

# NZFBF

NEW ZEALAND  
FINANCIAL BENCHMARK  
FACILITY



TE POU HERENGA PŪTEA O AOTEAROA

## Bank Bill Benchmark Rate (BKBM) & BKBM Trading Window – Operating Rules and Principles

*December 2024*

**NEW ZEALAND FINANCIAL BENCHMARK FACILITY**

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# Bank Bill Benchmark Rate (BKBM) & BKBM Trading Window

## *Operating Rules and Principles*

### 1.0 INTRODUCTION

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The Operating Rules and Principles outlined in this document have been derived with the objective of ensuring:

- Compliance with the New Zealand benchmark administration licensing regime overseen by the FMA;
- Alignment with the IOSCO Principles for Financial Benchmarks (to the extent applicable);
- A transparent BKBM determination process is maintained; and,
- Conformance with global best practice.

This service provides a Benchmark (BKBM) that represents the mid-rates (FRA or average) for Prime Bank eligible securities that are traded in the local New Zealand market. BKBM represents the rates at which banks are willing to borrow from, or lend to, one another for terms of one to six months. As such the rate includes a credit premium to the comparable risk-free interest rate curve. BKBM bids and offers are also published (see section 8.3).

BKBM is set using transaction-based data or executable bids and/or offers, for the one-month to six-month tenors, in a two-minute trading window held at 10:20am each business day. The two-, four- and five-month tenors are set via interpolation if there is no transaction-based data or executable bids and/or offers (see section 8.1).

This document should be read in conjunction with the following NZFBF publications, all of which can be found on the NZFBF website:

- NZFBF Board Charter;
- NZFBF Constitution;
- NZFBF Code of Conduct & Conflicts of Interest;
- NZFBF Governance Conflict Management Plan;
- NZFBF Complaints Process; and,
- NZFBF Whistle Blowing Process.

### 2.0 GOVERNANCE

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NZFBF is the administrator and calculation agent for key New Zealand financial market benchmarks. NZFBF provides transparent governance, oversight, and accountability procedures for benchmark determination processes.

NZFBF is a wholly owned subsidiary of the New Zealand Financial Markets Association (NZFMA).

NZFMA was formed in 2007 as the industry association for institutional participants in New Zealand's wholesale financial markets. NZFMA is a not-for-profit incorporated society that operates in accordance with its Rules of Association, primarily to represent the common interests of its members as institutional participants in New

Zealand's wholesale financial markets. One of NZFMA's key services is facilitating the provision of financial benchmarks that support the operation of New Zealand's wholesale financial markets.

NZFBF was established by NZFMA in 2021 to provide independent financial benchmark administration services exclusively for the NZFMA. NZFBF's objective is to deliver effective and efficient calculation and publication of the Benchmarks, ensuring, to the extent applicable, compliance with the New Zealand administrators of financial benchmarks regime, as provided for in the Financial Markets Conduct Act 2013 (FMCA) and the Financial Markets Conduct Regulations 2014, and alignment with the International Organization of Securities Commissions (IOSCO) Principles for Financial Benchmarks.

NZFBF is governed by a board of directors, which comprises a majority of independent directors.

If you wish to subscribe to any of the key New Zealand financial market benchmarks, please find the link [here](#).

## 2.1 Overall Responsibility of the Administrator

As Administrator, NZFBF maintains responsibility for all aspects of the capture and calculation process and overall governance surrounding the Benchmark. This includes the following:

- a) Development: The definition of BKBM and BKBM determination methodology (as outlined in this document);
- b) Determination and Dissemination: Accurate and timely compilation, publication and distribution of the Benchmark;
- c) Operation: Ensuring appropriate transparency in respect of significant decisions affecting the compilation of the Benchmark and any related determination process, including contingency measures in the event of absence of or insufficient inputs, market stress or disruption, failure of critical infrastructure, or other relevant factors; and,
- d) Governance: Establishing credible and transparent governance, oversight, and accountability procedures for the Benchmark determination process, including an identifiable oversight function accountable for the development, issuance, and operation of the Benchmark process.

## 2.2 Internal Oversight

NZFBF governance, which includes policies and processes for the calculation and control of the Benchmark, as noted above, is coordinated through the NZFBF Board, in consultation with relevant NZFBF Committees or Working Groups.

### 2.2.1 NZFBF Board

NZFBF has an oversight function via the Board (i.e., the board of directors of NZFBF) to review and challenge all aspects of the Benchmark determination process. NZFBF's Board Charter details the Board's oversight function. This is available on the NZFBF website.

The NZFBF Board will consist of at least three Directors, at least two of which are required to be independent Directors, at least one non-independent Director with financial markets experience, and one non-voting observer from the Government sector. The roles of the Chair and Deputy Chair will be filled by independent Directors.

### 2.2.2 NZFBF's BKBM Committee

NZFBF's BKBM Committee regularly reviews the operational management of the Benchmark capture and calculation process, noting however, that the governance of this and other NZFBF generated benchmarks will be the responsibility of the NZFBF Board.

NZFBF, in consultation with NZFBF's BKBM Committee, will provide recommendations to the NZFBF Board concerning the overall operation of the Benchmark. BKBM Committee members are drawn from price-making banks operating in New Zealand's domestic markets as well as a non-voting observer from the Reserve Bank of New Zealand.

### **2.3 Code of Conduct**

The NZFMA requires that NZFMA member banks included in the Benchmark determination process agree to comply with the NZFMA Code of Conduct and Principles. This Code sets out ethical principles for acceptable standards of behaviour in the over-the-counter (OTC) financial markets and promotes responsible decision-making by Participants.

For further information, please refer to the NZFMA Code of Conduct and Principles.

### **2.4 Conflicts of Interest**

Identifying and disclosing existing and potential conflicts of interest is a standing agenda item at NZFBF Board meetings. Employees and contractors of the Administrator must disclose any existing or potential conflicts of interest to the Chair of the NZFBF Board as soon as they arise in line with the Conflict Management Plan and the Code of Conduct and Conflicts of Interest.

Once disclosed, it is the responsibility of the Chair (or, where the Chair has the conflict, the Deputy Chair) to ensure that conflict does not inappropriately influence the calculation of the Benchmark.

### **2.5 Staff Training**

NZFBF ensures staff have the necessary skills and ongoing training to perform their duties to the highest standard and ensure benchmark outputs comply with the New Zealand benchmark administration licensing regime overseen by the FMA and align with the IOSCO Principles for Financial Benchmarks (to the extent applicable). Staff training is governed by the NZFBF Recruitment and Workplace Policies. Training will consist of in-house training and the use of external providers in relevant fields. Topics covered will be benchmark administration, NZ financial markets, and securities law & market regulation. Staff are also required to be familiar with the contents of the NZFMA's Accreditation programme.

## **3.0 QUALITY OF BENCHMARK**

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### **3.1 Benchmark design**

Factors such as the adequacy of the sample, the number of willing and available Price-makers, the size and liquidity of the relevant market, any market concentration issues surrounding the distribution of trading, and the relative size of the market in relation to the volume of trading in the market that references the Benchmark are subject to ongoing monitoring by the NZFBF. Following consultation with NZFBF's BKBM Committee this will be reported to the NZFBF Board. Should there be any significant developments to these market dynamics, a review process will be conducted to determine if the Benchmark determination process remains appropriate and produces a robust representation of the interest that it seeks to measure.

The NZFBF Board shall also review the design of the Benchmark determination process (upon recommendation from NZFBF, in consultation with NZFBF's BKBM Committee) in accordance with the FMA's licence for

administrators of financial benchmarks and to align with the IOSCO Principle 5 (Refer 3.5 for more detail) on an annual basis.

### 3.2 Data Sufficiency

The Benchmark determination process is anchored by observed transactions conducted in the Trading Window, entered into at arm's length between buyers and sellers in the market and having been formed by the competitive forces of supply and demand. As an adjunct or supplement to these transactions, deal-able bid and/or offer quotations extracted from broker pages may be relied upon. These different forms of data will be used depending on the conditions in the market on any given day to determine the Benchmark.

