FTSE Daily Leveraged Indices

v3.5

Contents

Section 1
Introduction

1. Introduction

1.1 **General**

FTSE Daily Leveraged Indices (Daily Leveraged Indices) aim to reflect a multiple of the daily performance of an underlying reference index.

1.2 The FTSE Daily Leveraged Indices do not take account of ESG factors in their index design.

1.3 **Objective**

The objective of the Daily Leveraged Indices is to reflect the leveraged performance of an underlying index, after incorporating leverage financing costs. The Daily Leveraged Indices reflect five aspects of the performance of leveraged indices.

1. Capital gains associated with the underlying index.

2. Cash dividends paid by the underlying securities.

3. The financing costs of leverage.

4. The spread between overnight interest rates and the longer-term 12-month interest rate.

5. Index rebalancing costs.

1.4 **Index features, terms, base dates and base values**

The features of each index, including base dates, base values, index terms, index calculation times and vendor codes can be found at:

Real_Time_Short_and_Leveraged_Index_Features.xlsx

The base currency of the benchmark is US Dollars. Index values may also be published in other currencies.

1.5 **Computational accuracy**

The index will be calculated to 13 decimal figures and published rounded to two decimal places.

1.6 **Frequency and time of calculation**

The Daily Leveraged Indices will be calculated intra-day on a 15 second pulsed basis.

1.7 **Trading suspension**

The Daily Leveraged Indices are calculated on the same days as the underlying reference indices are calculated. If there is a suspension of a relevant underlying reference index, the Daily Leveraged Index will be calculated using the latest value available and will then itself be suspended.

1.8 **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 FTSE Fixed

Income Europe Limited), FTSE Fixed Income LLC, FTSE (Beijing) Consulting Limited, Refinitiv Benchmark Services (UK) Limited, Refinitiv Limited and Beyond Ratings.

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

1.10 Index users who choose to follow these indices or to buy products that claim to follow this index series 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 Russell or its licensors (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;

– any inaccuracies in these Ground Rules;

– any non-application or misapplication of the policies or procedures described in these Ground Rules; and/or

– any inaccuracies in the compilation of the index or any constituent data.

1.11 These Ground Rules

These Ground Rules provide information about the publication of the FTSE Daily Leveraged Indices and set out the methodology underlying them.

1.12 Status of the indices

The status of the indices is determined by the calculation status and by the status of the underlying reference index.

A table of possible index status codes arising is shown below:

Index status codes	
Underlying reference index status	**Leveraged index status**
N (normal)	N (normal)
N (normal, during intra-day reset)	X (exception, during intra-day reset)
N (normal, post intra-day reset)	R (index reset, post intra-day reset)
K (part calculated)	N (normal)
I (indicative)	H (hold, calculate but do not publish and do not apply intra-day resets)
H (hold)	H (hold)
C (closed)	C (closed)

Section 2
Management responsibilities

2. Management responsibilities

2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index series[1].

2.1.2 FTSE is responsible for the daily calculation, production and operation of the index, and will:

– will maintain records of the index weightings of all constituents;

– make changes to the constituents and their weightings in accordance with the Ground Rules;

– carry out the periodic index reviews of the indices and apply the changes resulting from the reviews as required by the Ground Rules;

– publish changes to the constituent weightings resulting from their ongoing maintenance and the periodic reviews;

– disseminate the indices.

2.2 Amendments to these Ground Rules

2.3 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 Index governance board before approval is granted.

---

[1] 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) and The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019 (the UK Benchmark Regulation).

Section 3
FTSE Russell Index policies

3. 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 Index Policy for Trading Halts and Market Closures

3.2.1 Guidance for the treatment of index changes in the event of trading halts or market closures can be found using the following link:

Index_Policy_for_Trading_Halts_and_Market_Closures.pdf

3.3 Index Policy in the Event Clients are Unable to Trade a Market or a Security

3.3.1 Details of FTSE Russell's treatment can be accessed using the following link:

Index_Policy_in_the_Event_Clients_are_Unable_to_Trade_a_Market_or_a_Security.pdf

3.4 Policy for Benchmark Methodology Changes

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

Policy_for_Benchmark_Methodology_Changes.pdf

3.5 FTSE Russell Governance Framework

3.5.1 To oversee its indices, FTSE Russell employs a governance framework that encompasses product, service and technology governance. The framework incorporates the London Stock Exchange Group's three lines of defence risk management framework and is designed to meet the requirements of the IOSCO Principles for Financial Benchmarks[2], the European benchmark regulation[3] and the UK benchmark regulation[4]. The FTSE Russell Governance Framework can be accessed using the following link:

FTSE_Russell_Governance_Framework.pdf

3.6 Real Time Status Definitions

3.6.1 Please refer to the following guide for details of real time status definitions for indices which are calculated in real time.

