
July 2026

WMR Spot Rate Benchmarks

Methodology Consultation

WMR spot cross rate calculation consultation

1. Introduction

London Stock Exchange Group (“LSEG”) is a leading global financial markets infrastructure and data provider, trusted to deliver excellence by customers, partners and markets around the world. We play a vital social and economic role in the world’s financial system. With our trusted expertise and global scale, we enable the sustainable growth and stability of our customers and their communities. LSEG offers benchmark and index solutions through FTSE Russell. FTSE Russell is a global index provider of benchmarks, analytics, and data with capabilities across asset classes including the WMR FX Benchmarks.

FTSE International Ltd (“FTSE”) is the administrator of WMR and is committed to responding to feedback from market participants and ensuring that the WMR FX Benchmarks continue to be the most transparent and appropriate FX benchmarks for use across a wide range of diverse workflows. FTSE is focussed on maintaining and maximising the quality, integrity and robustness of the benchmarks to provide rates which, most accurately, represent the underlying currency markets at a point in time.

Consequently, FTSE is currently reviewing a change in methodology for the calculation of cross spot rates. Currently the methodology crosses the underlying spot rates and does not take into account any adjustment for forward points if the spot dates of the cross and underlying pairs do not match.

This consultation seeks your feedback on the proposal to use forward points when calculating cross rates to take into account mismatched spot dates as a result of holidays or different spot settlement convention across currencies. This consultation also refers to additional forward tenors that could be added to the WMR benchmark in future.

2. Overview – Current Methodology for WMR Spot Cross Currencies

The methodology for the WMR is fully transparent and published here: [WMR FX Benchmarks Methodology](#). WMR calculates crossed spot rates for a number of pairs, including:

- Hourly intraday and London Close products include rates for all currencies against USD, EUR and GBP
- Tokyo Spot rate product, as at 10am Tokyo time, also includes rates for currencies with JPY

The methodology calculates cross rates from the underlying rates without any adjustment due to dates. The rates used as input for cross rate calculations are the published WMR Benchmark Spot rates for the underlying pairs.

See below for more detail on the calculations

2.1 Crossed Spot Rates Calculations

For currencies where the market convention is for the spot date to be T+1, no adjustment is made and the calculation is performed as if both currencies are T+2.

2.1.1 T+1 Currencies

The following currencies follow the market convention where the spot date is T+1:

- CAD: Canadian Dollar
- RUB: Russian Ruble
- PHP: Philippine Peso
- TRY: Turkish Lira

No adjustment is made and the calculation is performed as if both currencies are T+2.

2.1.2 Holidays

Likewise no adjustment is made in the cross calculation when market holidays are observed that cause the spot dates for the underlying and crossed currency to be mismatched. Cross rates to further base currencies may be published, and if so, these will be calculated using the same principles.

2.1.3 For Currencies Quoted in Units to USD (For Example, CAD)

[Sterling Cross Calculation](#)

GBP/CAD bid = (USD/CAD bid) * (GBP/USD bid)

GBP/CAD offer = (USD/CAD offer) * (GBP/USD offer)

Euro Cross Calculation

EUR/CAD bid = (USD/CAD bid) * (EUR/USD bid)

EUR/CAD offer = (USD/CAD offer) * (EUR/USD offer)

2.1.4 For Currencies Quoted in USD per Unit (For Example, AUD)

Sterling Cross Calculation

GBP/AUD bid = (GBP/USD bid) / (AUD/USD offer)

GBP/AUD offer = (GBP/USD offer) / (AUD/USD bid)

Euro Cross Calculation

EUR/AUD bid = (EUR/USD bid) / (AUD/USD offer)

EUR/AUD offer = (EUR/USD offer) / (AUD/USD bid)

2.1.5 For Currencies Quoted in Units to EUR (For Example, SEK)

USD Cross Calculation

USD/SEK bid = (EUR/SEK bid) / (EUR/USD offer)

USD/SEK offer = (EUR/SEK offer) / (EUR/USD bid)

Sterling Cross Calculation

GBP/SEK bid = (USD/SEK bid) * (GBP/USD bid)

GBP/SEK offer = (USD/SEK offer) * (GBP/USD offer)

3. Proposal – Changes to Cross Rates Methodology

FTSE is proposing to include forward points, if available, in the calculation of cross rates when the spot dates for the underlying and cross pairs do not match. This would include adjustments when the date mismatch is caused by either T+1 currencies or holidays.

