

# LRW FX Model Calibration Report

Model Calibration Team

August 3, 2025

## 1 Summary

This report presents the calibrated parameters for the LRW (Linear-Rational-Wishart) FX Model across multiple calibration dates. The model is calibrated on domestic and foreign curves. For the options, 4Y tenor option data is used for the calibration.

- Model details:

Parameter	Value
Model Type	LRW FX Model
Dimensions (n)	2
Jump Component	No Jump

Table 1: General model setting

- details on matrix  $u_i$  and  $u_j$

**u for domestic curve:**

$$u_i = \begin{pmatrix} 1.0000 & 0.0000 \\ 0.0000 & 0.1250 \end{pmatrix}$$

**u for foreign curve:**

$$u_j = \begin{pmatrix} 0.1000 & 0.0000 \\ 0.0000 & 1.0000 \end{pmatrix}$$

- $\alpha_i$  and  $\alpha_j$  are the same.

## 2 Parameter Evolution Summary

Table 2: Key Parameter Evolution Over Time

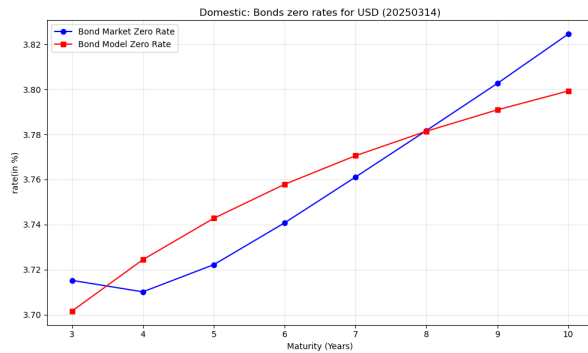
Date	FX Spot	$\alpha_i$	$\alpha_j$	$x_{011}$	$x_{022}$	$\omega_{11}$	$\omega_{22}$	$m_{11}$	$m_{22}$	$\sigma_{11}$	$\sigma_{22}$
03/14/2025	1.08800	0.03959	0.03959	0.4955	0.0001	0.2658	0.0217	-0.2653	-0.0399	0.1533	0.1598
04/01/2025	1.07875	0.03959	0.03959	0.3849	0.0001	0.0718	0.0229	-0.0870	-0.0310	0.0812	0.1679
04/15/2025	1.12730	0.03959	0.03959	0.4809	0.0003	0.4667	0.0259	-0.4703	-0.0360	0.1612	0.2078
05/16/2025	1.11525	0.03959	0.03959	1.1512	0.0001	0.8250	0.0273	-0.3538	-0.0362	0.0943	0.2040
05/30/2025	1.13590	0.03959	0.03959	0.7092	0.0003	0.5760	0.0272	-0.3976	-0.0383	0.1112	0.2028

### 3 Calibration Result Charts

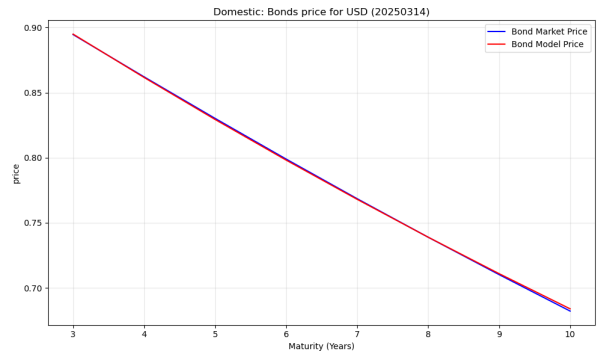
This section presents the calibration results through various charts showing the yield curves and implied volatility surfaces for each calibration date.

