called “income increasing EM”. El-Sood (2012) also reported the existence of EM in

878 banks in the US market. Prior literature found the use loan loss provisions (LLPs) for the purpose of EM. Since it is a large accrual therefore, the researchers found its significant use for the purpose of EM in banking industry (Zgarni et al., 2018; Ahmed *et al.*, 1999; Taktak & Mbarki, 2014; Kanagaretnam, 2004; Mersni & Ben Othman, 2016). These studies consider that manipulation of the LLPs for the purpose of EM is the best choice for the managers in banks. But it is also an undeniable fact that LLPs are essential and obligatory for a bank to mitigate the risks of default and non-performing loans.

Some researchers give logical solution of the contradiction that LLPs is good for risk management or it is a tool of EM (Moyer, 1990; Wahlen, 1994). They split the LLPs into two parts. The non-discretionary loan loss provisions (NDLLPs) and discretionary loan loss provisions (DLLPs). The NDLLPs is the essential part of the LLPs which is based on total loans and non-performing loans of the banks which mitigate the risks. It is the discretionary part of the LLPs which is under the control of the management and they exploit it for the purpose of EM (Montgomery, 1998). Some recent studies support this argument. For example Tran *et al.* (2020) confirms the use of DLLPs for the purpose of EM in US banking industry. Similarly Abaoub (2013) reported the use of discretionary loan loss provisions for the purpose of EM in Tunisian banking industry from 1999 to 2010. Empirical literature is scarce that why management of the banks indulges in EM practices and what are its real consequences however some, studies are available.

Proença *et al.* (2023) reported the negative impact of EM on the efficiency of banks in 70 European banks. Alhadab and Al-own (2017) also reported the negative impact of DLLPs on current and future performance of banks in European region. Ab-Hamid *et al.* (2018) reported the negative impact of EM practices on the efficiency of banks in five ASEAN countries. A recent study in this regard is conducted in Indian market by Mangala *et al.* (2022). They reported that EM practices negatively impacted the current and future performance of Indian banks. Similarly, Malik *et al.* (2022) found the positive association between NDLLPs and DLLPs with financial distress in Pakistani commercial banks. However, in Pakistani market Islamic and conventional banks are operating simultaneously under the governance of the State Bank of Pakistan.

Islamic banks are bound to follow *Shariah* and their *Shariah* governance framework makes them more answerable as compared to their conventional counterparts. Although EM itself is a prohibited act by *Shariah* but previous literature confirms the existence of EM practices in Islamic banks as well. Based on the *Shariah* and the strengthen *Shariah* governance framework of Islamic banks I expect that there is a significant difference between the impacts of EM on the efficiency and stability of these both type of banks. I also expect that EM of these banks does not negatively affect their efficiency and stability. Based on the literature review, the following hypotheses are constructed.

Hypotheses

H₁: The impact of EM is different on efficiency and stability of Islamic and conventional banks.

H₂: There is no negative impact of EM on the efficiency and stability of Islamic banks.

Data and Methodology

Secondary data were collected from the annual reports of 13 private commercial and 6 Islamic banks from Pakistan from 2002 to 2022. Since 2002 was the start of the Islamic banking sector of Pakistan therefore I start from this year. Government banks were excluded because the jobs of Govt. employees are already secured. Secondly, their incentives are mostly not dependent on the performance of banks. Therefore, the opportunistic EM is out of its domain. The data of macro-economic variables are obtained from the website of World Bank.

For detection of EM in banks different techniques are used. For instance, accrual models, income smoothing, benchmark beating etc. But the most effective technique is LLP analysis which is widely used to detect EM in banks. It is because the major accrual of a bank is its loan loss provisions (LLPs) account. It is used to cover expected credit losses on its loan or investment portfolio. The LLPs are the combination of non-discretionary loan loss provisions (NDLLPs) and discretionary loan loss provisions (DLLPs). NDLLPs is the portion which is driven by actual changes in credit risk, such as borrower default and economic conditions while DLLPs is subject to managerial judgment which can be adjusted beyond what is warranted by actual credit risk. This is an important portion which can be exploited by managers. Bank managers may increase or decrease these provisions to smooth reported earnings, manage capital ratios, or influence stakeholder perceptions without violating formal accounting standards. Prior literature used this portion to proxy EM. Consistent with previous literature, this study also uses discretionary loan loss provisions (DLLPs) to proxy EM. Since DLLPs cannot be observed directly from the financial statements therefore it is estimated from the LLPs. The first stage of this study shows that how DLLPs is estimated from the LLPs. The second stage shows the impact of DLLPs on the efficiency and stability of Islamic and conventional banks.