As New Zealand's domestic money markets are relatively small in size, the BKBM calculation operates on a waterfall methodology as described in section 8.1 to cater for low liquidity in the market. In times of market stress, the previous day's determination may be used as noted in section 8.2. NZFBF and the NZFBF Board monitor this activity closely and regularly engage with market participants to monitor changes in activity and developments in other jurisdictions.

### 3.3 Hierarchy of Data Inputs

NZFBF adheres to the following hierarchy of inputs in order to determine the Benchmark (full details are available in section 8.1):

- A trade weighted average of all trades and volumes completed within the Trading Window;
- Where there are no trades completed during the Trading Window – the system uses any/all executable bids and/or offers for each tenor; and/or,
- Interpolation is used to calculate those tenors where bids and offers have not been quoted.

If the above process is not able to determine the benchmark, for example due to market stress, NZFBF can use the BKBM waterfall or the previous day's Benchmark determinations, as described in section 8.2. The process is not dependent on submissions.

### 3.4 Transparency of Benchmark Determinations

NZFBF provides full transparency regarding the setting of the Benchmark on each business day. That is:

- How the benchmark was set – Traded, executable or interpolation;
- Details of any trading that occurred – Counterparties, volume, rate and tenor; and,
- Details when executable bids and/or offers are used – Counterparties, volume, rate, and tenor.

The information in the first two bullet points will be available to Benchmark users at 10:41am and all the information will be publicly available with a 24-hour delay. The Benchmark determination process will be conducted in a manner that complies with the details specified in this document and the NZFMA Code of Conduct. Any deviation will be investigated and, if necessary, escalated to the NZFBF Board for further consideration.

### 3.5 Periodic Review

NZFBF regularly reviews both the inputs and outputs of the BKBM process. If any issues arise it will raise the concerns directly with the BKBM Price-makers and NZFBF's BKBM Committee who meet approximately six times a year. This review of the methodology and Operating Rules & Principles will be undertaken on an annual basis and includes whether the two-way quotations:

- Have undergone any structural changes that may necessitate changes to the design of the methodology;
- Have diminished or are non-functioning such that they can no longer function as the basis for a credible Benchmark; and/or

- Have undergone any change which makes the Benchmark no longer representative of its intended interest and may result in the possible cessation of the Benchmark.

Any recommendations following each review will be forwarded to the NZFBF Board for consideration and approval. If any changes are required, the NZFBF Board will determine if a consultation is required (see section 4.2).

NZFBF will publish or make available a summary of such reviews where material revisions have been made to the methodology, including the rationale for the revisions with appropriate time frames for implementation.

## 4.0 QUALITY OF METHODOLOGY

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### 4.1 Content of Methodology

The methodologies are outlined in the Appendices and include the following:

- a) Definitions of key terms;
- b) All criteria and procedures used to develop the Benchmark including the input selection and source, prioritisation of certain data types, quorums and calculation methods;
- c) The procedures which govern a Benchmark determination in periods of market stress or disruption, including technology issues;
- d) Information regarding the frequency of internal and external reviews of methodologies – as specified in section 3.5; and,
- e) The circumstances in, and procedures under, which, the Administrator will consult with Stakeholders.

### 4.2 Changes to the Methodology

NZFBF, in consultation with NZFBF's BKBM Committee and the NZFBF Board, will publish or make available the rationale of any proposed material change in its methodology. A material change would be defined as, but not limited to, any change to the methodology that would alter the definition or representativeness of the Benchmark, the calculation of the Benchmark, the format in which it is released and/or the timing of that release.

NZFBF must notify the FMA if they propose to make a material change to the financial benchmark methodology or final stage methodology of the benchmark. This aligns with the requirements in section 22 of the FMC Regulations.

Material changes to the methodology will be communicated to benchmark users and stakeholders via a consultation, with adequate time for response. Following the consultation's close, NZFBF, in consultation with NZFBF's BKBM Committee and/or NZFBF Working Group, will consider the feedback. A summary of the feedback and proposed next steps will be published following this process, for further comment before a final decision is recommended to the NZFBF Board.

NZFBF will provide, at a minimum, one month's notice, via a market notice, for the implementation of the change which would be guided by consultation feedback.

Minor changes that do not meet the material change definition above will be discussed by the NZFBF, in consultation with NZFBF's BKBM Committee and the NZFBF Board, before being implemented.

These non-material changes would be implemented via a market notice, with a minimum two-week notice period.



The above processes may not apply if the Financial Markets Authority (FMA) has given written notice that a change is required.

#### 4.3 Internal Controls over Data Collection

As NZFBF collects data from an external source, appropriate internal controls have been put in place regarding data collection and transmission processes. These controls address the process for selecting the source, collecting the data, and protecting the integrity and confidentiality of the data.

A Master Services Agreement has been signed by the NZFMA with Bloomberg Finance LP which outlines the terms and conditions of the data license between the two entities. Permission has been obtained from the Brokers to access and use the quotation information that they publish on the relevant Bloomberg pages. Participating banks have agreed to disclose relevant trading information provided to the Brokers and subsequently used in the calculation of BKBM.

The Administrator does not actively monitor Bloomberg's arrangements for the collection and dissemination of the data because the data consists of live deal-able two-way quotations and therefore is of a mechanical nature.

#### 4.4 Transition

When a possible cessation event has been identified during the periodic review process specified in section 3.5, or at any other time by the NZFBF Board, be that due to the Benchmark no longer being representative or where the NZFBF and NZFMA can no longer act as the Benchmark Administrator, the processes in section 8.5 of this document will be followed.

## 5.0 ACCOUNTABILITY

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### 5.1 Complaints, Restatement & Penalties Procedures

NZFBF has a complaints procedure by which Stakeholders, or any other person may submit complaints relating to the BKBM process. This is covered in the NZFBF's Complaints Process which can be found on the NZFBF website. This document provides information on laying a complaint directly with NZFBF or externally to the FMA.

Where a complaint involves a request for a review and possible republication of BKBM, or in the event NZFBF identifies a system generated or other error in the calculation post publication of BKBM, the process will be handled in accordance with the following procedures.

- In determining the parameters for a refix, NZFBF considers the following:
  - Global best practice<sup>1</sup>;
  - Exposure of market participants to unnecessary basis risk;
  - The time and effort required to amend transactions in the event of a refix;
  - Transparency of error reporting; and,
  - Ensuring the rate is robust, reliable and reflective of the underlying interest.
- A material error is an error that would have a quarter basis point or greater impact on the final BKBM rate for that tenor;

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<sup>1</sup> For example, the IOSCO Principles for Financial Benchmarks

- A request to review a non-material error for a BKBM rate must be lodged by phone or email to NZFBF before 11:41am NZ time or 60 minutes post publication. To dispute the calculation of BKBM please call 0800 693 282 or email [helpdesk@nzfbf.co.nz](mailto:helpdesk@nzfbf.co.nz);
- NZFBF will accept requests to review material errors up until 3:00pm on the same business day;
- NZFBF will post a message to all benchmark users via email communicating either a non-material or material error of BKBM is under review;
- NZFBF will take steps to verify the basis of the error. If it is identified that a recalculation is warranted, then a recommendation will be made as per the procedures of section 8.1.
- In the event that an intraday refix is required, NZFBF will republish the amended rate for a non-material error to vendor screens, along with email notification to all BKBM users by 12:30pm NZ time;
- NZFBF will follow a similar process for material errors and will look to publish the intraday refix within 60 minutes of the error notification; and,
- NZFBF will maintain a log of all requests to recalculate a BKBM rate, including the entities which requested it, the investigations undertaken, and the reasons for the decision taken by NZFBF. This information will be published to the market, one month in arrears, on the NZFBF website.