#### 3.1 Calibration Results for March 14, 2025

##### 3.1.1 Domestic Curve Analysis



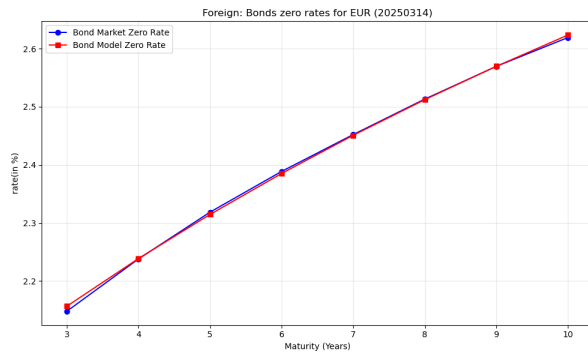
(a) Zero Rate Curve



(b) Zero Coupon Bond Price Curve

Figure 1: Domestic Curve Calibration Results for March 14, 2025

##### 3.1.2 Foreign Curve Analysis



(a) Zero Rate Curve



(b) Zero Coupon Bond Price Curve

Figure 2: Foreign Curve Calibration Results for March 14, 2025

### 3.1.3 FX Volatility Surface

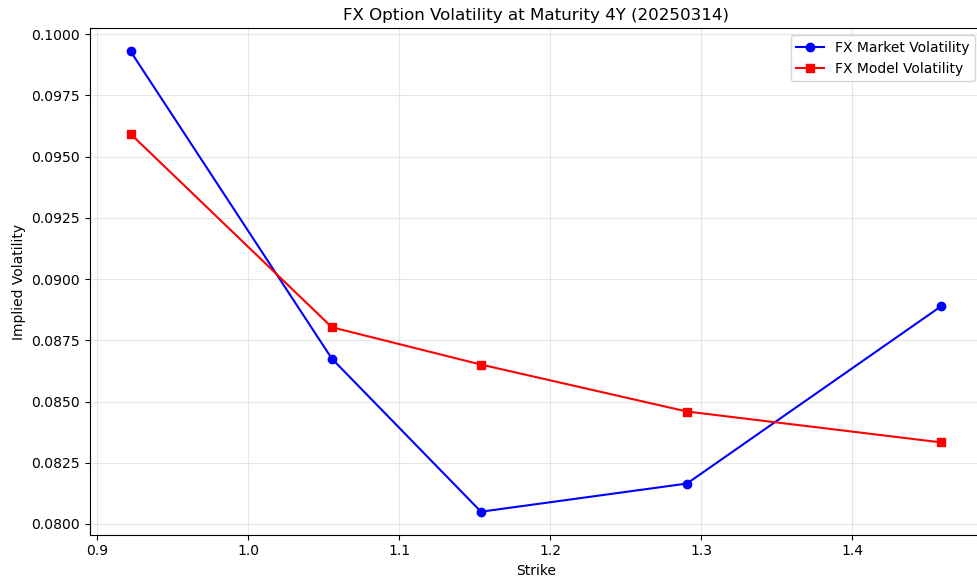
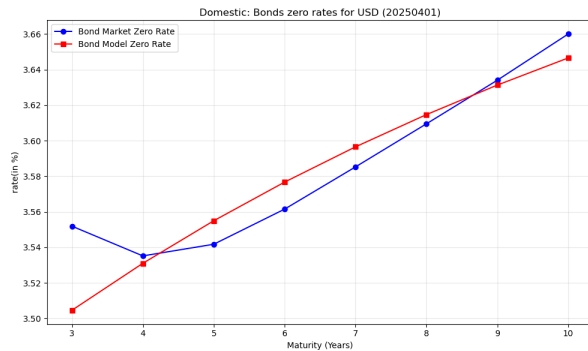


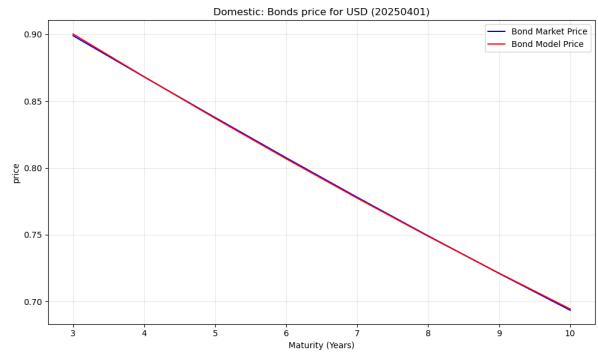
Figure 3: FX Implied Volatility Surface for March 14, 2025

