



South African Reserve Bank

## **Money Market Reference Rates**

**Jibar:**

### **Code of Conduct, Governance Process and Operating Rules**

January 2018

## Abbreviations

CEO	Chief Executive Officer
FMD	Financial Markets Department of the South African Reserve Bank
FMLG	Financial Markets Liaison Group
FSB	Financial Services Board
FSC	Financial Stability Committee
Jibar	Johannesburg Interbank Average Rate
JSE	Johannesburg Stock Exchange (JSE Ltd)
NCD	Negotiable certificate of deposit
SARB	South African Reserve Bank
RROC	Reference Rate Oversight Committee
RRWG	Reference Rate Working Group

## Glossary

Business day	A business day is defined as a market trading day in South Africa (Monday to Friday, excluding banking holidays).
Calculation Agent	The Calculation Agent is the JSE Ltd. It is responsible for the calculation of Jibar.
Code of Conduct	Code of Conduct refers to the Jibar Code of Conduct, Governance Process and Operating Rules.
Contributor	Contributor refers to a commercial bank which meets the criteria spelled out in paragraph 2,4.1 of this Code of Conduct.
Expert Judgement	The exercise of discretion by an Administrator or Contributor with respect to the use of data in determining Jibar. Expert Judgment includes extrapolating values from prior or related transactions, adjusting values for factors that might influence the quality of data such as market events or impairment of a buyer or seller's credit quality, or weighting firm bids or offers greater than a particular concluded transaction.
Financial Markets Liaison Group	The FMLG is a joint initiative between the SARB and key participants in the financial markets. The mission of the FMLG is to provide a forum for consultation, information exchange and the identification and management of challenges facing the South African financial markets.
Financial Services Board	The FSB is an independent institution established by statute to oversee the South African non-banking financial services industry in the public's interest.
Reference Rate Working Group	Committee established as a joint initiative between the SARB, the commercial banks, JSE Ltd and Strate to revise existing reference rates and to propose improvements in the reference rate-setting processes and to propose changes in this regard to the FMLG.
Strate (Pty) Limited	The licensed Central Securities Depository for the electronic settlement of equities and bonds transactions concluded on the JSE Ltd.

## **1. Introduction**

- 1.1 The process of transparently determining money market reference rates is important for the efficient functioning of money markets, the broader capital market, the interest rate derivatives market and the loan market. It is of the utmost importance to ensure the integrity of these reference rates and their use as benchmarks.
- 1.2 This document formalises a code of conduct and a governance process for the Jibar in the Republic of South Africa, as well as operating rules for Contributors.
- 1.3 In creating a code of conduct and operating rules, it is recognised that personal integrity and a high level of professional conduct cannot be created or preserved by written rules alone. They also depend on role players embracing the intentions and spirit of the Code of Conduct. The Code of Conduct is, therefore, the factor that determines the credibility of the Jibar. A Twin Peaks regulatory framework, with the SARB as Prudential Authority and the FSB as Financial Sector Conduct Authority (FSCA) will be implemented in 2018. The Governance arrangements for this Code of Conduct will, however, remain in place until such time as the Twin Peaks regulatory framework has been fully operationalised.
- 1.4 Once implemented, this Code of Conduct will continually be reassessed for improvement and relevance.
- 1.5 Supervision of compliance with the terms and conditions of the Code of Conduct shall be conducted by means of a committee, named the RROC.

