

# IMPACT OF FISCAL PRESSURE ON FINANCIAL PERFORMANCE OF BANKING SECTOR IN PAKISTAN: MODERATING ROLE OF FINANCIAL LEVERAGE

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## Abstract

Banking institutions are facing increasingly fiscal constraints that impact their profitability and stability. However, there is limited research on this issue in developing economies like Pakistan. To fill this gap, this study examines the effect of fiscal pressure on the financial performance of banks in Pakistan, considering the moderating role of financial leverage. The analysis uses panel data from 20 banks listed on the Pakistan Stock Exchange (PSX) from 2013 to 2022, employing random effects regression methods. Results indicate that both the sales ratio ( $\beta = 1.262$ ,  $p < 0.05$ ) and expenditure ratio ( $\beta = 1.115$ ,  $p < 0.10$ ) have a positive effects on the return on assets, enhancing operational efficiency. Financial leverage significantly moderates the relationship between fiscal pressure and profitability negatively (interaction term  $\beta = -1.380$ ,  $p < 0.10$  and  $\beta = -1.440$ ,  $p < 0.05$ ), suggesting that higher debt levels increase risks and reduce profitability. The overall model explains a substantial portion of the variation in profitability (Adj.  $R^2 = 0.46$ ). Based on these findings, the study recommends that banks diversify income sources, improve cost management, and optimize leverage levels. Policymakers should also implement strong fiscal frameworks to maintain economic stability.

## 1. Introduction

The banking sector is a cornerstone of Pakistan's financial system, representing about 74 percent of financial sector assets and contributing up to 55 percent of the country's GDP (Center for Economic Research in Pakistan, 2024). It plays a vital role in driving economic growth through financial intermediation, mobilizing savings, and extending credit to the private sector, which fuels investment and consumption. Studies have demonstrated a strong correlation between bank credit and economic growth in Pakistan, identifying bank

lending as a significant catalyst for economic activities, job creation, and overall prosperity (Tahir et al., 2015). However, this impact is nuanced, as regulatory constraints and fiscal conditions can hinder banks' ability to optimally allocate credit (Ahmad et al., 2020).

Pakistan's banking sector is increasingly burdened by fiscal challenges, primarily driven by ongoing fiscal deficits, escalating public debt, intensifying tax burdens, and the government's significant dependence on commercial banks to finance these

deficits (Pakistan Banks Association, 2025). The increasing fiscal demand on banks, particularly through sovereign exposure, has crowded out credit availability to the private sector, raising the cost of funds and restricting lending capacity (IMF, 2024). Recent data shows that banks allocate almost 60% of their assets to government securities, one of the highest proportions among emerging markets, resulting in a pronounced sovereign bank link that limits lending to the private sector and heightens systemic risk (IMF, 2025). Government borrowing from banks surged to Rs 2.39 trillion during the July to March FY-2023 period, almost three times higher than the previous year, raising the investment-to-deposit ratio to a record level while suppressing the advances-to-deposit ratio (Pakistan Economic Survey, 2023). Such fiscal pressures can diminish banks' profitability and compromise financial stability, as lending growth slows and non-performing loans rise. Empirical examinations specifically on Pakistani banks have highlighted the dynamic adverse effects of fiscal policy shocks, predominantly tax policy changes, on key performance metrics such as return on assets and equity, stressing the vulnerability of bank profitability to macro fiscal conditions (Ahmed & Malik, 2021).

Priharta and Gani (2024) analyzed state-owned banks in Indonesia and found that non-performing loans (NPLs), which can increase under fiscal stress, had a significant negative effect on Return on Assets (ROA). They also documented that factors like the capital adequacy ratio (CAR) positively affected ROA, while foreign exchange rates negatively affected profitability. Their panel regression model explained nearly 89% of the variations in ROA, underscoring the key roles of credit risk and macroeconomic variables. Similarly, a study conducted in Pakistan revealed that credit risk is a significant negative determinant of both ROA and return on equity (ROE) in conventional banks. This negative relationship highlights how increased credit risk, often worsened by fiscal pressures, results in higher loan loss provisions and diminished profitability. The study also observed that bank size had a positive relationship with ROA, implying that larger banks are better equipped to absorb the effects of fiscal pressures (Khan et al., 2017). Furthermore, Obeid (2023) identified that high capital adequacy

ratios, reflecting prudent bank management, positively correlate with ROA, while higher NPL ratios adversely affect banks' asset returns. Macroeconomic conditions such as GDP growth have a positive impact on ROA through improved borrower solvency, reducing loan defaults.

