

# FTSE Currency FRB Index Series Ground Rules

Developed with Record Currency  
Management

v3.2

Effective January 3, 2022



**FTSE  
RUSSELL**  
An LSEG Business



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## Section 1

# Introduction

## 1. Introduction

### 1.1 Overview

1.2 The FTSE Currency FRB Index Series aims to replicate the carry trade strategy that harvests the structural excess returns of the forward rate bias or “carry” experienced in global currency markets.

1.3 The FTSE Currency FRB Index Series comprises both excess return and total return indices.

1.4 The total return indices are calculated by adding the overnight interest rate return of the indices’ base currency to the excess return calculation.

1.5 The indices are calculated on a daily basis whenever WM/Refinitiv currency rates are published.

The FTSE Currency FRB Index Series consists of the following indices:

#### **FTSE Currency FRB5 Index Series**

1.6 The FTSE Currency FRB5 Index Series consists of 10 equally weighted currency pairs based upon the 5 most liquid developed market currencies. The 5 currencies are the US Dollar (USD), Euro (EUR), Japanese Yen (JPY), British Pound (GBP) and Swiss Franc (CHF).

1.7 The FTSE Currency FRB5 Index Series indices are available in the following base currencies:

USD, JPY, GBP and CHF

#### **FTSE Currency FRB10 Index Series**

1.8 The FTSE Currency FRB10 Index Series consists of 45 equally weighted currency pairs based upon those currencies in the FTSE Currency FRB5 Index Series plus the 5 next most liquid developed market currencies. In addition to those in the FTSE Currency FRB5 Index Series these currencies are the Australian Dollar (AUD), Canadian Dollar (CAD), New Zealand Dollar (NZD), Norwegian Krone (NOK) and Swedish Krona (SEK).

1.9 The FTSE Currency FRB10 Index Series indices are available in the following base currencies:

USD, JPY, GBP, CHF, AUD and CAD

1.10 The FTSE Currency FRB Index Series does not take account of ESG factors in its index design.

### 1.11 FTSE Russell

1.11.1 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.

1.11.2 FTSE Russell hereby notifies users of the index 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 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.

- 1.11.3 Index users who choose to follow this index series 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 for any losses, damages, claims and expenses suffered by any person as a result of:
- any reliance on these Ground Rules, and/or
  - any 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 inaccuracies in the compilation of the index or any constituent data.

## Section 2

# Management responsibilities

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## 2. Management responsibilities

### 2.1 FTSE International Limited (FTSE)

2.2 FTSE is the benchmark administrator of the index series.

2.3 FTSE is responsible for the daily calculation, production and operation of the FTSE Currency FRB Index Series and will:

- maintain records of the index weightings of all constituents;
- make changes to constituent weightings will be made by FTSE in accordance with the Ground Rules;
- carry out reviews and implement the resulting constituent changes as required by the Ground Rules;
- publish changes to the constituent weightings resulting from their ongoing maintenance and the periodic reviews;
- disseminate the indices.

### 2.4 Amendments to these Ground Rules

2.4.1 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 series. 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.

## Section 3

# FTSE Russell index policies

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### 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:

[Queries and Complaints Policy.pdf](#)

#### 3.2 FTSE Russell Policy for Benchmark Methodology Changes

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

[FTSE Russell Policy for Benchmark Methodology Changes.pdf](#)

## Section 4

# Eligible currencies

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## 4. Eligible currencies

- 4.1 The FTSE Currency FRB Index Series use the WM/Reuters 16:00 UK time Closing Spot and Forward Rates.
- 4.2 The FTSE Currency FRB5 Index consists 10 equally weighted currency pairs that are derived from the 5 most liquid developed currencies, namely: US Dollar, Euro, Japanese Yen, British Pound and Swiss Franc.
- 4.3 The FTSE Currency FRB10 Index consists of 45 equally weighted currency pairs that are derived from the currencies in the FTSE Currency FRB5 Index plus Australian Dollar, Canadian Dollar, New Zealand Dollar, Norwegian Krona and Swedish Krone.