## **2. Code of Conduct for Contributors on the Jibar panel**

- 2.1 This Code of Conduct sets out the qualifying criteria for Contributors to serve on the Jibar panel, the obligations of Contributors, and panel exit criteria.
- 2.2 A Contributor is a commercial bank with NCD trading screens reflecting bid and offer rates for NCDs. The bid/offer rates for different maturities in the Jibar calculation will be taken directly from the Contributors' NCD trading screens.
- 2.3 The objective of the Code of Conduct is to ensure that NCD rates published on a Contributor's NCD trading screen are reflective of true market conditions and actual trading levels, at all times. The Jibar reference rate is a snapshot of these rates and Contributors commit to post accurate rates reflective of their trading environment and funding requirements.
- 2.4 Eligibility criteria to qualify for, and remain on, the Jibar panel:
- 2.4.1 A bank and/or a branch of a foreign bank that satisfies the following conditions will qualify to become a Contributor for this money market reference rate panel:
- (i) A bank and/or a branch of a foreign bank must be duly registered as such in terms of either section 13 or section 18A of the Banks Act, 1990 (Act No. 94 of 1990), as the case may be.
  - (ii) A bank and/or a branch of a foreign bank must be a participant in the South African money market as a NCD issuer, with screen displayed prices good for a trade size of between R20 million and R100 million for all NCD issuances settling within seven business days following the trade date (i.e up to T+7 settlement). Although forward transaction(s) with a settlement date greater than T+7 would be excluded from the Jibar Code of Conduct and the Operating Rules, it would be monitored as part of the SARB's surveillance process on the settlement date.

- (iii) A bank and/or a branch of a foreign bank must comply with specific rules with regard to the quotes as referred to in the Operating Rules in Annexure 1.
- (iv) A bank with a minimum South African national scale credit rating of A- issued by an eligible external credit assessment institution (ECAI), as approved by the Registrar of Banks in terms of Section 85A of the Banks Act. For a branch of a foreign bank, a minimum global scale credit rating of BBB- issued by an eligible ECAI will be required.

2.4.2 Banks that comply with the eligibility criteria and qualify to serve on the Jibar panel will be appointed, by means of a formal letter from the Chairperson of the RROC, as a Contributor for purposes of the calculation of these reference rates.

2.4.3 An existing Contributor that no longer meets the eligibility criteria will be disqualified. However, should such disqualification adversely affect the robustness and confidence in the money market reference rate process in which the Contributor is participating, it may retain its status as a Contributor at the discretion of the RROC.

## 2.5 Obligations of Contributors

2.5.1 Contributors are subject to the Code of Conduct and shall fulfil the following obligations:

- (i) A Contributor shall quote a screen price on a real-time basis, on Reuters and/or Bloomberg, during normal business hours on a business day. Contributors' NCD trading screens must be updated timeously. If both systems are used, the prices should be the same.

- (ii) Real-time quotes from Contributors must reflect bid and offer screen rates for all NCDs, including forward-starting NCDs settling within seven business days following the trade date.
- (iii) Under normal market conditions, the quoted bid and offer spreads should be within the recommended spread, as defined in the Operating Rules for Jibar reference rates. The spread is governed by the Operating Rules and the SARB reserves the right to request motivations for deviations from the Operating Rules.
- (iv) The real-time quotes from a Contributor shall be a true reflection of the best price where the Contributor is willing to bid or offer NCDs under prevailing market conditions and cognisant of its own underlying funding conditions. A Contributor, therefore, may consider all factors relevant to the economic pricing of the underlying instrument and the funding requirements of the Contributor. These considerations should be reflected in its tradable bid/offer spread. Where a Contributor has traded at a different level to what was quoted on screen, the screen must be updated to reflect the level or price where the trade took place.
- (v) Switch trades (where a bank is simultaneously buying and selling NCDs negotiated as part of a single trade) are excluded from the rates used for the Jibar calculations. However, these trades must still be concluded at or inside the bid/offer spreads of NCD trading.
- (vi) A Contributor shall display real-time quotes for every valid business day.
- (vii) A Contributor shall establish and comply with appropriate internal governance processes to ensure that quotes displayed accurately reflect the actual NCD issuance rates of the Contributor concerned at any point in time.
- (viii) The Contributor must ensure that appropriate internal systems and controls are implemented and maintained. These should, inter alia, include procedures for contributing rates, procedures to detect and evaluate suspicious inputs, policy guidance regarding documentation requirements, record keeping policies, internal and external audit procedures, training procedures and contingency plans, to avoid undue operational risk related to the rate setting process.

