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Trend and Volatility Analysis of AU Small Finance Bank & Equitas Small Finance Bank

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Abstract

This study conducts a comparative analysis of AU Small Finance Bank and Equitas Small Finance Bank with a focus on return behavior, volatility dynamics, and financial performance. Leveraging daily stock price data and financial indicators from FY2019 to FY2023, the research applies econometric tools including the Augmented Dickey-Fuller (ADF) test, ARCH-LM test, and the GARCH(1,1) model to capture volatility clustering in stock returns. Additionally, key financial metrics such as Net Profit, Return on Assets, and CASA ratio are compared to assess operational performance.

The study is guided by three hypotheses, examining differences in return patterns, the effectiveness of volatility modeling, and comparative financial strength. Results indicate that Equitas SFB demonstrates higher average returns but also greater volatility, while AU SFB shows more consistent performance and financial stability. The GARCH model successfully captured volatility patterns in both banks, validating its application in the Indian small finance sector. The findings offer meaningful insights for investors, regulators, and policy-makers aiming to balance risk and return in emerging banking institutions.

Keywords: AU Small Finance Bank, Equitas SFB, GARCH, Volatility Clustering, CAMEL Framework, Financial Performance, Small Finance Banks

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1. Introduction

Small Finance Banks (SFBs) were established under RBI's initiative to deepen financial inclusion, targeting underserved segments like small farmers, MSMEs, and low-income households. Among the licensed SFBs, AU Small Finance Bank (AU SFB) and Equitas Small Finance Bank (Equitas SFB) have emerged as market leaders. Despite operating within the same regulatory framework and serving similar customer bases, the two banks have demonstrated varying degrees of success in areas such as profitability, operational efficiency, digital innovation, and risk management. AU SFB, initially a non-banking finance company (NBFC), has grown rapidly with a strong footprint in the north and west of India, leveraging its legacy customer base. Equitas SFB, with roots in microfinance, has emphasized southern markets and pioneered several financial inclusion initiatives. Both banks have successfully listed on the Indian stock exchanges, attracting interest from institutional and retail investors alike.

With increased investor participation comes the need to assess return beh*avior and risk characteristics. Understanding how stock prices of these banks behave in response to market stimuli is crucial for portfolio management and regulatory oversight. Volatility, in particular, plays a significant role in financial decision-making as it reflects the uncertainty and risk

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associated with asset returns. Modeling volatility in the banking sector helps in evaluating market efficiency, risk exposure, and investor sentiment.

This study aims to provide a comparative evaluation of return volatility and financial performance of AU and Equitas SFB. It applies the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model to examine volatility clustering, a phenomenon where periods of high volatility are followed by similar periods. In addition to econometric modeling, the study uses key financial indicators—including net profit, return on assets (ROA), cost-to-income ratio, and capital adequacy—to offer a holistic view of bank performance. The analysis covers data from FY2019 to FY2023, providing insights into pre- and post-pandemic financial behavior.

By examining these aspects, the study contributes to the growing literature on financial stability and market dynamics of small finance banks in India. It also serves as a useful guide for regulators, investors, and financial analysts interested in risk-return trade-offs within the SFB segment.

Objectives of the Study

- To examine the return patterns and volatility of AU and Equitas SFB stocks.
- To apply GARCH models for capturing volatility clustering.
- To compare performance metrics, digital initiatives, and investor implications.

2. Literature Review

Bollerslev (1986) Bollerslev extended Engle's ARCH model by developing the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) framework, allowing for better modeling of time-varying volatility in financial time series. The GARCH(1,1) model became a widely used tool in capturing volatility clustering and persistence in stock returns. This study uses the same framework to analyze volatility in AUSFB and ESFB.

Sengupta and Roy (2020) emphasized the transformative role of SFBs in bridging the financial access gap in rural and semi-urban areas. Both AU and Equitas were shown to contribute to credit access for micro-entrepreneurs and self-help groups. However, the study did not evaluate performance volatility or digital readiness—areas this paper expands upon.

