NOVEMBER 2023

FTSE GLOBAL SUKUK INDEX

METHODOLOGY

FTSE RUSSELL
An LSEG Business

CONTENTS

1. Introduction

FTSE Global Sukuk Index tracks the performance of total returns in the global USD sukuk market.

2. Sources of Input Data

Raw data for index generation are sourced from LSEG Data Scope Select (DSS) report templates.

2.1 Historical Index Data Backfill

Raw price data from Timeseries Pricing Template for data ranging from 2 May 2011 to 2 March 2012. Price provider is LSEG Evaluated Pricing Service (EPS). Settlement is based on settlement conventions of individual bonds.

2.2 Daily Pricing Data

Daily raw price data from End of Day Pricing Template for data starting from 5 March 2012 onwards. Price provider is LSEG Evaluated Pricing Service (EPS) and the daily report cut-off time is scheduled at 00:20 GMT. Settlement is based on settlement conventions of individual bonds.

2.3 Issues Specifications Data

Data sourced from Terms and Conditions Template.

3. Construction Rules

The index construction rules (based on guide by EFFAS European Bond Commission Standardized Rules On Constructing and Calculating Bond Indices) outline the perimeters to define eligible sukuk for inclusion into the index calculation and composition.

This is with regard to defining sukuk specifications and structures which are ideal to compose a continuous and stable index performance.

3.1 Index Type

All Bond Index – Total Return Index. No explicit criterion on liquidity of issues is imposed. Numbers of constituents allowable in the indices are not fixed as they are rules-based.

3.2 Eligible Sukuk Specifications

Refers to basic sukuk characteristics available in terms and conditions of issuances.

3.2.1 Total Outstanding Amount

Sukuk with outstanding amounts of USD 100 million and above. Sizeable market size is indicative to the depth and liquidity of the sukuk and is taken as a precursor to a stable trade of the issues. Issues where redemptions reduce the outstanding amount below USD 100 million are excluded.

3.2.2 Currency

US Dollar denominated sukuk.

3.2.2 Coupon Type

Fixed and zero profit-rate sukuk. Sukuk with floating or indexed profit-rates are excluded for their volatile future cash flows which redound to volatile sukuk prices and index values.

3.2.3 Tenure

Sukuk with time to legal maturity of 6 months and above. Sukuk with short remaining tenure are relatively illiquid as they are held tightly to maturity. Such captive issues do not reflect the normal trading behaviour of fixed income instruments.

3.3 Credit Quality

The All sukuk index includes sovereign, quasi-government as well as corporate bonds without any restriction on credit rating. Defaulted issues are however, excluded.

3.4 Issue Types

The principle behind issue type inclusion is to obtain constituents with stable, known and quantifiable future cash flows. The following issue types are included:

- Zero coupon bonds
- Fixed coupon bonds

Following the principles set out in EFFAS Standardized Rules, option embedded bonds should be excluded unless they represent a significant proportion of the market sector. As this is not the case in the global sukuk market currently, issues with the following features are excluded:

- Dual currency bonds
- Callable and putable bonds
- Convertible bonds
- Warrant bonds

Issues with sinking funds and amortization features are also excluded because the redemption schedules may be volatile due to prepayment actions which cause uncertainties in future cash flows.

3.5 Region

Only sukuk issued in Eurobond market are considered. No restriction on issuer domicile.

4. Reviewing and Rebalancing

Index constituents undergo calculations on a daily basis.

4.1 Index Base Date

Index base date begins on 2 May 2011.

4.2 Inclusion of New Issues

Inclusion of new issues is done on monthly basis; on the first weekday of the month. The fixing day to identify all new issuances is at the end of the month. This is done to ensure all new sukuk issuances for the previous month are accumulated and listed completely.

4.3 Exclusion and Reallocation

Exclusion of ineligible issues, i.e issues which do not qualify any of the construction rules set out in part 3, is performed daily. Re-allocation (such as rating changes) is also adjusted accordingly upon daily calculation of indices.

4.4 Timing of Index Generation

At the close of each business day, prices are sourced from the price provider, LSEG Evaluated Pricing Service (EPS). Based on the most recent collated prices, index returns and levels are calculated daily to reflect the performances of the portfolios. Issues without prices for the day nor previous day will not be included in the index calculation.

5. Index Level Computation

Index computation conventions are designed from the perspective of capturing accurate measures of portfolio performances for reliable benchmarking exercises. This is done to ensure the index returns and levels calculated are comparable to a functioning portfolio.

5.1 Total Return Computation

To reflect portfolio performances, the indices utilize arithmetic calculations on its constituents to derive the total returns. The relative size of each index constituent in the respective index series will be reflected in the weight allotted to the constituent, computed as shown in part 5.4.2.

In order to maintain continuity from the previous day, the arithmetic calculations must also be chain-linked i.e. previous index level is multiplied by the computed aggregate percentage return for the day.

5.2 Weighting Scheme

Each issue within an index is weighted via daily market capitalisation, similar to the equity index concept. Therefore, the indices allow larger issues greater role in influencing the total return of the index.

Furthermore, the adopted chain-link method allows constituents to change their relative sizes by placing differing weights on current and previous returns as market capitalisations change.

5.3 Reinvestment of Cash Flows

Profit payments earned by sukuk issues are reinvested into the indices on the day of scheduled payment disseminations or more specifically, when accrued profit payments accrue to 0. The proceeds are reinvested in the indices according to the proportions of issue sizes. Transaction costs are ignored.