- (ix) Such governance processes must be overseen by senior management, namely, the Treasurer (or a staff member of equivalent or higher seniority).
- (x) Given the difference between the trade and settlement dates of a forward-starting NCD, Jibar contributing banks' should adjusted their NCD trading screens to reflect the trade rates of all NCDs up to T+7 settlement.
- (xi) Jibar contributing banks will also notify the SARB of all forward starting NCD trades on the actual trade date.
- (xii) A Contributor shall provide the FMD with underlying transactional information and other relevant information that may be requested in support of any review or complaint of the rate setting process for money market reference rates.
- (xiii) In the event that a contributor is no longer registered as a bank, immediate written notice should be given to the FMD, which will inform the FMLG as well as the RROC.

## 2.6 Criteria to exit the Jibar panel

2.6.1 If a Contributor does not comply with the terms and conditions of the Code of Conduct, or does not fulfil its obligations as a Contributor, it may be removed from the panel of Contributors in accordance with the Governance Process referred to in Section 4.

2.6.2 The exit of a Contributor from the Jibar panel for reasons of non-compliance or at its own request, will be considered by the RROC, in order to determine an appropriate outcome.

## 3. **Obligations of the Calculation Agent of the Jibar reference rate**

3.1 A Calculation Agent is the institution responsible for the calculation and publication of the reference rate.

3.2 The JSE is appointed by the Chairperson of the RROC as Calculation Agent for the Jibar reference rate.

- 3.3 The calculation of Jibar reference rates shall be based on the bid/offer rates for NCDs for different maturities in the Jibar rates obtained directly from the Contributors' NCD trading screens on Reuters and/or Bloomberg on a real-time basis.
- 3.4 Rates obtained by the Calculation Agent from the Contributors' NCD trading screens will be validated by the Calculation Agent prior to the publication of the Jibar. This process entails ensuring that the Contributors' NCD trading screens are active before using the rates as reflected. Several screen snapshots will be taken between 9:15 and 9:45. Data reflected on Contributors' screens during this period, will be deemed as updated. The hierarchy of data inputs should include:
- (i) Contributors' own concluded Arms-length Transactions in the underlying interest or related markets.
  - (ii) Reported or observed concluded Arm's-length Transactions in the underlying interest.
  - (iii) Reported or observed concluded Arm's-length Transactions in related markets.
  - (iv) Other market information or Expert Judgements.
- 3.5 Although the Calculation Agent will not be liable for stale prices when harvesting data from the contributors' NCD trading screens, the Calculation Agent should ensure that rates submitted adhere to the guidelines regarding the hierarchy of data inputs and exercise the use of Expert Judgement for the determination of the Jibar.
- 3.6 Subject to the Code of Conduct, the Calculation Agent shall fulfill the following obligations:
- 3.6.1 Obtain screen prices quoted by the Contributors, as defined in the Operating Rules for Jibar reference rates, and may request motivations for deviations from the Operating Rules.
  - 3.6.2 The Calculation Agent must ensure that Contributors' trading screens have been open before using the rates reflected.

- 3.6.3 The Calculation Agent reserves the right to use any snapshot during the window period for the Jibar calculation and may use its own discretion in the Jibar rate setting process, within the framework of the Code of Conduct and Operating Rules for the Jibar.
- 3.6.4 Ensure that there are appropriate internal controls over its data collection and transmission processes. These controls should address the process for selecting the source, collecting the data and protecting the integrity and confidentiality of the data.
- 3.6.5 Implement an appropriate control framework for the process of determining and distributing the Jibar reference rate. The control framework should be appropriately tailored to the materiality of the potential or existing conflicts of interest identified. The control framework should:
- (i) Be documented and available to the relevant regulatory authorities and should be reviewed periodically and updated, as appropriate.
  - (ii) Include arrangements to identify outliers and to ensure the quality and integrity of the Jibar reference rate.
  - (iii) Be maintained to ensure accountability.
  - (iv) Include effective complaints mechanisms.
  - (v) Provide for robust infrastructure, policies and procedures for the management of risk, including operational risk, as well as a whistle-blowing mechanism to facilitate early awareness of any potential misconduct or irregularities that may arise and which also allow for external reporting of such cases, where appropriate.
  - (vi) Ensure that Jibar determinations are made by personnel who possess the relevant levels of expertise, with a process for periodic review of their competence and appropriate training, including ethics and conflicts of interest training, and continuity and succession planning for personnel.
  - (vii) Establish and comply with appropriate internal governance processes to include oversight by senior management, the compliance function of the Calculation Agent, and appropriate internal and external audit procedures (including contingency plans), to avoid undue operational risk related to the rate determination process.

