



FTSE NSE Kenyan Shilling Government Bond Index

v1.4



Contents

1.0	Introduction.....	3
2.0	Management Responsibilities	5
3.0	FTSE Russell Index Policies	6
4.0	Eligibility of Securities	7
5.0	Price Sources.....	8
6.0	Periodic Changes to the Portfolios	9
	Appendix A: Index Calculation Formulae.....	11
	Appendix B: Further Information	14



Section 1

Introduction

1.0 Introduction

- 1.1 The FTSE NSE Kenyan Shilling Government Bond Index is designed to measure the performance of the Kenyan government bond market.
- 1.2 This document sets out the Ground Rules for the construction and management of the FTSE NSE Kenyan Shilling Government Bond Index.
- 1.3 The Index has the following five maturity sub indexes:
 - 1 – 3 years
 - 3 – 5 years
 - 5 – 7 years
 - 7 – 10 years
 - Over 10 years

The sub index in which each bond is assigned depends on the maturity term from the appropriate settlement day (T+0) for trades performed on the first business day of the month.
- 1.4 The purpose of the FTSE NSE Kenyan Shilling Government Bond Index is to measure the market capitalisation weighted performance that holders of the relevant types of bonds experience over time. This is achieved by creating a representative portfolio of bonds, and measuring their performance. At the end of each month the constituents of the portfolio are reviewed. During the review, bonds may be removed or added to the index portfolio. It is assumed that any rebalancing does not have a cost. The contents of a portfolio do not change during any month, except in exceptional circumstances.

The rules used in their construction broadly follow the EFFAS standardised ones for bond index. The formulae used are described in Appendix A.
- 1.5 The capital index¹ and sub indexes are calculated daily. Each capital index is an arithmetically weighted index based on the clean price, and weighted by the nominal amount outstanding.
- 1.6 A total return index² is also calculated for the index and sub indexes. A total return index takes into account the price changes and interest accrual and payments of each bond.
- 1.7 The base currency of the benchmark is KES.

¹ Also known as the Price Index or the Clean Price Index

² Also known as the Performance Index

1.8 In addition to the Capital Index and Total Return Index, the following index analytics are also calculated:

- Average Coupon
- Average Gross Redemption Yield
- Average Time to Maturity
- Average (Macaulay) Duration
- Average Modified Duration
- Average Convexity
- The sum of the nominal value of all bonds in each index
- The number of bonds in each Index, and
- The weight of the index in relation to its relevant aggregated index (when applicable)

1.9 **FTSE Russell**

FTSE Russell is a trading name of FTSE International Limited, Frank Russell Company, FTSE Global Debt Capital Markets Limited (and its subsidiaries FTSE Global Debt Capital Markets Inc. and MTSNext Limited), Mergent, Inc., FTSE Fixed Income LLC and The Yield Book Inc.

1.10 FTSE hereby notifies users of the Index that it is possible that circumstances, including external events beyond the control of FTSE, may necessitate changes to, or the cessation of, the Index and therefore, any financial contracts or other financial instruments that reference the Index or investment funds which use the index to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the Index.

1.11 Index users who choose to follow this Index or to buy products that claim to follow this Index should assess the merits of the Index's rules-based methodology and take independent investment advice before investing their own or client funds. No liability whether as a result of negligence or otherwise is accepted by FTSE nor its subsidiary undertakings (or any person concerned with the preparation or publication of these Ground Rules) for any losses, damages, claims and expenses suffered by any person as a result of:

- any reliance on these Ground Rules, and/or
- any errors or inaccuracies in these Ground Rules, and/or
- any non-application or misapplication of the policies or procedures described in these Ground Rules, and/or
- any errors or inaccuracies in the compilation of the index or any constituent data in the index.



Section 2

Management Responsibilities

2.0 Management Responsibilities

2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index.³

2.1.2 FTSE is responsible for the daily calculation, production and operation of the FTSE NSE Kenyan Shilling Government Bond Index and will:

- maintain records of all the constituents;
- be responsible for the addition and deletion of gilts and changes of nominal amounts, in accordance with the Ground Rules.