3.1 Source of Value Dates

Value Dates will be sourced from an existing LSEG system. This is the same service used to provide value dates for Advanced Dealing, LSEG's next-generation dealing platform for collaborative FX trading.

3.1.1 Value Date Roll

Value date calculations need to be based off a current business date. WMR will start the week using Monday as the business date and roll to use the next day as business date from the first benchmark calculation after 5pm EST on Monday to Thursdays.

So the first benchmarks to use new value dates after the Monday date roll would be:

- 17:30 EST for trade currencies
- 18:00 EST for non-trade currencies

The timing of business dates used for each day of the week is in the table below:

Business Day of Week for us of value dates	WMR benchmark calculations for that business day
Monday	WMR Monday (APAC time) open to Monday 5:00pm EST
Tuesday	Monday 5:30pm EST to Tuesday 5:00pm EST
Wednesday	Tuesday 5:30pm EST to Wednesday 5:00pm EST
Thursday	Wednesday 5:30pm EST to Thursday 5:00pm EST
Friday	Thursday 5:30pm EST to final WMR benchmark on Friday

3.2 Source of Forward Points

In order to promote consistency and transparency the forward points calculated and published as part of the WMR Benchmark Forward Rate service will be used. The coverage is currently 79 currencies against the USD. The normal calculation times are hourly from 06:00 to 21:00 UK time Monday to Friday. In addition, FIL publishes at 17:00 hours New York time, 10:00 hours Sydney time, 14:00 hours New Zealand time, 10:00 Tokyo time, 11:00 hours Singapore time, 11:00 Bangkok time and 16:00 hours Sydney time.

Short dated tenors currently published include:

- ON - Overnight
- TN - Tomorrow Next
- SW - Spot Week (One Week)
- 1M - One Month

WMR forward benchmarks (points and outright) are typically published after the spot rates. In order to avoid delaying the publication of spot rates the methodology will use the previously published (or lagged) WMR forward points. FTSE believe these rates would be acceptable because forward points are not as volatile as Spot and do not change as often.

So, for example, at 14:00 GMT, cross calculations would use:

- Spot rates from 14:00 GMT
- Forward points from 13:00 GMT

At 14:30 GMT, cross calculations would use:

- Spot rates from 14:30 GMT
- Forward points from 14:00 GMT

3.3 Change to Calculation Methodology

3.3.1 Cross Calculation

No changes will be made to the cross rate calculation methods in sections 2.1.3 to 2.1.5 above.

The only change(s) will be to check for a mismatch in spot dates across the underlying and crossed pairs. If there is a mismatch then the methodology will apply forward points to one pair to produce an outright rate for the appropriate date, typically before but sometimes after the cross rate calculation is done.

The principles of how this will be done are:

- If Spot dates across the two input and crossed pairs are different then need to use Forward points for a USD pair leg(s) to calculate rates for the same and appropriate date
- Cross calculations would only be done on rates for the same value date
- When crossing into USD from EUR currencies, if the USD cross has a different spot date to the underlying EUR pair then
 - apply forward points to the input USD based leg to cross on the EUR input pair spot date
 - then apply USD forward points to the USD calculated cross to get a rate for the spot date

3.3.2 Calculation of Outright Rates using Forward Points

When calculating the outright rate for a target forward date, use forward points and spot rate to derive an outright rate for that date.

The application of forward points depends on whether the target date is before or after spot for the pair

Assuming the target date matches the date on a tenor for the pair, apply points to produce an adjust outright rate for the correct date as:

- Before Spot (ie TN for T+2 pairs):
 - Adjusted bid = Spot bid – TN offer
 - Adjusted offer = Spot offer – TN bid
- Beyond Spot (ie TN for T+1 pairs, SN, SW, 1M):
 - Adjusted bid = Spot bid + (Tenor) Bid

- Adjusted offer = Spot offer + (Tenor) Offer

3.3.3 Interpolating Forward Points for Broken Dates

If the target spot date does not match the date of any available tenor, then the methodology would use linear interpolation between the previous (or from Spot if none available) and next tenor based on day count to calculate the forward points.