- (viii) Include procedures to deal with error reports.
- (ix) Include procedures to deal with the determination of the reference rates, in consultation with Contributors, in periods of market stress, market disruption or in the absence of data sources (see 2.9.2 of Operating Rules).

3.7 Audits of the Jibar calculation process applied by the Calculation Agent will be conducted by its internal auditors on an annual basis. Confirmation that internal audit reviews of the Jibar rate-setting process have taken place and a summary of the findings and corrective actions, should be sent to the compliance function of the Calculation Agent, and should be available, on request, to the SARB.

#### **4. Jibar Governance Process**

4.1 The Governance Process for the determination of the Jibar is of paramount importance to ensure continued integrity and reliability of these benchmark rates, through increased transparency and accountability.

4.2 This Governance Process outlines the responsibilities of the SARB and sets out procedures for dealing with disputes lodged and queries raised relating to the determination of these benchmark rates.

4.3 Responsibilities of the SARB

4.3.1 The process of determining Jibar reference rates in terms of the Code of Conduct is overseen by the SARB.

4.3.2 The Calculation Agent and all Contributors are appointed in writing by the Chairperson of the RROC to participate in the determination of the relevant money market reference rates. The Calculation Agent and Contributors will be requested, on an annual basis, to confirm in writing that they adhere to, and are bound by, the requirements of the Code of Conduct.

4.3.3 Any changes to the Jibar determination procedures must be authorised by the RROC, based on recommendations from the FMLG.

- 4.3.4 The RROC will assess, on an annual basis (or when circumstances necessitate an additional review), the Calculation Agent's and Contributors' compliance with the Code of Conduct and internal governance processes for the calculation of Jibar rates. The RROC will prepare semi-annual reports to the FSC of the SARB.
- 4.3.5 The post-publication surveillance of the Jibar will be conducted by the FMD of the SARB, with a one-business day lag, to monitor compliance with the Code of Conduct. For this purpose, primary issuance data will be provided to the SARB by Strate. The surveillance of the Jibar should be conducted by personnel who possess the relevant levels of expertise and there should be a process for periodic review of their competence. Staff training should include ethics and conflicts of interest training, as well as continuity and succession planning for personnel.
- 4.3.6 The SARB should ensure that there are appropriate internal controls over its data collection and transmission processes. These controls should address the process for selecting the source, collecting the data and protecting the integrity and confidentiality of the data.
- 4.3.7 Any breaches identified (an instance where a Contributor traded above or below the rates taken from their NCD trading screens, without updating screens accordingly) during the FMD's post-publication surveillance, will be recorded by the FMD and a written explanation, detailing the breach will be requested from the Contributor by the FMD. All breach incidents will be reported to the RROC and, subsequently, also the FMLG. Subject to the RROC's findings, a contributor may be reported to the Registrar of Banks.
- 4.3.8 Audits of the Jibar surveillance process applied by the SARB will be conducted by its internal auditors on an annual basis. Confirmation that internal audit reviews of the Jibar surveillance process have taken place and a summary of the findings and corrective actions, should be sent to the compliance function of the SARB.

- 4.3.9 The SARB has an effective whistle-blowing mechanism to facilitate early awareness of any potential misconduct or irregularities that may arise.
- 4.4 Changes to the methodology of the Code of Conduct
- 4.4.1 The Code of Conduct, Governance Process and Operating Rules will continually be reassessed by the RRWG, which comprises of members from the FMD of the SARB, Contributors, as well as the Calculation Agent, for relevance and improvement.
- 4.4.2 Proposals by the RRWG will be presented to the FMLG. Following endorsement by the FMLG, the changes will be submitted to the RROC. Once approved by the RROC, the revised Code of Conduct will be published on the SARB's website. The revised Code of Conduct will be effective from the date of publication.
- 4.4.3 Market structure change, product definition change, or any other condition which makes the Jibar no longer representative of its intended interest, shall be addressed and approved by the RROC.
- 4.4.4 The SARB should periodically review the conditions in the underlying interest rate market that the Jibar measures to determine whether this market has undergone structural changes that might require changes to the design of the methodology to determine a credible Jibar reference rate. The SARB should also periodically review whether volumes in the relevant interest rate market have diminished, or are non-functioning, such that it can no longer serve as the basis for a credible benchmark.
- 4.4.5 Any material change in the calculation methodology contained in this Code of Conduct shall be consistent with the overriding objective to ensure the continued integrity of the Jibar as a reference rate.
- 4.4.6 The SARB should publish, or make available, a summary of such reviews where material revisions have been made to the benchmark rates, including

