

THE EFFECT OF COVID-19 ON REVENUE DIVERSIFICATION, PROFITABILITY AND RISK OF BANKS IN ZAMBIA

Kelvin Mukolo Kayombo*; Grace Lusana Kamwengo**; Moses Katebe***;
Elisha Sakutemba****

* School of Business,
ZCAS University, Dedan Kimathi Road,
Lusaka, Zambia
Email id: kelvin.kayombo@zcasu.edu.zm

**School of Business,
ZCAS University, Dedan Kimathi Road,
Lusaka, Zambia
Email id: grace.kamwengo@zcasu.edu.zm

***School of Business,
ZCAS University, Dedan Kimathi Road,
Lusaka, Zambia
Email id: moses.katebe@zcasu.edu.zm

****School of Business,
ZCAS University, Dedan Kimathi Road,
Lusaka, Zambia
Email id: Elisha.Sakutemba@zcas.edu.zm

DOI: 10.5958/2319-1422.2022.00017.0

ABSTRACT

The aim of this study was to evaluate the effect of the COVID-19 pandemic on revenue diversification and performance of banks in Zambia. The study was quantitative in design. Herfindahl Hirschmann Index measures for each bank to account for diversification between interest and non-interest activities were constructed, while the Risk Adjusted Return on Average Assets to measure bank profitability and the Z-Score to measure bank income volatility were computed. SPSS's One-way repeated measures ANOVA was then used to analyse panel data from 16 of the 18 commercial banks in the country.

The study concluded that there was no statistically significant difference in bank revenue diversification following the outbreak of COVID-19 in Zambia. With respect to bank performance, the study found that there was a statistically significant increase in bank profitability as measured by RAROOA in the aftermath of the pandemic. Similarly, the study found that there was a statistically significant increase in bank income volatility following the COVID-19 pandemic.

Although bank profitability increased in the pandemic era, income volatility also increased thereby, exposing banks in the country to insolvency risk. The policy implication is that the Bank of Zambia should encourage banks to diversify their non-interest income sources to enhance their capacity to withstand major disruptions caused by natural and man-made disasters.

KEYWORDS: *Bank revenue diversification, COVID-19, Income volatility, Risk adjusted return on assets, Zambia.*

REFERENCES

- Absa Bank Zambia PLC (2021) *2020 Annual Report*. Lusaka: Absa Bank Zambia PLC.
- Addai, B., Tang, W. and Agyeman, A.S. (2022) ‘Examining the impact of income diversification on bank performance: Are foreign banks heterogeneous?’, *Journal of Applied Economics*, 25(1), pp. 1–21. Available at: <https://doi.org/10.1080/15140326.2021.2022828>.
- Altman, E.I. (1968) ‘Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy’, *The Journal of Finance*, 23(4), pp. 589–609. Available at: <https://doi.org/10.2307/2978933>.
- Altman, E.I. (2000) ‘Predicting financial distress of companies: revisiting the Z-Score and ZETA® models’, in Bell, A., Brooks, C., and Prokopczuk, M., *Handbook of Research Methods and Applications in Empirical Finance*. Edward Elgar Publishing, pp. 428–456. Available at: <https://doi.org/10.4337/9780857936097.00027>.
- Ammar, N. and Boughrara, A. (2019) ‘The impact of revenue diversification on bank profitability and risk: evidence from MENA banking industry’, *Macroeconomics and Finance in Emerging Market Economies*, 12(1), pp. 36–70. Available at: <https://doi.org/10.1080/17520843.2018.1535513>.
- Bank of Zambia (2021) *Annual Report 2020*. Lusaka: Bank of Zambia.
- Bank of Zambia (2022a) *Annual Report 2021*. Lusaka: Bank of Zambia.
- Bank of Zambia (2022b) ‘Summarised Annual Income Statement bank by bank.xlsx’. Bank of Zambia.
- Chiorazzo, V., Milani, C. and Salvini, F. (2008) ‘Income Diversification and Bank Performance: Evidence from Italian Banks’, *Journal of Financial Services Research*, 33(3), pp. 181–203. Available at: <https://doi.org/10.1007/s10693-008-0029-4>.
- Dadoukis, A., Fiaschetti, M. and Fusi, G. (2021) ‘IT adoption and bank performance during the Covid-19 pandemic’, *Economics Letters*, 204, p. 109904. Available at: <https://doi.org/10.1016/j.econlet.2021.109904>.
- Demirgüç-Kunt, A., Pedraza, A. and Ruiz-Ortega, C. (2021) ‘Banking sector performance during the COVID-19 crisis’, *Journal of Banking & Finance*, 133, p. 106305. Available at: <https://doi.org/10.1016/j.jbankfin.2021.106305>.
- Denis, D.J. (2019) *SPSS Data Analysis for Univariate, Bivariate, and Multivariate Statistics*. Hoboken, NJ, USA: John Wiley & Sons, Inc. Available at: <https://doi.org/10.1002/9781119465775>.
- DeYoung, R. and Rice, T. (2004) ‘Noninterest Income and Financial Performance at U.S. Commercial Banks’, *Financial Review*, 39(1), pp. 101–127. Available at: <https://doi.org/10.1111/j.0732-8516.2004.00069.x>.