Potential penalties for non-compliance by BKBM participants are as follows:

- 5.1.1 Rules for participation in the BKBM rate-set are integral to the integrity of the calculation of BKBM rates. Repeated failure by a Price-maker to operate in accordance with these rules may result in review of a Price-makers eligibility status.
- 5.1.2 Following a repeated failure, NZFBF, in consultation with the NZFBF's BKBM Committee, shall ask the NZFBF Board to formally warn the offending Price-maker that it may be suspended if there is a further failure to adhere to the rules during the following month.
- 5.1.3 If that Price-maker has another failure during the following month, NZFBF may, in consultation with the NZFBF's BKBM Committee, request that NZFBF Board suspend that Price-maker for a period of four weeks. If the Price-maker has another failure after completion of the suspension, it shall receive another formal warning.
- 5.1.4 In the event that the Price-maker has two further failures after completion of the suspension, NZFBF, in consultation with the NZFBF's BKBM Committee, and NZFBF Board (and without formal warning), may (a) suspend that Price-maker for a period of 12 weeks, or (b) if these failures were, in the majority opinion of NZFBF, NZFBF BKBM Committee and NZFBF Board, a blatant breach of the Operating Rules and Principles, permanently remove that Price-maker from the rate-set process.
- 5.1.5 The offending Price-maker shall be given the opportunity to be heard fully before its suspension or removal is ordered. The offending Price-maker shall be able to consent to suspension or removal before or after being heard.
- 5.1.6 The offending Price-maker shall have the right of appeal to the Board of the NZFMA in the event of suspension or removal.

## 5.2 Reporting and Audits

Daily data integrity checks will be conducted pre-publication, and retrospective reviews undertaken to ensure the methodology remains robust. This integrity check will be performed by NZFBF as part of its obligations as Administrator. Breaches of tolerance will be identified in NZdata, with Price-makers and NZFBF notified accordingly.

From time to time, the NZFBF Board may appoint an independent external auditor with appropriate experience and skill to review and report NZFBF's adherence to its stated BKBM Operating Rules & Principles.

## 5.3 Audit Trail

Written records will be retained by NZFBF for a minimum of seven years. These will include:



- All market data, any other data and information sources relied upon for Benchmark determination;
- Details surrounding deviations from standard procedures and methodologies; and,
- Any queries and/or complaints with appropriate responses relating to the Benchmark determination process.

Record Keeping:

NZFBF will retain auditable records of all data relating the daily calculation of BKBM, and any changes to the methodology. Physical and electronic records shall be kept for at least seven years. Records of telephone conversations or electronic communications shall be kept for a period of three years. The following information will be retained:

- All data inputs including details of the source;
- The calculated rates;
- Evidence of any NZFBF intervention;
- Relevant compliance reports including the NZFBF approval process;
- Any other reporting related to the calculation of BKBM;
- Relevant communication relating to the inputs or published BKBM rates;
- Any queries or complaints received in relation to BKBM and the NZFBF's response;
- Incident reports in relation to any issues or errors that occurred, including the proposed resolution;
- The identification of any conflicts of interest and how they were managed; and,
- Findings of any external audits.

The above information will be available to FMA on request.

#### **5.4 Confidentiality**

Subject to section 5.5, data provided by Price-makers and used in the Benchmark determination process will not be disclosed to any party, outside of the data noted in section 3.4, other than NZFBF and its employees, officers, and the NZFBF Board for the purpose of carrying out its duties as Administrator.

#### **5.5 Co-operation with Regulatory Authorities**

Where required by law, data audit trails and other documents subject to these Operating Rules & Principles shall be made readily available by NZFBF to any relevant Regulatory Authority.

## 6.0 Appendix I

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### Eligibility, Rules, and Current Price-Makers

#### 6.1 Price-Maker Eligibility Criteria

A Price-Maker means a financial institution approved by NZFBF to quote prices and transact during the BKBM Trading Window.

The BKBM Trading Window opens from 10:20am to 10:22am every business day, including Wellington and Auckland anniversary days. BKBM rates for one-month to six-months are calculated based on eligible trading or executable bids and/or offers during the rate set window. All price-makers should therefore endeavour, to the best of their ability, to transact during the rate-set window.

To be accepted as a Price-Maker to the Benchmark process, an entity must:

1. Be approved in writing by the NZFBF Board;
2. Be a paid-up member of the NZFMA;
3. Be an active participant in the bank bill market and a recognised Price-Maker across all maturities in the market amount and spread. At the time of writing, this requires Price-Makers to provide a five-basis point price in \$20 million parcels in the one-to-six-month maturities in the inter-bank market during NZ market hours – currently 8.30am to 4.30pm NZ time;
4. Provide NZFBF with proof that the entity has RWT-exempt status;
5. Provide NZFBF with a Company Extract issued by the NZ Companies Office showing that the entity is registered in NZ and listing the company directors and the registered office;
6. Provide NZFBF with a signed copy of the NZFBF standard “Fixed Establishment Warranty” on an annual basis;
7. Provide NZFBF with written acceptance of these Rules and Principles on an annual basis;
8. Display professionalism in market practice and adhere to the NZFMA Code of Conduct and Principles;
9. Provide written authority for Brokers to release details of volumes and rates relevant to BKBM settings to NZFBF or an independent reviewer, upon request; and,
10. Provide written authority to NZFBF, consenting to the publication of trade details relevant to the BKBM capture and calculation process.

#### 6.2 Rules for Price-makers in Rate-Set

NZFBF must notify the FMA of any proposed changes to the contributor conduct rules (rules for price-makers in the rate-set) below.

1. To be eligible to participate in the BKBM Trading Window, a Price-Maker must meet the **Price-Maker Eligibility Criteria** above in section 6.1 and must be confirmed by the NZFBF Board as a Price-maker in the BKBM Trading Window, thereby being bound by these Operating Rules and Principles;
2. Price action must display the intention to transact;
3. This means that a price entered by a Price-maker into the market must enable the market sufficient time to transact on that price;
4. Gapping of prices is not permitted. A Price-maker must enter the first price at the Broker MID and then may only move the bid or offer 1 basis point at a time. Each move must give sufficient time for the market to transact (i.e., 10 seconds), subsequently there should be no price movement in the final 10 seconds of the rate set window. Brokers will not accept a price in breach of this rule;
5. Sellers that issue Prime Bank Bill Paper must be willing to offer their own paper. Sellers that do not issue Prime Bank Bill Paper must be able to offer three lines of Prime Bank Bill Paper at all times throughout the BKBM Trading Window in order to take a market choice or inverse (i.e., offer at the same level or at a higher level than the lowest bid);
6. To be a valid offer, the paper that is being offered must be able to be bought by a minimum of three other Price-makers at all times throughout the BKBM Trading Window. Sellers who hold non-valid

paper under this rule may give bids during the BKBM Trading Window once they have ascertained the buyer has a line available for the paper being offered and, providing they do not take the market inverse in doing so;

7. Buyers must be able to always buy a minimum of four lines of Prime Bank Bill Paper throughout the BKBM Trading Window. For the sake of clarity, a Price-maker needs to be able to accept a minimum of three lines of Prime Bank Bill Paper plus their own. Buyers who have insufficient lines available may pay offers during the BKBM Trading Window once they have ascertained they have line available on the paper being offered, and providing they do not take the market inverse in doing so;
  8. The minimum parcel of bills during the set is \$20 million in the one-to-six-month maturities;
  9. Price-makers shall not initiate a non-valid BKBM trade during the BKBM Trading Window; and,
  10. Price-makers commit to providing two-way pricing in the one-, three-, and six-month tenors via the broker venue.
- ❖ NZFBF, in consultation with NZFBF's BKBM Committee, may widen the spread for BKBM pricing (see 6.1 (3)) in times of low liquidity or market stress, or as required.

NZFBF must notify the FMA if it knows or suspects that a contributor (price-maker) has committed, is committing or is likely to commit a significant contravention to Part Two (fair dealing in relation to financial products and financial services) of the FMC Act in connection with the service.

### **6.3 Eligible Prime Bank Paper**

The NZFBF Board will consider applications for Prime Bank Paper that meet the following criteria.

