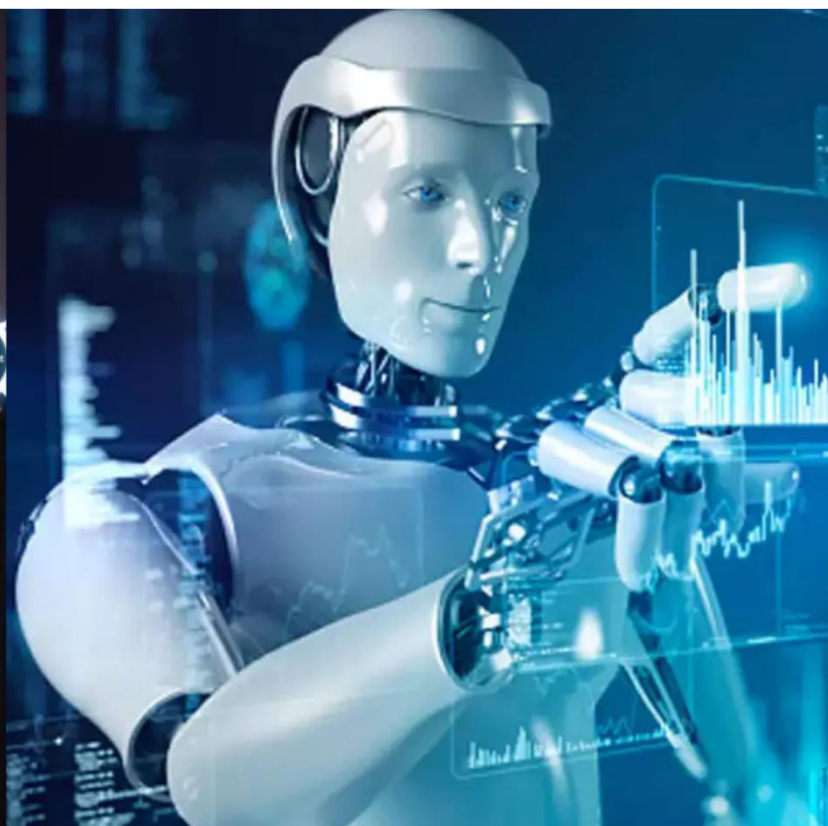




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Assessing the Impact of Interest Rate Changes on Profitability of Foreign and Private Sector Banks in India

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ABSTRACT: This study examines the influence of the Reserve Bank of India's (RBI) repo rate on the profitability of selected commercial banks in India over the period FY 2018–2023. Using financial modeling and statistical analysis, the paper explores how changes in the repo rate affect key profitability metrics—Net Interest Margin (NIM), Return on Assets (ROA), Return on Equity (ROE), and Net Profit—across four banks: HSBC India, Standard Chartered India, DBS Bank India (foreign banks), and Kotak Mahindra Bank (private domestic bank). The research reveals varying degrees of sensitivity to repo rate changes, with foreign banks generally exhibiting stronger responsiveness than domestic banks. The findings have significant implications for monetary policy transmission, bank risk management, and investor decision-making.

I. INTRODUCTION

The banking system is a foundational element of any economy, and its profitability is an indicator of both financial health and policy effectiveness. In India, the Reserve Bank uses the repo rate to control inflation and manage liquidity. Interest rate movements directly affect a bank's cost of funds and revenue streams.

While past studies have discussed sector-level effects of monetary policy, this research zooms in on specific institutions, comparing the impact of repo rate changes on profitability across different banking models. It becomes particularly relevant in the post-COVID monetary landscape, where policy cycles have swung from easing to tightening rapidly.

II. LITERATURE REVIEW

Theoretical Foundation

- **Net Interest Margin Theory** explains how banks manage income and costs from interest-sensitive assets and liabilities.
- **The Fisher Effect** links nominal interest rates to real rates and inflation expectations, affecting real bank earnings.
- **Liquidity Preference Theory** suggests that interest rates reflect the cost of liquidity; higher rates reduce lending and potentially lower profits.
- **Asset-Liability Management (ALM)** addresses interest rate mismatches and profitability through hedging, gap analysis, and rebalancing strategies.