the rationale for the revision. In addition, the SARB should publish, or make available, the rationale of any proposed material changes in its methodology and procedures for making such changes.

4.4.7 The SARB should develop broader stakeholder consultation procedures in relation to changes to the methodology that are deemed material by the oversight function and that are appropriate and proportionate to the breadth and depth of the benchmark's use and the nature of the stakeholders. Procedures should:

- (i) Provide advance notice and a clear timeframe that gives stakeholders sufficient opportunity to analyse and comment on the impact of such proposed material changes, having regard to the SARB's assessment of the overall circumstances.
- (ii) Provide for stakeholders' summary comments, and the SARB's summary response to those comments, to be made accessible to all stakeholders after any given consultation period, except where the commentator has requested confidentially.

#### 4.5 Complaints, disputes and misconduct

4.5.1 The objective of this governance process is to maintain the integrity of Jibar as a reference rate. In the event that a Contributor contravenes any provision of the Code of Conduct, any market participant that becomes aware of the breach, be it the public or another Contributor, must lodge a complaint or query in writing (letter or e-mail) with the Calculation Agent. In the event that the Calculation Agent is not able to resolve the complaint or query within a reasonable time period, the following process must be followed:

4.5.2 Complaints or queries shall be lodged formally, in writing (letter or e-mail), to the Head: FMD. The FMD is obliged to address the query or complaint of the alleged contravention with the relevant Contributor within five (5) business days. In the event that a Contributor has contravened any provision of the Code of Conduct, the Contributor will be requested by the FMD to provide reasons for the alleged non-compliance.

4.5.3 Should the contravening Contributor fail to rectify the situation as requested, the matter will be referred to the RROC. The RROC will conduct a hearing and provide a final ruling to the CEO of the Contributor on any cases referred by the Head of the FMD. The ruling may include suspension from the Jibar panel. The Contributor shall remain suspended and only be reinstated after the situation has been remedied to the satisfaction of the RROC.

#### 4.6 Independent reporting of malpractice

4.6.1 Market participants who are of the opinion that the above reporting channels (directly to the Calculation Agent or Head of the FMD) are not viable or cannot be trusted, may elect to make use of the independent hotline reporting facility provided by an independent external service provider, the details of which are available on the SARB's website. The reporting through this channel may be done anonymously.

4.6.2 The independent service provider will confidentially provide the reports to the SARB Whistle-blowing Response Team that comprises the Chief Internal Auditor and the Head of the Risk Management and Compliance Department.

4.6.3 The Whistle-blowing Response Team will direct all Jibar related reports to the Head of the FMD, who will follow the process outlined in paragraphs 4.5.2 and 4.5.3 above. The Head of the FMD will monitor that the necessary action is taken to ensure the satisfactory resolution of the reported incidents. In a case where the whistle relates to FMD, the report will be referred to appropriate bodies in the SARB for further investigation. The whistle blowing response team will monitor that the necessary action is taken and the reported incident is resolved accordingly.

4.6.4 In the case where a reporter requests no involvement of the FMD, the Whistle-blowing Response Team will review the reports and refer them to appropriate bodies in the SARB for further investigation. The Whistle blowing response team will then refer the matter to RROC for further action. The RROC will conduct a hearing and provide a final ruling to the CEO of the Contributor as outlined in paragraph 4.5.3.