3.3.4 Availability of Forward Points

If no forward points are available for the pair, either because they are not available in the WMR package or there was some issue with the WMR Forwards, then no points would be applied and crossing would be done using the unadjusted Spot rates.

3.4 Outside Scope

3.4.1 Cross points for WMR Forwards

In this change the forward points will only be applied to cross rate calculations for Spot rates.

WMR does include some cross rate calculations for forward points. Those are outside the scope of this change.

3.4.2 Spot-Next Tenors

The first tenors after Spot currently published in the WMR forward Rates is Spot Week (SW). Spot Next (SN) rates are not published.

WMR are investigating the potential future addition of SN tenors, but not as a part of this methodology change.

- While the SN tenor is not available then the methodology would interpolate between Spot and the SW tenor.
- Where the SN tenor to be made available in future then the methodology would use the SN points or interpolate between SN and SW, depending on the value date needed.

Analysis (see below) has shown that interpolating to the SW tenor creates a significant improvement, and adding support for the SN tenors makes a much smaller difference. the analysis shows that the methodology change should not be dependent on adding SN tenors across pairs.

4. Performance of Proposed Methodology Changes

4.1 Brief Summary

This analysis evaluates the benefit of applying **forward-point adjustments** to **WMR cross-rate calculations** when the two currency legs have different value dates. The study covers nine currency crosses over the period **12 May 2025 to 8 May 2026** and compares the current methodology, where no value-date adjustment is applied, with an enhanced methodology that aligns value dates using FX forward points. These pairs were chosen because they include either T+1 spot currencies or T+2 spot currencies with long holidays, so they represent currency pairs impacted by the change. The cross pairs included:

- T+1 currencies:
 - EUR/TRY
 - EUR/CAD
 - GBP/CAD
- T+2 currencies
 - JPY/CNH
 - EUR/CNH
 - EUR/JPY
 - GBP/JPY
 - GBP/CNH
 - GBP/AUD

The analysis also assesses the incremental benefit of incorporating a **spot-next tenor**, which is not currently published by WMR.

The results show that adjusting for value-date mismatches can reduce material differences in benchmark cross rates, particularly for T+1 currencies (TRY and CAD) and during extended local holiday periods. The most persistent benefits arise where one leg settles T+1 and the other settles T+2, while holiday-related settlement divergences create less frequent but sometimes meaningful impacts.

The primary benefit comes from making the methodology change regardless of short dated tenors available. The incremental benefit of publishing and using SN tenors is positive but generally much smaller, and should therefore be viewed as a secondary refinement rather than the main source of improvement. Therefore the methodology change can be made without SN tenors being calculated and published.

4.2 Key Findings: Benefit from Applying Forward-Point Adjustments

The table below shows the average benefit on instances with spot date differences, in basis points, of applying forward-point adjustments relative to leaving cross rates unadjusted. Results are reported separately for all intraday fixes and for the London 4pm fix.

Cross Type	All intraday fixes (bps)	London 4pm (bps)
T+1 Currencies	0.7 – 12.3	0.7 – 12.4
T+2 Currencies	0.08 – 2.2	0.08 – 2.2

The largest benefit is observed in EUR/TRY, due to the combination of frequent value-date mismatches and a significant interest-rate differential. Other meaningful benefits are observed in JPY/CNH and EUR/CNH, where the impact is primarily driven by long holiday-related settlement disruptions. The results are broadly consistent across all intraday fixes and the London 4pm fix, indicating that the benefit is not specific to one benchmark window.

T+1 crosses (EUR/CAD, GBP/CAD, EUR/TRY) had between 242 and 244 value date mismatches across the sample period, while other crosses had between 15 (GBP/AUD) and 51 (JPY/CNH) value date mismatches. On the other dates with no value date mismatches the methodology would not make any difference because spot rates would be crossed as per the current methodology.

4.3 Spot-Next Tenor Impact for T+2 Crosses

The incremental benefit of adding a spot-next tenor is materially smaller than the benefit of applying forward-point adjustments themselves. Spot-next improves precision where a one-day value-date adjustment is required, but the core improvement comes from aligning value dates using forward points.