Real_Time_Status_Definitions.pdf

---

[2] IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013
[3] 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
[4] The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019

Section 4
The index

4. The index

4.1 Index calculation

The leveraged index value is calculated as 1 plus the leveraged index return since the start of the current calculation session multiplied by the previous session leveraged index closing value.

$$LIDX_t = LIDX_s \times (1+r)$$

4.2 Return calculation (r)

The return r consists of the leveraged return of the underlying index less the financing costs, liquidity spread and any rebalancing costs.

$$r = (LIR_t - FC_{t,t-1} - LS_{t,t-1} - RB_t)$$

4.3 Leveraged index return calculation (LIR$_t$)

The leveraged index return is a multiple (K) of the underlying index return.

The leveraged index return is calculated relative to the previous day's closing value on days where no intra-day reset occurs. If an intra-day reset occurs the leveraged index return is calculated relative to the previous session's final index value.

$$LIR_t = \left[K^* \left(\frac{IDX_t}{IDX_s} - 1 \right) \right]$$

4.4 Finance cost calculation (FC)

The finance cost arises as a result of raising capital to undertake the required levels of leverage.

The leveraged financing cost for Dt,t-1 calendar days is:

$$FC_{t,t-1} = \left[(K-1) \times \left(\frac{R_{t-1}}{DayCountBasis} \right) \times D_{t,t-1} \right]$$

In the event of interest rate (Rt-1) turning negative the finance cost (FCt,t-1) is set to 0 (zero).

No additional financing cost is applied after an intra-day reset occurs.

The finance cost will be set to 0 (zero) for indices where it is not be applicable.

4.5 Liquidity spread cost (LS)

To reflect the reality of wider spreads between the interbank and the swap market rates post June 2007, a liquidity spread term was introduced.

The liquidity spread is the difference between the 12-month interbank interest rate and the 12-month overnight indexed swap rate.

$$SPRD = IR - Swap$$

The liquidity spread cost for Dt,t-1 calendar days is given by:

$$LS_{t,t-1} = (K-1) \times \left(\frac{SPRD}{DayCountBasis} \right) \times D_{t,t-1}$$

The liquidity spread is set to zero if the spread becomes negative.

To obtain a representative number for the liquidity spread, an average spread is calculated over the five business days prior to the notification date each month.

The liquidity spread is updated monthly and implemented after the close on the third Friday of the month and is effective from the next business day.

A technical notice is issued at the close, two business days prior to the effective date of the third Friday of each month giving notice of the applicable value for the next month. This is typically the Wednesday before the third Friday and is known as the notification date.

No additional liquidity spread cost is applied after an intra-day reset occurs.

Long-term interest and swap reference data used in the calculation of the liquidity spread can be found in the appendix.

Historic liquidity spread values can be found on www.lseg.com/en/ftse-russell/.

The liquidity spread will be set to 0 (zero) for indices where it is not be applicable.

4.6   Leveraged index rebalancing cost (RB$_t$)

This arises where stamp duty or other costs are applicable to changes in the underlying reference index. An additional rebalancing cost is applied after an intra-day reset occurs.

This term is only applicable to certain indices. Other indices use a default value of zero. Applicable indices are listed in the appendix.

$$RB_t = \left[K \times (K-1) \times \left(\left| \frac{IDX_t}{IDX_s} - 1 \right| \right) \times TC \right]$$

Where:

TC   =   StampDuty+Execution Cost

The rebalancing cost will be set to 0 (zero) for indices where it is not be applicable.

4.7   Extreme market movements

To mitigate the risk of total loss due to extreme market movements, an intra-day reset mechanism is employed. The intra-day reset is triggered by movements in the underlying index that are greater than the predefined limits shown in the table below.

To determine whether an intra-day reset is triggered, the most recent value of the underlying index is compared to the previous session's final level. If the decline in the underlying index is greater than or equal to the trigger level for the relevant level of leverage, the intra-day reset process is initiated.

The previous session's final level is normally the previous trading day's closing level, but in the case of an intra-day reset being triggered, it is the minimum underlying index value observed during the 15-minute observation period.