4.6.5 Any person or body to whom a protected disclosure has been made must, as soon as reasonably possible, but in any event, within 21 days after the disclosure has been made—

- (a) decide whether to—
  - (i) investigate the matter or not; or
  - (ii) refer the disclosure to another person or body if that disclosure could be investigated or dealt with more appropriately by that other person or body; and
- (b) in writing acknowledge receipt of the disclosure by informing the person who made the disclosure of the decision—
  - (i) to investigate the matter, and where possible, the time-frame within which the investigation will be completed;
  - (ii) not to investigate the matter and the reasons for such decision; or
  - (iii) to refer the disclosed information to another person or body.

**5. Managing conflicts of interest for the SARB, Contributors and the Calculation Agent (hereafter referred to as institutions, unless stated otherwise)**

5.1 To protect the integrity and independence of the Jibar as a reference rate, each institution must implement, maintain, and operate effective organisational and administrative arrangements to enable it to identify, manage, mitigate or avoid any conflicts of interest that may arise from the process of the Jibar rate setting process. Any material conflicts of interest should be disclosed to the relevant regulatory authority. The conflict of interest framework of each institution should be tailored to the level of existing or potential conflicts of interest identified and the risks that the Jibar reference rate poses, and should be reviewed regularly to ensure:

- (i) Existing or potential conflicts of interest do not inappropriately influence the Jibar determinations.
- (ii) Personal interests and connections or business connections do not compromise any part of any of the institutions functions.
- (iii) Segregation of reporting lines, where appropriate, to clearly define responsibilities and prevent unnecessary or undisclosed conflicts of interest or the perception of conflicts.

- (iv) Adequate supervision and sign-off by authorised or qualified employees, prior to the release of the Jibar reference rate.
- (v) Confidentiality of data, information and other inputs submitted to, received by, or produced, subject to appropriate disclosure obligations.
- (vi) Effective procedures to control the exchange of information between staff engaged in activities involving a risk of conflicts of interest or between staff and third parties, where that information may reasonably affect any reference rate determination.
- (vii) Adequate remuneration policies that ensure all staff who participate in the reference rate determination are not directly or indirectly rewarded or incentivised by the levels of the Jibar rates.

**6. Procedures for record keeping for the SARB, Contributors and the Calculation Agent (hereafter referred to as institutions, unless stated otherwise)**

6.1 Institutions should retain all written records, subject to the relevant legal framework for public and private bodies relating to records management (including the Companies Act, 71 of 2008 and the Protection of Public Information Act, 4 of 2013), and should include, where applicable:

- (i) All market data, documents relating to complaints, and any other data and information sources relied upon for Jibar determination.
- (ii) The documentation relating to Expert Judgment made in reaching the Jibar determination.
- (iii) Changes in or deviations from standard procedures and methodologies, including those made during periods of market stress or disruption.
- (iv) The identity of each person involved in the production of the Jibar.
- (v) Any queries and responses related to data inputs.
- (vi) Any interaction between the SARB, Contributors and the Calculation Agent.
- (vii) Declaration of any conflicts of interests and aggregate exposures of individual traders/desks to Jibar related instruments in order to facilitate audits and investigations.
- (viii) Exposures of individual traders/desks to benchmark related instruments in order to facilitate audits and investigations; and

- (ix) Findings of external/internal audits, related to the Jibar submission, remedial actions, and progress in implementing them.
  
- 6.2 Records shall be held by the institutions for assessment of compliance with the principles of the Code of Conduct, and is subject to appropriate written record sharing agreements.
  
- 6.3 Relevant documents, audit trails and other documents subject to the principles shall be made readily available by the relevant institutions to the relevant regulatory authorities in carrying out their regulatory or supervisory duties and handed over promptly upon request.

## Operating Rules

### 1. Introduction

1.1 Operating Rules are intended to subject Contributors to certain requirements, restrictions and guidelines to create transparency in the process of determining money market reference rates, and to reduce the risk of manipulative market practices. The following Operating Rules are applicable to the Jibar:

### 2. Jibar

2.1 The Calculation Agent for the Jibar is the JSE.

2.2 Contributors shall post bid and offer prices on their Reuters or Bloomberg pages. The following criteria shall apply:

2.2.1 Quotes shall apply to NCDs.

2.2.2 The recommended spread under normal conditions should be a maximum of 25 basis points. In the event of abnormal market conditions, causing the spread to move above 25 basis point, contributors must inform the SARB via electronic mail of the increase and the conditions causing the increase.

