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Lost or Found? Making Sense of South Africa's Benchmark Rate Transition

Prof Mesias Alfeus (Stellenbosch University)

DATE: Monday, 17 March 2025 | 16h00–17h00 SAST

VENUES:

- Neelsie Cinema, Stellenbosch University
- Online

--- A recording of the talk will be published on the NITheCS YouTube channel afterwards ---

ABSTRACT

The transition from the Johannesburg Interbank Average Rate (JIBAR) to the South African Rand Overnight Index Average (ZARONIA) represents a pivotal shift in South Africa's financial markets, aimed at increasing transparency and robustness. With the South African Reserve Bank (SARB) implementing this phased transition, understanding its financial implications is critical. This paper explores the impact of this change through a comprehensive Value at Risk (VaR) analysis and examines counterparty credit risk linked to financial instruments. Using a Cox-Ingersoll-Ross (CIR) model with stochastic jumps, the forward spread between JIBAR and ZARONIA is simulated, showing that volatility persists despite expected rate convergence. The analysis of Potential Future Exposure (PFE) indicates that legacy JIBAR-linked instruments still present considerable risk. While the overall transition appears smooth, ongoing uncertainty, driven by volatility and economic shocks, requires careful management. The success of the shift relies on effective risk management strategies and clear communication from SARB to market participants.

BIOGRAPHY

Prof Mesias Alfeus is an Associate Professor in the Department of Statistics and Actuarial Science at Stellenbosch University and a Lead Principal Investigator for the NITheCS Quantitative Finance Research Programme. He also serves on the board of directors of the South African Institute of Financial Markets. He holds a PhD in Quantitative Finance from the University of Technology Sydney (UTS), Australia, and a BSc in Mathematics and Physics from the University of Namibia. He earned both his Honours and Master's degrees in Financial Mathematics (Cum Laude) from Stellenbosch University. Prof Alfeus has held various academic and research positions, including visiting academic at the University of Padova, Italy; Risk Analyst at Namibian Financial Institutions Supervisory Authority; Research Associate at UTS Finance; Lecturer in Financial Mathematics at the University of Wollongong, Australia; and AIFMRM Postdoctoral Research Fellow at the University of Cape Town. He serves on the editorial board of the *Journal of Futures Markets* and is an Associate Editor for the *International Journal of Theoretical and Applied Finance*. His papers have been published in many leading journals. His current research focuses on computational and mathematical finance, particularly numerical methods for option pricing, model calibration, and empirical analysis of financial models.



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