First Stage

For the estimation of DLLPs this study follows two step-approach of *Ahmed et al.* (1999). Large strand of literature follows this study for estimation of DLLPs (Shawtari

et al. 2015; Kanagaretnam et al. 2004 & Taktak et al. 2010). Consistent with these studies we use Model 1 in first step.

$$LLP_{it} = \alpha + \beta_1 NPL_{t-1} + \beta_2 \Delta NPL_{it} + \beta_3 \Delta Loan_{it} + \epsilon_{it} \quad (1)$$

Where

LLP_{it} Represent the loan loss provisions of bank i at year t normalized by total loans.

NPL_{t-1} Represent the non-performing loans of bank at the beginning of the year, normalized by total loans. ΔNPL_{it} is change in non-performing loans of bank i at year t , normalized by total loans.

$\Delta Loan_{it}$ Represent the change in loans of bank i at year t , normalized by total loans.

From the equation 1 the NDLLPs is estimated, which is the uncontrollable part of LLPs by the management. From the residual of this equation, the DLLPs is calculated. This estimation of NDLLPs become equation No. 2.

$$\widehat{NDLLP}_{it} = \alpha + \widehat{\beta}_1 NPL_{t-1} + \widehat{\beta}_2 \Delta NPL_{it} + \widehat{\beta}_3 \Delta Loan_{it} \quad (2)$$

Where

\widehat{NDLLP}_{it} is the estimated non-discretionary loan loss provisions of bank i at year t . \widehat{NPL}_{t-1} is estimated as the non-performing loans of the previous year. $\widehat{\Delta NPL}_{it}$ is the estimated change in non-performing loans at the end of the year. $\widehat{\Delta Loan}_{it}$ is the estimated change in the total loans at the end of the year.

The second step is the isolation of DLLPs from the total LLPs shown in equation No. 3.

$$\widehat{DLLP}_{it} = LLP_{it} - \widehat{NDLLP}_{it} \quad (3)$$

Where

\widehat{DLLP}_{it} Represent the estimated discretionary loan loss provisions, it is the main independent variable of this study. This part of the loan loss provisions is exploited by the management for EM purposes.

LLP_{it} is total loan loss provisions

\widehat{NDLLP}_{it} is estimated non-discretionary loan loss provisions.

With this process the estimation process of DLLPs is completed which is the main independent variable of this study.

Second Stage

To evaluate the impact of DLLPs on the efficiency and stability of Islamic and conventional banks the following models are used.

$$\begin{aligned} \text{Dependent Variable} = & \alpha + DLLP_{it} + BS_{it} + Asset_{it} + Dep_{it} + \\ & + Loans_{it} + GDP_t + Inf_t + e_i \end{aligned} \quad (4-6)$$

Where

The dependent variables are ROE for Model 4, ROA for model 5 and Z-Score for model 6.

Variable	Definition
ROE	ROE is return on equity.
ROA	ROA is return on assets. ROE and ROA are primary indicators of managerial efficiency and performance in banks (Baselga-Pascual & Vähämaa, 2021). Therefore, this study includes these variables as efficiency variables.
Z-Score	Z-Score is common stability variables for banks. Calculated as $\frac{ROA_{it} + \left(\frac{Eq_{it}}{TA_{it}}\right)}{\sigma(ROA)}$ where ROA_{it} is return on asset of bank i at time t, Eq_{it} is total equity of bank i at time t, TA_{it} is total assets of bank i at time t, the sum of all these is divided by the standard deviation of ROA.
DLLP	DLLP is discretionary loan provisions, proxied as earnings management.
BS	BS is the size of board of directors. BS is a major corporate governance variable which impacts the performance and stability of banks (Adams & Mehran, 2005; Bennedsen <i>et al.</i> , 2004).
Asset	Asset is log of total assets. Bank size has been found to matter for performance and stability, while varying studies reporting both positive and negative impact on performance and stability (Redmond <i>et al.</i> , 2007; Kasimodou <i>et al.</i> , 2006).
Dep	Dep is the total deposits to asset ratio. Deposits to total assets ratio of bank i at year t. Theoretically deposits acts as blood for survival of banks. Haddawee and Flayyih (2020) reported significant and positive impact of deposits on banks profitability.
Loans	Loans are total financing of the bank.
GDP	GDP is growth rate of gross domestic product
Inf	Inf is inflation rate of the country