## 3.2 Calibration Results for April 01, 2025

### 3.2.1 Domestic Curve Analysis



(a) Zero Rate Curve



(b) Zero Coupon Bond Price Curve

Figure 4: Domestic Curve Calibration Results for April 01, 2025

### 3.2.2 Foreign Curve Analysis

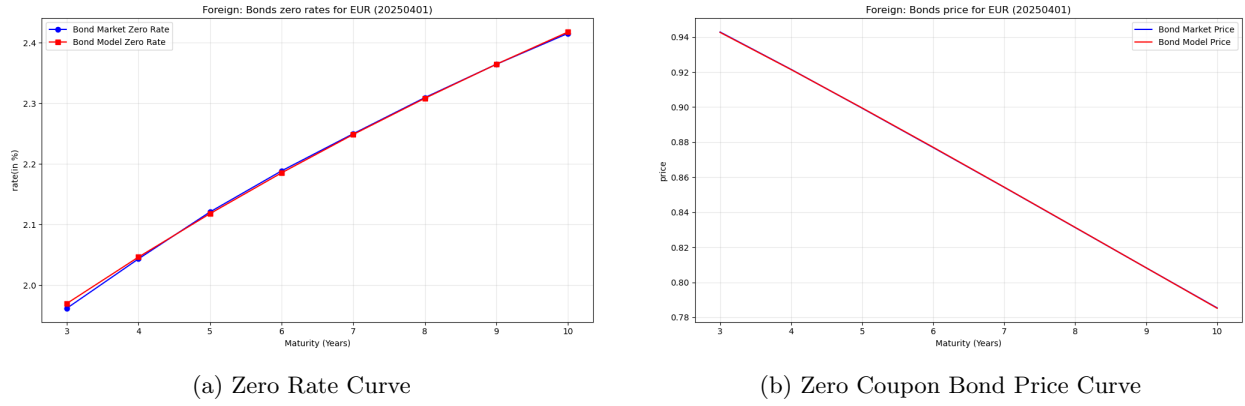


Figure 5: Foreign Curve Calibration Results for April 01, 2025

### 3.2.3 FX Volatility Surface

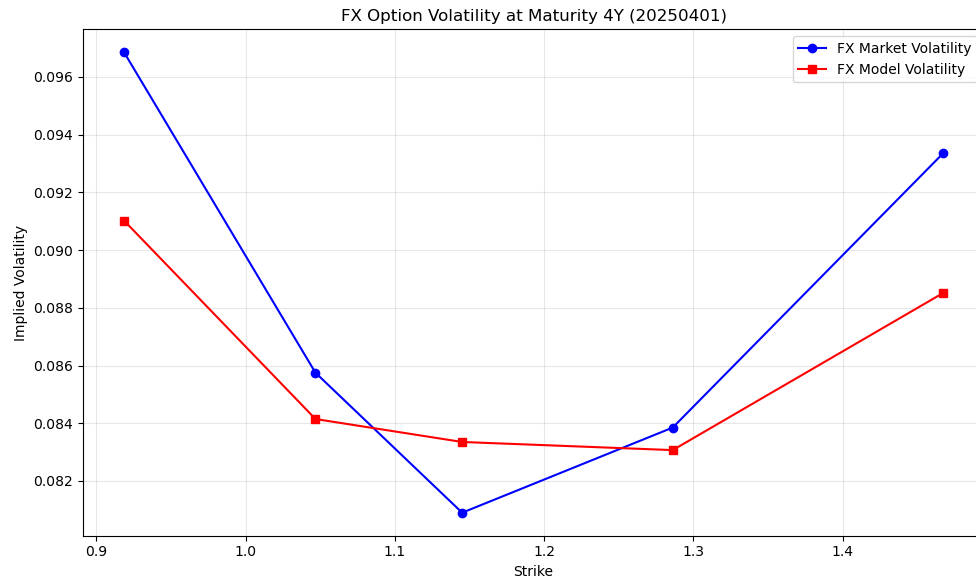
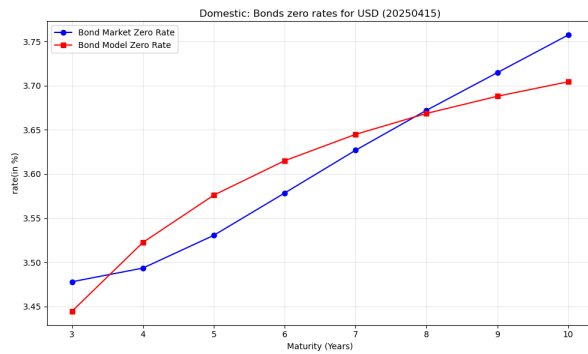


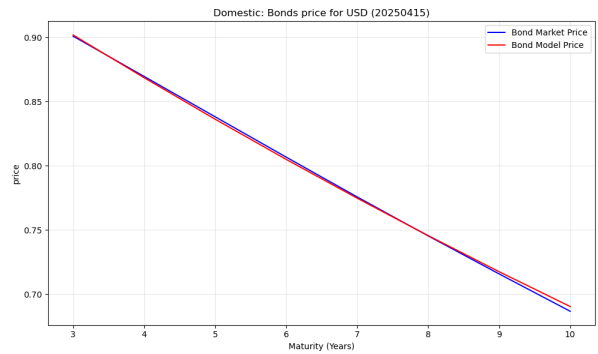
Figure 6: FX Implied Volatility Surface for April 01, 2025