- 6.3.1 The bank paper issuer is a Registered Bank in New Zealand;
- 6.3.2 The bank paper issuer is a participant in the New Zealand wholesale financial markets as demonstrated by a commitment to offering a range of wholesale financial products to a wide range of users and counterparties;
- 6.3.3 The issuer's bank paper should be broadly fungible with the paper issued by other prime issuers from both a credit and liquidity perspective such that the market in general is willing to trade the prime issuer's paper at rates equivalent to those generally pertaining to other prime bank paper in normal market conditions;
- 6.3.4 The bank paper issuer is a paid-up member of the NZFMA;
- 6.3.5 The bank paper issuer is a Price-maker in the BKBM Trading Window; and,
- 6.3.6 NZFBF, in consultation with NZFBF's BKBM Committee, will recommend a list of eligible prime bank paper to the NZFBF Board. This will be reviewed annually, or earlier if required.

The current list of Prime Bank Paper eligible to be traded during the BKBM Trading Window is:

- ANZ Bank New Zealand Ltd
- ASB Bank Ltd
- Bank of New Zealand
- Kiwibank Ltd
- Westpac New Zealand Ltd

### **6.4 Current Price-makers**

- ANZ Bank New Zealand Limited
- ASB Bank Limited
- Bank of New Zealand
- Kiwibank Ltd
- Westpac Banking Corporation – New Zealand Branch

## 7.0 APPENDIX II

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### Broker Obligations

#### 7.1 Operational

- 7.1.1 Provide accurately communicated, timely data for the rate calculation process by electronic connection through a specified vendor (Bloomberg) connection. NZFBF is authorised to publish benchmark rates derived from the supplied data;
- 7.1.2 Ensure prices are updated promptly<sup>2</sup> and are an accurate reflection of the market information available;
- 7.1.3 Have adequate measures in place to reduce the likelihood of erroneous pricing entering the market (noting that clearly erroneous pricing may result in exclusion from the BKBM Trading Window and BKBM Calculation Process);
- 7.1.4 Clear down (remove pricing from) the Bloomberg pages at 9:00am each Business day;
- 7.1.5 Provide timely information in relation to any outages or delays to NZFBF;
- 7.1.6 Operate at all times in accordance with the BKBM Operating Rules & Principles;
- 7.1.7 Ensure that gapping of prices does not occur. The Broker will ensure that a Price-maker enters the first price at the Broker MID and then may only move the bid or offer one (1) basis point at a time, with each move providing sufficient time for the market to transact;
- 7.1.8 Achieve prompt cancellation and amendment of good orders where sought;
- 7.1.9 Time stamp all orders, amendments and transactions, log all activity and keep records for seven (7) years;
- 7.1.10 Only allow firm orders (no indicative orders) that do not have restrictions on their validity (for example it is not acceptable for orders to have restrictions as to their type of counterparty – the usual ‘subject to credit’ condition is acceptable);
- 7.1.11 Allow cancellation of trades for reasons of credit or genuine error only; and,
- 7.1.12 Have standard settlement instructions for all orders as per Market Conventions.

#### 7.2 Governance

- 7.2.1 Certify that they have at least two active *bona fide* market Price-makers connected to (or in the case of voice brokers contractually ready to participate in) the venue;
- 7.2.2 Report data specifically referencing Prime Bank Paper only and on a homogenous basis as defined by the NZFMA Conventions from time to time, noting that the NZFMA will give sufficient notice where possible as agreed before any relevant changes to these Conventions;
- 7.2.3 Give notice to NZFBF of plans for the introduction of features that may impact the BKBM Trading Window and BKBM Calculation Process;
- 7.2.4 Monitor the markets for compliance with the relevant regulatory requirements and adopt sound compliance standards;
- 7.2.5 Maintain the confidence of the NZFBF Board that the broker venue is suitable for inclusion in the BKBM Trading Window and the provision of data; and,
- 7.2.6 Operate and maintain a functioning Disaster Recovery Plan.

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<sup>2</sup> For voice brokers – to update prices on electronic representations of their market in well under 10 seconds.

### **7.3 Termination of Participation in the BKBM Trading Window and Rate Calculation Process**

- 7.3.1 Broker participation in the BKBM Trading Window may be suspended or terminated at the sole discretion of the NZFBF Board where actions of the Broker would adversely impact on NZFBF's confidence in the integrity of the supplied data. In the event of a suspension or termination of the Broker's participation due to a decision by the NZFBF Board, in consultation with NZFBF and NZFBF's BKBM Committee, NZFBF will provide a reason for such decision to the Broker. The Broker will have the right to appeal such decision to the NZFBF Board for their consideration; and,
- 7.3.2 Give one month's notice before termination of participation in the BKBM Trading Window.

### **7.4 Trade Reporting**

- 7.4.1 Input data records for transactions executed on the Broker's trading platform (representing trades of Prime Bank Paper between 10:20 to 10:22am) on a daily basis by 10:35am via the NZdata website. To authorise the provision of this trading information to the FMA and the publication of this information on a delayed, cross-venue and counterparty aggregated basis as determined by NZFBF, in consultation with NZFBF's BKBM Committee, from time to time;
- 7.4.2 Provide evidence of trading activity that meets the minimum defined threshold for relevance for inclusion in the BKBM Trading Window and BKBM Calculation Process initially and from time to time, as requested by NZFBF and described in these Operating Rules & Principles of the Bank Bill Benchmark Rate (BKBM) and BKBM Trading Window.

### **7.5 Source of Data**

#### 7.5.1 Collection from Broker Feeds

The collection of real-time Bids and Offers across all Bank Bill tenors from predefined broker pages are performed using dedicated data feed handlers (Bloomberg).

There are two servers: a Production server and a Disaster Recovery (DR) server. Both are active with the DR server being made available should the production server become unavailable.

The BKBM market (NZdata system) will take a snapshot of the Bank Bill broker data at 10:23am each business day (See 13.0 Appendix VIII for Good Business Day definition).

#### 7.5.2 Collection from Broker TRADES

In addition to Bid and/or Offer collection for each BKBM tenor, each broker is obligated to enter all trades with their respective volumes that have been executed/transacted during the Trading Window, into the NZdata system. If no trades occur in any of the one-month to six-month tenors, each broker is obligated to enter all Bid and/or Offer information with their respective volumes at the close of the Trading Window.

This is performed using their specified broker logons via a secure webpage All broker trades and volumes must be entered into the system by 10:35am each business day by each broker venue.

## 8.0 APPENDIX III

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### BKBM Calculation

#### 8.1 Calculation Methodology

BKBM is set in accordance with these BKBM Operating Rules and Principles using a rate set process based on a two-minute trading window commencing at 10.20am each business day. Pricing and trading occurs via two broker venues. At 10:23am, NZFMA's system (NZdata) collects data from the broker venues via Bloomberg using two feed handlers (production & disaster recovery). NZFBF and the NZdata system complete checks on the data before the calculation process commences at 10:41am, with publication soon after.

The BKBM methodology sets the tenors using a waterfall with four steps:

Step	Method
One	Arms-length Transactions
Two	Executable Bids and Offers
Three	Executable Bids or Offers & Movement Test
Four	Interpolation

***For BKBM to set on any given business day, at least one of the six BKBM tenors must set using step 1 or step 2 of the BKBM Waterfall. If this requirement is not met BKBM will revert to the previous business days BKBM rates (see section 8.2).***

NZFBF publishes a BKBM average and FRA for each of the one to six-month tenors which are the weighted average of transactions, midpoint of the executable bid/offers, bids or offers and movement, or interpolation. NZFBF also publishes BKBM bids and offers for the six tenors. BKBM bid is BKBM FRA plus five basis points and BKBM offer is BKBM FRA less five basis points.