## Section 5

# Periodic review of currencies

## 5. Periodic review of currencies

### 5.1 Review dates

5.1.1 The FTSE Currency FRB Index Series will be reviewed monthly, one day prior to last working day of the month. The review will be implemented after the close of business on the last working day of the month.

### 5.2 Calculation of spot and forward mid rates

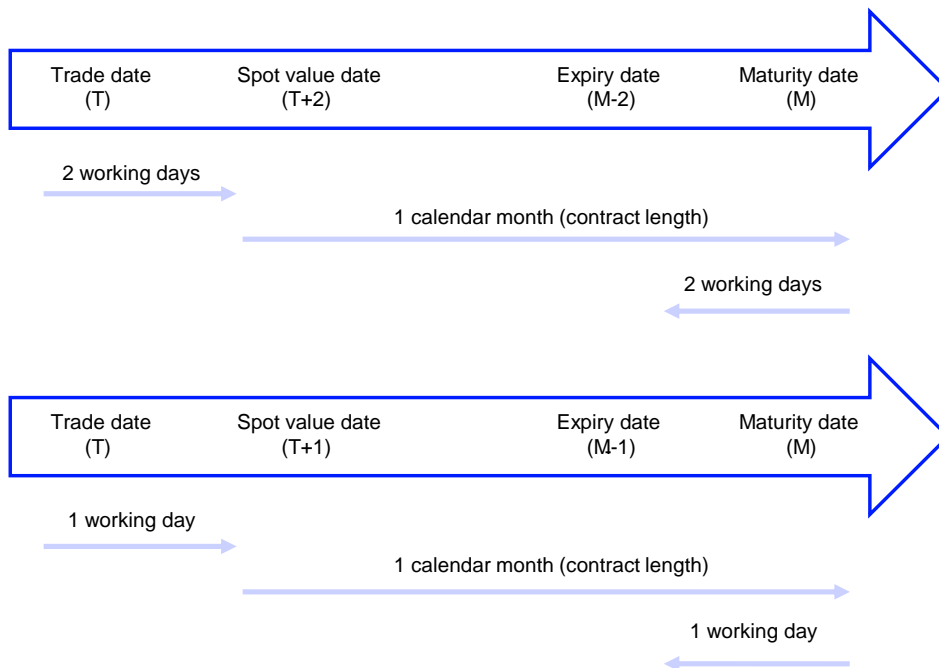
5.2.1 Spot and Forward mid rates are calculated as the arithmetic mean of the spot bid and spot offer rates using the following formula:

$$MidRate = \left( \frac{Bid + Offer}{2} \right)$$

5.2.2 Where WM/Reuters do not provide directly quoted currency rates, the spot and forward rates are calculated via the US Dollar.

### 5.3 Forward rate expiry and day count convention

5.3.1 The diagrams below illustrate the determination of expiry dates for all currency pairs that settle on a T+2 basis and CADUSD which settles on a T+1 basis.