2.2.3 Quotes shall apply to a trade size of between R20 million and R100 million.

2.2.4 Contributors shall adjust their screen prices for all (fixed rate) standard maturities (1-, 3-, 6-, 9- and 12-month interest rate periods) for trades between R50 million and R1 billion, settling within seven business days following the trade date (up to T+7 settlement).

2.3 The bid and offer prices shall apply to the issuance (offer) or buy-back (bid) of NCDs issued by the Contributor. Bid and offer prices shall be quoted as bid first and offer second, for example, 7,25 per cent (bid) and 7,0 per cent (offer) implies that the Contributor is willing to buy its own NCDs at 7,25 per cent and issue a new NCD at 7,00 per cent.

- 2.4 Quotes shall be displayed as a minimum between 9:00 and 14:00 on any normal business day. Quotes may be changed during this period in line with normal market practice. If a Contributor trades outside of these hours, the Contributors NCD trading screens must continue to be updated in line with the principles laid out in the Code of Conduct.
- 2.5 Quotes shall imply a Contributor's willingness to transact with approved counterparties at the displayed interest rates.
- 2.6 The Calculation Agent shall distribute a spreadsheet to Contributors and to the broader market, indicating all bids and offers through its data subscription system.
- 2.7 Contributors shall post quotes for all (fixed rate) standard maturities (1-, 3-, 6-, 9- and 12-month interest rate periods).
- 2.8 Quotes shall be based on the following market conventions:
- 2.8.1 The settlement will be on a T+0, up to a T+7, basis.
- 2.8.2 Redemption date is calculated by using the modified following-business-day convention.
- 2.8.3 Interest rates shall be quoted on the basis of an Actual/365 (fixed) day count calculation.
- 2.9 Procedure to obtain bid/offer rates:
- 2.9.1 After ensuring that the Contributors' trading screens are active, the Calculation Agent shall take several screen snapshots of the Contributors' Reuters and/or Bloomberg screen rates for the appropriate Jibar maturities between 9:15 and 9:45 of each business day. These rates will be used to calculate the Jibar.
- 2.9.2 In the event of Contributors not being able to update NCD trading screens due to technology-related issues, Contributors shall submit bid/offer rates via e-mail to the Calculation Agent by 9:30.

- 2.10 Calculation of Jibar by the Calculation Agent:
- 2.10.1 The bid/offer interest rates for each Contributor must be averaged to calculate a mid-rate.
  - 2.10.2 The mid-rates for all Contributors must be ranked from highest to lowest.
  - 2.10.3 The highest and lowest 25 percentile mid-rates must be excluded from the calculation. If a number of Contributors are included in the rates to be excluded, a random selection process will be used to select the excluded Contributor or Contributors. This is to preclude any systemic bias in any statistics that calculate the number of times a Contributor is excluded.
  - 2.10.4 The 50 percentile mid-rates must be averaged to determine Jibar rates for the respective maturities.
  - 2.10.5 The use of percentiles, when combined with a discreet number of Contributors, requires that a discreet number of Contributors be selected to be equivalent to the 25/50 percentile statistics (Table 1).
  - 2.10.6 Jibar rates must be published on Reuters and/or Bloomberg at 10:00 and distributed through the JSE's data distribution systems to Contributors and to the general market.
  - 2.10.7 Recalculation and republishing of Jibar are allowed when the revised Jibar exceeds the initial published rate by three or more basis points.
  - 2.10.8 Errors should be identified between 10:00 and 10:15.
  - 2.10.9 The Calculation Agent must inform the market of the revision of Jibar at 10:15, as well as the reason for the recalculation.
  - 2.10.10 Republication of Jibar is at 10:30.

**Table 1: Percentiles to discard Contributors in the calculation of the Jibar**

<b>Number of contributors</b>	<b>25%</b>	<b>50%</b>
4	1	2
5	1	3
6	1	4
7	1	5
8	2	4
9	2	5
10	2	6
11	3	5
12	3	6