Recent empirical studies on the Pakistani banking sector suggest that fiscal pressure, measured as the ratio of total sales to total tax, exerts a significant negative influence on banks' ROA. Research by Albertazzi and Gambacorta (2010) found that higher tax burdens reduce banks' profitability due to increased operational costs, particularly for smaller banks with limited tax optimization strategies. Similarly, Farooq et al. (2021) analyzed data from Pakistani commercial banks and confirmed an inverse relationship between tax-to-sales ratios and ROA, attributing this to reduced net earnings after tax obligations. However, Aslam (2024) observed that Islamic banks in Pakistan exhibit greater resilience to fiscal pressure compared to conventional banks, possibly due to different tax structures and profit-sharing mechanisms.

Empirical studies show that fiscal pressure through taxes and related expenses significantly impacts the ROA of banks. A study by Manzoor and Jalil (2021) investigated 23 banks in Pakistan over 2007-2020 using a Panel Vector Auto-Regressive (PVAR) model and found strong Granger causality between tax rates and ROA. The study concluded that fiscal pressures, manifested through taxes and expenses, influence banks' asset returns by changing the financial intermediary role of banks in the economy. Other research highlights that increased taxes raise banks' administrative and financing costs, which decreases profitability. Banks tend to transfer tax burdens to consumers and borrowers through higher fees and interest rates, further impacting asset returns negatively. The relationship between fiscal pressure to expenses and ROA is generally inverse, reflecting how fiscal and regulatory burdens can erode banks' operational efficiency and net asset profitability (Obeid, 2023). Butt and Chamberlain (2025) find that Islamic banks in Pakistan maintain stable ROA despite high expense-to-tax ratios due to their unique financial structures.

Financial leverage plays a crucial moderating role in the relationship between fiscal pressure and firm

performance measured by ROA in the banking sector by influencing how fiscal constraints impact profitability and risk. While leverage can enhance returns on equity through tax advantages, excessive leverage tends to increase financial risk and reduce ROA, thereby amplifying the negative effects of fiscal pressure, such as higher costs and liquidity constraints (Ali et al., 2024). Effectively managing fiscal pressures by weighing the advantages of debt financing against the dangers of financial distress is made possible by banks having the right amount of leverage (Li, 2025). Additionally, technological advancements like artificial intelligence can further moderate this relationship by improving operational efficiency and decision-making, thereby mitigating some adverse impacts of high leverage under fiscal pressure (Ben Rejeb and Merzki, 2024). Studies have also highlighted liquidity as another important moderator, where adequate liquidity strengthens the positive relationship between financial leverage and profitability in banks measured by ROA (Johnson et al., 2025; Patel and Kumar, 2024; Huang, 2024). Thus, financial leverage is a critical determinant of bank performance under fiscal pressures and requires careful strategic management to optimize ROA outcomes (Almasri et al., 2025).

The banking sector in Pakistan is confronted with considerable fiscal challenges, including elevated government borrowing, inflationary pressures, and macroeconomic instability, which potentially undermine financial performance by raising funding costs and diminishing profitability. The role of financial leverage, encompassing debt-to-equity ratios and capital structure choices as a moderating factor in this dynamic, remains insufficiently investigated, especially in emerging markets like Pakistan, where banks predominantly depend on debt financing.

Although prior studies address the direct impacts of fiscal stress on banking performance, there is a lack of clarity on whether financial leverage intensifies or alleviates these effects. This research seeks to analyze the influence of fiscal pressure on banks' financial outcomes, measured through ROA, while exploring how financial leverage modifies this relationship.

## 2. Materials and Methods

This explanatory research examines the impact of fiscal pressure on the financial performance of banking firms listed on the Pakistan Stock Exchange (PSX), while assessing the moderating roles of financial leverage. Using a quantitative approach, the study analyzes panel data, combining cross-sectional (20 banks) and time-series (10 years) dimensions, allowing for controlling unobserved heterogeneity and capturing dynamic effects, leveraging secondary sources such as annual reports and financial statements. The banking sector is selected due to its economic significance, higher tax obligations, and data transparency, with the chosen timeframe capturing key events like CPEC, IMF reforms, and the COVID-19 pandemic.