Elnahass, M., Trinh, V. Q. and Li, T. (2021) ‘Global banking stability in the shadow of Covid-19 outbreak’, *Journal of International Financial Markets, Institutions & Money*, 72. Available at: <https://doi.org/10.1016/j.intfin.2021.101322>.

Gazi, M.A.I, Nahiduzzaman, M., Harymawan, I., Masud, A.A. and Dhar, B.K. (2022) ‘Impact of COVID-19 on Financial Performance and Profitability of Banking Sector in Special Reference to Private Commercial Banks: Empirical Evidence from Bangladesh’, *Sustainability*, 14(10), p. 6260. Available at: <https://doi.org/10.3390/su14106260>.

Johnson, R., D and Meinster, D., R. (1974) “‘Bank Holding Companies: Diversification Opportunities in Nonbank Activities”,’ *Eastern Economic Journal*, pp. 316-323.

Katusiime, L. (2021) ‘COVID 19 and Bank Profitability in Low Income Countries: The Case of Uganda’, *Journal of Risk and Financial Management*, 14(12), p. 588. Available at: <https://doi.org/10.3390/jrfm14120588>.

Kayombo, K.M. (2021) ‘Revenue diversification, risk and profitability of banks: Evidence from Zambia’, *SAARJ Journal on Banking & Insurance Research*, 10(2), pp. 1–15. Available at: <https://doi.org/10.5958/2319-1422.2021.00012.6>.

Kozak, S. (2021) ‘The Impact of COVID-19 on Bank Equity and Performance: The Case of Central Eastern South European Countries’, *Sustainability*, 13(19), p. 11036. Available at: <https://doi.org/10.3390/su131911036>.

Kozak, S. and Wierzbowska, A. (2022) ‘Did the COVID-19 pandemic amplify the positive impact of income diversification on the profitability of European banks?’, *Equilibrium*, 17(1), pp. 11–29. Available at: <https://doi.org/10.24136/eq.2022.001>.

Le, Tu, Nguyen, Van and Tran, Son (2022) ‘A cross-country analysis on diversification, Sukuk investment, and the performance of Islamic banking systems under the COVID-19 pandemic | Elsevier Enhanced Reader’, *Heliyon*, 8. Available at: <https://doi.org/10.1016/j.heliyon.2022.e09106>.

Li, Xingjian, Feng, Hongrui, Zhao, Sebastian and Carter, David, A. (2021) ‘The effect of revenue diversification on bank profitability and risk during the COVID-19 pandemic’, *Finance Research Letters*, 43, p. 101957. Available at: <https://doi.org/10.1016/j.frl.2021.101957>.