Empirical Results

This section of the study provides empirical results. First it shows the results of stage 1 followed by descriptive statistics and correlations and the regression results of 2nd stage.

Breusch-Pagan and Hausman tests for model No.1 are significant which indicate that OLS and random models are not appropriate for both the Islamic and conventional banks, thus I use fixed effect model for estimation purposes. The results of fixed effects model are given in Table 1.

Table 1: Regression Results Model 1

Variable	Islamic Banks		Conventional Banks	
	Coeff.	t-Stats	Coeff.	t-Stats
C	0.002582***	0.004667	-0.015464**	2.848095
BEG NPL	0.581893***	0.059473	0.603839***	22.62706
CH NPL	0.681867***	0.041544	0.459935***	16.70386
CH Loans	-0.002731	0.007646	0.014531	1.612618
Adjusted R ²	78%		71%	
F-statistic	107***		181***	

The adjusted R² for Islamic banks is 78% with highly significant F-Stat value of 107. Similarly the adjusted R² for conventional banks is 71% with highly significant F-Stats value of 181.

Regression results shows significant positive impact of beginning non-performing loans and change in non-performing loans on the total loan loss provisions in both type of banks. While the impact of change in loans is not significant in both type of banks. These results are consistent with (Shawtari *et al.* 2015; Kanagaretnam *et al.* 2004 & Taktak *et al.* 2010). This indicates that these results can be used for further estimation. The residual of this model is used as estimated non-discretionary loan loss provisions. The residual is further subtracted from the total loan loss provisions to get the estimated value of discretionary loan loss provisions. The descriptive statistics for all the variables of Islamic and Conventional banks are given in Table 2 and 3 respectively.

Table 2: Descriptive Statistics (Islamic Banks)

Variable	N	Mean	St.Dev	Minimum	Median	Maximum	Skewness
ROE	92	0.0868	0.1002	-0.1101	0.0720	0.4459	0.9733
ROA	92	0.4835	0.8720	-2.8500	0.5650	2.3700	-1.0020
Z-Score	92	1.3055	1.5983	-2.7660	1.2954	5.6318	-0.0674
DLLPs	92	0.0621	0.0843	0.0011	0.0378	0.5215	3.5208
BS	92	8.6593	1.4773	7.0000	8.0000	14.000	0.8501
Asset	92	11.931	1.2086	9.0984	11.993	14.918	-0.1334
Dep	92	11.681	1.2358	8.4233	11.771	14.321	-0.2932
GDP	92	3.8932	2.0729	-1.2740	4.2171	7.8312	-0.6777
INF	92	8.6784	4.0152	0.9221	9.9183	16.410	-0.1069

The highest standard deviation in descriptive statistics is 4.01 pertains to inflation. It is because the inflation rate in 2011 of Pakistan was 16.41 which is comparatively high than other years, but its skewness is -0.06777. Rest of the variables behaved normally. Jarque-Bera tests of all the variables suggest that the data is normally distributed, the P-Value of all variables is more than 0.05.

The next step is to check the stationarity of the variables which is an essential step for panel data analysis, for this purpose this study use Levin–Lin–Chu (LLC), Im–Pesaran–Shin (IPS), Fisher–ADF tests. The results of the tests are given in table 2.1.