### Step One: Arms-length Transactions

This step uses arms-length transactions that have been transacted in any of the six tenors during the two-minute rate-set window. The Brokers report any transactions that occur during the two-minute window via email and load the information into NZdata. NZFBF complete several checks to ensure all data is valid using the Broker's emails. If brokers are unable to access the NZdata system, for whatever reason, NZFBF can load the information into NZdata.

If transactions are available, the weighted average volume is taken to determine the BKBM rate. The formula for traded tenors is as follows:

$$\text{BKBM Wavg}_y = ((\text{Volume}_{\text{broker1}} \times \text{Rate}_i) + (\text{Volume}_{\text{broker2}} \times \text{Rate}_i)) / \sum \text{Broker volumes}$$

For example:

Tenor	Broker one	Broker two
<b>Three-month</b>		
Yield (%)	5.30000	5.29500
Volume (NZ\$m)	20.0	30.0

Three-month:

$$\text{Wavg}_3 = ((20 * 5.30000\%) + (30 * 5.29500\%)) / 50$$

$$= 5.29700\%$$

### Step Two: Executable Bids and Offers (Two-Sided Quotations)

If there are no arms-length transactions for any of the six tenors the methodology will check if there are executable bids and offers. This step uses arms-length executable bids and offers that have been quoted by the price-making banks in any of the six tenors during the two-minute rate-set window. The Brokers report any bid/offer quotations at the end of the two-minute rate-set window via email and load the information into NZdata. NZFBF complete several checks to ensure all data is valid using the Broker's emails. If brokers are unable to access the NZdata system, for whatever reason, NZFBF can load the information into NZdata.

If executable bids and offers are available, the midpoint is taken using the tightest bid/offer spread from the two brokers. The formula for executable bids/offers is as follows:

$$BKBM \text{ Mid}_y = (\text{Bid}_y + \text{Offer}_y)/2$$

For example:

Tenor	Broker one	Broker two
One-month Yield (%)	5.28000/5.26000	5.29000/5.27000

One-month bid/offer is 5.28000%/5.27000%

$$\begin{aligned} BKBM \text{ Avg}_1 &= (5.28000\% + 5.27000\%)/2 \\ &= (10.55000\%)/2 \\ &= 5.27500\% \end{aligned}$$

### Step Three – Executable Bids or Offers and Movement (One-Sided Quotations)

**Note: For BKBM to set on any given business day, at least one of the six BKBM tenors must set using step 1 or step 2 of the BKBM Waterfall. If this requirement is not met BKBM will revert to the previous business days BKBM rates (see section 8.2).**

If there are no arms-length transactions or executable bids and offers for any of the six tenors, the methodology will check if there are any executable bids or offers. This step uses executable bids or offers that have been quoted by the price-making banks in any of the six tenors during the two-minute rate-set window. It also uses a movement calculation based on tenors that have set and their movement from the previous days rate-set. The Brokers report any bid or offer quotations at the end of the two-minute rate-set window via email and load the information into NZdata. NZFBF complete several checks to ensure all data is valid using the Broker's emails. If brokers are unable to access the NZdata system, for whatever reason, NZFBF can load the information into NZdata.

The one-sided bid or offer quotations will be used in conjunction with the bid or offer and movement matrix below:

Bid or offer and Movement Matrix				
If Bid	>	Movement	Use	Movement
If Bid	<	Movement	Use	Bid
If Offer	>	Movement	Use	Offer
If Offer	<	Movement	Use	Movement

In the matrix, movement refers to the difference between the rate that is calculated using the tenors that have set during the rate-set and the rates from yesterday's rate-set. The movement is calculated using the average movement in the two nearest tenors that have been set using step one and/or step two. If the one-month or six-month tenors have not been set, then the movement in the three-month will be used. The movement from one set tenor will be used if only one has been calculated using steps one and/or two.

If more than one tenor has been set using steps one and/or two, movement is only used on the one-month, three-month and six-month tenors. Interpolation (see step 4 below) is used to calculate the movement rate for the two-month, four-month and five-month tenors.

If there are two tenors set using steps one and or two, movement is calculated using one of the following formulae:

When the three-month tenor has not set:

$$BKBM_x^{T+0} = BKBM_x^{t-1} + (((BKBM_y^{t+0} - BKBM_y^{t-1}) + (BKBM_z^{t+0} - BKBM_z^{t-1}))/2)$$

Example one:

Tenor	1 month	3 months	6 months
Yield (%) <sub>t-1</sub>	5.28000	5.30000	5.29000
Yield (%) <sub>t+0</sub>	5.29000	5.31500 / X.XXXXX	5.30500

Using the movement formula, the following movement rate would be calculated:

$$\begin{aligned} BKBM_3^{T+0} &= 5.30000\% + (((5.29000\% - 5.28000\%) + (5.30500\% - 5.29000\%))/2) \\ &= 5.30000\% + ((0.02500\%)/2) \\ &= 5.31250\% \end{aligned}$$

Using the bid or offer and movement matrix above, the three-month tenor has a Bid of 5.31500% and a movement of 5.31250%:

Given we have a Bid > Movement = Use Movement

$$5.31500\% > 5.31250\%$$

The Movement rate is used. The three-month tenor will be set at this rate of 5.31250%.

Example two:

Tenor	1 month	3 months	6 months
Yield (%) <sub>t-1</sub>	5.28000	5.30000	5.29000
Yield (%) <sub>t+0</sub>	5.29000	5.31500	X.XXXXXX / 5.33000

$$\begin{aligned} BKBM_6^{T+0} &= 5.29000\% + (5.31500\% - 5.30000\%) \\ &= 5.30500\% \end{aligned}$$

Using the matrix above, the six-month tenor has an Offer of 5.33000% and a movement of 5.30500%:

Given we have an Offer > Movement = Use Offer

$$5.33000\% > 5.30500\%$$

The Offer rate is used. The six-month tenor will be set at this rate of 5.33000%.

If only one tenor is set using steps one and/or two, movement is calculated using the following formula:

$$BKBM_x^{T+0} = BKBM_x^{t-1} + (BKBM_y^{t+0} - BKBM_y^{t-1})$$

For example:

Tenor	1 month	3 months	6 months
Yield (%) <sub>t-1</sub>	5.28000	5.31000	5.29000
Yield (%) <sub>t+0</sub>	5.30000	No trading or bid and/or offer	X.XXXXX/5.31500

As the three-month tenor has no bid or offer it would be set using the movement in the set tenor.

$$\begin{aligned} BKBM_3^{T+0} &= 5.31000\% + ((5.30000\% - 5.28000\%)) \\ &= 5.31000\% + 0.02000\% \\ &= 5.33000\% \end{aligned}$$

The six-month tenor would set as follows:

$$\begin{aligned} BKBM_6^{T+0} &= 5.29000\% + ((5.33000\% - 5.31000\%)) \\ &= 5.29000\% + 0.02000\% \\ &= 5.31000\% \end{aligned}$$

Using the matrix above, the six-month tenor has an Offer of 5.31500% and a movement of 5.31000%:

Given we have an Offer > Movement = Use Offer

$$5.31500\% > 5.31000\%$$

The Offer is used. The six-month tenor will be set at the Offer rate of 5.31500%

#### Step Four – Straight-Line Interpolation

If there are no arms-length transactions, executable bids and offers, or executable bids or offers, the remaining unset tenors will set using straight line interpolation between the two closest tenors that have been set, using steps one, two or three above.

Straight-line interpolation is calculated as follows:

$$BKBM \text{ Avg}_2 = (BKBM \text{ Avg}_3 - BKBM \text{ Avg}_1)/2 + BKBM \text{ Avg}_1$$

Example One:

Tenor	1 month	3 months	6 months
Yield (%) <sub>t+0</sub>	5.31000	5.32000	5.30500

$$\begin{aligned} \text{BKBM Avg}_2 &= (5.32000\% - 5.31000\%)/2 + 5.31000\% \\ &= 0.00500\% + 5.31000\% \\ &= 5.31500\% \end{aligned}$$

$$\begin{aligned} \text{BKBM Avg}_4 &= (5.30500\% - 5.32000\%)/3 + 5.32000\% \\ &= -0.00500\% + 5.32000\% \\ &= 5.31500\% \end{aligned}$$

$$\begin{aligned} \text{BKBM Avg}_5 &= 2((5.30500\% - 5.32000\%)/3) + 5.32000\% \\ &= -0.01000\% + 5.32000\% \\ &= 5.31000\% \end{aligned}$$

If either of the 4-month or 5-month tenors set during the trading window, the unset tenor will be interpolated between the two nearest tenors that set. For example, if the 4-month tenor set, the 5-month tenor would be interpolated between the 4-month tenor and 6-month tenor.