2.1.3 These Ground Rules set out the methodology and provide information about the publication of the FTSE NSE Kenyan Shilling Government Bond Index.

2.2 Amendments to These Ground Rules

2.2.1 These Ground Rules shall be subject to regular review (at least once a year) by FTSE Russell to ensure that they continue to best reflect the aims of the index. Any proposals for significant amendments to these Ground Rules will be subject to consultation with FTSE Russell advisory committees and other stakeholders if appropriate. The feedback from these consultations will be considered by the FTSE Russell Product Governance Board before approval is granted.

2.2.2 As provided for in the Statement of Principles for FTSE Russell Equity Indexes, where FTSE Russell determines that the Ground Rules are silent or do not specifically and unambiguously apply to the subject matter of any decision, any decision shall be based as far as practical on the Statement of Principles. After making any such determination, FTSE Russell shall advise the market of its decision at the earliest opportunity. Any such treatment will not be considered as an exception or change to the Ground Rules, or to set a precedent for future action, but FTSE Russell will consider whether the Rules should subsequently be updated to provide greater clarity.

³ The term administrator is used in this document in the same sense as it is defined in [Regulation \(EU\) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds](#) (the European Benchmark Regulation).



Section 3

FTSE Russell Index Policies

3.0 FTSE Russell Index Policies

These Ground Rules should be read in conjunction with the following policy documents which can be accessed using the links below:

3.1 Queries and Complaints

3.1.1 FTSE Russell's complaints procedure can be accessed using the following link:

[Benchmark_Determination_Complaints_Handling_Policy.pdf](#)

3.2 Recalculation Policy and Guidelines

3.2.1 The Recalculation Policy and Guidelines for Fixed Income Indexes document is available from the FTSE Russell website using the link below or by contacting info@ftserussell.com.

[Fixed_Income_Recalculation_Policy_and_Guidelines.pdf](#)

3.3 Policy for Benchmark Methodology Changes

3.3.1 Details of FTSE Russell's policy for making benchmark methodology changes can be accessed using the following link:

[Policy_for_Benchmark_Methodology_Changes.pdf](#)



Section 4

Eligibility of Securities

4.0 Eligibility of Securities

4.1 Eligibility of Bonds

4.1.1 All straight bullet bonds (“plain vanilla”) denominated in the KES (Kenyan Shilling) and issued by Kenyan Government, maturing in one year or more are considered for inclusion in the FTSE NSE Kenyan Shilling Government Bond Index.

4.1.2 Zero coupon bonds may be included.

Strippable bonds are included in the index with weights which assume that they have not been stripped.

4.1.3 Excluded from the index are:

- Coupon strips and maturity strips (separated interest and capital repayment securities)
- Partly-paid bonds
- Variable interest bonds (including floating rate bonds)
- Index linked bonds
- Callable, puttable and extendible bonds
- Convertible bonds
- Bonds with no final redemption date
- Sinking funds

4.1.4 The bonds must have a current market quotation to be included.

4.2 Minimum Nominal Issuance of a Bond

4.2.1 The minimum nominal issuance of a bond for FTSE NSE Kenyan Shilling Government Bond Index is 5 billion KES.



Section 5

Data Sources

5.0 Data Sources

- 5.1 The prices used for the calculation of the index are based on data sourced from NSE (Nairobi Securities Exchange). To calculate the price, the arithmetic mean between bid and ask quotes (mid price) is used in the index.
- 5.2 The index consists only of bonds that have price quotes and are then filtered through a quality control process to ensure they provide an accurate representation of the market.
- 5.3 In circumstances such as severe market disruption where pricing is not available FTSE Russell reserves the right to carry over the price from the last business day.
- 5.4 Terms and conditions data for constituent bonds are provided by Thomson Reuters.



Section 6

Periodic Changes to the Portfolios

6.0 Periodic Changes to the Portfolios

6.1 Rebalancing the Index

6.1.1 The FTSE NSE Kenyan Shilling Government Bond Index is rebalanced after the close of the last business day of every month.