Table 2.1: Results of Stationary Tests Islamic Banks

Variable	N	LLC	Prob.	IPS	Prob.	Fisher ADF	Prob.
ROE	92	-0.3907	0.6520	1.3322	0.9086	4.4848	0.9730
ROA	92	-0.6217	0.2670	-0.9143	0.1803	15.924	0.1947
Z-Score	92	1.3055	0.5983	-2.7660	0.2954	5.6318	0.0674
DLLPs	92	-0.962	0.168	-0.783	0.216	11.438	0.3244
BS	92	-1.324	0.0927	-0.516	0.302	7.518	0.275
Asset	92	-1.343	0.2541	-1.5432	0.0982	9.1454	0.2123
Dep	92	-4.538	0.000***	-2.704	0.003**	30.488	0.002**
GDP	92	-1.426	0.0729	-1.2740	0.271	7.876	0.431
INF	92	0.789	0.785	1.070	0.857	4.466	0.973

Stationarity tests of the variables suggests that there is stationarity problem in the deposits of Islamic banks because the probability of all the tests pertaining to deposits are highly significant. Rest of the variables are non-stationary and can be used for further evaluation.

Table 3: Descriptive Statistics (Conventional Banks)

Variable	N	Mean	St.Dev	Minimum	Median	Maximum	Skewness
ROE	219	0.1285	0.1295	-0.8400	0.1600	0.3400	-2.8798
ROA	219	0.8122	1.4614	-7.0936	0.9500	3.7200	-2.7191
Z-Score	219	2.3007	2.0459	-3.0100	2.2761	7.0936	-0.1137
DLLPs	219	0.0701	0.0411	0.0154	0.0615	0.3199	2.4798
BS	219	8.7945	1.8643	5.0000	9.0000	13.000	0.2965
Asset	219	12.914	1.2174	9.0092	13.031	15.286	-0.6371
Dep	219	12.596	1.2622	8.6264	12.820	14.989	-0.7391
GDP	219	3.8463	1.9663	-1.2740	4.2171	6.5738	-0.7451
INF	219	8.6474	3.8604	0.9221	9.9183	16.410	0.8476

Since the data set is large of conventional banks compared to Islamic banks therefore, the standard deviation of inflation is under 4. All the variables used in the study behaved normally because the standard deviation of all variables is under 4.00 and the skewness of all variables is between -2.8 and 2.4. The probability of Jarque-Berra is higher than 0.05 of all variables therefore it is suggested normal distribution.

Table 3.1 presents the result of stationary tests of variables used for conventional banks.

Table 3.1: Results of Stationary Tests Conventional Banks

Variable	N	LLC	Prob.	IPS	Prob.	Fisher ADF	Prob.
ROE	193	-0.9023	0.2520	-1.305	0.6890	8.3564	0.7343
ROA	193	-0.7980	0.6435	-0.4543	0.4563	9.0924	0.1765
Z-Score	193	-0.5420	0.5431	-6.6760	0.4345	15.634	0.0872
DLLPs	193	-0.6092	0.1590	-0.9631	0.1076	19.852	0.4324
BS	193	-2.314	0.0721	-0.8327	0.2160	10.872	0.5211
Asset	193	-1.061	0.1442	3.9572	1.0000	22.234	0.675
Dep	193	-1.9321	0.0266**	3.102	0.099	9.1321	0.990
GDP	193	-0.4653	0.2973	-1.4709	0.1873	6.7853	0.143
INF	193	1.747	0.959	1.134	0.871	11.175	0.994

All the three stationary tests suggests that the data of the variables of conventional banks are non-stationary.

Table 4 and 5 presents the correlation amongst variables.

Table 4: Correlation (Islamic Banks)

Variable	ROE	ROA	Z-Score	DLLP	BOD	Asset	Dep	GDP	INF
ROE	1.000								
ROA	0.745	1.000							
Z-Score	0.695	0.917	1.000						
DLLP	-0.294	-0.255	-0.210	1.000					
BS	0.705	0.578	0.554	-0.394	1.000				
Asset	0.647	0.497	0.504	-0.044	0.454	1.000			
Dep	0.642	0.491	0.485	-0.029	0.452	0.997	1.000		
GDP	0.049	0.106	0.081	-0.126	0.133	0.028	0.018	1.000	
INF	0.040	-0.037	-0.02	0.095	-0.123	-0.095	-0.096	-0.448	1.000

Table 5: Correlation (Conventional Banks)

