Box 2 The South African Rand Overnight Index Average (ZARONIA) interest rate benchmark[1]

In the wake of a culmination of scandals involving the manipulation of the London Interbank Offered Rate (Libor)[2] among the rate-setting banks and the role it played in worsening the 2008 global financial crisis, international regulators and central banks initiated a coordinated response to improve the resilience and transparency of systemically important interest rate benchmarks. As such, the Financial Stability Board conducted a review of major interest rate benchmarks in 2013 and 2014 that gave rise to a global reform. South Africa followed suit in 2015 when it embarked on an exercise to determine whether the Johannesburg Interbank Average Rate (Jibar)[3] reflected an appropriate and representative sample of banks' money market funding. Another purpose of the exercise was to determine the size of the negotiable certificate of deposit (NCD)[4] market that serves as a basis for the calculation of Jibar.

This box provides a brief overview of the phased implementation of the new benchmark[5] interest rate in South Africa, namely the South African Rand Overnight Index Average (ZARONIA).[6] The South African Reserve Bank (SARB) started publishing[7] the ZARONIA rate on 1 November 2022 and afforded market participants and other users an observation period of 12 months to monitor its performance.[8] At the end of the observation period, the SARB and the Market Practitioners Group (MPG)[9] approved the use of ZARONIA, effective from 3 November 2023, and encouraged market participants to start using it as a reference rate in financial contracts, marking the culmination of the multi-year interest rate reform process.

In August 2018, the SARB published a *Consultation paper on selected interest rate benchmarks in South Africa*[10] with the objective to propose the reform of key interest rate benchmarks used in South Africa and to announce the establishment of the MPG.[11] The consultation paper found that the current design of interest rate benchmarks was not fully aligned with the new global standards and raised questions regarding the robustness, representativeness and credibility of Jibar.[12] With the calculation of Jibar based on only five submissions of forward-looking indicative rates at which contributing banks buy and sell NCDs, it was regarded as being vulnerable to manipulation. Furthermore, the market activity underlying key Jibar tenors, especially the three-month Jibar, had declined considerably in the aftermath of private sector banks adopting new funding strategies following the introduction of Basel III requirements, such as the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR). Jibar was also not seen as representative of the total cost of funding for banks and it was found that there were insufficient transactions in the NCD market to meet the data compliance and reference rate design requirements stipulated by the International Organization of Securities Commissions (IOSCO).[13]

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1 This box relates to the money market and related interest rates on page S–32 in this edition of the *Quarterly Bulletin (QB)*. It specifically reflects on ZARONIA, one of four new benchmarks in the overall reference rate reform process. The other benchmarks are:
- South African Secured Overnight Financing Rate (ZASFR);
- Term Wholesale Financial Corporate Fixed Deposit Benchmark Rate; and
- Term Wholesale Non-Financial Corporate Fixed Deposit Benchmark Rate.

2 Libor is regarded as an indicative interest rate, reflecting the rate at which banks offer to lend funds (wholesale money) to each other in the London interbank market and has been replaced in some parts with a Secured Overnight Financing Rate.

3 Jibar is compiled and published by the JSE Limited (JSE) as the calculation agent, using data from five contributing banks daily between 09:15 and 09:45. The JSE harvests bid and offer rates from the contributing banks' NCD trading screens and calculates the midpoint rates, which are ranked in descending order. The highest and lowest 25th percentile mid-rates are eliminated and the remaining 50th percentile rates are averaged to determine Jibar rates for the respective maturities.

4 An NCD is a negotiable type of fixed-deposit investment instrument offered by commercial banks.

5 Market participants often prefer to use credible reference rates against which they can price or evaluate the performance of selected financial instruments. Because reference rates tend to reflect wider market conditions, they assist in price discovery and reduce information asymmetry.

6 ZARONIA is a reformed version of the existing South African Benchmark Overnight Rate (Sabor) and reflects the interest rate at which rand-denominated overnight wholesale funds are obtained by commercial banks.

7 The SARB is the administrator of ZARONIA and publishes the rate daily at 10:00. https://www.resbank.co.za/en/home/what-we-do/financial-markets/south-african-overnight-index-average

8 Owing to the rate potentially underpinning a significant number of financial contracts, it was deemed critical that the conceptual design of the benchmark rate be rigorously tested to ensure that it is reliable, robust and sufficiently stable.

9 In 2018, the SARB embarked on an initiative to strengthen the widely used reference rates and established the MPG to make final decisions on the proposed benchmarks.

10 The consultation paper is available at https://www.resbank.co.za/en/home/publications/publication-detail-pages/markets-consultation-paper/2018/8722

11 Established by the SARB to facilitate the decision-making on matters relating to the reform of interest rate benchmarks in South Africa, the MPG is a joint public and private sector body comprising representatives of the SARB, the Financial Sector Conduct Authority (FSCA) and other senior professionals from different market interest groups active in the domestic money market.

12 In South Africa, Jibar was the key money market benchmark used as a reference interest rate for financial instruments and derivatives, with the three-month Jibar being the most widely used and accepted reference rate for South African rand-denominated financial contracts.

13 IOSCO is a global co-operative of securities regulatory agencies that regulates the world's securities and futures markets. It establishes and maintains worldwide standards for efficient, orderly and fair markets.