6.2 Addition of Constituents

6.2.1 New issues are included in the Index after the close of the last business day of the every month.

6.3 Removal of Constituents

6.3.1 The bonds are removed from the index after the close of the last business day of the month, when the maturity falls below one year, and notional falls below 5 billion KES.

6.4 Alterations to Constituents

6.4.1 Alterations to nominal amounts outstanding are adjusted after the close of last business day of the month.

6.5 Implementation of Changes in the Portfolio

6.5.1 The research is made three business days before the last business day of the month regarding which bonds will be part of the index in the next period. This is in accordance with the index scheme, and the issue volume of these bonds (rounded to the nearest 1 million KES. The residual life is all bonds which on the first trading day of the new month have a full year or more to run as per the value date plus three days.

6.5.2 Bonds to be removed from the index, e.g. because their residual life at the beginning of the next month is less than a year, are treated as sold at the fixing price (defined as 12:00 am GMT) on the last trading day of the previous month, and reinvested uniformly across the whole Index.

6.5.3 A "Shortener" is where a bond is moved, at its fixing price, from one maturity sub index to a shorter maturity sub index. This occurs after the close of the last business day of the previous month when the remaining lifetime of this bond is within this shorter life band index.

6.5.4 It may occur that some sub indexes are only temporarily active. When a bond in a maturity band sub index is moved into its neighbouring sub index and no other bond remains in that portfolio, the calculations will no longer be performed for the empty sub index. If a new issue makes the re-activation of this index necessary, the new starting value of this sub index will be amended to a value that includes the market changes occurred since the sub index was de-activated.

- 6.5.5 New issues are bought at the fixing price of the last trading day of the previous month and integrated into the index.
- 6.5.6 Changes to amounts in issue are included or removed by way of sale or purchase at the closing price on the last trading day of the previous month, provided that the change amounts to a minimum value of 1 million KES over the previous month.
- 6.5.7 After the decisions to the portfolio changes have been made, any removed or newly joined bonds are announced to the market one day before the last business day of the month. These decisions are based on the information available three business days before the last business day of the month. The issuance applicable to bonds in the portfolio for the coming month are also published.
- 6.5.8 If an issuer fails to pay a coupon on the coupon date (i.e. in the event of default), it will be treated as if it is sold with the latest price considered to be fair, and the proceeds reinvested in the index. In this case, the change of the index portfolio is not postponed until the next month-end.
- 6.5.9 All changes take effect on the first trading day of the new month.

Appendix A: Index Calculation Formulae

The following notation is used in the following calculations.

Z_t	value of criterion Z at time t
Z_{t-1}	value of criterion Z at time $(t-1)$
Z_0	initial value of criterion Z
$P_{i,t}$	clean price of the i th bond at time t
A	accrued interest to the normal settlement date
N	nominal value of amount outstanding
Y	redemption yield to maturity
L	life to maturity
D	(Macaulay) duration
M	Modified duration
X	Convexity
$G_{i,t,t}$	value of any coupon payment received from the i th bond for the assumed settlement date at time t or since time $(t-1)$. If none the value = 0

Clean Price Index (Capital Index)

The clean price (P) or capital index is given by:

$$PI_0 = 100$$

$$PI_t = PI_{t-1} \times \frac{\sum_i P_{i,t} \times N_{i,t-1}}{\sum_i P_{i,t-1} \times N_{i,t-1}}$$

where the summations are over the bonds currently in the index.

Total Return Index

For a market where securities do not go XD, the total return index (TR) is calculated as follows:

$$TR_0 = 100$$
$$TR_t = TR_{t-1} \times \frac{\sum_i (P_{i,t} + A_{i,t} + G_{i,t}) \times N_{i,t-1}}{\sum_i (P_{i,t-1} + A_{i,t-1}) \times N_{i,t-1}}$$

where the summations are over the bonds currently in the index.

Average Coupon

The average coupon (CO) for an index is given by:

$$CO_t = \frac{\sum_i C_{i,t} \times N_{i,t}}{\sum_i N_{i,t}}$$

where the summations are over the bonds currently in the index.