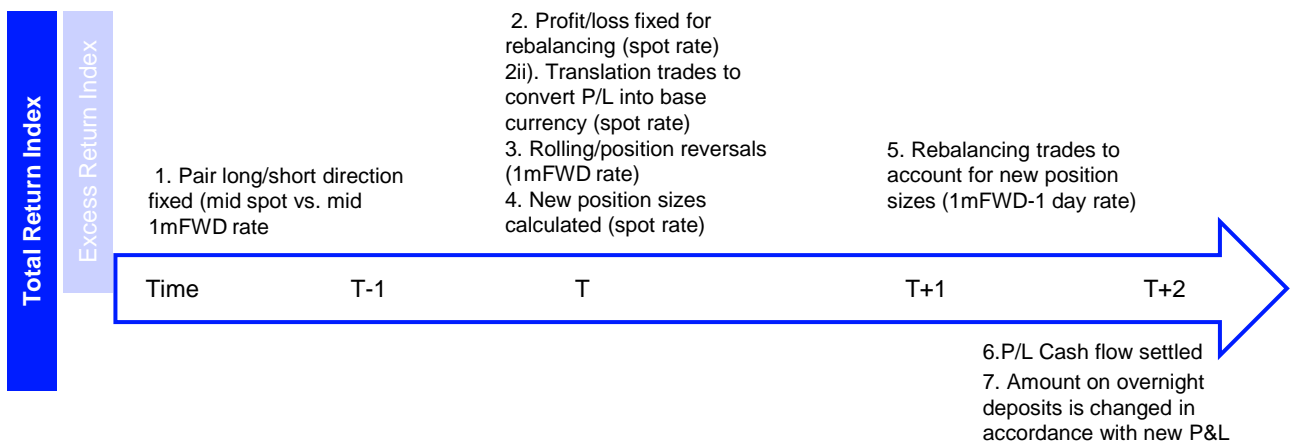


5.3.2 In order to match the cash flows of the CAD/USD currency pair with the remaining currency pairs that settle on a T+2 basis one additional day is added in the calculation of the forward contract.

**5.4 Determination of currency pair direction**

5.4.1 The differential between the mid spot rate and mid 1-month forward rate is assessed for each currency pair to determine which currency in each pair has the higher, and which the lower, nominal interest rate.

5.4.2 If the direction of the nominal interest rate differential for a currency pair is unchanged (or if the nominal interest rate differential becomes zero, i.e. mid spot rate equals mid 1-month forward rate), then the position is rolled forward for another month at the then prevailing forward rates.



5.4.3 If the direction of the nominal interest rate differential has reversed, then the forward contract will be closed out, and a new forward contract entered into, in which the former long currency, now with the lower nominal interest rate, is sold, and the former short currency, now with the higher nominal interest rate, is bought.

## Section 6

# Index calculation

## 6. Index calculation

- 6.1 The FTSE Currency FRB Indices are calculated whenever WM/Refinitiv currency rates are published (Monday to Friday) on an end of day basis only, with the exceptions of 1 January, Good Friday and 25 December each year, as well as during service alteration days specified by the WM/Reuters policy. National holidays in the following four financial centres are monitored by WM/Reuters: US, UK, Germany and Japan. WM/Reuters Rates are produced as normal if two or more of these centres are open. If only one centre is open, the normal policy is that no fixings are produced and the rates from previous fixings are used – in which case, FTSE Currency FRB Indices will not be calculated. Where national holidays occur, but two or more of the financial centres monitored by WM/Reuters are open, FTSE Currency FRB Indices will be calculated as normal with any unavailable rate being replaced by the previous rate used in the FTSE Currency FRB Index calculation.
- 6.2 In the event that any component price, interest rate or FX rate, is not published (e.g. because of a public holiday), then the previously published price is used.
- 6.3 FTSE Currency FRB Indices are derived by marking to market the 1-month forward contracts on a daily basis. An equal and offsetting forward position is used based on quoted 1-month forward contract rates on each valuation day. As the calculation date moves through the month the number of calendar days in the offsetting forward contract diminishes. For example, if we assume there are 31 days in an existing 1-month forward contract and 7 days have transpired in the month, the forward would be marked to market using an offsetting 24-day forward contract (i.e.  $31 - 7 = 24$ ).
- 6.4 Odd-day forward contracts are calculated by using the spot rate and the premium/discount between the spot rate and 1-month forward rate, prorated for the number of days in the odd-days forward contract.
- 6.5 FTSE uses a linear interpolation formula to compute odd-days forward rates.

$$FFRate_{i,odd-day_{t=}} = FXRate_{i,t} + (FFRate_{i,t} - FXRate_{i,t}) \cdot \left( \frac{d_{sv,md_{odd-days}}}{d_{sv,1md}} \right)$$

