Analysis of the Impact of Structural Variables on Bank Financial Stability: Evidence from the Iranian Banking Industry

Extended Abstract

purpose

The financial stability of banks is a critical element of the broader economic system, as banks are the primary financial intermediaries within an economy. Financial stability refers to the ability of a bank to withstand economic shocks, absorb losses, and maintain its critical functions under adverse conditions. In the context of Iran, where the banking sector faces unique challenges such as economic sanctions, inflationary pressures, and regulatory uncertainties, it is crucial to understand the factors that contribute to or detract from the stability of financial institutions. This study aims to analyze the impact of various structural variables, such as income structure, cost structure, asset structure, and capital structure, on the financial stability of banks in Iran. By focusing on listed banks on the Tehran Stock Exchange (TSE), this research explores how these internal variables influence the resilience of banks in the face of financial pressures.

Methodology

To achieve the research objectives, panel data for 15 Iranian banks listed on the Tehran Stock Exchange over the period from 2015 to 2023 was utilized. The study adopts two econometric methods: the Fixed Effects (FE) model and the Generalized Method of Moments (GMM). The FE model helps control for unobserved heterogeneity by considering individual-specific characteristics of each bank, while GMM is used to address potential endogeneity issues and obtain more reliable estimates. The study examines the relationship between structural variables and financial stability, measured by the Z-score index. This index is commonly used in banking studies as it incorporates profitability, risk, and leverage to determine a bank's likelihood of survival under stress conditions. The structural variables analyzed in this study include income structure (profit margin), cost structure, asset structure (bank size), and capital structure (equity ratio).

Finding

The empirical results reveal several key findings regarding the impact of structural variables on the financial stability of banks. The study finds that higher profit margins are associated with better financial stability. Banks with higher profitability have a stronger capacity to absorb financial shocks and are better equipped to manage operational risks, as they generate a greater return on their assets. The equity ratio, representing the proportion of a bank’s financing derived from its own capital, also has a positive and significant impact on financial stability. Banks with higher equity ratios tend to be more resilient during financial downturns, as they have more internal

resources to absorb losses and reduce their reliance on external debt. The results indicate that larger banks, due to their diversified income sources, have higher financial stability. Larger banks benefit from economies of scale and are better able to manage risks associated with market fluctuations, making them more robust against systemic shocks. On the other hand, higher non-performing loans (NPL) ratios are found to negatively affect financial stability. Banks with high levels of non-performing loans face greater credit risks, which can lead to significant losses and undermine their capital base. The study also shows that higher leverage, which refers to the proportion of debt in a bank's capital structure, has a negative effect on financial stability. Banks with high levels of debt face increased liquidity risks and are more vulnerable to financial crise.

Conclusion

The findings of this study underscore the importance of managing structural variables to ensure the financial stability of banks. Banks that focus on improving operational efficiency, strengthening their capital base, and diversifying their revenue streams are better equipped to withstand economic shocks. In contrast, excessive reliance on debt and the accumulation of non-performing loans pose significant risks to financial stability. These results align with contemporary financial theories, such as capital structure theory and financial stability perspectives, which emphasize the need for an optimal balance between debt and equity. Furthermore, this research highlights the importance of integrating risk management strategies with operational performance improvements. The study also suggests that future research should investigate the impact of external factors, such as macroeconomic conditions and regulatory changes, on the financial stability of banks. Given the dynamic nature of the banking industry and the ongoing economic challenges in Iran, further studies utilizing broader datasets and longitudinal data could provide deeper insights into the evolving relationship between structural variables and financial stability.