### 3.3 Calibration Results for April 15, 2025

#### 3.3.1 Domestic Curve Analysis



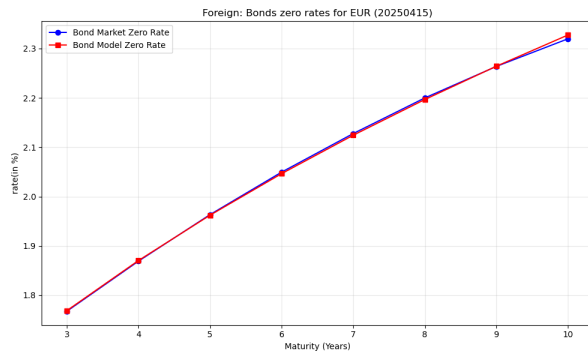
(a) Zero Rate Curve



(b) Zero Coupon Bond Price Curve

Figure 7: Domestic Curve Calibration Results for April 15, 2025

#### 3.3.2 Foreign Curve Analysis



(a) Zero Rate Curve



(b) Zero Coupon Bond Price Curve

Figure 8: Foreign Curve Calibration Results for April 15, 2025

### 3.3.3 FX Volatility Surface

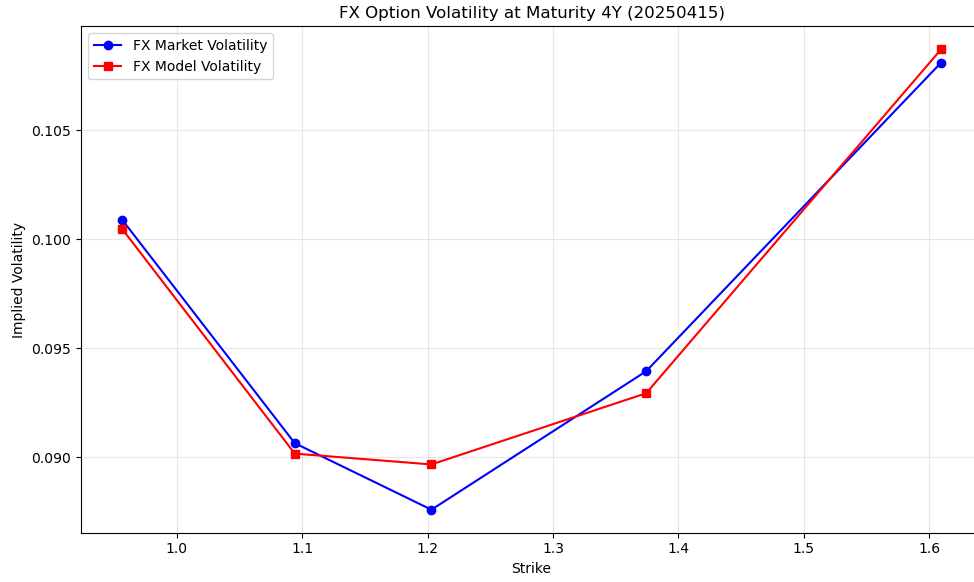
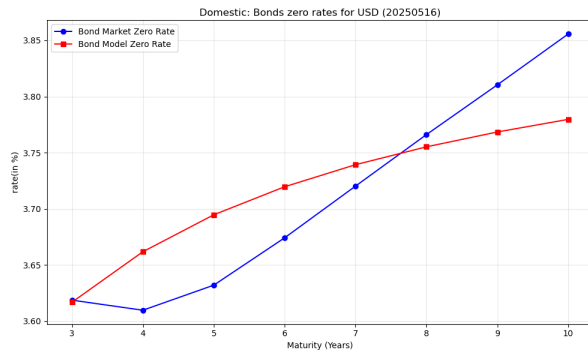


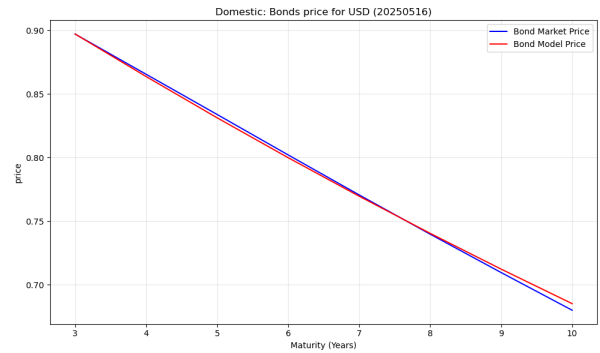
Figure 9: FX Implied Volatility Surface for April 15, 2025