Where,

$FFRate_{i,odd-day_t}$	=	Odd-days forward FX rate on day $t$ for currency pair $i$
$FXRate_{i,t}$	=	Spot FX rate, in currency per unit in the NRA on day $t$
$FFRate_{i,t}$	=	1-month forward FX rate on day $t$ for currency pair $i$ on day $t$
$sv$	=	Spot value date
$md_{odd-days}$	=	Maturity date for odd-days forward contract
$1md$	=	Maturity date for 1m-forward contract
$d_{sv,md_{odd-days}}$	=	Number of calendar days between spot value date and maturity date for odd-days contract
$d_{sv,1md}$	=	Number of calendar days between spot value date and maturity date for 1m-forward contract

## Appendix A

# Data sources and historic data

The FTSE Currency FRB5 Indices have been back-calculated to 1978; the FTSE Currency FRB10 Indices have been back-calculated to 1988. Over that time a variety of sources of data have been used for Closing Spot and 1-Month Forward Rates to calculate the excess returns and interest rates for the total return calculation.

### Interest rates used in the calculations

Currency	RIC	Description	Source	Day count basis
Australian Dollar	RBA30/ RBA36	Interbank Overnight Cash Rate	Reserve Bank of Australia	a/365
British Pound	SONIAORS=	SONIA – Sterling Overnight Average	WMBA	a/365
Canadian Dollar	CORRA=	CORRA – Canadian Overnight Repo Rate Average	Bank of Canada	a/365
Japanese Yen	JPONMU=RR	TONAR – Tokyo Overnight Average Rate	Bank of Japan	a/365
Swiss Franc	CHFTOIS=	TOIS – CHF Tom/Next Index Swaps	Cosmorex	a/360
US Dollar	USONFFE	Fed Funds Effective Rate	New York Fed	a/360

Source: FTSE Group

### Historic interest rates and sources

Currency	Rate	Period	Source
Australian Dollar	Interbank Overnight Cash Rate	1998 - now	Reserve Bank of Australia
British Pound	SONIA	Mar '97 – now	WMBA
	1m GBP Libor*	Jan '86 – Mar '97	bbalibor
	1m interest rate*	Pre Jan '86	Record Currency Management
Canadian Dollar	CORRA	Jul '97 – now	Bank of Canada
	1m CAD LIBOR*	Oct '90 – Jul '97	bbalibor
	1m interest rate*	Jan '88 – Oct-90	Record Currency Management
Japanese Yen	TONAR	Feb '89 – now	Bank of Japan
	1m JPY LIBOR*	Jan '86 – Feb '89	bbalibor
	1m interest rate*	Pre Jan '86	Record Currency Management
Swiss Franc	TOIS	Aug '97 – now	Cosmorex
	1m CHF LIBOR*	Jan '89 – Aug '97	bbalibor
	1m interest rate*	Pre Jan '89	Record Currency Management
US Dollar	Fed Funds Effective Rate	Continuous	Federal Bank of New York

Source: FTSE Group

\* All of the 1-month interest rates used in the calculations as a proxy for the overnight rates in the early years have been reduced by 10 basis points.

**Current forex data**

All Closing Spot and Forward Exchange Rates are sourced from WM/Reuters.

**Historic forex data**

Forex rate	Period	Source	Data
Spot	Aug '98 –	WM/Reuters	Bid/Offer Calculated Mid
	Jun '78 – Aug '98	Record Currency Management	USD pairs - Bid/Off calculated by applying 6bps around the Mid Spot price Non-USD pairs have 12bps spread around MID Spot price
1-Month Forward	Aug '98 –	WM/Reuters	LHS/RHS Calculated Mid
	Jun '78 – Aug '98	Record Currency Management	USD pairs – LHS/RHS calculated by applying 8 bps spread around Mid 1-month Fwd price Non-USD pairs have 16 bps spread over Mid 1-month Fwd price

Source: FTSE Group

## Appendix B

# Further information

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## Further information

A glossary of terms used in FTSE Russell's Ground Rules document can be found using the following link:

[Glossary.pdf](#)

Further information on the FTSE Currency FRB Index Series is available from FTSE Russell.

For contact details please visit the FTSE Russell website or contact FTSE Russell client services at [info@ftserussell.com](mailto:info@ftserussell.com).

Website: [www.lseg.com/en/ftse-russell/](http://www.lseg.com/en/ftse-russell/)

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