Methodology overview

FTSE Russell

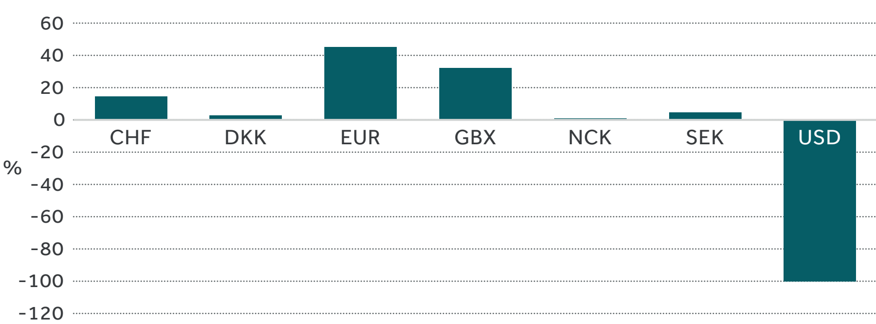
FTSE Currency Hedging

Overview

International equities are playing an increasingly central role in the asset allocation decisions of investors worldwide. Many choose to gain passive exposure to international equities through index-tracking funds.

An index which includes securities denominated in foreign currencies has an embedded currency exposure that is long foreign currencies and 100% short the domestic currency.

FTSE Developed Europe Index Currency Exposure as of May 29, 2015 (USDm)



Source FTSE Russell. Data as of June 15, 2015. Please see disclaimer page for important information. Past performance is no guarantee of future returns.

Currency hedging

FTSE Russell's standard currency hedging methodology enables users to measure the returns of foreign securities whilst removing the impact of exchange rates fluctuations on those security prices. The hedged index is derived from the unhedged index performance.

Features

- A consistent, transparent and publicly available methodology
- Equal applications for traditional, Smart Beta or Custom indexes
- Indexes can be hedged against individual currencies or currency baskets.
- Indexes can be hedged against all major global currencies

Example:

Step 1: Calculate country index market capitalisations to determine currency exposures

FTSE Developed Europe May 29, 2015	
Currency	**Exposure (USDm)**
CHF	1,271,402.2
DKK	235,086.2
EUR	3,976,295.7
GBX	2,842,463.2
NOK	91,610.3
SEK	401,364.1

Step 2: Calculate the Forward Interpolated Rates (FIR)

Forward Interpolated Rates calculate the spot/forward discount/premium at the beginning of the contract period, and then discount this over the life of the contract. In the example below, there are 15 days left in the 32 day contract.

May 29 Spot	May 29 Spot	Jun 15 FIR
0.94	0.94	0.94
6.80	6.80	6.80
0.91	0.91	0.91
65.53	65.55	65.54
7.80	7.80	7.80
8.54	8.54	8.54

Step 3: Calculate the Impact of Hedging

$$\text{Impact of Hedging} = \text{Country Market cap X } \frac{\left(\frac{\textit{Spot at previous month end}}{\textit{FIR}} - \frac{\textit{Spot at previous month end})}{\textit{Current Spot}}\right)}{\textit{Index Market Cap}}$$

May 29 Spot	May 29 Spot	Jun 15 FIR	Jun 15 Spot	Impact of Hedging
0.94	0.94	0.94	0.94	-0.12%
6.80	6.80	6.80	6.63	-0.07%
0.91	0.91	0.91	0.89	-1.18%
65.53	65.55	65.54	64.33	-0.61%
7.80	7.80	7.80	7.77	0.00%
8.54	8.54	8.54	8.19	-0.20%
			Total Impact of Hedging	-2.18%

Step 4: Calculate the hedged index

The hedged index is derived from the unhedged index performance and the impact of hedging.

Hedged Index = Hedged Index at previous month end * (Changed in unhedged index + Impact of Hedging)

May 29 Unhedged	May 29 Hedged	Jun 15 Unhedged	Jun 15 Hedged
402.36	2273.75	396.03	2188.42

Source FTSE Russell. Data as of June 15, 2015. Please see disclaimer page for important information. Past performance is no guarantee of future returns.

Calculating currency exposure

The currency exposure is calculated using closing values on the last trading day of the month. Currency exposure is aggregated for each country, regardless of local trading currency (ie, some countries have securities that trade in local and/or USD). The subtotals for each country are then combined for a total currency exposure by the assigned currency. This same exposure by aggregated currency ratio is applied to the daily hedge until the next month end.

WM Reuters one month (16:00 hrs London Time mid price) forward rates are used in the currency hedging calculation. All rates are the last working day of the relevant market month direct USD quotes. Spot rates that are used in the currency hedging calculation are WM/Reuters Closing Spot Rates™, compiled by The WM Company.

Forward interpolated rates

FTSE Russell calculates a Forward Interpolated Rate to value a forward contract on a particular inter month period. We do this by calculating the spot/forward discount/premium at the beginning of the contract period, and then discount this over the life of the contract. You can also think of this as amortizing the one month forward over the month.

For more information about our indexes, please visit ftserussell.com.

About FTSE Russell

FTSE Russell is a leading global provider of benchmarking, analytics and data solutions for investors, giving them a precise view of the market relevant to their investment process. A comprehensive range of reliable and accurate indexes provides investors worldwide with the tools they require to measure and benchmark markets across asset classes, styles or strategies.

FTSE Russell index expertise and products are used extensively by institutional and retail investors globally. For over 30 years, leading asset owners, asset managers, ETF providers and investment banks have chosen FTSE Russell indexes to benchmark their investment performance and create ETFs, structured products and index-based derivatives.

FTSE Russell is focused on applying the highest industry standards in index design and governance, employing transparent rules-based methodology informed by independent committees of leading market participants. FTSE Russell fully embraces the IOSCO Principles and its Statement of Compliance has received independent assurance. Index innovation is driven by client needs and customer partnerships, allowing FTSE Russell to continually enhance the breadth, depth and reach of its offering.

FTSE Russell is wholly owned by London Stock Exchange Group.

For more information, visit www.ftserussell.com.

To learn more, visit www.ftserussell.com; email index@russell.com, info@ftse.com; or call your regional Client Service Team office:

EMEA

+44 (0) 20 7866 1810

North America

+1 877 503 6437

Asia-Pacific

Hong Kong +852 2164 3333

Tokyo +81 3 3581 2764

Sydney +61 (0) 2 8823 3521