### 2.1 Econometric Model

Multiple panel regression data analysis is performed to determine the relationship between fiscal pressure, financial performance, and financial leverage as a moderator of banking firms. This approach allows the researchers to explore the correlation between one dependent and multiple explanatory variables (Ahmad et al. 2024), and it is used by several researchers (Ali and Ahmad 2021; Jadoon, Ali, & Tahir, 2018). The following econometric models were designed.

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 M_{it} + \beta_3 X_{it} * M_{it} + \beta_4 C_{it} + \epsilon_{it} \quad (1)$$

where  $Y_{it}$  represents the dependent variable,  $\beta_0$  is the constant term,  $\beta_1$  to  $\beta_4$  are vectors of explanatory variables,  $X_{it}$  indicates the independent variable,  $M_{it}$  is an independent and moderating variable,  $X_{it} * M_{it}$  is a result of independent and moderating variables,  $C_{it}$  is a control variable, and  $\epsilon_{it}$  is a random error. Based on the study variable, the following econometric models were designed.

### 2.2 Study Models

#### 2.2.1 Based Model (without moderation)

The base model (without moderation) examines the direct effect of the independent variable on the dependent variable, excluding any moderating influences (Hayes, 2018).

$$ROA_{it} = \beta_0 + \beta_1 FPSR_{it} + \beta_2 FPER_{it} + \beta_2 FL_{it} + \epsilon_{it} \tag{2}$$

Where  $ROA_{it}$  represents the dependent variable (proxy for a financial performance indicator), Return on Assets, for bank “i” at time “t”.

**2.2.2 Moderated Model (With interaction term)**

The moderated model (with interaction term) examines how the relationship between the independent and dependent variables changes depending on the level of a moderating variable, by including an interaction term in the analysis (Baron & Kenny, 1986).

$$ROA_{it} = \beta_0 + \beta_1 FPSR_{it} + \beta_2 FPER_{it} + \beta_3 FPSR_{it} * FL_{it} + \beta_4 FPER_{it} * FL_{it} + \mu_i + \gamma_t + \epsilon_{it} \tag{3}$$

Where  $ROA_{it}$  represents the dependent variable (proxy for a financial performance indicator), Return on Assets, for bank “i” at time “t”.  $FPSR_{it}$  is an independent variable (Sale Ratio, proxy for a fiscal pressure indicator), which is a fiscal pressure indicator for bank “i” at time “t”.  $FPER_{it}$  is an independent variable (Expenses Ratio, proxy for a fiscal pressure indicator), which is a fiscal pressure indicator for bank “i” at time “t”.  $FL_{it}$  is the moderating variable (financial leverage) for firm “i” at time “t”. The  $\beta$  coefficients represent the estimated effects of the respective variables and interaction terms. Interaction terms are represented by the product of independent variables and moderating variables ( $FPSR_{it} * FL_{it}, FPER_{it} * FL_{it}$ ). In this context, "t" denotes different time periods, "i" indicates different banks,  $\mu_i$  represents unobserved bank-specific effects, and  $\gamma_t$  represents year fixed effects.

**2.3 Panel Data Models**

The study used the panel data to determine the profitability of banking in Pakistan. Panel data consists of observations on multiple entities over multiple periods, allowing for more complex analysis than cross-sectional or time-series data alone (Baltagi, 2008). There are three different methods used for the measurement of the panel data; these are the FEM, REM, and POLS methods.

**2.3.1 Pooled OLS**

The pooled Ordinary Least Squares (OLS) model analyzes panel data by combining all observations without accounting for individual-specific effects, assuming unobserved heterogeneity is absent or uncorrelated with predictors (Wooldridge, 2010). While simple and useful as a baseline, it can produce biased results if these assumptions do not hold (Cameron & Trivedi, 2005). The model is expressed as

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \epsilon_{it} \tag{4}$$

$Y_{it}$  = outcome variable,  $X_{it}$  = predictor,  $\epsilon_{it}$  = disturbance term

**2.3.2 Fixed Effects Model (FEM)**

This model controls for time-invariant characteristics that could bias results by removing the influence of constant, entity-specific factors (Wooldridge, 2010). It filters out unobserved heterogeneity that does not vary over time, improving accuracy (Greene, 2018).

Individual effects are assumed fixed and accounted for through entity-specific dummy variables, which capture time-invariant traits unique to each unit. Thus, the fixed effects model estimates within-group variation, reflecting the average impact within each individual or group.

$$Y_{it} = \alpha_i + \beta_1 X_{it} + \gamma Di + \epsilon_{it} \tag{5}$$

The variable Di is a dummy variable that is specific to each individual, denoted by i.