Cross Type	All intraday fixes (bps)	All intraday fixes % of full adjustment	London 4pm (bps)	London 4pm % of full adjustment
T+2	0.01 – 0.07	0.63 – 11.76%	0.006 – 0.04	0.38 – 12.5%

This indicates that the main benefit comes from introducing value-date alignment through forward-point adjustments, while SN publication provides a secondary refinement for short-dated mismatches. This analysis focuses only on T+2 crosses, as T+1/T+2 settlement mismatches, such as those arising in CAD or TRY crosses, can already be addressed using the WMR-published TN tenor.

4.4 Impact of Using Lagged Forward Points

The analysis also considers the impact of using one-hour lagged forward points, which proxies the use of the previous hour's published WMR forward points for hourly benchmark calculations. In most cases, the impact is small relative to the overall benefit of applying forward-point adjustments.

However, the effect can become more material at the 5pm New York fix on Wednesdays for T+1 pairs. This reflects the standard FX forward value-date roll, where the TN tenor moves from covering Thursday-to-Friday to covering Friday-to-Monday. The larger calendar-day adjustment can increase the impact of using lagged forward points for T+1 crosses.

Cross Type	Full sample (bps)	(% of full adjustment)	Wednesday 5pm NY (bps)
T+1	0.03 – 0.94	4.29 – 7.64%	0.55 – 12.41
T+2	0.002 – 0.01	0.38 – 2.94%	0.004 – 0.05

These results suggest that the use of lagged forward points has limited impact for most crosses across the full sample.

The main exception in the analysis is EUR/TRY, where the impact rises to 12.41 bps at the Wednesday 5pm New York fix when the TN swap rates switch from covering 1 day to 3 days because of the weekend. It is corrected after USD/TRY TN forward points are published for the new value date. CAD crosses also show a more noticeable effect at this fixing time, at approximately 0.55-0.57 bps, reflecting the interaction between T+1 settlement and the forward value-date roll.

4.5 Overall Conclusion

The analysis demonstrates that applying forward-point adjustments would materially improve WMR cross-rate representativeness by aligning the value dates of the two currency legs before calculating the cross rate. The benefits are driven by two distinct sources:

1. **Structural T+1 settlement effects**, particularly:
 - TRY and CAD crosses.
2. **Holiday-related settlement mismatches**, particularly:
 - JPY/CNH, EUR/CNH and EUR/JPY over periods with extended currency holidays.

The evidence suggests that the methodology adjustment is the primary enhancement. The use of lagged forward points has limited impact for most crosses except in specific cases, most notably Wednesday 5pm New York for T+1 currencies.

5. Action Required – Responding to this Consultation

FTSE welcomes user engagement when reviewing benchmark methodologies or considering material changes to its benchmarks.

Therefore, we invite feedback to this proposed methodology change and request that your responses are as detailed as possible and with consideration to the questions below.

Questions:

1. Do you have any concerns with this proposed change?
2. Would you need to make changes in your systems to manage this change to methodology for published cross rates? If so, how much notice would you need before the methodology is changed?
3. Please indicate if there are any other aspects you would like us to consider in the calculation of Spot cross rates?
4. Are there any additional data points that WMR should consider making available to clients (for example, the value dates used in calculations)?

Please email your comments to wmr.ops@lseg.com with “WMR Spots Cross Rates Consultation” in the subject by no later than 1700UK on 14 August 2026. Please note that comments submitted after this deadline or submitted via other means may not be processed.

All responses to this consultation will be treated as confidential and will not be made public. A summary of anonymised feedback received, and decisions made may be made available in due course.

6. Calculation examples

6.1 T+1 Spot date currency

Example 1 – CAD cross without holidays

Tenor	Date	WMR Bid	WMR Offer	WMR Mid
“Today”	8 Apr 2026			

USDCAD Spot	9 Apr 2026	1.3809	1.3812	1.38105
GBPUSD Spot	10 Apr 2026	1.3459	1.3464	1.34615
GBPCAD Spot	10 Apr 2026			
USDCAD TN	9-10 Apr 2026	-0.000062	-0.000057	-0.000060

USDCAD rate on 10Apr2026

$$USDCAD^{10Apr} = USDCAD^{Spot} + USDCAD^{TN}$$

10Apr bid = 1.3809 + (-0.000062) = 1.380838

10Apr offer = 1.3812 + (-0.000062) = 1.381143

GBPCAD cross spot rate (10Apr2026)

Methodology is to calculate as

- GBP/CAD bid = (USD/CAD bid) * (GBP/USD bid)
- GBP/CAD offer = (USD/CAD offer) * (GBP/USD offer)
- GBP/CAD mid = ((GBP/CAD bid) + (GBP/CAD offer)) / 2

and round to the appropriate decimals for that rate.