Empirical Studies

- **Global:** English et al. (2012) found declining profitability during low interest periods in advanced economies. Borio et al. (2017) confirmed these trends across 14 countries.
- **India:** Sinha & Ghosh (2010) highlighted poor profitability under volatile rates. Chakraborty & Das (2021) demonstrated lagged policy transmission in profitability metrics.
- **Foreign Banks in India:** RBI (2020) reported higher rate sensitivity due to funding structure and client base. Narayan & Singh (2022) found faster profitability response in HSBC and Standard Chartered.

Literature Gap

Few comparative studies exist between foreign and private Indian banks, particularly with post-pandemic data and bank-specific modeling. This study fills that gap.

III. RESEARCH METHODOLOGY

Research Design

The study follows a **quantitative, descriptive, and analytical** approach:

- Descriptive to summarize trends.
- Analytical to examine statistical relationships.

Sample

- **Banks:** HSBC India, Standard Chartered India, DBS India, and Kotak Mahindra Bank.
- **Period:** FY 2018–2023.
- **Technique:** Judgmental sampling based on data availability and operational scope.

Variables

- **Independent:** RBI Repo Rate (%)
- **Dependent:**
 - Net Interest Margin (NIM %)
 - Return on Assets (ROA %)
 - Return on Equity (ROE %)
 - Net Profit (₹ Cr)

Data Sources

- Annual Reports (2018–2023)
- RBI Monetary Policy Bulletins
- CMIE Prowess, Moneycontrol

Analytical Tools

- Descriptive statistics
- Graphical trend analysis
- Pearson correlation
- Linear regression modeling

IV. RESULTS AND ANALYSIS

Trend Overview

- ❖ The **repo rate** declined from 6.25% in FY18 to 4.00% in FY21 due to the pandemic, then rose sharply to 6.50% in FY23 due to inflationary pressures.
- ❖ **Profitability metrics:**
 - Kotak Mahindra consistently performed well.
 - Foreign banks showed more volatility in ROE and Net Profit.
 - NIM and ROA remained relatively stable across banks.

Correlation Results

Bank	Metric	Correlation
HSBC	ROE	+0.977
Standard Chartered	Net Profit	+0.975
Kotak Mahindra	Net Profit	+0.990
DBS India	Net Profit	+0.412

Interpretation: Strong positive relationships suggest banks profit more as repo rates increase, likely due to improved interest spreads.

Regression Analysis

Bank	Metric	R ²	p-value	Slope (β_1)
HSBC	ROE	0.955	0.004	+0.77
Standard Chartered	Net Profit	0.952	0.005	+₹29.91 Cr
Kotak Mahindra	Net Profit	0.981	0.001	+₹248.38 Cr
DBS	Net Profit	0.170	0.490	+₹10.34 Cr

Only DBS showed weak significance, possibly due to its unique expansion model and overseas integration.

V. DISCUSSION

The study confirms that interest rate policy significantly affects bank profitability, especially in institutions with strong loan portfolios or efficient ALM practices. The responsiveness of Kotak Mahindra suggests a close alignment with RBI policy and reliance on domestic interest-sensitive sectors. Meanwhile, foreign banks show high statistical significance but operational constraints may cause delayed impacts.

DBS Bank, with a retail expansion phase and lower disclosure granularity, reflects an outlier pattern.

IMPLICATIONS

For Bank Managers

- Prioritize dynamic ALM frameworks.
- Strengthen forecasting to pre-empt policy changes.
- Diversify revenue sources to mitigate rate shocks.

For Policymakers

- Repo rate remains an effective tool for bank profitability regulation.
- Transmission mechanisms vary; tailored policy nudges may be required.

For Investors

- ROE and Net Profit are reliable indicators of interest rate responsiveness.
- High correlation may signal robust rate-spread management.

VI. CONCLUSION

The repo rate significantly affects banking profitability in India. Both foreign and private banks exhibit measurable sensitivity, with variations based on business model, funding strategy, and market focus.

- Kotak Mahindra shows the strongest linkage.
- Foreign banks reflect significant but complex reactions.
- The RBI's policy effectiveness in monetary transmission is empirically evident.

VII. LIMITATIONS & FUTURE SCOPE

Sample limited to four banks.

Excludes other variables (inflation, fiscal policies, global shocks).

Future research may adopt multi-variable models or include public sector banks.

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