**2.3.3 Random Effects Model (REM)**

The random effects model assumes unobserved effects are uncorrelated with explanatory variables and that variability across entities is random, not fixed (Cameron & Trivedi, 2005). It accounts for individual-specific effects as random variables, estimated through the method of moments, allowing control for time-varying confounders without assuming homogeneity (Greene, 2018). This model captures overall variance among individuals and estimates the average effect. Formally,

$$Y_{it} = \alpha + \beta_1 X_{it} + C_i + \epsilon_{it}$$

where  $C_i$  is the random effect unique to each individual, assumed independent of  $X_{it}$ .

**2.4 Model Selection Tests**

The choice of the best panel data model depends on the data and is guided by three main tests. The Chow test determines whether fixed effects are needed over pooled OLS by checking for individual-specific intercepts (Wooldridge, 2010). The Breusch-Pagan test decides if random effects are preferable to pooled OLS by testing the variance of individual effects (Breusch & Pagan, 1980). The Hausman test compares fixed and random effects to identify if individual effects correlate with regressors. If so, fixed effects are preferred; otherwise, random effects (Hausman, 1978). These tests ensure the model fits the data and assumptions, improving inference reliability (Cameron & Trivedi, 2005).

**Table -01: Model Selection Criterion**

Test	Null Hypothesis ( $H_0$ )	Alternative Hypothesis ( $H_1$ )	Decision Rule
<b>Chow Test</b>	All individual effects = 0 (no fixed effects needed) Pooled OLS is appropriate	$H_1$ : At least one individual effect $\neq 0$ (fixed effects matter) (individual intercepts differ)	If p-value $\leq \alpha$ -value, use Fixed Effects
<b>Breusch-Pagan Test</b>	Variance of random effects = 0 (no panel effect, pooled OLS valid)	Variance of random effects $> 0$ (RE is better)	If p-value $\leq \alpha$ -value, use Random Effects
<b>Hausman Test</b>	RE is consistent and efficient (no correlation between individual effects and regressors)	RE is inconsistent (correlation exists, FE preferred)	If p-value $\leq \alpha$ -value, use Fixed Effects

**3. Results and Discussion**

**3.1 Descriptive Statistics**

The descriptive statistics for the four variables (ROA, SRatio, ERatio, and FLev) with 220 observations each are presented in Table -02. All variable means and medians are extremely near to one another, suggesting symmetric distributions with little skewness around zero. With a standard deviation of 0.1134, ROA exhibits moderate variability and an average of approximately 26%. Values range from slightly negative to over 52%. When compared to

ROA, financial leverage (FLev) has a relatively narrow range and low variability, averaging around 0.77, indicating that firms generally use significant leverage. Because of their lower means and less variability, SRatio and ERatio both point to more stable ratios in the sample. The data distributions are generally flatter and less susceptible to extreme outliers, as indicated by the kurtosis values for all variables being below the benchmark of 3 for the normal distribution.

**Table -02: Descriptive Statistics**

	ROA	FPSR	FPER	FLev
Mean	0.261	0.286	0.235	0.769
Median	0.266	0.294	0.237	0.773
Maximum	0.528	0.399	0.320	0.949
Minimum	-0.010	0.183	0.143	0.602
Std. Dev.	0.113	0.067	0.049	0.102

Skewness	0.004	-0.016	-0.039	-0.022
Kurtosis	2.460	1.637	1.937	1.744
Observations	220	220	220	220

3.2 Correlational Analysis

The correlation matrix between Return on Assets (ROA), Sales Ratio (SRatio), Expenses Ratio (ERatio), and Financial Leverage (FLev) is displayed in the table-04. According to the findings, banks with higher sales ratios typically have marginally higher profitability because ROA and SRatio have a weak but statistically significant positive correlation (r = 0.121, p = 0.036). On the other hand, ROA and ERatio have almost no correlation (r = 0.003, p =

0.480), indicating that there is no significant linear relationship between profitability and expense ratio. Interestingly, there is a highly significant negative correlation between ROA and FLev (r = -0.675, p < 0.01), indicating that lower return on assets is strongly correlated with higher financial leverage. Other correlations between SRatio and FLev (r = -0.052, p = 0.220), ERatio and FLev (r = 0.033, p = 0.312), and SRatio and ERatio (r = -0.014, p = 0.419) are weak and not statistically significant.

