

September 2023

FX Market Structure Monthly

CHANGES IN SPREAD AND VOLATILITY FOR MAJOR MARKET PAIRS

FX spreads narrowed marginally in September, after little change in August and following a widening in June and July. Of the 23 pairs that we monitor, only three – NZD.USD, EUR.GBP and AUD.CAD widened during the 12:00-16:00 GMT trading window. Volatility in the pre-WMR trading window fell across the board, after remaining constant for the past three months. Only the volatility for EUR.CAD increased in September. Compared to three months ago, 12 pairs recorded wider spreads while only six registered higher volatility. Twelve months ago, all pairs recorded higher spreads and volatility.

READING THE RESULTS

On the intraday charts, the green line represents the average spread or volatility for the past 12 months, the black line represents the past three months, and the blue line represents the past month. On the daily charts, the green area represents the 95th percentile confidence interval for the spread and volatility.

SPREADS

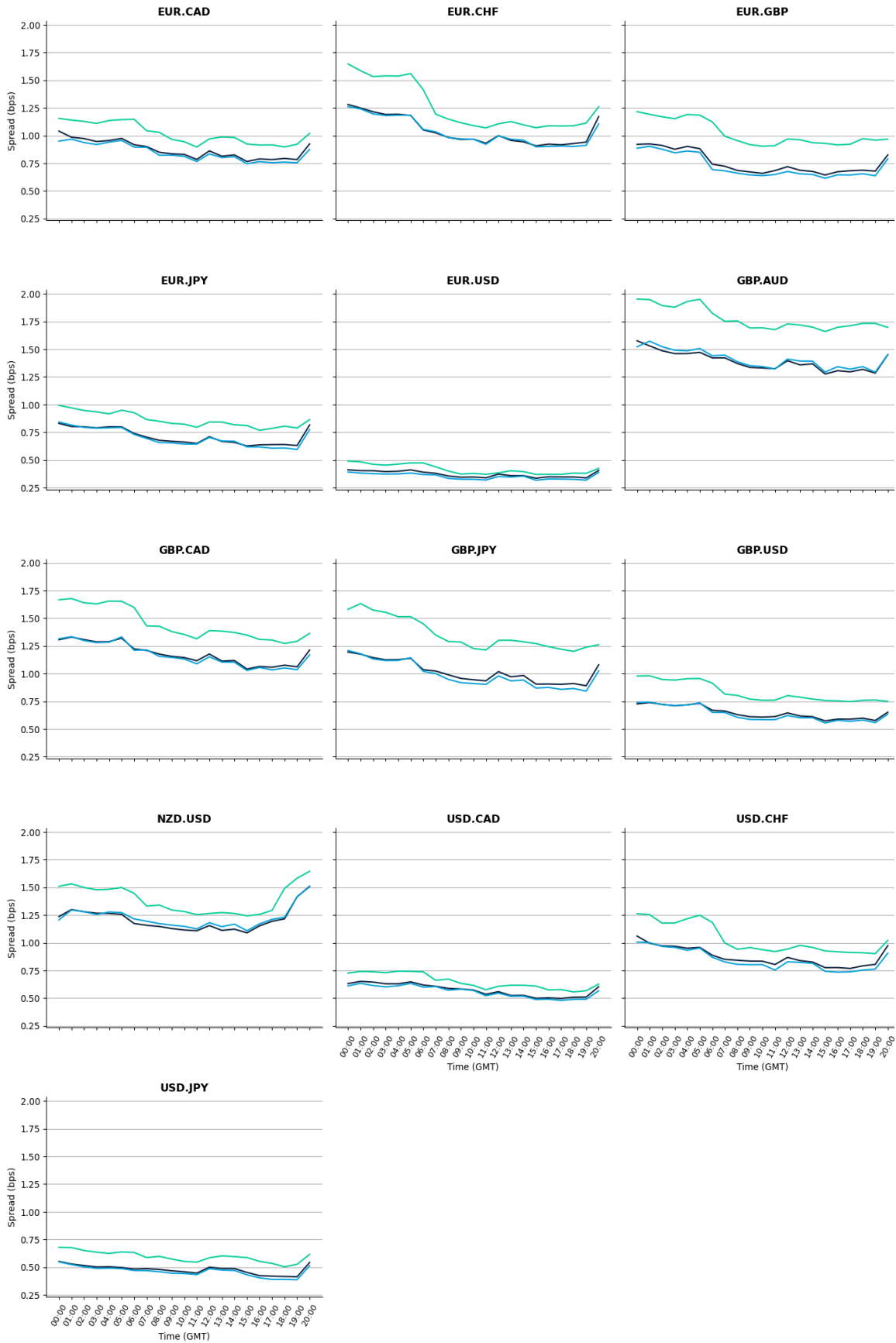
In the intra-day charts, we present the median spread for the month. We wondered how much that spread differed throughout the month, focusing on EUR.USD, USD.JPY and GBP.USD. We were surprised to see how large the differences in median values were, given how tight the spreads were. For EUR.USD, the daily median spread for 12:00-13:00 GMT varied between 0.25 and 0.47 bps. For GBP.USD, the variation was from 0.51 to 0.87 bps while the USD.JPY ranged from 0.41 to 0.67 bps.