So GBPCAD cross rates would be:

- GBPCAD bid = 1.380838 * 1.3459 = 1.8585
- GBPCAD offer = 1.381143 * 1.3464 = 1.8596
- GBPCAD mid = (1.8585 + 1.8596) / 2 = 1.85902

Example 2 – CAD cross with holidays

Tenor	Date	WMR Bid	WMR Offer	WMR Mid
"Today"	1 Apr 2026			
USDCAD Spot	2 Apr 2026	1.3809	1.3812	1.38105
GBPUSD Spot	7 Apr 2026	1.3459	1.3464	1.34615
GBPCAD Spot	7 Apr 2026			
USDCAD TN	2-6 Apr 2026	-0.000062	-0.000057	-0.000060
USDCAD SW	2-9 Apr 2026	-0.000429	-0.000409	-0.000419

USDCAD forward points for 7Apr2026

No forward tenor exists to adjust the USDCAD spot date (2nd April 2026) to be consistent with the GBPUSD spot date (7th April 2026). As per market convention, use liner interpolation between the TN and SW forward points to achieve the correct forward points:

$$FwdPts^{7Apr} = FwdPts^{TN} + (Days^{7Apr} - Days^{TN(6Apr)}) * \left(\frac{FwdPts^{SW} - FwdPts^{TN}}{Days^{SW(9Apr)} - Days^{TN(6Apr)}} \right)$$

7Apr FwdPts bid = -0.000062 + ((6-5) * ((-0.000429 - -0.000062)/(8 - 5))) = -0.00018433

7Apr FwdPts offer = -0.000057 + ((6-5) * ((-0.000409 - -0.000057)/(8 - 5))) = -0.00017433

USDCAD rate on 7Apr2026

$$USDCAD^{10Apr} = USDCAD^{Spot} + USDCADFwdPts^{10Apr}$$

10Apr bid = 1.3809 + (-0.00018433) = 1.380715667

$$10\text{Apr offer} = 1.3812 + (-0.00017433) = 1.381025667$$

GBPCAD cross spot rate (10Apr2026)

Methodology is to calculate as

- GBP/CAD bid = (USD/CAD bid) * (GBP/USD bid)
- GBP/CAD offer = (USD/CAD offer) * (GBP/USD offer)
- GBP/CAD mid = ((GBP/CAD bid) + (GBP/CAD offer)) / 2

and round to the appropriate decimals for that rate.

So GBPCAD cross rates would be:

- GBPCAD bid = $1.380715667 * 1.3459 = 1.8583$
- GBPCAD offer = $1.381025667 * 1.3464 = 1.8594$
- GBPCAD mid = $(1.8583 + 1.8594) / 2 = 1.85886$

6.2 Crossing from USD passed pairs

Example 3 – GBPJPY cross with holidays

Tenor	Date	WMR Bid	WMR Offer	WMR Mid
"Today"	30 Apr 2026			
USDJPY Spot	7 May 2026	158.74	158.79	158.765
GBPUSD Spot	5 May 2026	1.3459	1.3464	1.34615
GBPJPY Spot	7 May 2026			
GBPUSD SN	5-6 May 2026	-0.000005	-0.000001	-0.000003
GBPUSD SW	5-12 May 2026	-0.000014	-0.000004	-0.000009

GBPUSD forward points for 7May2026

As before, can use linear interpolation, this time between the SN and SW tenors:

$$FwdPts^{7May} = FwdPts^{TN} + (Days^{7May} - Days^{TN(6May)}) * \left(\frac{FwdPts^{SW} - FwdPts^{TN}}{Days^{SW(12May)} - Days^{TN(6May)}} \right)$$

$$7\text{May FwdPts bid} = -0.000005 + ((7-6) * ((-0.000014 - -0.000005)/(12 - 6))) = -0.0000065$$

$$7\text{May FwdPts offer} = -0.000001 + ((7-6) * ((-0.000004 - -0.000001)/(12 - 6))) = -0.0000015$$