Example 2:

Tenor	1 month	3 months	5 months	6 months
Yield (%) <sub>t+0</sub>	5.31000	5.32000	5.30000 / X.XXXXX	5.30500

$$\begin{aligned} \text{BKBM Avg}_2 &= (5.32000\% - 5.31000\%)/2 + 5.31000\% \\ &= 0.00500\% + 5.31000\% \\ &= 5.31500\% \end{aligned}$$

$$\begin{aligned} \text{BKBM Avg}_5 &= 2((5.30500\% - 5.32000\%)/3) + 5.32000\% \\ &= -0.01000\% + 5.32000\% \\ &= 5.31000\% \end{aligned}$$

Using the matrix in step three above, the five-month tenor has a Bid of 5.30000% and an interpolation of 5.31000%:

Given we have a Bid < Interpolation = Use Bid

$$5.30000\% < 5.31000\%$$

The Bid is used. The five-month tenor will be set at the Bid rate of 5.30000%

The four-month tenor will then use straight line interpolation between the nearest set tenors, in this case it will be the three-month and five-month tenors.

$$\begin{aligned}\text{BKBM Avg}_4 &= (5.30000\% - 5.32000\%)/2 + 5.32000\% \\ &= -0.01000\% + 5.32000\% \\ &= 5.31000\%\end{aligned}$$

- ❖ NZFBF and the NZFBF Board confirmed that for any tenor to set on a given business day, there must be a minimum of an arms-length transaction or executable bid and offer in at least one of the tenors. This means that if there is only a single bid or single offer in one of the tenors at 10:23am, the previous day's BKBM will be used as a one-sided quotation does not satisfy this requirement.

## 8.2 Revert to previous day's BKBM

In the extreme event that the four steps above do not calculate BKBM then the previous day's BKBM will be used to calculate the BKBM tenors.

The use of this step is immediately reported to the NZFBF Board, with follow-up notification to the FMA.

Reliance on this method to calculate BKBM will not extend beyond five consecutive business days. This timeframe reflects:

- The use of previous day's BKBM data will become less representative of the underlying market over time;
- This will likely occur in a stressed market environment where interest rates are volatile;
- The practice in other jurisdictions; and,
- The time required to assess the issue, consider an alternative benchmark rate and implement.

If BKBM becomes operational again within the five-day period (for example, a period of market volatility passes) NZFBF will revert to the BKBM process as noted in 8.1, with notification to the stakeholders noted above.

## 8.3 Publication

The data is distributed to benchmark users via:

- An XML feed to the information vendors. Vendors are obligated to display the BKBM rates on their vendor screens upon immediate receipt of the XML data; and,
- Spreadsheet distribution for users of the BKBM service. With this service users may request a spreadsheet with information relating to any transactions that have occurred. The following information is provided: tenor, counterparties, volume, and yield.

The data noted above is also available free-to-air with a 24-hour delay on the NZFMA website. Additionally, if any of the tenors are set using executable bids and offers, the website will also provide the following information: tenor, counterparties, volume, and yield.

## 8.4 Final Stage Methodology

The Final Stage Methodology will be implemented when NZFBF and Price-makers are instructed by the FMA to provide expert opinion. This will require Price-makers to contribute expert opinion on a BKBM tenor or tenors



each business day to NZFBF for a period prescribed by the FMA, and no longer than the relevant regulations allow. This will likely occur, but is not limited to, when the BKBM waterfall has been exhausted and use of the previous day's rate has reached its five-day maximum or if the FMA determines that BKBM is no longer representative.

Under the Final Stage Methodology, BKBM is defined as the rate at which a Prime Bank could reasonably fund itself in the underlying market for Bank Paper around 10:20am on any NZ business day. Price-makers must only submit BKBM rates that solely reflect the above definition of BKBM. Submissions must be provided by 10:30am on any business day. NZFBF will calculate a trimmed mean of the rates provided. BKBM will be published at 10:41am.

Price-makers should develop an internal Submissions Guide, formulated in accordance with the BKBM Final Stage Methodology and Code of Conduct when submitting BKBM rates. For clarity, each Price-maker is only required to submit rates that are reflective of their own cost of funding for that day.

### **Guidance on selection and priority of inputs**

Expert judgement involves the use of discretion by a Price-maker when determining the data inputs to be used in rate submissions and adjusting these inputs where necessary to reflect current market conditions. Price-makers must identify a range of data inputs that may be used in determining BKBM submissions as part of their Submission Guide. Where possible, expert judgement should be supported by market data. In developing the Submission Guide, Price-makers may have regard to the following:

- Genuine business purposes (where applicable in the context of submission); and
- Trading in Bank Paper by a Price-maker should be based on its genuine business purposes to buy or sell Bank Paper, as determined by the Price-maker.

Without limiting the matters, it may have regard to, and for the avoidance of doubt in determining its genuine business purposes to buy or sell Bank Paper, a Price-maker may have regard to:

- Balance sheet or prudential requirements for management of liquidity by way of purchases of Bank Paper or similarly satisfying prudential funding requirements with the issuing or sale of Bank Paper;
- Credit risk limit management when trading Bank Paper - hedging of derivatives exposure; and,
- Price and/or volume discovery.

and extrapolation of values using:

- Transactions in related funding markets (local and offshore, secured and unsecured);
- Aggregate cost of raising wholesale funds for that day;
- Transactions or quotes in local interest rate derivative markets that are independent of BKBM; and,
- Prior or historical BKBM data, accounting for current market conditions. A parallel shift may be applied to the data to reflect recent events/activity.

In addition to quantitative elements above, the Submission Guide should also incorporate the use of qualitative elements (i.e., expert judgement) with sufficient flexibility where quantitative data is limited or unavailable.

In determining the priority of inputs, the below guidance should be observed:

- Transactional based data should be accorded the highest priority with transactional data that meets some or all of the criteria noted in section 8.1;
- Executable quote data should be accorded higher priority than indicative quote data; and,
- The most recent transactions in Bank Paper should be given higher weighting relative to historical transactions.

In the case where BKBM has been set off the previous days rate for 5 consecutive days and the FMA implements the Final Stage Methodology, NZFBF will continue to concurrently operate the BKBM process. This will allow a path back to the BKBM process as noted in 8.1, with prior FMA approval, should BKBM become operational.

In the case where the FMA determines that BKBM is no longer representative and implements the Final Stage Methodology, NZFBF and Price-makers could continue to calculate BKBM. If the FMA's concerns with BKBM were addressed by NZFBF during the final stage process, BKBM could be reinstated as the Benchmark subject to FMA approval. Similarly, if a period of market stress passes and the publication of BKBM recommences, within the period where the FMA has implemented the Final Stage Methodology, NZFBF will revert to the BKBM process as noted in 8.1, with prior notification to the FMA for its approval.

## 8.5 BKBM Cessation Procedures

These procedures concern the actions that will be taken by NZFBF in the event of cessation of BKBM.

Various factors, including external factors beyond the control of NZFBF, might necessitate material changes to BKBM. Benchmark users and stakeholders of BKBM should have robust fall-back provisions in place in the event of material change or cessation of BKBM. For example, cessation can be invoked by NZFBF if it believes it is no longer in a position to calculate and publish BKBM and/or the Benchmark is no longer representative.