Variable	ROE	ROA	Z-Score	DLLP	BOD	Asset	Dep	GDP	INF
ROE	1.000								
ROA	0.766	1.000							
Z-Score	0.750	0.684	1.000						
DLLP	-0.615	-0.643	-0.537	1.000					
BS	0.164	0.165	0.036	-0.112	1.000				
Asset	0.511	0.507	0.438	-0.393	-0.022	1.000			
Dep	0.526	0.512	0.456	-0.394	-0.025	0.995	1.000		
GDP	0.146	0.068	0.038	-0.135	0.017	0.044	0.042	1.000	
INF	-0.058	-0.062	-0.005	0.096	-0.014	-0.092	-0.087	-0.478	1.000

The correlation of the variables suggests that there is acceptable correlation in the models except the assets and deposits which are highly correlated. In Islamic banks the correlation of these two variables is 99.7% while in conventional banks it

is 99.5%. Prior literature suggests that acceptance range of correlation in independent variables is less than 80% (Gujrati and Porter, 2003). Therefore, the independent variable "Dep" is excluded from the regression models. Furthermore the multicollinearity is also evaluated through VIF and found that the VIF values of all the remaining variables are just under 2.00.

In panel data analysis, the fixed effects model assumes entity-specific characteristics are correlated with the independent variables and controls for them by using only within-entity variation, though it drops time-invariant variables. The random effects model assumes no such correlation and uses both within- and between-entity variation, making it more efficient but potentially biased if the assumption is violated. The Hausman test is typically used to decide between the two.

Breusch-Pagan and Hausman tests suggest OLS and random effect model is not appropriate for ROE in Islamic banks, therefore fixed effect model is used. Breusch-Pagan test further suggest that OLS model is appropriate for ROA of these banks. Similarly these tests suggest the appropriation of fixed effect model for stability in Islamic banks.

Breusch-Pagan and Hausman tests suggests that random effect model is appropriate for ROE and fixed effect model is appropriate for ROA and Z-Score in conventional banks.

Table 6 and 7 shows the regression results of appropriate models 4, 5 and 6 for Islamic banks and conventional banks respectively.

Table 6: Regression Results (Islamic Banks)

Variable	ROE		ROA		Z-Score	
	Coeff.	t-Stats	Coeff.	t-Stats	Coeff.	t-Stats
C	-0.4949***	-7.862	-4.654***	-5.362	-1.613	-1.348
DLLP	-0.1516	-2.208	-0.861	-0.869	-0.671	-0.404
BS	-0.0028	-0.472	0.239***	3.795	-0.104	-0.765
Size	0.0477***	9.938	0.237**	3.739	0.286**	2.675
GDP	0.0027	1.074	0.420	0.723	0.066**	1.172
INF	0.0041**	3.215	0.216	0.851	0.024	0.849
Adjusted R ²	83.43%		37.90%		67.1%	
F-Stats	43.04***		11.40***		18.41***	

The adjusted R² for regression of ROE is 83% with highly significant F-Stats value of 43. Similarly regression of ROA shows the adjusted R² 38% with highly significant F-Stats value 11.4. The Z-Score shows the adjusted R² 67% with highly significant F-Stats value of 18.41.

The regression models show interesting results. The DLLP shows no significant impact on ROE, ROA and Z-Score. This indicates that managerial discretion regarding earnings management has no relation with efficiency and stability of these banks. Furthermore it can also be confirmed that EM of these banks is at least not harmful in terms of efficiency and stability. Size of the BOD negatively affects the ROA

consistent with the findings of Haddad (2024). While no significant impact of the size of BOD is observed on the ROE and Z-Score. Size of the bank positively impacts the efficiency and stability of Islamic banks. The reason of this might be the quality of assets because Islamic banks are based on real assets. GDP growth rate also impact positively on the stability of these banks. Consistent with the findings of Maria and Hussain (2023) it has also been observed that inflation rate positively impact the ROE of Islamic banks in Pakistan.