Leverage factors		
Index	Leverage factor	Intra-day reset trigger levels
FTSE 1.25x Daily Leveraged Index	1.25	25%
FTSE 2x Daily Leveraged Index	2	25%
FTSE 3x Daily Leveraged Index	3	20%
FTSE 4x Daily Leveraged Index	4	15%
FTSE 5x Daily Leveraged Index	5	15%

4.8 Intra-day reset procedure

The intra-day reset procedure is invoked if a predefined movement in the underlying index is exceeded, unless the time to the end of the calculation day is less than 17 minutes. In this situation the index will continue to be calculated normally.

If the time to the end of the day is greater than 17 minutes, the following process is followed:

i. The calculated index status is set to X and held for the duration of the 15-minute observation period.

ii. The value of the underlying index at the beginning of the observation period is recorded.

iii. All values of the underlying index during the 15-minute observation period are recorded.

iv. The minimum value of the underlying index recorded during the observation period determines the session's closing value, denoted as TRNs.

v. The closing session value of the underlying index i.e. TRNs is published.

vi. The index is held for a further two minutes to allow the reset process to complete. The index status is set to R and the index continues to publish values based on the TRNs.

The intra-day reset is carried out by simulating the beginning of a new business day. However no additional financing or liquidity costs are included.

From the reset point onwards, the return on the leveraged index is the leveraged return on the underlying index less any rebalance costs associated with index transaction costs.

$$\frac{LIDX_t}{LIDX_s}-1 = \left[K \times \left(\frac{IDX_t}{IDX_s}-1\right)\right] - \left[K \times (K-1) \times \left(\left|\frac{IDX_t}{IDX_s}-1\right|\right) \times TC \right]$$

If subsequent movements of the underlying index after an intra-day reset result in an additional breach of the trigger levels, an additional intra-day reset will be invoked.

A technical notice will be issued to the market at the end of the day notifying the intra-day reset had triggered.

4.9 Reverse split

If the leveraged index closes below the level of 100 a reverse split (consolidation) in the ratio of 100:1 will be implemented.

A technical notice will be issued to the market giving two business days' notice of the implementation of the reverse split.

During the two-day period, the index will calculate normally and if an intra-day reset is triggered the observation period procedure will come into effect as outlined in rule 2.8 above.

The reverse split will be effective from the open on the third business day after the reverse split was triggered.

The rebased index level resulting from the reverse split is determined by the closing leveraged index level two business days after the trigger event scaled by 100.

For example, if the closing leveraged index level on the trigger day was 99.55 and the closing level two business days later was 87.50, the new rebased index level will be 8,750.

If during the two-day period between the trigger event and the index rebasing, the leveraged index level recovers to a level above the trigger level the reverse split will still be applied.

If during the two-day period between the trigger event and the index rebasing, the index continues to fall and becomes negative, the leveraged index will be set to zero and its calculation/publication discontinued. No reverse split will be applied.

4.10   Cessation of index calculation

In the event of the leveraged index value becoming negative, the index value will be set to zero and its calculation/publication discontinued.

If an overnight change of the underlying index results in an opening value of the leveraged index of zero (or below), the leveraged index value will be set to zero and its calculation/publication discontinued.

If an overnight change of the underlying index results in a breach of the intra-day trigger limits but does not result in the leveraged index becoming zero or negative, a standard intra-day reset will be triggered and the observation period procedure will come into effect.

Section 5
Formula symbols

5. Formula symbols

5.1 Subscripts

12m	=	12 month
s	=	Previous session
t	=	Current session
t-1	=	Previous calculation day

5.2 Main terms

DayCountBasis	=	Day count convention for the interest rates
$D_{t,t-1}$	=	Number of calendar days between current session and previous calculation date t-1
FC	=	Finance cost
IR	=	12-month interbank interest rate
R_{t-1}	=	Annualised overnight unsecured lending rate at t-1
K	=	Leverage factor
$LIDX_s$	=	Previous session leveraged Index value
$LIDX_t$	=	Current session leveraged Index value
LIR_t	=	Current session leveraged index return
LS	=	Liquidity spread cost
r	=	Session return
RB_t	=	Current session leveraged index rebalance cost
SD	=	Stamp duty as a percentage of the value of stock traded
SPRD	=	Spread reflecting difference between the 12-month interbank rate and the 12-month overnight indexed swap rate.
Swap	=	12-month capitalised overnight rate
IDX_s	=	Previous session underlying index level
IDX_t	=	Most recent underlying index level

Section 6
Glossary

6. Glossary

6.1 ESTR (€STR)[5]

The Euro short-term rate (ESTR) reflects the wholesale Euro unsecured overnight borrowing costs of banks located in the Euro area. The ESTR is based entirely on daily confidential statistical information relating to money market transactions collected in compliance with the money market statistical reporting (MMSR) regulation.