Table-03: Correlation Matrix

		ROA	SRatio	ERatio	FLev
ROA	Pearson Correlation	1.000			
	Sig.				
SRatio	Pearson Correlation	.121*	1.000		
	Sig.	.036			
ERatio	Pearson Correlation	.003	-.014	1.000	
	Sig.	.480	.419		
FLev	Pearson Correlation	-.675**	-.052	.033	1.000
	Sig. (1-tailed)	.000	.220	.312	

\*. and \*\*. Correlation is significant at the 0.01 and 0.05 level

3.3 Results of Model Selection Test

The results of the three main model specification tests that were used to select the fixed effects FEM, REM, and pooled OLS for panel data analysis are shown in table-04. The null hypothesis is rejected in the Chow Test, which compares POLS and FEM. The significant F-statistic (F (19,195) = 5.12, p = 0.000) shows that the fixed effects model fits the data better than pooled OLS. Additionally, a significant result ( $\chi^2 = 98.45$ , p = 0.000) is obtained from the Breusch-Pagan Test comparing POLS and REM,

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rejecting pooled OLS in favor of the random effects model. Finally, the Hausman Test, which evaluates REM and FEM to determine which is better, yields a non-significant chi-square value ( $\chi^2(4) = 4.350$ , p = 0.3607), indicating that we are unable to reject the null hypothesis and, as a result, favor the random effects model over the fixed effects model. In conclusion, both FEM and REM outperform pooled OLS; however, the Hausman test indicates that REM is the best model for this set of data.

Table-04: Diagnostic Test Results

Test	Models	Results	Decision Rule
Chow Test	Pooled OLS vs Fixed Effect	F (19, 195) = 5.12 p-value= 0.000	Reject Ho. FEM is preferred over POLS.
Breusch-Pagan Test	Pooled OLS vs Random Effect	$\chi^2 = 98.45$ p-value= 0.000	Reject Ho. REM is preferred over POLS.
Hausman	Random Effect vs Fixed Effect	$\chi^2 (4) = 4.350$	Don't Reject

Test	Models	Results	Decision Rule
Test		p-value= 0.3607	Ho. REM is preferred over REM.

**3.4 Econometric Assumptions**

**3.4.1 Normality Tests**

The dependent variable ROA's normality test results are shown in the table-05. Based on a sample size of 220, the Shapiro-Wilk test statistic was 0.991 (p = 0.187), and the Kolmogorov-Smirnov test statistic

was 0.046 (p = 0.200, Lilliefors corrected). The assumption that ROA is normally distributed is supported by these significance values, which are higher than the typical cutoff point of 0.05 and show that the distribution of ROA does not significantly deviate from normality.

**Table-05: Tests of Normality**

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
ROA	.046	220	0.200*	.991	220	0.187

\*. This is a lower bound of the true significance.

**3.4.2 Assumption of Multicollinearity**

The table -06 presents the collinearity results, revealing that all tolerance values span from 0.206 to 0.296, exceeding the essential threshold of 0.10, but the corresponding VIF values range from 3.379 to 4.846, remaining below the generally accepted cutoff of 5. The results indicate that while moderate

correlations among the predictors are present, they are not enough to indicate a significant multicollinearity issue. As a result, there is no chance of multicollinearity distortion when using the independent variables in the model for regression analysis.

**Table-06: Multicollinearity**

Model	Collinearity Statistics	
	Tolerance	VIF
SRatio	0.206	4.846
ERatio	0.218	4.578
SRatio*FLev.	0.296	3.379
ERatio*FLev.	0.258	3.871

a. Dependent Variable: ROA

**3.4.3 Autocorrelation**

The table presents the Durbin-Watson statistic of 2.140 for the regression model with ROA as the dependent variable and ERatio and SRatio as predictors. The Durbin-Watson value, which ranges from 0 to 4, is used to detect the presence of autocorrelation in the residuals of the regression

model. A value close to 2 suggests that there is no significant autocorrelation, meaning the residuals are independent. Therefore, with a Durbin-Watson statistic of 2.140, the model meets the assumption of no autocorrelation in the error terms, supporting the validity of the regression results.

**Table -07: Autocorrelation**

Model	Durbin-Watson
ROA	2.140

**3.4.4 Heteroscedasticity Assumption**

The Breusch–Pagan test results in the table-08 indicate that the p-values exceed the 0.05 threshold, indicating that we do not reject the null hypothesis of homoscedasticity at the standard 5% significance level. This indicates that the model's residuals display constant variance and do not strongly suggest the

presence of heteroscedasticity. However, the closeness of the p-values to the 0.10 threshold suggests little evidence of variance instability. The minor heteroscedasticity present is insufficient to significantly affect coefficient estimates or threaten the validity of the regression results.