G-10 Currency Pairs: Average Hourly Spread, 00:00-20:00 GMT

Comparison over the past month, three months and year



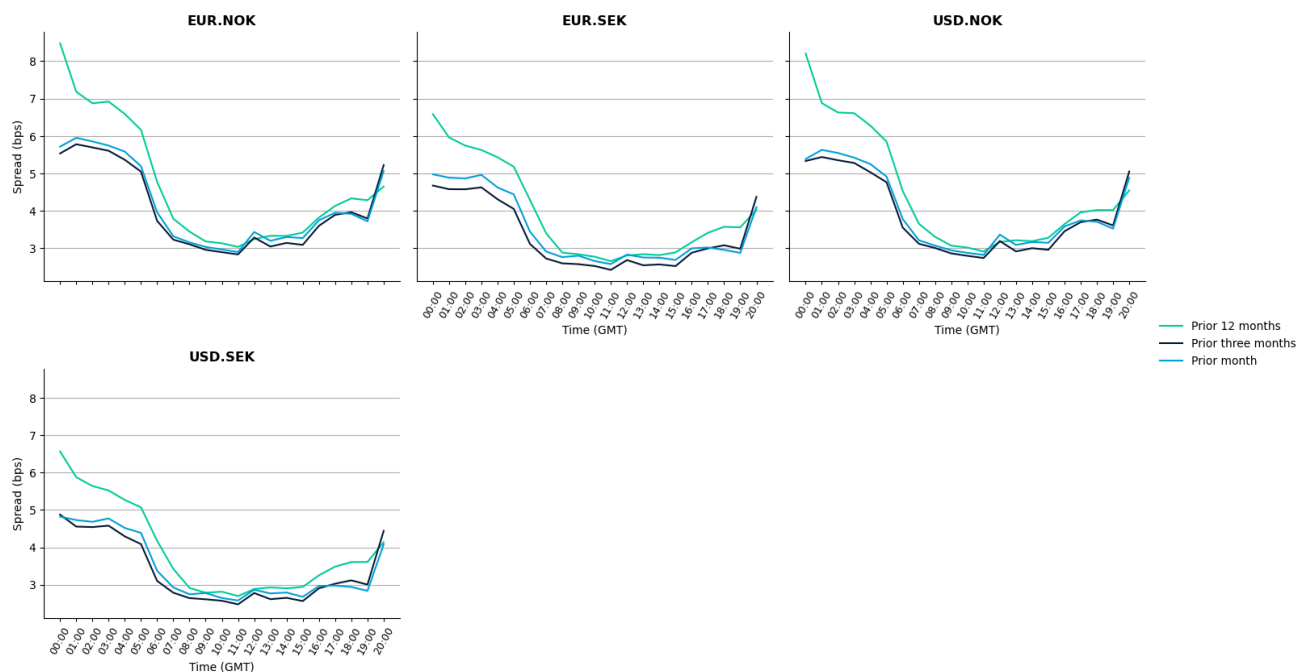
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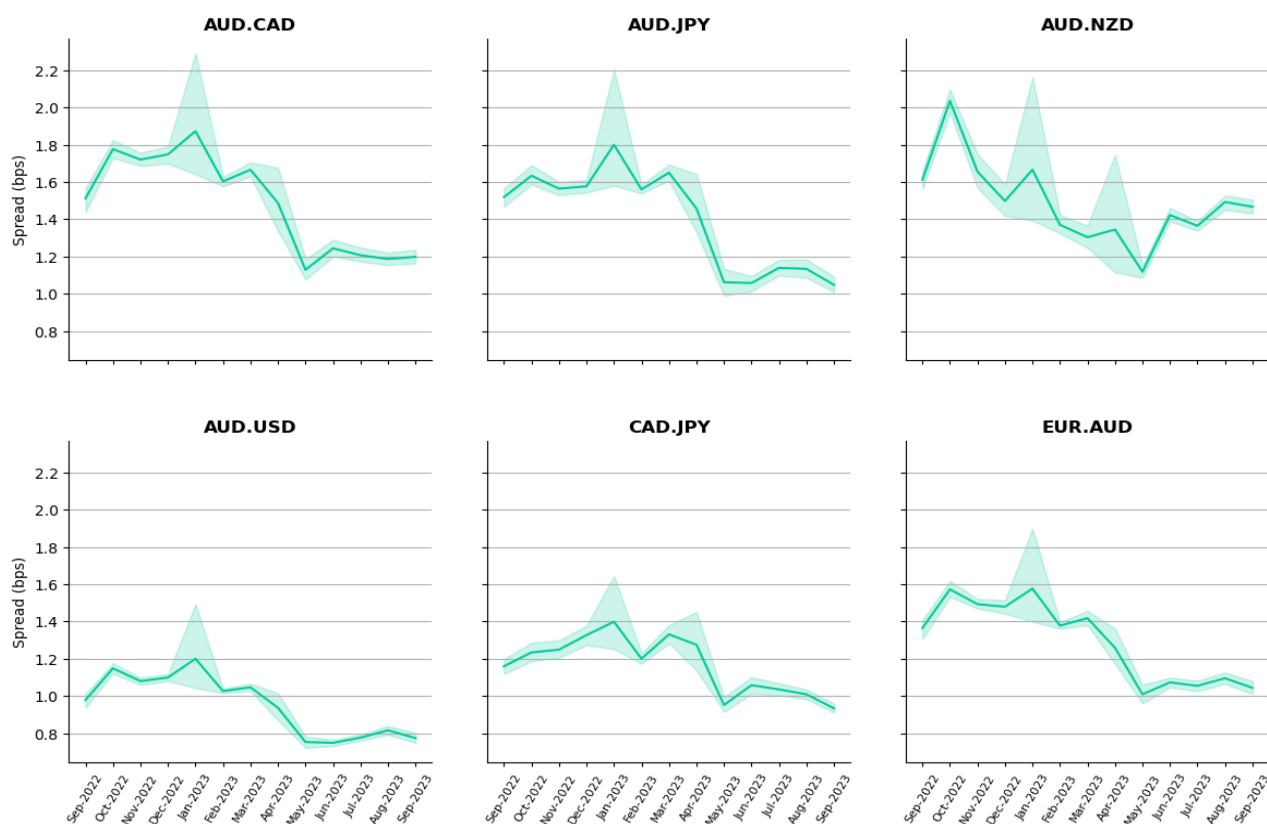
All chart sources: Virtu Financial, 2023. Spread and volatility calculations are derived from sources that Virtu believes to be reliable, but Virtu does not make any claims to its accuracy. USD.NOK, USD.SEK, EUR.NOK and EUR.SEK are shown in separate exhibits.