Refinitiv publishes the ESTR reference rate on the "EUROSTR=" page, which is made available to all its subscribers and to other data vendors

6.2 Overnight index swap

An overnight index swap, also called a call money swap, is a fixed/floating interest rate swap with the floating leg tied to a daily overnight (or tomorrow/next in some markets) reference rate. The term generally ranges from one week to one year.

The one-year rate used is published by EIKON.

Currency	Name	RIC	Day count convention
EUR	Euro 1 Year Overnight Index Swap	EUREST1Y=[6]	Actual/360
GBP	UK Pound Sterling 1 Year SONIA Overnight Index Swap	GBP1YOIS=	Actual/365
JPY	Japanese Yen 1 Year TONAR Overnight Index Swap	JPY1YOIS=	Actual/365
USD	US Dollar 1 Year Fed Fund Overnight Index Swap	USD1YOIS=	Actual/360

6.3 EURIBOR – 12m interest rate

EURIBOR® is the rate at which Euro interbank term deposits are offered by one prime bank to another prime bank within the EMU zone and is published at 11:00 (CET) for spot value (T+2).

6.4 Kuala Lumpur Interbank Offered Rate (KLIBOR)

KLIBOR is the average interest rate at which term deposits are offered between prime banks in the Malaysian wholesale money market or interbank market. Rates are contributed by 12 banks designated by Bank Negara Malaysia (BNM). The rate is announced and published by the central bank (BNM) every market day at 11:00 (MYT).

---

[5] €STR replaced EONIA from 3 January 2022.

[6] Euro 1 Year ESTR Overnight Index Swap (EUREST1Y=) replaced EONIA 1 Year Swap (EUREON1Y=) in Euro 1 Year Overnight Index Swap from 3 January 2022.

6.5   Sterling Overnight Interbank Average Rate (SONIA)

SONIA is the weighted average rate of all unsecured sterling overnight cash transactions brokered in London between midnight and 16:15 with all counterparties in a minimum deal size of £25 million. It is the weighted average overnight deposit rates for each business day and the index is published at 17:00 London time each day.

6.6   Tokyo Interbank Offered Rate (TIBOR)

TIBOR is the daily reference rate based on the interest rates at which banks offer to lend unsecured funds to other banks in the Japan wholesale money market. The quotes are provided at about 11:00 JST.

6.7   Tokyo Overnight Average Rate (TONAR)

TONAR is the weighted average rate of all unsecured overnight cash transactions between financial institutions. The rate is published by the Bank of Japan (BOJ). The rate is published at 10:00 JST, the next business day.

Section 7
Example calculation

7. Example calculation

7.1 Example calculation

Calculate the FTSE MIB Daily Ultra Leveraged Index value (LIDX) for Monday 2 January 2012 (t). The reference underlying index is FTSE MIB Net-of-Tax (Lux) TR Index.

Model inputs:

EONIA[7] (30 December 2011)	= 62.9 bps
Day count basis	= 360
Leverage factor	= 4
12m EURIBOR	= 194.7 bps
EONIA 1Yr Swap[8]	= 38.2 bps
SPRD	= 156.5 bps
IDX_s (FTSEMIBN)	= 20,707.62
IDX_t (FTSEMIBN)	= 21,208.35
$LIDX_s$ (FMIBL4X)	= 10,000
Previous trading day (t-1)	= 30 December 2011

Model outputs

Number of calendar days ($D_{t,t-1}$)	= 3
Return on underlying index	= 0.024181
Leveraged return	= 0.096724
Finance cost	= 0.000157
Liquidity spread cost	= 0.000391
Return (r)	= 0.09618
1+r	= 1.096175
$LIDX_t$ (FMIBL4X)	= 10961.75

---

[7] EONIA will be replaced with ESTR from 3 January 2022.
[8] EONIA 1 Year Swap (EUREON1Y=) will be replaced with Euro 1 Year ESTR Overnight Index Swap (EUREST1Y=) from 3 January 2022.