Average Gross Redemption Yield

The average gross redemption yield (RY) is the average of the bond yields weighted by both their sizes and their modified durations.

$$RY_t = \frac{\sum_i Y_{i,t} \times M_{i,t} \times (P_{i,t} + A_{i,t}) \times N_{i,t}}{\sum_i M_{i,t} \times (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

where the summations are over the bonds currently in the index.

The yields are usually compounded on an annual basis. However, for those markets where coupons are paid on a semi-annual basis, semi-annual yields are also shown.

The relationship between a semi-annual redemption yield Y_s and an annualised yield Y_a is given by:

$$\left(1 + \frac{Y_a}{100}\right) = \left(1 + \frac{Y_s}{200}\right)^2$$

Average Time to Maturity

The average life (LF) or time to maturity for an index is given by:

$$LF_t = \frac{\sum_i L_{i,t} \times N_{i,t}}{\sum_i N_{i,t}}$$

where the summations are over the bonds currently in the index.

Average (Macaulay) Duration

The average (Macaulay) duration (DU) for an index is given by:

$$MD_t = \frac{\sum_i M_{i,t} \times (P_{i,t} + A_{i,t}) \times N_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

where the summations are over the bonds currently in the index.

Average Modified Duration

The average modified duration (*MD*) for an index is given by:

$$MD_t = \frac{\sum_i M_{i,t} \times (P_{i,t} + A_{i,t}) \times N_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

where the summations are over the bonds currently in the index.

Average Convexity

The average convexity (*CX*) of an index is given by:

$$CX_t = \frac{\sum_i X_{i,t} \times (P_{i,t} + A_{i,t}) \times N_{i,t}}{\sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}}$$

where the summations are over the bonds currently in the index.

Nominal Size of Index

The sum (*SZ*) of the nominal values of all the bonds in an index is:

$$SZ_t = \sum_i (P_{i,t} + A_{i,t}) \times N_{i,t}$$

where the summations are over the bonds currently in the index.

Index Weight

The weight (*W*) of the index *j* in relation to the weight of the All Bonds aggregate index is:

$$W_{j,t} = \frac{SZ_{j,t}}{\sum_i SZ_{i,t}} \times 100$$

where the summation is now over all the sub-index that make up the aggregate index.



Appendix B: Further Information

A Glossary of Terms used in FTSE Russell's Ground Rule documents can be found using the following link:
[Glossary.pdf](#)

Further information on the FTSE NSE Kenyan Shilling Government Bond Index is available from FTSE Russell.

For contact details please visit the FTSE Russell website or contact FTSE Russell client services at info@ftserussell.com.

Website: www.ftserussell.com

© 2019 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada") and (4) MTSNext Limited ("MTSNext"), (5) Mergent, Inc. ("Mergent"), (6) FTSE Fixed Income LLC ("FTSE FI") and (7) The Yield Book Inc ("YB"). All rights reserved.

The FTSE NSE Kenyan Shilling Government Bond Index is calculated by FTSE International Limited or its affiliate, agent or partner. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, MTSNext, Mergent, FTSE FI and YB. "FTSE®", "Russell®", "FTSE Russell®" "MTS®", "FTSE4Good®", "ICB®", "Mergent®", "The Yield Book®" and all other trademarks and service marks used herein (whether registered or unregistered) are trade marks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, MTSNext, FTSE Canada, Mergent, FTSE FI, YB.

All information is provided for information purposes only. Every effort is made to ensure that all information given in this publication is accurate, but no responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for any errors or for any loss from use of this publication or any of the information or data contained herein.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the results to be obtained from the use of the FTSE NSE Kenyan Shilling Government Bond Index or the fitness or suitability of the Index Series for any particular purpose to which it might be put.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset. A decision to invest in any such asset should not be made in reliance on any information herein. Indexes cannot be invested in directly. Inclusion of an asset in an index is not a recommendation to buy, sell or hold that asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group index data and the use of their data to create financial products require a licence with FTSE, Russell, FTSE Canada, MTSNext, Mergent, FTSE FI, YB and/or their respective licensors.