Other entities within New Zealand, such as the FMA or the Reserve Bank of New Zealand (RBNZ), can also invoke the cessation of BKBM if they believe NZFBF is no longer in a position to calculate and publish BKBM and/or BKBM is no longer representative. These procedures do not refer to their actions or procedures.

Prior to cessation it is likely that NZFBF will have exhausted the BKBM waterfall (see section 8.1) and the use of the previous day's rate (see section 8.2). As such, notice would have already been provided to the necessary stakeholders and benchmark users that there were issues pertaining to the calculation and publication of BKBM. However, if cessation was to occur the NZFBF Board would notify:

- The FMA;
- The RBNZ; and
- Benchmark users and other stakeholders of BKBM.

Such notice would include:

- A description of the issue;
- When cessation would likely occur;
- The potential to use other benchmarks, be they the fallback benchmark interest rate or some other benchmark;
- The time required to implement a new benchmark if one is available;
- NZFBF's ability to continue as the Benchmark Administrator; and
- Options for an alternate Benchmark Administrator, if NZFBF were unable to continue.

### Voluntary discontinuation

If NZFBF determined it could no longer continue as the Benchmark Administrator, for whatever reason, it would notify the stakeholders noted above. Following this, a market notification would be made giving at least six-month's notice.

NZFBF would work with stakeholders to identify expressions of interest from other administrators in publishing BKBM and NZFBF would be prepared to work with the successful administrator to transition the Benchmark.

## 9.0 APPENDIX IV

### Bank Paper Maturity Convention

#### 9.1 Bank Paper Maturity Convention

Prime Bank eligible securities (bank paper) are traded in the local New Zealand market and represent the rates that banks are willing borrow from, or lend to, one another for terms out to twelve months and more typically for terms of one to six months. The rate at which bank paper trades contain a credit premium to the comparable risk-free interest rate curve. Bank paper is quoted and transacted in the BKBM two-minute rate-set window, between 10:20 and 10:22am, to set the benchmark. There is also an interbank market.

From 9 May 2022<sup>3</sup> the bank paper maturity convention is:

- Primary Issuance: Actual Maturity Date and +1 to +5 business days.
- Secondary Issuance: Actual Maturity Date and -5 to +5 business days.
- A good business day is defined as any day on which banks in New Zealand are generally open for business, or a day other than one on which banks in New Zealand are obliged or permitted to close, excluding Saturday and Sunday. Essentially, New Zealand business days are weekdays (Monday to Friday) other than public holidays. For clarity, Wellington and Auckland Anniversary days are valid maturity dates for BKBM.
- If the Maturity Date does not fall on a good Business Day, then it is to be adjusted on a 'Modified Following Business Day' basis.

#### 9.2 Bank Paper Maturity Convention Examples

##### Public holiday maturity date

Issuance	Term	Start date	Valid Maturity Dates		
			- 5 business days	Actual Maturity Date	+ 5 business days*
Primary	3 months	7 March 2022	n/a	7 June 2022	8 June 2022 9 June 2022 10 June 2022 13 June 2022 14 June 2022
Secondary	3 months	7 March 2022	30 May 2022 31 May 2022 1 June 2022 2 June 2022 3 June 2022	7 June 2022	8 June 2022 9 June 2022 10 June 2022 13 June 2022 14 June 2022

\* Note 6 June 2022 is a public holiday in New Zealand.

<sup>3</sup> Prior to 9 May 2022 the convention for bank paper was based on an early/late month. Early meant maturities on business days from the 1<sup>st</sup> to the 15<sup>th</sup> of the month and late referred to maturities on business days from the 16<sup>th</sup> to the end of the month.

### Wellington Anniversary maturity date

Issuance	Term	Start date	Valid Maturity Dates		
			- 5 business days	Actual Maturity Date	+ 5 business days*
Primary	1 month	23 December 2022	n/a	23 January 2023	24 January 2023 25 January 2023 26 January 2023 27 January 2023 30 January 2023
Secondary	1 month	23 December 2022	16 January 2023 17 January 2023 18 January 2023 19 January 2023 20 January 2023	23 January 2023	24 January 2023 25 January 2023 26 January 2023 27 January 2023 30 January 2023

# Wellington Anniversary Day 23 January 2023

\*Auckland Anniversary Day 30 January 2023

### End of month maturity date (modified following)

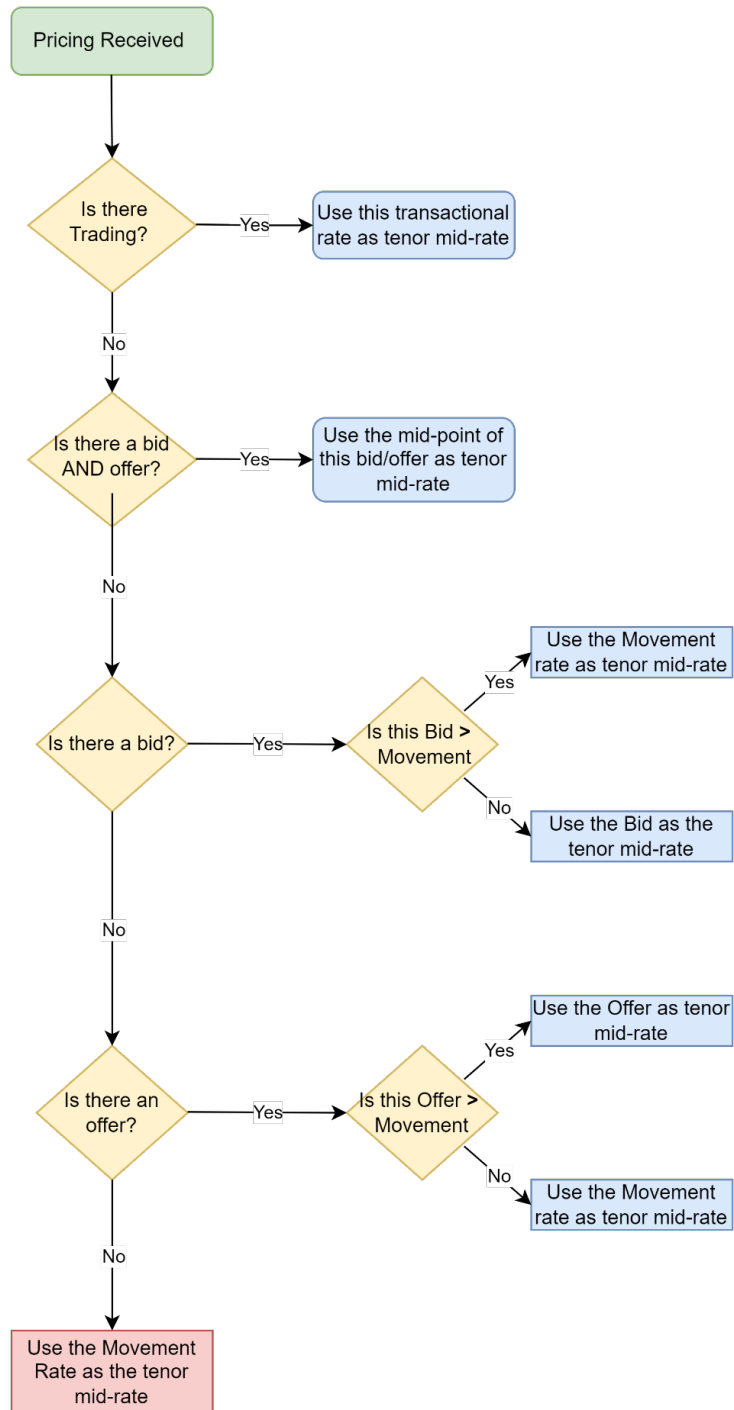
Issuance	Term	Start date	Valid Maturity Dates		
			- 5 business days	Actual Maturity Date	+ 5 business days*
Primary	6 months	31 October 2022	n/a	28 April 2023	1 May 2023 2 May 2023 3 May 2023 4 May 2023 5 May 2023
Secondary	6 months	31 October 2022	20 April 2023 21 April 2023 24 April 2023 26 April 2023 27 April 2023	28 April 2023	1 May 2023 2 May 2023 3 May 2023 4 May 2023 5 May 2023

# Modified following

\* Note 25 April is a public holiday in New Zealand

# 10.0 APPENDIX V

## BKBM Waterfall Flowchart



**Process To Be Followed For All BKBM Tenors**

## 11.0 APPENDIX VI

### BKBM Waterfall Scenarios

The following scenarios are based on the new BKBM waterfall process utilising one-sided quotations. The changes entail assessing the one-sided quotation and comparing it to the rate that would have been calculated through movement (from yesterday's rate) and using the more appropriate of these two rates per the movement matrix below.