## 3.4 Calibration Results for May 16, 2025

### 3.4.1 Domestic Curve Analysis



(a) Zero Rate Curve



(b) Zero Coupon Bond Price Curve

Figure 10: Domestic Curve Calibration Results for May 16, 2025

### 3.4.2 Foreign Curve Analysis

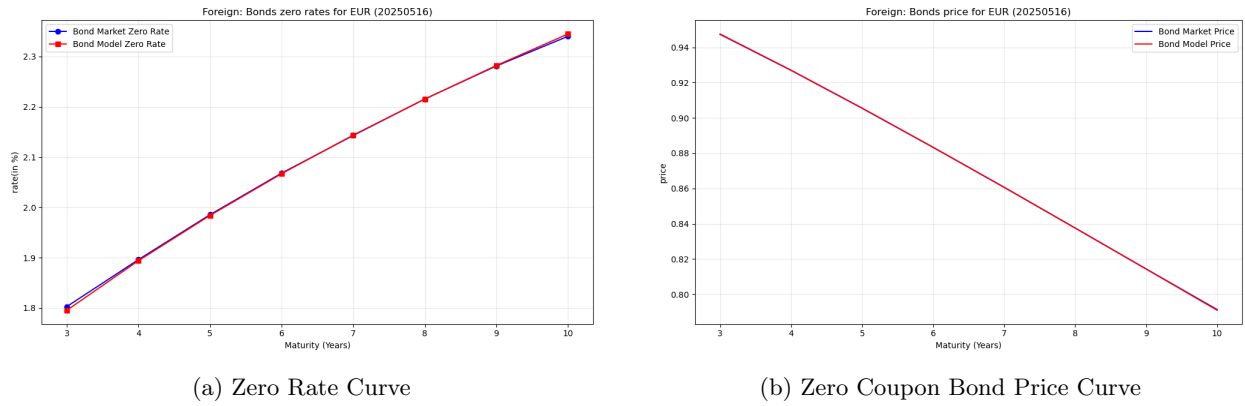


Figure 11: Foreign Curve Calibration Results for May 16, 2025

### 3.4.3 FX Volatility Surface

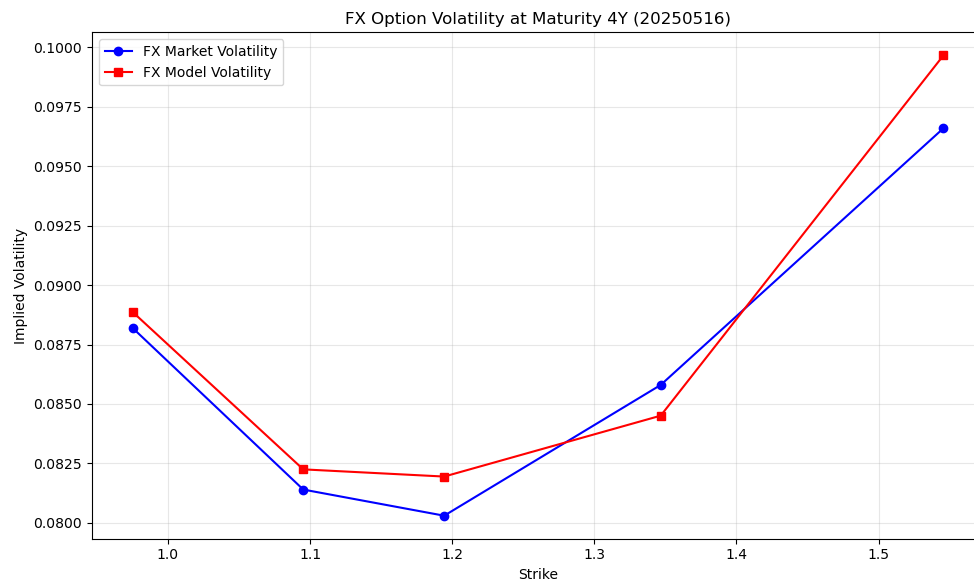
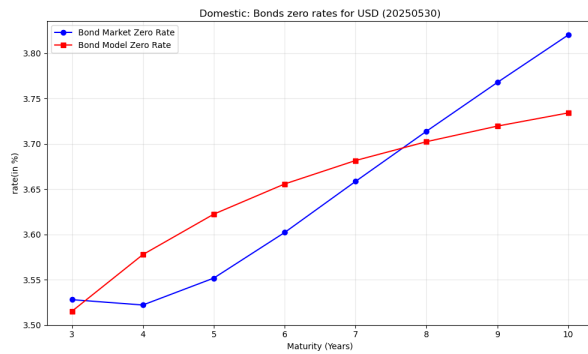


