

GBP Interest Rate Swap Volatility Indices

Parameta Solutions GBP Interest Rate Swap Volatility (GBP IRSV) indices aim to provide market participants with a forward looking implied volatility measure for the GBP interest rate swap markets.

Background

Interest rate swaps are an important tool for fixed income market participants, chiefly as they reflect the market's expectation of future interest rates. They are used by corporate treasurers, speculators, investors and banks in a variety of use cases in portfolio management, financing, risk management and investment strategies. According to ISDA¹, total notional outstanding for Interest Rate Derivatives (IRD) reached \$490.6 trillion and accounted for 79.4% of global OTC derivatives notional outstanding at year-end 2022. Interest rate swaps notional outstanding hit \$405.5 trillion accounting for 82.7% of total IRD notional outstanding at year-end 2022.

Index description

The Parameta Solutions GBP Interest Rate Swap Volatility (GBP IRSV) indices aim to provide market participants with a model-free measure of spot implied volatility in the GBP interest rate swap markets. Derived from interest rate swaption prices, an index is available for each of the 48 most liquid option expiry, swap tenor combinations. Each index distills the information content of up to 24 different ATM and OTM payer and receiver strikes into a single measure of implied volatility for each option expiry/swap tenor combination.

Accurate volatility forecasts are important for investors, both when making investment decisions and when measuring investment risks. Simple volatility measures implied from at-the-money (ATM) option prices fail to capture all available information from option markets. To address this, recent research advocates deriving implied volatility in a model-free manner from both ATM and out-of-the-money (OTM) call and put options. A recent BIS working paper² found that predictions of interest rate swap volatility based on model-free implied volatility have superior predictive power over other commonly used volatility forecasting measures.

Index Objective and Key Features

- Indices are available for 48 of the most liquid option expiry, swap tenor combinations from the GBP interest rate option markets
- The objective of each index is to provide an indication of the expected volatility of the index swap rate tenor over the index option expiry period.
- IRSV indices distill the information content of ATM and OTM interest rate swaptions into a single measure of implied volatility for each index
- Model-free volatility estimates are widely accepted to have superior predictive power compared to other forecasting measures²

Recent history of 1Y10Y volatility indices



1. <https://www.isda.org/a/wdXgE/Key-Trends-in-the-Size-and-Composition-of-OTC-Derivatives-Markets-in-the-Second-Half-of-2022.pdf>

2. <https://www.bis.org/publ/work1068.pdf>



Indices Available

GBP IRSV Indices	Swap Tenor (T in years)						
	01Y	02Y	05Y	10Y	20Y	30Y	
Option Expiry (E)	01M	01M01Y	01M02Y	01M05Y	01M10Y	01M20Y	01M30Y
	03M	03M01Y	03M02Y	03M05Y	03M10Y	03M20Y	03M30Y
	06M	06M01Y	06M02Y	06M05Y	06M10Y	06M20Y	06M30Y
	01Y	01Y01Y	01Y02Y	01Y05Y	01Y10Y	01Y20Y	01Y30Y
	02Y	02Y01Y	02Y02Y	02Y05Y	02Y10Y	02Y20Y	02Y30Y
	03Y	03Y01Y	03Y02Y	03Y05Y	03Y10Y	03Y20Y	03Y30Y
	05Y	05Y01Y	05Y02Y	05Y05Y	05Y10Y	05Y20Y	05Y30Y
	10Y	10Y01Y	10Y02Y	10Y05Y	10Y10Y	10Y20Y	10Y30Y

Calculation Methodology

The index calculation methodology is based on published academic research³ which provides a theoretical foundation for measuring interest rate swap volatility based on the model-free fair value of variance swap contracts for forward swap rates.

- Each index is derived from the following inputs:
- Swaption ATM mid-price premium
- Swaption ATM Normal Volatility
- Swaption skew mid-price premia across the following payer and receiver strikes 1000, 500, 400, 300, 200, 150, 100, 75, 50, 25, 12.5 for the specified option expiry and swap tenor.

For more information on the calculation methodology please [contact us](#).

3. Mele, Antonio & Obayashi, Yoshiki. (2015). The Price of Fixed Income Market Volatility. 10.1007/978-3-319-26523-0_3

Additional Information

- The price source for the GBP IRSV indices is the ICAP EMEA Interest Rate Options Desk
- IRSV indices are published at or around 5PM UK time based on closing prices as at 4.15PM
- A business day for IRSV means a day on which banks are open in the UK and the ICAP Interest Rate Options Desk publishes prices
- The inception date for the majority of GBP IRSV indices is 04 Jan 2010

Get in touch

For further information, please visit us at: www.parametasolutions.com

Sales: findoutmore@parametasolutions.com

Support: operations@parametasolutions.com

Disclaimer

This communication and all information contained in or attached to it (including, but not limited to market prices/levels and market commentary) (the "Information") is for informational purposes only, is confidential, may be legally privileged and is the intellectual property of one of the companies of TP ICAP plc group ("TP ICAP") or third parties. The Information is directed to Eligible Counterparties and Professional Customers only and is not intended for Retail Clients (as each term is defined by the rules of the Financial Conduct Authority or equivalent). The Information is not, and should not be construed as, an offer, bid, recommendation or solicitation in relation to any financial instrument or investment or to participate in any particular trading strategy. The Information is not to be relied upon and is not warranted, including, but not limited, as to completeness, timeliness or accuracy and is subject to change without notice. All representations and warranties are expressly disclaimed. Access to the Information by anyone other than the intended recipient is unauthorised and any disclosure, copying or redistribution is prohibited. The Information and any opinions expressed within it are not to be relied upon as authoritative, or taken in substitution for seeking your own advice or the exercise of your own commercial judgment. The Information has no regard to specific investment objectives and does not comprise investment advice. The Information is not, and should not be construed as, an offer or solicitation to bid, sell or buy any product, investment, security or any other financial instrument. TP ICAP does not promote any of the contents of the Information. TP ICAP does not make any representation or warranty, express or implied, as to the accuracy, completeness or correctness of the Information, which is subject to change without notice. TP ICAP does not accept any responsibility or liability for any direct or indirect loss or damage, howsoever caused, arising from or in connection with the Information. In no circumstances may the products referred to herein be used for any purpose that would cause it to become a benchmark for the purposes of (a) the Regulation (EU) 2016/1011, (b) the UK version of Regulation (EU) 2016/1011 as on shored via the European Union (Withdrawal) Act 2018 (the "UK Benchmarks Regulation") © other applicable benchmark regulation and/or (d) the IOSCO Principles for Financial Benchmarks in each case together with the relevant technical standards, whether by the products referred to being referenced in a financial instrument, financial contract or investment fund or otherwise. ("Prohibited Use"). The terms of this disclaimer are governed by the laws of England and Wales. For further regulatory information and our terms of business, please see www.tpicap.com. ©TPICAP 2024