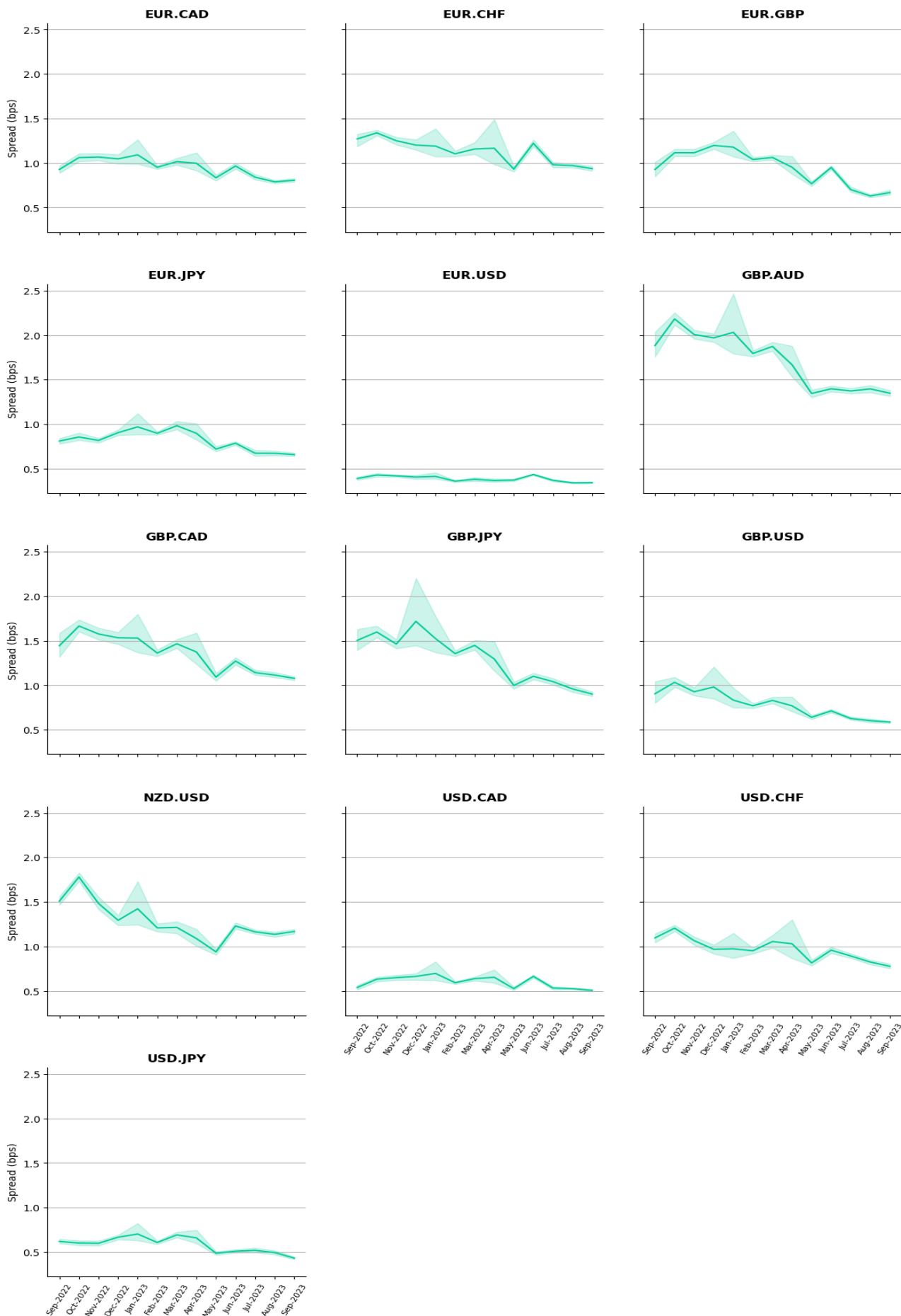
Scandinavian G-10 Currencies: Average Hourly Spread, 00:00-20:00 GMT Comparison over the past month, three months and year