7.2   List of leveraged indices

7.2.1   Total return index is used as underlying index for the indices listed in rules 7.2.1.1 and 7.2.1.2

7.2.1.1   With finance cost and liquidity spread.

Index Code		Index name	Leverage factor
1.	FCNACL2X	FTSE N Share 2x Daily Leveraged Index	2
2.	FCNACL3X	FTSE N Share 3x Daily Leveraged Index	3
3.	FMIBL2X	FTSE MIB Daily Leveraged RT Net-of-Tax (Lux) TR Index	2
4.	FMIBL3X	FTSE MIB Daily Super Leveraged RT Net-of-Tax (Lux) TR Index	3
5.	FMIBL4X	FTSE MIB Daily Ultra Leveraged RT Net-of-Tax (Lux) TR Index	4
6.	FMIBL5X	x5 Daily Leveraged FTSE MIB Daily RT Net-of-Tax (Lux) TR Index	5
7.	FMIBL2	FTSE MIB Daily Leveraged Index	2
8.	FTGMIL2X	FTSE Gold Mines 2x Daily Leverage Index	2
9.	FTGMIL3X	FTSE Gold Mines 3x Daily Leverage Index	3
10.	FTSTIL2X	FTSE STI 2x Daily Leverage Index	2
11.	FTSTIL3X	FTSE STI 3x Daily Leverage Index	3
12.	UKXL2X	FTSE 100 Daily Leveraged RT TR Index	2
13.	UKXL3X	FTSE 100 Daily Super Leveraged RT TR Index	3
14.	UKXL4X	FTSE 100 Daily Ultra Leveraged RT TR Index	4
15.	UKXL5X	x5 Daily Leveraged FTSE 100 RT TR Index	5
16.	UKXL2	FTSE 100 Daily Leveraged Index	2
17.	MCXL2X	FTSE 250 Daily Leveraged RT TR Index	2
18.	MCXL3X	FTSE 250 Daily Super Leveraged RT TR Index	3
19.	MCXL4X	FTSE 250 Daily Ultra Leveraged RT TR Index	4
20.	SLQUSL2	FTSE USA Large Cap Super Liquid 2x Daily Leveraged Index	2
21.	SLQUSL3	FTSE USA Large Cap Super Liquid 3x Daily Leveraged Index	3
22.	SLQUSL4	FTSE USA Large Cap Super Liquid 4x Daily Leveraged Index	4
23.	SLQUKML2	FTSE UK Mid Cap Super Liquid 2x Daily Leveraged Index	2
24.	SLQUKML3	FTSE UK Mid Cap Super Liquid 3x Daily Leveraged Index	3
25.	SLQUKML4	FTSE UK Mid Cap Super Liquid 4x Daily Leveraged Index	4
26.	SLQJPLL2	FTSE Japan Large Cap Super Liquid 2x Daily Leveraged Index	2
27.	SLQJPLL3	FTSE Japan Large Cap Super Liquid 3x Daily Leveraged Index	3
28.	SLQSPL2X	FTSE Spain Super Liquid 2x Daily Leveraged Index	2
29.	SLQSPL3X	FTSE Spain Super Liquid 3x Daily Leveraged Index	3
30.	BRICUL2X	FTSE BRIC 50 2x Daily Leveraged Index	2
31.	BRICUL3X	FTSE BRIC 50 3x Daily Leveraged Index	3
32.	USCSLL2X	FTSE USA Small Cap Super Liquid 2x Daily Leveraged Index	2
33.	USCSLL3X	FTSE USA Small Cap Super Liquid 3x Daily Leveraged Index	3
34.	XIN0UL2X	FTSE China 50 2x Daily Leveraged Index	2
35.	XIN0UL3X	FTSE China 50 3x Daily Leveraged Index	3
36.	WIJPNL2X	FTSE Japan 2x Daily Leveraged Index	2
37.	WIJPNL3X	FTSE Japan 3x Daily Leveraged Index	3

7.2.1.2　With no finance cost or liquidity spread.

Index code		Index name	Leverage factor
1.	DXNAL1QX	FTSE Developed Ex NA 1.25x Daily Leveraged No Spread Index	1.25
2.	FTEML1QX	FTSE Emerging 1.25x Daily Leveraged No Spread Index	1.25
3.	EMNLL1QX	FTSE Emerging Net Tax (US RIC) 1.25x Daily Leveraged No Spread LIBOR Index[9]	1.25
4.	DXUSL1QX	FTSE Developed ex US All Cap Net Tax (US RIC) 1.25x Daily Leveraged No Spread Index	1.25
5.	XUSLL1QX	FTSE Developed ex US All Cap Net Tax (US RIC) 1.25x Daily Leveraged No Spread LIBOR Index[10]	1.25
6.	R2000L2X	Russell 2000 2x Daily Leveraged Index	2
7.	UKXDL2X	FTSE 100 2x Daily Leveraged (Declared Dividend) Index	2