Following these movement calculations, the rates are compared to any bid or offer present in the affected tenor. The following matrix is used to determine the most appropriate rate for setting BKBM:

Bid or offer and Movement Matrix				
If Bid	>	Movement	Use	Movement
If Bid	<	Movement	Use	Bid
If Offer	>	Movement	Use	Offer
If Offer	<	Movement	Use	Movement

For example:

	t-1	t	change
Three-month benchmark	3.36%	3.39%	+3 bpts

One-month	t-1	bid/offer	Movement	Rate-Set
1.	3.00	3.07/-	3.03	<b>3.03</b>
2.	3.00	3.01/-	3.03	<b>3.01</b>
3.	3.00	-/3.04	3.03	<b>3.04</b>
4.	3.00	-/3.00	3.03	<b>3.03</b>

Six-months	t-1	bid/offer	Movement	Rate-Set
1.	3.71	3.79/-	3.74	<b>3.74</b>
2.	3.71	3.73/-	3.74	<b>3.73</b>
3.	3.71	-/3.76	3.74	<b>3.76</b>
4.	3.71	-/3.73	3.74	<b>3.74</b>

#### Three months

One-month change 1 basis point, six-month change 4 basis points = **average change 2.5 basis points.**

	t-1	bid/offer	Movement	Rate-set
1.	3.36	3.40/-	3.385	<b>3.385</b>
2.	3.36	3.38/-	3.385	<b>3.38</b>
3.	3.36	-/3.39	3.385	<b>3.39</b>
4.	3.36	-/3.37	3.385	<b>3.385</b>



## 12.0 APPENDIX VII

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### Fixed Establishment Warranty /Acceptance of Rules

*SAMPLE – Price-maker*

*[date]*

New Zealand Financial Benchmark Facility Limited  
P. O. Box 641  
Wellington  
New Zealand

Dear

#### **FIXED ESTABLISHMENT IN NEW ZEALAND – BKBM**

*[Company name]* confirms and represents and warrants that, on each date on which it enters into a sale and purchase of New Zealand dollar denominated certificates of deposit, it is engaged in business through a fixed establishment in New Zealand.

*[Company name]* will promptly advise the New Zealand Financial Markets Association (“NZFMA”) of any change in circumstance that would or could potentially result in *[Company name]* to be not engaged in business through a fixed establishment in New Zealand for New Zealand income tax purposes.

*[Company name]* acknowledges that NZFMA and its members rely on the representations made in this letter in entering into the sale and purchase of certificates of deposit between *[Company name]* and members of NZFMA from time to time.

#### **OPERATING RULES & PRINCIPLES for Bank Bill Benchmark Rate (BKBM) AND THE BKBM TRADING WINDOW**

*[Company name]* confirms that it has read, understands and accepts the **Operating Rules & Principles of the Bank Bill Benchmark Rate (BKBM) and the BKBM Trading Window**, available on the NZFBF [website](#), and further permits NZFMA to publish daily transactional data information relating to the BKBM Trading Window.

Yours faithfully

*[sign off]*

## 13.0 APPENDIX VIII<sup>4</sup>

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### Key Definitions

**Administration:** Includes all stages and processes involved in the production and dissemination of the Benchmark, including:

- a) Collecting, analysing and/or processing information or expressions of opinion for the purposes of the determination of the Benchmark;
- b) Determining the Benchmark through the application of a formula or another method of calculating the information or expressions of opinions provided for that purpose; and
- c) Dissemination to users, including any review, adjustment, and modification to this process.

**Audit trail:** For the purposes of the Benchmark determination process, the documentation and retention of all relevant data, submissions, other information, judgments (including the rationale for any exclusions of data), analyses and identities of Submitters used in the Benchmark setting process for an appropriate period.

**Benchmark:** The Benchmark in scope of this document are prices, estimates, rates, indices or values that are:

- a) Made available to users, whether free of charge or for payment;
- b) Calculated periodically, entirely or partially by the application of a formula or another method of calculation to, or an assessment of, the value of one or more underlying interests;
- c) Used for reference for purposes that include one or more of the following:
  - determining the interest payable, or other sums due, under loan agreements or under other financial contracts or instruments;
  - determining the price at which a financial instrument may be bought or sold or traded or redeemed, or the value of a financial instrument; and/or
  - measuring the performance of a financial instrument.

**Benchmark Administrator (“Administrator”):** An entity or legal person that controls the creation and operation of the Benchmark Administration process, whether or not it owns the intellectual property relating to the Benchmark. In particular, it has responsibility for all stages of the Benchmark Administration process, including:

1. The calculation of the Benchmark;
2. Determining and applying the Benchmark methodology; and
3. Disseminating the Benchmark.

The current Benchmark Administrator is New Zealand Financial Benchmark Facility Limited(NZFBF).

**Benchmark User:** A person or entity that purchases Benchmark determination services from the Administrator.

**BKBM Trading Window:** Two-minute period between 10:20am and 10.22am being the trading period used for the capture and calculation of the BKBM Benchmark.

**Bloomberg:** A third party platform that provides a real time source of market data, pricing information and news.

**Bona fide:** Refers to data where the parties submitting the data have executed, or are prepared to execute, transactions generating such data and the concluded transactions were executed at arm’s-length from each other.

**Calculation Agent:** An entity with delegated responsibility for determining the Benchmark through the application of a formula or other method of calculating the information or expressions of opinions provided for that purpose, in accordance with the methodology set out by the Administrator.

**‘Good’ Business Day:** A 'good' business day is defined as a day on which banks in New Zealand are generally

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<sup>4</sup> Source: IOSCO Principles for Financial Benchmarks July 2013 and NZFBF internal documents.

open for business, or a day other than one on which banks in New Zealand are obliged or permitted to close - specifically excluding Saturday and Sunday.

Essentially, good business days are weekdays (Monday to Friday) other than public holidays.

In general, NZFMA recommends that transactions should not be negotiated for settlement or price fixing (rollover) on a non-business day. Other conventions can be utilised, if agreed upon at the time of dealing.

**Methodology:** The written rules and procedures according to which information is collected and the Benchmark is determined.

**Over-the-Counter:** Financial instruments that are bought and sold and privately negotiated directly between two counterparties, without the use of an exchange or other intermediary.

**Participants:** Legal entities involved in the production, structuring, use or trading of financial contracts or financial instruments used to form the Benchmark, or which reference the Benchmark.

**Price-maker:** A financial institution approved by the NZFBF to supply two-way quotations via a third party platform for the calculation of the BKBM Benchmark.

**Publish or make available:** Refers to the expectation that a party such as an Administrator should provide a document or notice to Stakeholders. The means by which such notice is made should be proportionate to the breadth and depth of the Benchmark used by Stakeholders, as determined by the Administrator on a “best efforts” basis. Ordinarily, posting a document or notice on the Administrator’s website will meet this expectation.

**Regulatory Authority:** A governmental or statutory body (not being a self-regulatory organisation) with responsibility for securities and/or commodities and futures regulation in New Zealand.

**Repeated Failure:** More than one breach of the Rules in a calendar month.

**Stakeholder:** Refers to Subscribers and other persons or entities who own contracts or financial instruments that reference the Benchmark.

**Two-way:** A price that has a bid price (yield) and an offer price (yield). The bid offer spread is the difference between the bid price and offer price.