Lund Research Ltd (2018) *One-way ANOVA with repeated measures in SPSS Statistics - Step-by-step procedure including assumptions*. Available at: <https://statistics.laerd.com/spss-tutorials/one-way-anova-repeated-measures-using-spss-statistics.php> (Accessed: 2 July 2022).

Mercieca, S., Schaeck, K. and Wolfe, S. (2007) ‘Small European banks: Benefits from diversification?’, *Journal of Banking & Finance*, 31(7), pp. 1975–1998. Available at: <https://doi.org/10.1016/j.jbankfin.2007.01.004>.

Meslier, C., Tacneng, R. and Tarazi, A. (2014) ‘Is bank income diversification beneficial? Evidence from an emerging economy’, *Journal of International Financial Markets, Institutions and Money*, 31, pp. 97–126. Available at: <https://doi.org/10.1016/j.intfin.2014.03.007>.

Ochenge, R. (2022) *The effect of Revenue Diversification on Bank Profitability and Stability during the COVID-19 Pandemic: Evidence from Kenya*. Working Paper 59. Nairobi: Kenya Bankers Association.

Pallant, J. (2020) *Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS*. 7th edn. New York: Routledge. Available at: <http://public.eblib.com/choice/PublicFullRecord.aspx?p=6215124> (Accessed: 4 July 2022).

Paltrinieri, A., Dreassi, A., Rossi, S., Khan, A., (2020) ‘Risk-adjusted profitability and stability of Islamic and conventional banks: Does revenue diversification matter?’, *Global Finance Journal*, p. 100517. Available at: <https://doi.org/10.1016/j.gfj.2020.100517>.

Sanya, S. and Wolfe, S. (2011) ‘Can Banks in Emerging Economies Benefit from Revenue Diversification?’, *Journal of Financial Services Research*, 40(1–2), pp. 79–101. Available at: <https://doi.org/10.1007/s10693-010-0098-z>.

Senyo, D.B., Olivia, A.-T. and Musah, A. (2015) ‘Income Diversification and Financial Stability of Banks in Ghana’, 6(6), p. 8.

Simoens, M. and Vennet, Vander, Rudi (2022) ‘Does diversification protect European banks’ market valuations in a pandemic?’, *Finance Research Letters*, 44. Available at: <https://doi.org/10.1016/j.frl.2021.102093>.

Stiroh, K.J. (2006) ‘A Portfolio View of Banking with Interest and Noninterest Activities’, *Journal of Money, Credit, and Banking*, 38(5), pp. 1351–1361. Available at: <https://doi.org/10.1353/mcb.2006.0075>.

Tabachnick, B.G., Fidell, L.S. and Ullman, J.B. (2019) *Using multivariate statistics*. Seventh edition. NY, NY: Pearson.

Tarawneh, A., Obeidat, M., Khataibeh, M., Omet, G.(2021) ‘The performance of banks in a developing country: has Covid-19 made any difference’, *Pressacademia*, 8(2), pp. 102–108. Available at: <https://doi.org/10.17261/Pressacademia.2021.1395>.

Taylor, D. (2022) ‘Did diversified and less risky banks perform better amid the pandemic?’, *Economics Letters*, 211, p. N.PAG-N.PAG. Available at: <https://doi.org/10.1016/j.econlet.2021.110251>.

Tran, D.V., Hassanm, M. K., Alam, W. A. and Dau, N.(2022) ‘Banks’ financial soundness during the COVID-19 pandemic’, *Journal of Economics and Finance* [Preprint]. Available at: <https://doi.org/10.1007/s12197-022-09591-x>.

Xie, H., Chang, H., Hafeez, M. and Saliba, C.(2021) ‘COVID-19 post-implications for sustainable banking sector performance: evidence from emerging Asian economies’, *Economic Research-Ekonomska Istraživanja*, pp. 1–16. Available at: <https://doi.org/10.1080/1331677X.2021.2018619>.

Zanaco (2022) *Annual Report 2021*. Lusaka: Zanaco.