7.2.2　Price index is used as underlying index for the indices listed in rules 7.2.2.1.

7.2.2.1　With only finance cost.

Index code	Index name	Leverage factor
FTKLPL2X	FTSE Bursa Malaysia KLCI 2x Daily Leveraged (Price) Index	2

7.2.3　FTSE Short and Leveraged Index features

The features of each of the above indices can be found at:
Real_Time_Short_and_Leveraged_Index_Features.xlsx

7.3　Overnight, 12m and swap rates

7.3.1　The table below contains the overnight, 12m and swap rates used for the corresponding base currency.

Overnight, 12m and swap rates			
	O/N	12M	Swap 12m vs. O/N
Ccy	Name	Name	Name
EUR	EONIA[11]	EURIBOR 12M	EUR Swap (EONIA[12]) 1YR
USD	Fed Fund Eff Rate	SOFR Realised RFR 1Y	USD Swap OIS 1YR
GBP	SONIA	SONIA Realised RFR 1Y	GBP Swap vs. SONIA 1YR
CHF	SARON	LIBOR CHF 12M	CHF Swap Fix 1YR vs. 6M
JPY	TONAR	TIBOR Fixing Rate 1 Year	JPY Swap vs TONAR 1Yr
HKD	HIBOR	HKD 12M HIBOR	HKD Swap 1Y
MYR	KLIBOR	n.a.	n.a.

---

[9] FTSE Emerging Net Tax (US RIC) 1.25x Daily Leveraged No Spread LIBOR Index and FTSE Developed ex US All Cap Net Tax (US RIC) 1.25x Daily Leveraged No Spread LIBOR Index used SOFR Realised RFR 1m (Refinitiv RIC: USDSOFR1M=R) effective 22 November 2021.

[10] FTSE Emerging Net Tax (US RIC) 1.25x Daily Leveraged No Spread LIBOR Index and FTSE Developed ex US All Cap Net Tax (US RIC) 1.25x Daily Leveraged No Spread LIBOR Index used SOFR Realised RFR 1m (Refinitiv RIC: USDSOFR1M=R) effective 22 November 2021.

[11] EONIA replaced with ESTR from 3 January 2022.

[12] EONIA 1 Year Swap replaced with Euro 1 Year ESTR Overnight Index Swap from 3 January 2022.

7.4 Stamp duty and execution cost

7.4.1 The table below contains the stamp duty and execution cost.

Stamp duty and execution cost			
Index code	Index name	Stamp duty (%)	Execution cost (%)
XIN0UL2X	FTSE China 50 2x Daily Leveraged Index	0.1	0.05
XIN0UL3X	FTSE China 50 3x Daily Leveraged Index	0.1	0.05

7.5 Historic liquidity spread values

7.5.1 Liquidity spread values are updated monthly and effective after the close of business on the third Friday of the month.

7.5.2 Prior to June 2007, obtaining liquidity in the market to finance the leveraged positions used the spread between a one-year interest rate and overnight rate used to fund the capital needed for the leveraged position was negligible.

7.5.3 Post 2007, the spread between a one-year interest rate and overnight rate widened due to the credit crisis. From July 2007 onwards, the change in liquidity spread has been considered in the index calculation model.

7.5.4 This is reflected as the difference between a long-term rate (1Y) and 1Y Capitalised Overnight Rate (swap price).

7.6 A note on calculating back histories

Five years of back history is available for the Daily Leveraged Indices. Where available, they have been calculated using a net of withholding tax total return index on the underlying index.

Prior to July 2007, the liquidity spread was set at zero, as liquidity was plentiful. After the financial crisis of 2007, a calculated spread has been used.

Appendix A
Further information

A Glossary of Terms used in FTSE Russell's Ground Rule documents can be found using the following link:

Glossary.pdf

For further information on the FTSE Daily Leveraged Indices Ground Rules visit www.lseg.com/en/ftse-russell/ or e-mail info@ftserussell.com. Contact details can also be found on this website.

FTSE RUSSELL
An LSEG Business