Sharma and Goyal (2021) analyzed the extent to which digitalization impacts customer acquisition and retention among Indian SFBs. Their research highlighted that AU SFB's adoption of innovations like video banking and QR-based payments had significantly improved customer outreach. Equitas SFB was also praised for its "Equitas 2.0" initiative but noted as lagging behind AU in reach and automation maturity.

ICRA (2022) A sectoral report by ICRA examined asset quality trends and risk metrics of Indian SFBs. AU SFB had the lowest Gross NPAs among peers and was praised for maintaining a robust risk management structure. Equitas was marked as moderately exposed due to higher dependence on unsecured MSME lending. This aligns with the current paper's findings on the stability differences between the two banks.

Mahajan (2022) conducted a comparative study across five SFBs, including AU and Equitas, using 40 financial parameters such as net profit, ROE, CASA, and asset quality. The findings indicated AU Bank outperformed Equitas in approximately 67% of the metrics. This supports the current research's observation that AU holds stronger financial fundamentals than Equitas.

Patra and Padhy (2023) applied ARCH-GARCH models to Indian bank stocks, including private and public sector banks, and found that financial institutions exhibit significantly high volatility persistence, especially around regulatory changes and macroeconomic events. The current study follows a similar approach to explore whether these findings hold true in the case of SFBs.

Yamijala and Kothapalli (2023) In their study titled *"Trend Analysis of AU Small Finance Bank and Equitas SFB"*, the authors investigated stock return behaviors using descriptive statistics and GARCH models. They found both banks exhibited volatility clustering and non-normal return distributions. However, they did not extend the analysis to operational or digital banking metrics, which this study addresses comprehensively.

3. Research Method

The study adopts a **quantitative and comparative research design**, aimed at analyzing stock return behavior and financial performance of AU Small Finance Bank and Equitas Small Finance Bank. The research is based entirely on **secondary data** and focuses on modeling volatility using econometric tools and evaluating performance using key financial indicators.

Data Sources

- Daily closing stock prices:
  - AUSFB: July 10, 2017 – May 31, 2023
  - ESFB: November 2, 2020 – May 31, 2023
- Financial reports sourced from the National Stock Exchange (NSE), Yahoo Finance, and the banks' official disclosures.

Methodology

- Returns Calculation:
  Daily log returns were computed using Rt=ln⁡(Pt/Pt−1)R_t = \ln(P_t/P_{t-1})Rt =ln(Pt/Pt−1)
- Tests Conducted:
  - ADF Test for stationarity
  - ARCH-LM Test for heteroskedasticity
  - GARCH(1,1) model for volatility
- Financial Performance Metrics:
  - ROA, ROE, Net Profit, Cost-to-Income ratio, etc.

Hypotheses

H_{01}: There is no significant difference in the average stock returns and volatility between AU SFB and Equitas SFB.

H_{02}: GARCH(1,1) modeling does not significantly capture volatility clustering in AU and Equitas SFB stock returns.

H_{03}: There is no significant difference in financial performance indicators (e.g., ROA, Net Profit, CASA ratio) between AU and Equitas SFB.

4. Results and Discussion

H_{01}: Return and Volatility Comparison

Metric	AU SFB	Equitas SFB
Mean Return	0.000725	0.001531
Std Deviation	0.026063	0.026313

Metric	AU SFB	Equitas SFB
Skewness	–0.45	+0.76
Kurtosis	8.44	9.23

- Observation: Equitas has slightly higher mean returns and volatility.
- Inference: Both stocks show leptokurtic distribution and volatility clustering.
- Decision: Reject H_{01}. There is a statistically observable difference in return characteristics.

H_{02}: GARCH Model Effectiveness

- ADF Test: Both return series are stationary ($p < 0.01$).
- ARCH-LM Test: Confirmed significant ARCH effects.
- GARCH(1,1) results: $\alpha + \beta \approx 0.9$ in both cases → shows strong volatility persistence.
- Inference: GARCH is effective in modeling volatility clustering.
- Decision: Reject H_{02}. The GARCH(1,1) model captures return volatility well for both banks.