G-10 Currencies: Average Daily Spread, 12:00-16:00 GMT September 2022-September 2023



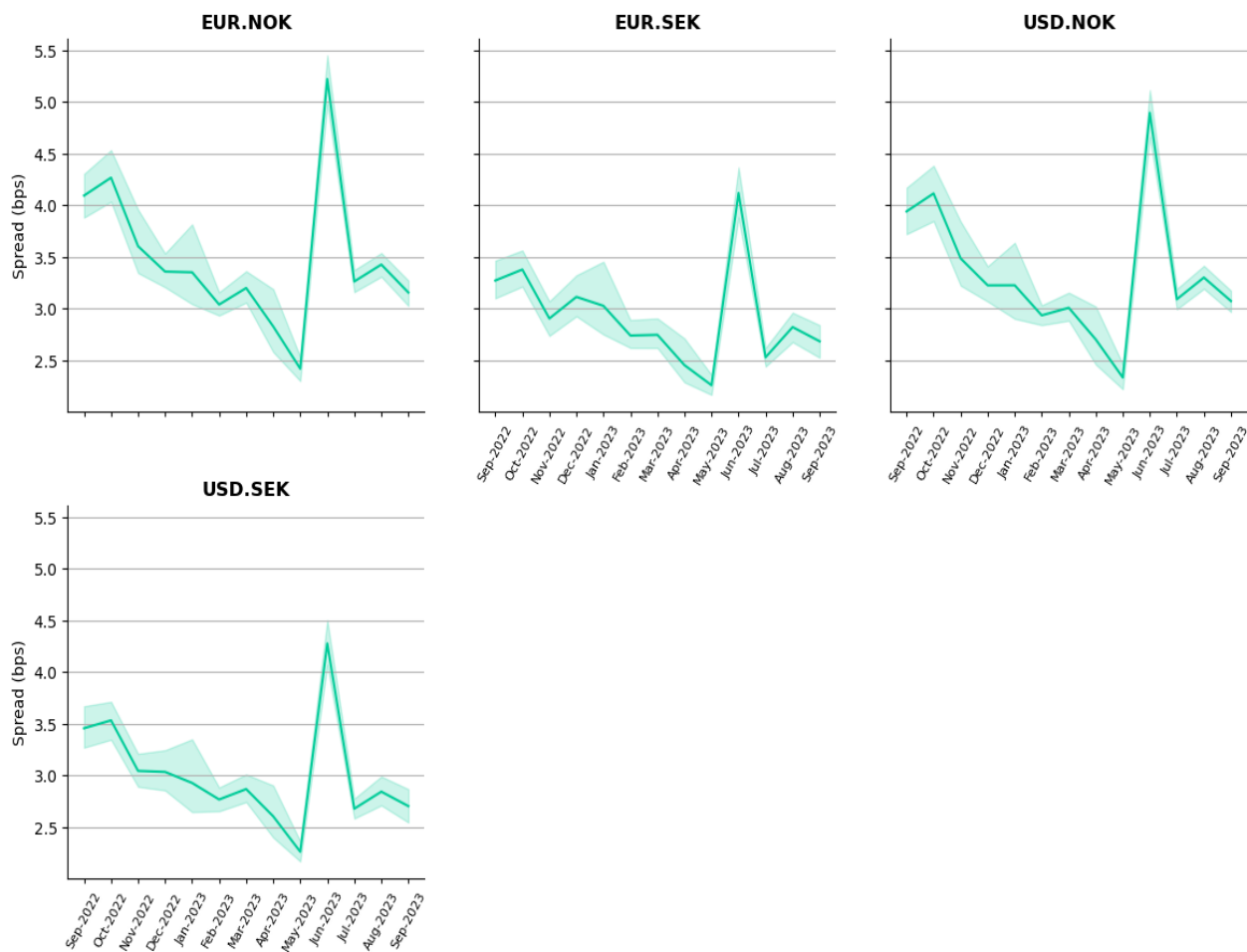
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Scandinavian G-10 Currencies: Average Daily Spread, 12:00-16:00 GMT September 2022- September 2023