Table 7: Regression Results (Conventional Banks)

Variable	ROE		ROA		Z-Score	
	Coeff.	t-Stats	Coeff.	t-Stats	Coeff.	t-Stats
C	-0.1820*	-1.863	2.593*	1.653	7.569***	4.561
DLLP	-1.440***	-8.837	-22.16***	-11.46	-12.28***	-6.136
BS	0.0080*	1.956	0.0282	0.286	0.0850	0.402
Size	0.0234*	3.880	-0.023	-0.274	-0.392***	0.830
GDP	0.0061*	1.888	-0.023	-0.678	0.004	0.985
INF	0.0016	1.001	-0.008	-0.490	-0.008	0.663
Adjusted R ²	36%		63.3%		79.8%	
F-Stats	25.53***		23.12***		51.85***	

The adjusted R² for regression of ROE is 36% with highly significant F-Stats value of 25.53. Similarly regression of ROA shows the adjusted R² 63% with highly significant F-Stats value 23.12. The Z-Score show the adjusted R² 79% with highly significant F-Stats value of 51.85.

The DLLPs of conventional banks negatively impacts the ROE, ROA and Z-Score. Although the impact of DLLPs on ROE is low as compared to ROA and Z-Score but it is significant. This indicates that EM of these banks negatively impacts their efficiency and stability. The results shows “decreasing income” EM techniques are applied in these banks to reduce the ROE and ROA. Size of the BOD positively impacts the ROE with no significant impact on ROA and Z-Score. Size of the bank positively impacts the ROE of these banks but negatively impact the Z-Score consistent with the findings of (Laeven *et al.*, 2014 & Köhler, 2015). Similarly GDP growth rate positively impacts its ROE while no significant impact is observed on ROA and Z-Score. There is no association found of inflation rate with ROE, ROA and Z-Score of conventional banks in Pakistan.

Conclusion

Earnings management (EM) refers to the manipulation of financial statements to create a fabricated position of the bank, which carries adverse consequences for stakeholders and the wider economy. Although it is carried out within the boundaries of accounting standards and thus cannot be termed illegal, it remains unethical under

Shariah principles as it involves misrepresentation. Prior studies have documented the presence of EM in both Shariah-compliant and conventional banks.

This study investigated the impact of EM on the efficiency and stability of these banks, using a sample of 13 private conventional and 6 Islamic banks in Pakistan from 2002 to 2023. Efficiency was measured through ROE and ROA, while stability was assessed with the Z-Score. EM was proxied by discretionary loan loss provisions. The findings highlight that EM has implications beyond mere statistical significance, affecting both the operational efficiency and financial resilience of banks, thereby reinforcing the importance of addressing such practices in the sector.

Empirical results reveal a striking disparity between the EM practices of Islamic banks and their conventional counterparts. Specifically, EM did not exhibit a significant impact on the stability and efficiency of Islamic banks, suggesting that their EM practices are not harmful to stakeholders in terms of efficiency and stability. Furthermore, the absence of a significant relationship between EM and bank returns suggests that managerial discretion has not been exploited to manipulate earnings for the purpose of increasing or decreasing returns. In contrast, EM had a negative impact on the efficiency and stability of conventional banks, implying that managerial discretion has been employed to decrease returns. The findings, therefore, provide evidence that conventional banks exhibit a “decreasing earnings management” behavior.

The results carry important implications for regulators, bank management, and policymakers. For regulators and central banking authorities, the evidence supports the need for enhanced monitoring of loan loss provisioning practices in conventional banks, including stricter disclosure requirements and independent audits to reduce opportunities for EM that undermines stability. For Islamic financial institutions and their Shariah supervisory boards, the findings reinforce the value of strong governance and Shariah oversight mechanisms, demonstrating that these safeguards may help contain harmful EM. Policymakers can also use these insights to refine prudential regulations and capital adequacy standards, ensuring that incentives to engage in “decreasing EM” are minimized. Finally, bank managers and investors can draw on these results to strengthen internal controls, promote transparency, and safeguard stakeholder trust, thereby enhancing both market confidence and long-term financial stability.

Further studies are needed to explore additional efficiency metrics and to examine the motivations behind the adoption of decreasing EM techniques by conventional banks.

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Conflicts of interest/Competing interests

There is no conflict of interest/Competing interests

Availability of data and material

Data is publicly available.

Code Availability

The computer program results are shared through the tables in the manuscript.

Authors' Contributions

Not applicable.

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