H_{03}: Financial Performance Comparison

Indicator	AU SFB	Equitas SFB
Net Profit (FY22-23)	₹1,429 Cr	₹581 Cr
Net Interest Margin	6.2%	7.1%
ROA	1.8%	1.3%
Cost-to-Income Ratio	59%	63%
CASA Ratio	34%	27%

- Observation: AU outperforms in profitability, efficiency, and asset utilization.
- Exception: Equitas has slightly better NIM, suggesting strong interest income efficiency.
- Decision: Reject H_{03}. There is a significant difference in financial performance.

4.1 Descriptive Statistics

Metric	AU SFB	Equitas SFB
Mean Return	0.000725	0.001531
Std Deviation	0.026063	0.026313
Skewness	-0.45	+0.76
Kurtosis	8.44	9.23

- Equitas SFB shows marginally higher average returns and positive skew, suggesting potential for positive outliers.
- Both return series show leptokurtic distribution—indicating heavy tails and volatility clusters.

4.2 Stationarity and Volatility Tests

- ADF Test: Both stock return series were stationary ($p < 0.01$).
- ARCH-LM Test: Significant for both banks ($p < 0.01$), justifying use of GARCH models.

4.3 GARCH(1,1) Model Results

- Both banks exhibited strong GARCH effects with high $\alpha + \beta$ (close to 0.9), signifying high volatility persistence.
- AU SFB's volatility appeared more stable compared to Equitas's slightly spiked clusters.

4.4 Comparative Financial Performance

Indicator	AU SFB	Equitas SFB
Net Profit (FY22-23)	₹1,429 Cr	₹581 Cr
Net Interest Margin	6.2%	7.1%
Cost to Income Ratio	59%	63%
Return on Assets (ROA)	1.8%	1.3%
CASA Ratio	34%	27%

- AU SFB shows superior net profits, lower cost ratios, and higher asset efficiency.
- Equitas SFB, though lagging slightly in financials, has strong digital presence and superior NIM.

5. Implications and Recommendations

For Investors

- Equitas offers potential for higher short-term gains due to positive skew.
- AU SFB is preferable for long-term investors seeking consistency and stronger fundamentals.

For Regulators

- The study reaffirms the role of SFBs in deepening inclusive banking and innovation.
- Emphasis should be placed on strengthening capital buffers and liquidity management given volatility persistence.

6. Limitations

- The study covers only two SFBs and a limited time frame.
- Only GARCH(1,1) model used; other variants (e.g., EGARCH, TGARCH) could be explored in future research.

7. Conclusion

This study conducted a comparative analysis of AU Small Finance Bank and Equitas Small Finance Bank to understand their return behavior, volatility patterns, and financial performance. Using daily stock return data and key financial ratios over the period FY2019–FY2023, the study applied descriptive statistics and the GARCH(1,1) model to identify volatility clustering and market behavior.

The results indicated that both banks exhibit non-normal return distributions with significant volatility clustering, as confirmed by the ARCH-LM and ADF tests. Equitas SFB showed slightly higher average returns but also higher volatility, whereas AU SFB demonstrated more stable return behavior. The GARCH(1,1) model effectively captured time-varying volatility in both return series, supporting its suitability for modeling financial market risks in small finance banks.

Financial performance analysis showed that AU SFB consistently outperformed Equitas SFB across multiple indicators, including Net Profit, ROA, and cost efficiency. While Equitas has made considerable progress in digital adoption and customer outreach, AU's operational strength, profitability, and market stability offer it a competitive edge.

In conclusion, AU SFB appears to be financially stronger and less volatile, making it a more favorable option for risk-averse investors. Both banks, however, play a vital role in advancing financial inclusion and digital banking in India. Policymakers and regulators must continue to support the SFB sector with a balanced focus on innovation, inclusion, and risk management.

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