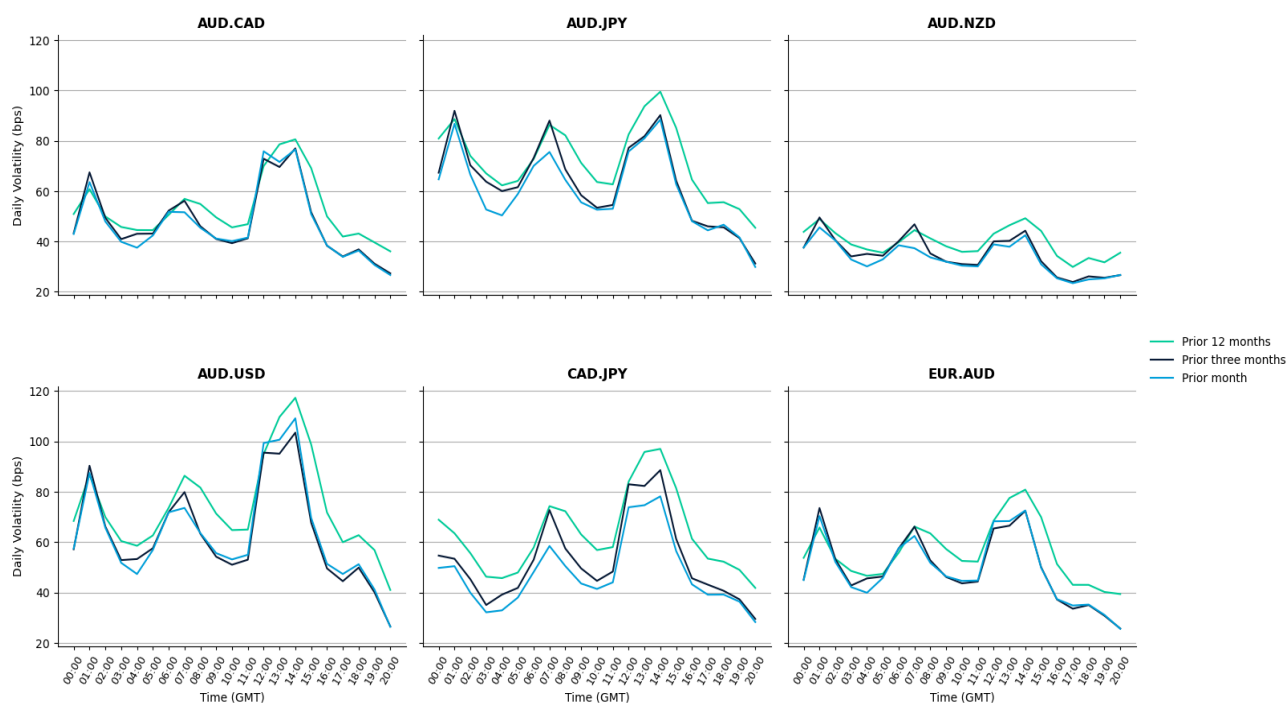


VOLATILITY

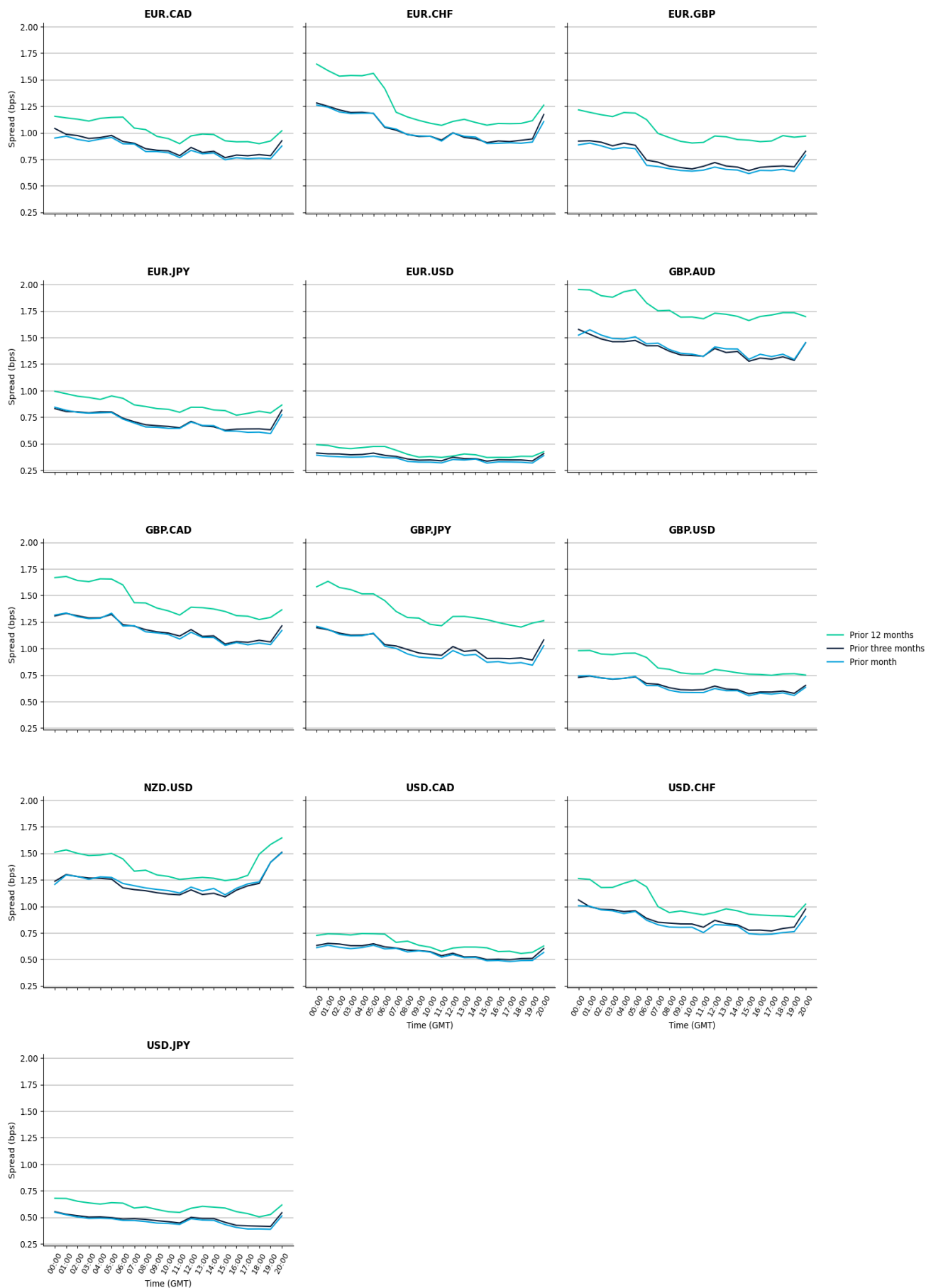
September FX volatility for the 23 pairs that we monitor was as low as we have registered in the past 12 months for most pairs. Compared to August, daily FX spread volatility increased for only one of the 23 pairs, AUD.CAD, in the 12:00-16:00 GMT pre-WMR trading window after increasing for 15 pairs in August and 12 pairs in July. Compared to three months ago, volatility has declined for 21 pairs while going back 12 months, volatility for all 23 pairs was lower in September.

On an intraday basis, we noted a modest increase in FX volatility in Tokyo trading for 12 pairs, but quieter trading in both London and New York hours for all but three pairs, EUR.SEK, USD.SEK and USD.NOK. Rate volatility for all majors was lower in September compared to August across all regions.

G-10 Currencies: Average Hourly Volatility, 00:00-20:00 GMT Comparison over the past month, three months and year



