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Determinants of commercial bank interest rate spread in Papua New Guinea – an empirical analysis

Non-technical summary

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The core business of commercial banks as financial intermediaries involves pooling funds from depositors and channelling to economic agents, both at a cost. The difference in costs, that is, the difference between lending and deposit rates, is referred to as the interest rate spread (or margin). For financial intermediaries, the spread represents their gross profit margin, while for regulators and policymakers, the spread draws concern to the efficiency of the financial intermediation process, which has implications for inclusive and overall economic growth and the transmission of monetary policy. A stable banking system requires sufficient profits, while economic efficiency demands that the costs of intermediation in the form of interest rate spread to be competitive. Thus, policymakers have an interest in ensuring that the banks remain profitable, but not excessively so.

In the 1990s, financial liberalisation flourished across most developing and emerging economies. Similarly, PNG dismantled controls through several financial sector reforms, bank reconstruction and privatisation, and liberalisation towards market-oriented settings of interest rates. Legislative changes allowed for improved governance, limited government influence, and increased oversight and supervision of the operations of financial institutions. The realised benefits of these changes included a decline in overall non-performing loans, improved capital adequacy requirements, and an increase in asset size of licensed financial institutions. Despite these gains, interest rate spread continues to remain wide.

Commercial banks' interest rate spread in PNG has averaged around 9.0 percent since 2004, with banks remaining highly profitable. This maybe a reflection of the oligopolistic nature of the banking sector, the high-risk premiums, as well as the high cost of banking operations in PNG. High interest rates on loans have been identified as one of the key challenges encumbering businesses and investments in PNG. For deposits, the very low rates could be explained by the liquidity overhang in the banking system as well as the shallow financial market, which offer limited options for investment. These has posed challenges for the central bank in influencing domestic interest rates. Compared to other Pacific Island countries, PNG has the second highest interest rate spread after Solomon Islands – the spread is high by both regional and international standards.

This leads to the research question. *What are the determinants or factors that drive the high commercial bank interest rate spread in PNG?*

The merits of identifying the factors are undisputable, particularly for economies with underdeveloped capital and financial markets, predominately dependent on the banking sector. For policy makers, particularly the central bank, establishing the factors that determine the spread is important. The outcome of the empirical findings will assist towards identifying key areas that may need appropriate policy design and intervention, including oversight.

In this study, from available data using a rigorous statistical testing process, appropriate economic and business in-house variables were selected. These include government's net fiscal position, the Treasury bill rate (364-day) and the real effective exchange rate, commercial banks' ratio of loans to deposits, liquid asset ratio, external liabilities to assets and ratio of administrative expenses to interest income. The paper uses the Autoregressive Distributed Lag (ARDL) bounds test econometric modelling technique in estimating the short-run and long-run relationship between these variables and the spread.

The empirical results shows that in the short-run, past interest rate spreads, government deficit balance, 364-day T-bill rate, total liquid assets, the real effective exchange rate, external liabilities to assets and administrative expenses to total revenue help explain changes in the spread. The results suggests that past increases in the spread have an effect on current increases. Government budgets have implications for interests where an improvement in the government's fiscal position induces a reduction in the spread, while tight fiscal position (through budget deficits) triggering increases in T-bill rates induces a widening of the spread.

An appreciation in the real effective exchange rate will lead to a narrowing in the spread, suggesting that as commercial banks' external exposure is reduced through an appreciation, this is passed on to lower lending rates. An increase in the ratio of loans to deposits will also induce a reduction in the interest rate spread. This suggests that as the volume of loans in proportion to deposits increases, deposit rates will increase faster than lending rates. Other variables that will lead to an increase in the interest rate spread are: increase in the liquid asset ratio - where an increase in commercial bank liquidity will lead to a fall in deposits; an increase in the ratio of external liabilities to total assets - as commercial banks' external exposure increases, lending rates will be hiked to mitigate associated risks; and an increase in the ratio of administrative expenses to income - reflecting the general increase in cost of doing business.

Long-run results showed that the 364-day T-bill rate and commercial bank liquid asset ratio are statistically significant in explaining changes in the interest rate spread. An increase in the T-bill rate will lead to a reduction in the spread while and an increase in the liquid asset ratio will lead to increase the interest rate spread. These suggests that in the long-run, deposit rates are likely to increase in response to an increase in T-bill rates, narrowing the spread, while an increase in commercial banks' liquid assets will lead to a fall in deposit rates, increasing the spread.

Conclusion and policy implications

In summary, the findings from this paper suggest that government's fiscal operations, commercial banks' external positions, as well as the cost of doing business and liquidity conditions are major factors driving interest rate spread in PNG. These findings are similar to related studies on peer economies.