The MPG established various workstreams, focusing on the different aspects of the markets that will underpin South Africa's transition to alternative reference rates, including, among other workstreams:

- the unsecured reference rate workstream;
- the risk-free reference rate workstream;
- the derivative workstream;
- the cash market workstream;
- the data collection and infrastructure workstream;
- the transition workstream;
- the governance workstream; and
- the communications workstream.

The role of the workstreams and subgroups was to provide technical input and recommendations to the MPG on specific issues that are relevant to the transition from Jibar. The insights and expertise of the workstreams were aimed at shaping industry opinions on the reform agenda, with, for example, the derivative and cash market workstreams established to look into how ZARONIA will be adopted in their respective markets.

Contrary to the forward-looking nature of Jibar, ZARONIA is regarded as more objective, robust and aligned with international standards because it is backward-looking and based on actual settled transactions reported daily to the SARB. ZARONIA is thus an overnight deposit rate and serves as a benchmark to reflect the interest rate at which overnight wholesale funds are obtained by commercial banks. Furthermore, it is calculated as a trimmed, volume-weighted mean[14] of interest rates paid on eligible unsecured overnight deposits.[15] The rate was expected to respond to changes in the policy rate and to be more resilient than Jibar, partly because of the depth and liquidity of the market that underpins it, and this has indeed been the case thus far. Furthermore, ZARONIA's response to changes in the policy rate is desirable because it suggests that the interest rate should be effective in transmitting monetary policy, which is why the MPG selected ZARONIA as the successor to replace Jibar as the preferred reference rate to underpin financial contracts from its official implementation. The table below summarises the main differences between ZARONIA and Jibar.

Main differences between ZARONIA and Jibar

ZARONIA	Jibar
Near risk-free rate	Built-in credit and term premium component
Overnight rate	Term rate
Backward-looking	Forward-looking
Fully transaction-based	Based on indicative rates
Broad array of market participants	Only five contributing institutions

Since its inception, ZARONIA has been trending at an average spread of 13 basis points below the repurchase (repo) rate and followed changes in the policy rate closely.[16]

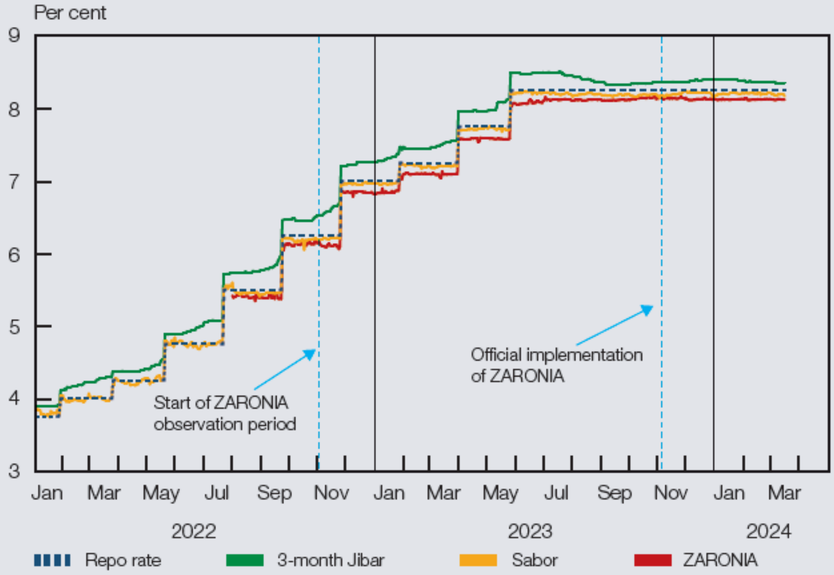
The SARB also publishes compounded averages and index values based on past realisations of the ZARONIA interest rate benchmark. The published compounded ZARONIA period averages provide market participants with a single point of reference for backward-looking term rates, including one-week, one-month, three-month, six-month, nine-month and 12-month tenors. Although the SARB has indicated that it would prefer a reasonably short Jibar transition phase, the adoption of the rate may take some time as market participants are still preparing market infrastructure.

14 A trimmed mean removes a small, designated percentage of the largest and smallest values before calculating the average. Using a trimmed mean helps to eliminate the influence of outliers or data points on the tails that may unfairly affect the traditional mean.

15 There are 10 commercial banks that have been earmarked as reporting institutions that submit transactions data to the SARB on a daily basis. The reporting institutions and the SARB spent a substantial amount of time developing and implementing technology to enable the extraction, transfer and verification of data, as outlined in the SARB's Money Market Data Collection Reporting Guide. https://www.resbank.co.za/en/home/publications/publication-detail-pages/markets-consultation-paper/2020/10021

16 This is similar to the experience in other jurisdictions, where the Sterling Overnight Index Average (SONIA) and the Euro Short-Term Rate (ESTR) tend to be lower than the Bank of England's (BOE) and the European Central Bank's (ECB) policy rates respectively.

Benchmark rates and the repurchase rate



Source: SARB

With the change to ZARONIA, Jibar will eventually be phased out as a reference rate and it is intended that all contracts referencing Jibar will be transitioned by 2026. The transition will need to be treated with caution as contracts linked to Jibar will be gradually switched to the compounded[17] ZARONIA rates, while debt securities and other types of interest rate derivative contracts will change to ZARONIA. Furthermore, new contracts entered into after the announcement of the cessation date should reference ZARONIA. As an interest rate benchmark, ZARONIA will play an important role in the functioning of modern financial markets and promote adherence to international best practice

17 The ZARONIA compounded index represents the returns from rolling an investment that earns interest daily at the ZARONIA rate.