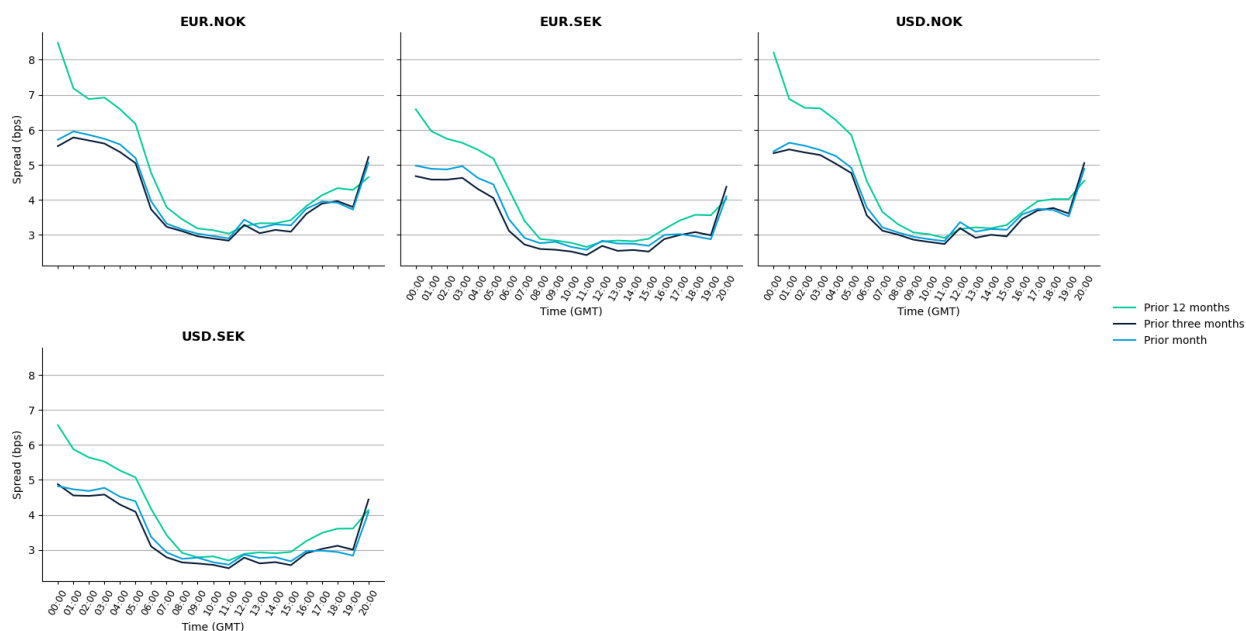
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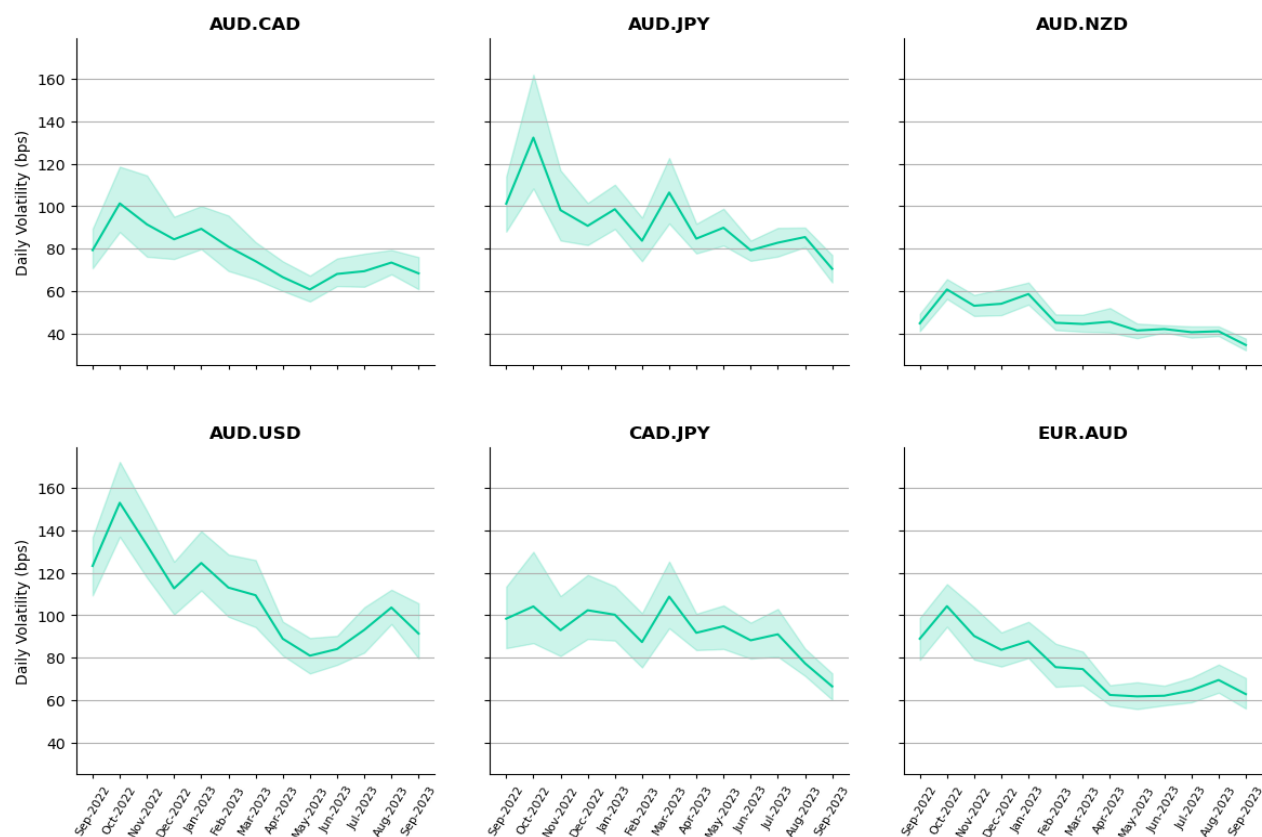
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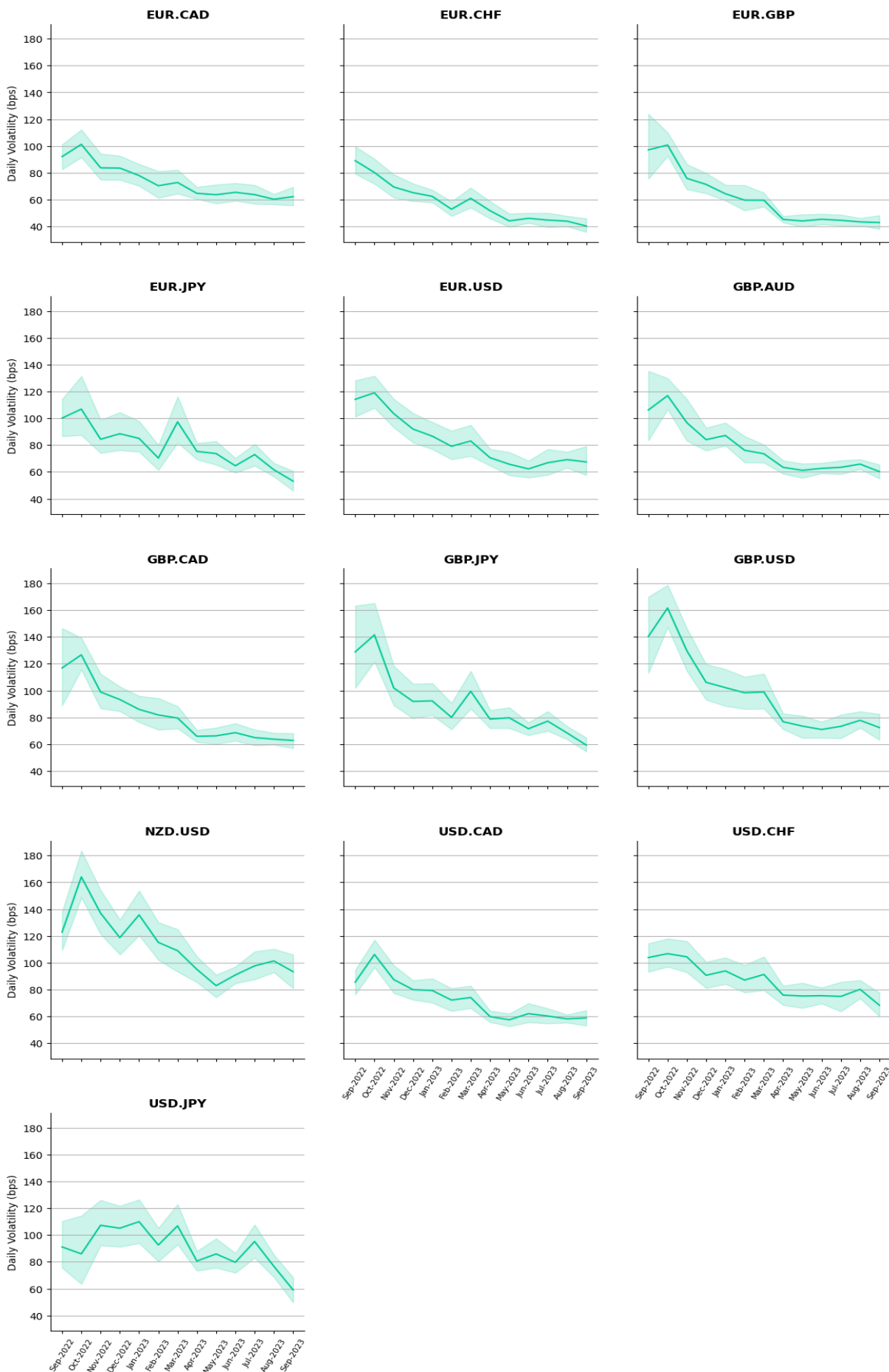
Scandinavian G-10 Currencies: Average Hourly Volatility, 00:00-20:00 GMT Past month, three months and year



G-10 Currencies: Average Daily Volatility, 12:00-16:00 GMT September 2022-September 2023



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Scandinavian G-10 Currencies: Average Daily Volatility, 12:00-16:00 GMT September 2022-September 2023



Have questions? To learn more, contact your regional Virtu Analytics representative.
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