**Table-08: Results of Breusch–Pagan Test for**

Test Statistic	df	F-Statistic	p-value (LM)	p-value (F)
7.842	4	1.523	0.098	0.095

**3.5 Regression Results**

Table-09 shows the findings of two regression models that explain ROA: the Base Model (without interaction) and the Moderated Model (with interaction).

The base model's findings show that, although the expense ratio is still negligible, the sales ratio has a positive but statistically small impact on profitability. This suggests that increased returns on assets are partly correlated with sales growth, but without additional contributing factors, profitability cannot be explained by expense efficiency alone. These results are consistent with earlier research in the banking industry, which found that sales efficiency increased profitability. However, the impact of this effect was frequently mitigated by other factors like financial risk and cost effectiveness (Athanasoglou, Brissimis, & Delis, 2008; Pasiouras & Kosmidou, 2007). Similarly, Sufian and Habibullah (2009) pointed out that, especially in emerging nations, expense ratios typically have conflicting and negligible effects on bank profitability.

The moderated model includes interaction terms for financial leverage (FLev). Both the sales ratio and the expense ratio become significant predictors of profitability when financial leverage is added as a moderating factor, indicating that the explanatory power of both ratios is strengthened. The interaction terms' negative coefficients, however, show that too much leverage reduces the profitability-boosting effects of cost and sales efficiency. Higher debt raises financial risk and reduces the benefits of operational efficiency, which is consistent with agency theory and risk-return tradeoff arguments (Berger & Bonaccorsi, 2006; Margaritis & Psillaki, 2010). These findings are supported by Goddard, Molyneux, and Wilson (2004), who also highlighted that excessive dependence on debt lowers profitability over time by raising the chance of default, even though leverage can initially improve performance through financial discipline. As a result, the results validate that, in the banking industry, financial leverage is a significant but limiting factor in the relationship between sales, expenses, and profitability.

**Table-10: Random Effect Results**

Variable	Based Model		Moderated Model	
	Coefficient	t-Statistic	Coefficient	t-Statistic
SRatio	0.147	1.735	1.262**	2.647
ERatio	0.061	0.539	1.115*	1.947
ERatio*_FLev	---		-1.380*	-1.851
SRatio*_FLev	---		-1.440**	-2.346
C	0.777	13.750	0.203	5.594
R-squared	0.464		0.472	
Adjusted R-squared	0.457		0.462	
F-statistic	62.420		48.058	
Prob(F-statistic)	0.000		0.000	

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01\*

#### 4. Conclusion and Implications

##### 4.1 Conclusion

The present study examined the influence of fiscal pressure on the financial performance of the Pakistani banking system, with particular emphasis on the moderating effect of financial leverage. The empirical findings indicate that fiscal pressure indicators, specifically the sales ratio and expenditure ratio, significantly influence bank profitability as determined by return on assets (ROA). An elevated sales ratio was shown to significantly influence operational efficiency, augment revenue creation, and eventually improve asset returns. In contrast, the expense ratio had a more complicated impact when banks effectively control operating expenses the detrimental effect is alleviated but in the presence of inefficiencies or excessive expenditures, profitability suffers. Furthermore, the study emphasizes the significant function of financial leverage as a moderating element. The findings indicate that leverage worsens the detrimental impacts of fiscal pressure, rendering banks with elevated debt levels more susceptible to variations in fiscal conditions. Excessive leverage diminishes profitability and exacerbates financial risks, thereby undermining the stability and resilience of banks during fiscal hardship.

##### 4.2 Recommendations

- Banks should strengthen operational efficiency by diversifying income sources, improving sales strategies, and investing in digital technologies to sustain profitability under fiscal pressures.
- Strict monitoring and rationalization of operating expenses are necessary to minimize cost inefficiencies and prevent profit erosion.
- Financial leverage should be carefully managed, with banks maintaining an optimal debt–equity mix to avoid the risks associated with excessive borrowing.
- Regulators should encourage prudent lending and capital adequacy standards while formulating fiscal policies that reduce volatility in the banking sector.
- Investors are advised to prioritize banks with lower leverage and sound cost-control mechanisms, as these institutions are more resilient to fiscal fluctuations.

- Future banking strategies should integrate robust risk management practices, including stress-testing, to prepare for adverse macroeconomic and fiscal shocks.

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