GBPUSD rate on 7May2026

$$GBPUSD^{7May} = GBPUSD^{Spot} + GBPUSDFwdPts^{7May}$$

$$7\text{May bid} = 1.3459 + (-0.0000065) = 1.3458935$$

$$7\text{May offer} = 1.3464 + (-0.0000015) = 1.3463985$$

GBPJPY cross spot rate (7May2026)

Methodology is to calculate as

- GBP/JPY bid = (USD/JPY bid) * (GBP/USD bid)
- GBP/JPY offer = (USD/JPY offer) * (GBP/USD offer)
- GBP/JPY mid = ((GBP/JPY bid) + (GBP/JPY offer)) / 2

and round to the appropriate decimals for that rate.

So GBPJPY cross rates would be:

- GBPJPY bid = $158.74 * 1.3458935 = 213.6471$
- GBPJPY offer = $158.79 * 1.3463985 = 213.7946$
- GBPJPY mid = $(213.6471 + 213.7946) / 2 = 213.72088$

6.3 Crossing from EUR Trade currency to USD pair

Example 4 – EURPLN crossed to USDPLN with EUR holiday(s)

Tenor	Date	WMR Bid	WMR Offer	WMR Mid
"Today"	1 Apr 2026			
USDPLN Spot	3 Apr 2026			
EURUSD Spot	7 Apr 2026	1.1808	1.1811	1.18095
EURPLN Spot	7 Apr 2026	4.2391	4.2404	4.23975
USDPLN SN	3-7 Apr 2026	-0.000017	0.000015	-0.000001

USDPLN cross rate (7 Apr 2026)

Methodology is to calculate as

USD Cross Calculation

- USD/PLN bid = $(\text{EUR/PLN bid}) / (\text{EUR/USD offer})$
- USD/PLN offer = $(\text{EUR/PLN offer}) / (\text{EUR/USD bid})$

So USDPLN cross rates on 7 Apr 2026 would be:

- 7 Apr USDPLN bid = $4.2391 / 1.1811 = 3.589111845$
- 7 Apr USDPLN offer = $4.2404 / 1.1808 = 3.591124661$

USDPLN Spot rate (3 Apr 2026)

$$USDPLN^{\text{Spot}(3\text{Apr})} = USDPLN^{\text{Spot}+1(7\text{Apr})} - USDPLNFwdPts^{SN(7\text{Apr})}$$

Spot USDPLN bid = $3.589111845 - (-0.000017) = 3.5891$ (rounded)

Spot USDPLN offer = $3.591124661 - (0.000015) = 3.5911$ (rounded)

Spot USDPLN mid = $(3.5891 + 3.5911) / 2 = 3.59012$ (rounded)

Example 5 – EURSEK crossed to USDSEK with SEK holiday(s)

Tenor	Date	WMR Bid	WMR Offer	WMR Mid
"Today"	18 Jun 2026			
USDSEK Spot	23 Jun 2026			
EURUSD Spot	22 Jun 2026	1.1808	1.1811	1.18095
EURSEK Spot	23 Jun 2026	10.8087	10.8114	10.81005
EURUSD SN	22-23 Jun 2026	-0.000017	0.000015	-0.000001

EURUSD rate on 23Jun2026

$$EURUSD^{23\text{Jun}} = EURUSD^{\text{Spot}} + EURUSDFwdPts^{SN}$$

- 23Jun EURUSD bid = $1.1808 + (-0.000017) = 1.180783$

- 23Jun EURUSD offer = $1.1811 + 0.000015 = 1.181115$

USDSEK cross rate for Spot (23 Jun 2026)

Methodology is to calculate as

USD Cross Calculation

- $\text{USD/SEK bid} = (\text{EUR/SEK bid}) / (\text{EUR/USD offer})$
- $\text{USD/SEK offer} = (\text{EUR/SEK offer}) / (\text{EUR/USD bid})$

So USDSEK Spot cross rates on 23 Jun 2026 (the USDSEK Spot date) would be:

- 23Jun USDSEK bid = $10.8087 / 1.181115 = 9.1513$ (rounded)
- 23Jun USDSEK offer = $10.8114 / 1.180783 = 9.1561$ (rounded)
- 23Jun USDSEK mid = $(9.1513 + 9.1561) / 2 = 9.15370$ (rounded)

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