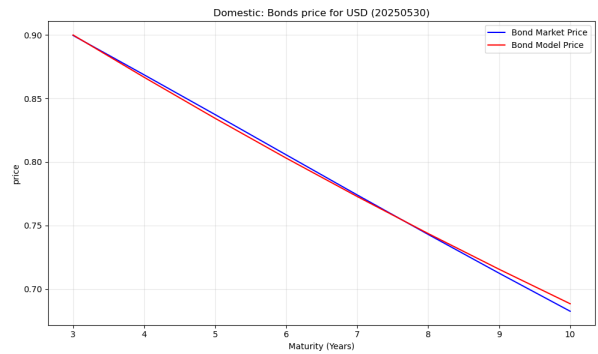
Figure 12: FX Implied Volatility Surface for May 16, 2025

## 3.5 Calibration Results for May 30, 2025

### 3.5.1 Domestic Curve Analysis



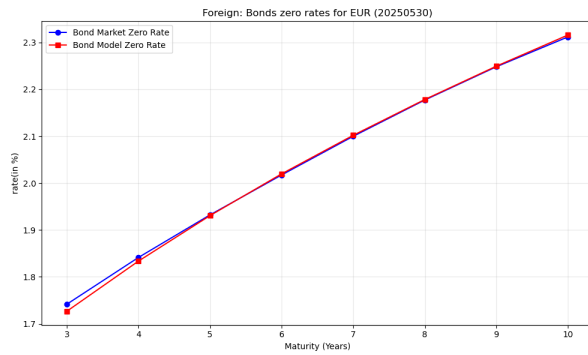
(a) Zero Rate Curve



(b) Zero Coupon Bond Price Curve

Figure 13: Domestic Curve Calibration Results for May 30, 2025

### 3.5.2 Foreign Curve Analysis



(a) Zero Rate Curve



(b) Zero Coupon Bond Price Curve

Figure 14: Foreign Curve Calibration Results for May 30, 2025



### 3.5.3 FX Volatility Surface

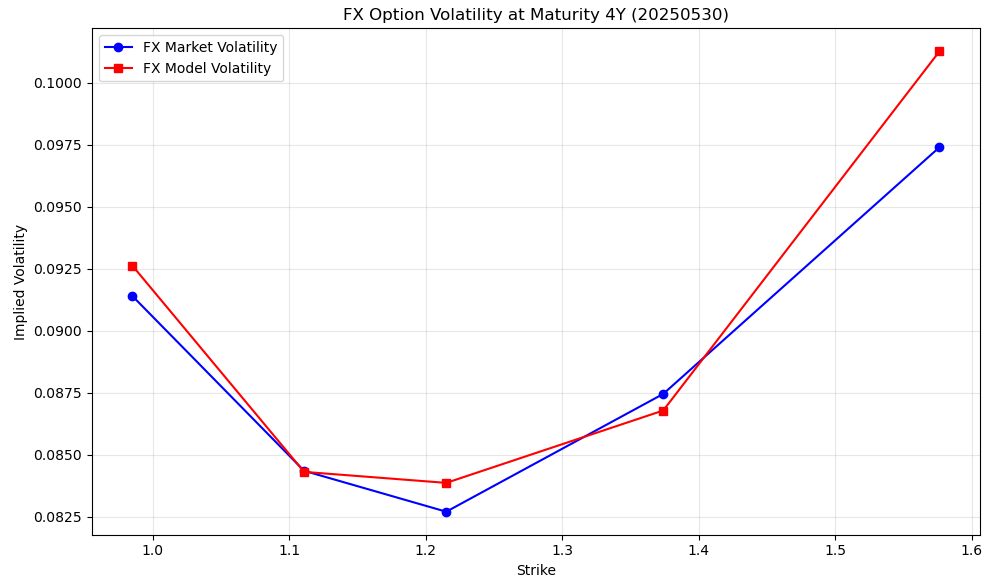


Figure 15: FX Implied Volatility Surface for May 30, 2025