5.4 Notations and Formulae

Notation	Descriptions
$P_{i,t}$	clean price of the i-th bond at time t
AI	accrued interest
I	coupon payments
N	nominal outstanding amount

5.4.1 Issues Total Return

Daily total returns are calculated for all eligible issues. The formula for daily total return is:

$$\text{Total Return } (\mathrm{TR_{i,t}}) = \frac{(\mathrm{P_{i,t}} + \mathrm{AI_{i,t}} + \mathrm{I_{i,t}}) - (\mathrm{P_{i,t-1}} + \mathrm{AI_{i,t-1}})}{\mathrm{P_{i,t-1}} + \mathrm{AI_{i,t-1}}}$$

The total return is in fact the summation of the price return (capital gain) and the coupon return (income) for each respective issue:

$$\text{Total Return } \left(\mathrm{TR_{i,t}}\right) = \text{Price Return } (PR_{i,t}) + \text{Coupon Return } (CR_{i,t})$$

5.4.2 Index Weight

The weight of each eligible issue or index constituent is equal to the market capitalisation of the issue expressed as a percentage of the total market capitalisation of the index or subindex as of previous day, as follows:

$$\mathrm{W_i} = \frac{\left(\mathrm{P_{i,t-1}} + \mathrm{AI_{i,t-1}}\right) \times \mathrm{N_{i,t-1}}}{\sum_{\mathrm{j=1}}^{\mathrm{n}}((\mathrm{P_{j,t-1}} + \mathrm{AI_{j,t-1}}) \times \mathrm{N_{j,t-1}}}$$

5.4.3 Index Total Return

The daily total return for an index on a given day is equal to the weighted average of the total returns of eligible issues which compose the index or subindex. The formula is:

$$\text{Total Return } \left(\mathrm{ITR_{i,t}}\right) = \sum_{\mathrm{i=1}}^{\mathrm{n}} \mathrm{W_i} \times \mathrm{TR_{i,t}}$$

5.4.4 Index Level

Daily index values are derived at the end of computation process by multiplying the previous index value by current Index Total Return, as follows:

$$\text{Total Return Index } ((\mathrm{TR_{i,t}}) = (1 + \mathrm{ITR_t}) \times \mathrm{TR_{t-1}}, \mathrm{TR_0} = 100$$

6. Index Statistics Computation

By contrast to index returns and levels, index statistics are calculated to reflect the profile of the index, after rebalancing is performed. These statistics are designed to reflect the portfolio characteristics that will generate returns for the succeeding day. The following statistics are calculated:

- Market Value and No. of Issues
- Average Days to Maturity
- Average Coupon

6.1 Notations and Formulae

Notation	Descriptions
$P_{i,t}$	clean price of the i-th bond at time t
AI	accrued interest
I	coupon payments
N	nominal outstanding amount
T	time to maturity (in days)
CR	coupon rate

6.1.1 Market Value and No. of Issues

Market value of index or subindex is calculated as the summation of dirty prices (expressed in percentage of par 100) multiplied by nominal outstanding amounts for all constituents in the respective index or subindex. No. of issues is the number of constituents which compose the index or subindex.

6.1.2 Index Weight

For index statistics computation, the weight of each eligible issue or index constituent is equal to the market capitalisation of the issue expressed as a percentage of the total market capitalisation of the index or subindex as of present day after rebalancing is performed, as follows:

$$W'_i = \frac{(P_{i,t} + AI_{i,t}) \times N_{i,t}}{\sum_{j=1}^{n}((P_{j,t} + AI_{j,t}) \times N_{j,t}}$$

6.1.3 Average Days to Maturity and Average Coupon

The following formulae compute the average maturity and coupon of the index portfolios based on weighted average principles.

$$\text{Average Days To Maturity } (\mathrm{AT_t}) = \sum_{\mathrm{i-1}}^{\mathrm{n}} \mathrm{w'_i} \times \mathrm{T_{i,t}}$$

$$\text{Average Coupon } (\mathrm{ACR_t}) = \sum_{\mathrm{i-1}}^{\mathrm{n}} \mathrm{w'_i} \times CR_{\mathrm{i,t}}$$

7. References

[1] Noor Bazlina Sharifmuddin, Razni Razak, (2010), “Construction Rules and Calculation Methodology For BPAM Ringgit Bond Index”, BPAM Research Series Jan 2010.

[2] Brown, P.J., (1994), “Constructing & Calculating Bond Indices: A Guide to the EFFAS Standardized Rules”, Great Britain, University Press, Cambridge

ABOUT FTSE RUSSELL

FTSE Russell is a leading global provider of index and benchmark solutions, spanning diverse asset classes and investment objectives. As a trusted investment partner we help investors make better-informed investment decisions, manage risk, and seize opportunities.

Market participants look to us for our expertise in developing and managing global index solutions across asset classes. Asset owners, asset managers, ETF providers and investment banks choose FTSE Russell solutions to benchmark their investment performance and create investment funds, ETFs, structured products, and index-based derivatives. Our clients use our solutions for asset allocation, investment strategy analysis and risk management, and value us for our robust governance process and operational integrity.

For over 35 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

CONTACT US

To Learn more, visit ftse-russell/indices; email Index_Queries@lseg.com

Disclaimer

FTSE RUSSELL
An LSEG Business