

February 2023

FX Market Structure Monthly

CHANGES IN SPREAD AND VOLATILITY FOR MAJOR MARKET PAIRS

In February, we observed a decrease in the median spreads for almost all of the 23 G-10 pairs we monitor during the 12:00-16:00 GMT trading window, with only three pairs showing wider spreads. Across Tokyo, London, and New York desks, there were no instances of wider spreads quoted for any of the 23 pairs throughout the day. However, during the London and New York trading hours, USD.CHF and USD.SEK were the only two pairs that consistently had wider spreads. Additionally, we observed slightly wider spreads for half of the pairs at the end of New York desk hours.

READING THE RESULTS

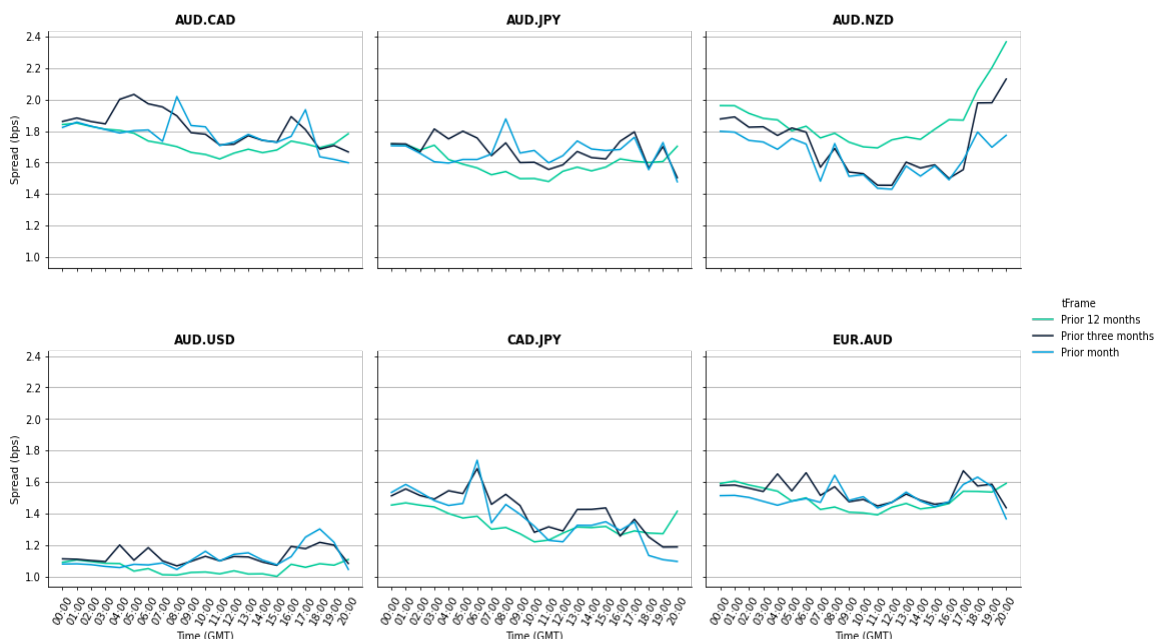
In the intraday charts, the green line represents the average spread or volatility for the past 12 months, the black line represents the past three months, and the blue line represents the past month. On the daily charts, the green area represents the 95th percentile confidence interval for the spread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

SPREADS

This month's spreads and volatility charts suggest that the FX markets are returning to a sense of normalcy, one-year after the Russian invasion of Ukraine and as China reopens after the pandemic. Among the majors, only USD.CHF registered a wider median spread during the 12:00-16:00 GMT pre-WMR trading window compared to last month, and only USD.JPY has a wider spread than three months ago. Over the past year, four of the seven majors have been trading at wider spreads, suggesting that the FX markets have been experiencing relatively small back-and-forth movements over the year, which is likely the new "normal".

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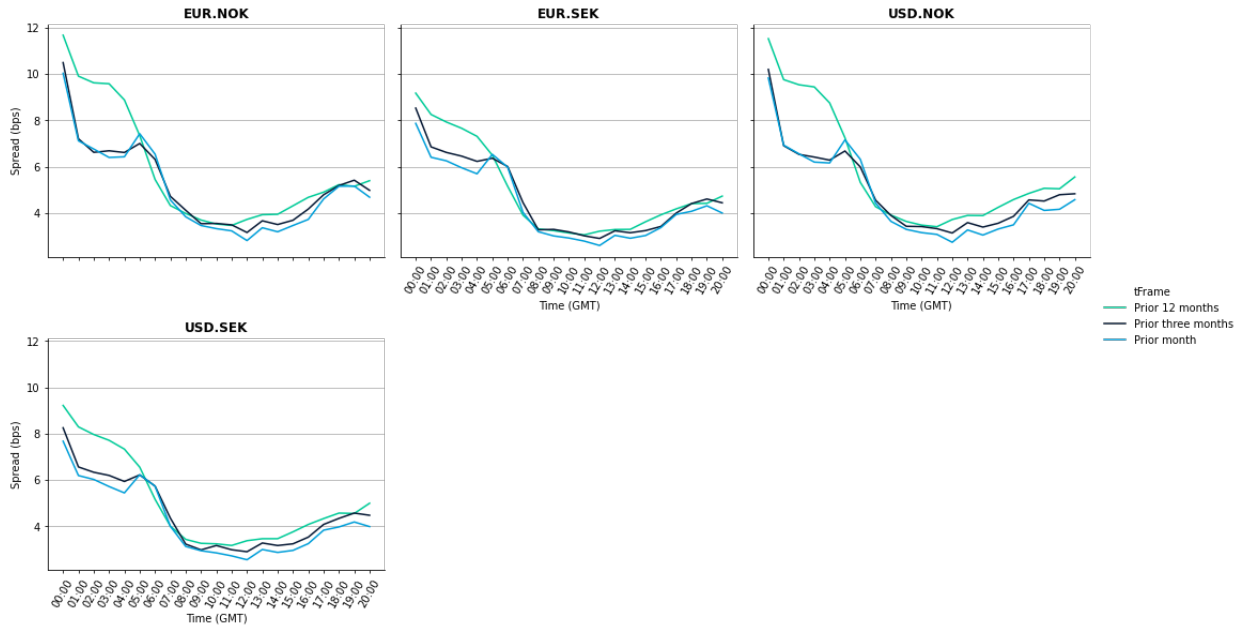
All chart sources: Virtu Financial, 2023. Spread and volatility calculations are derived from sources that Virtu believes to be reliable, but Virtu does not make any claims to its accuracy. USD.NOK, USD.SEK, EUR.NOK and EUR.SEK are shown in the separate exhibits



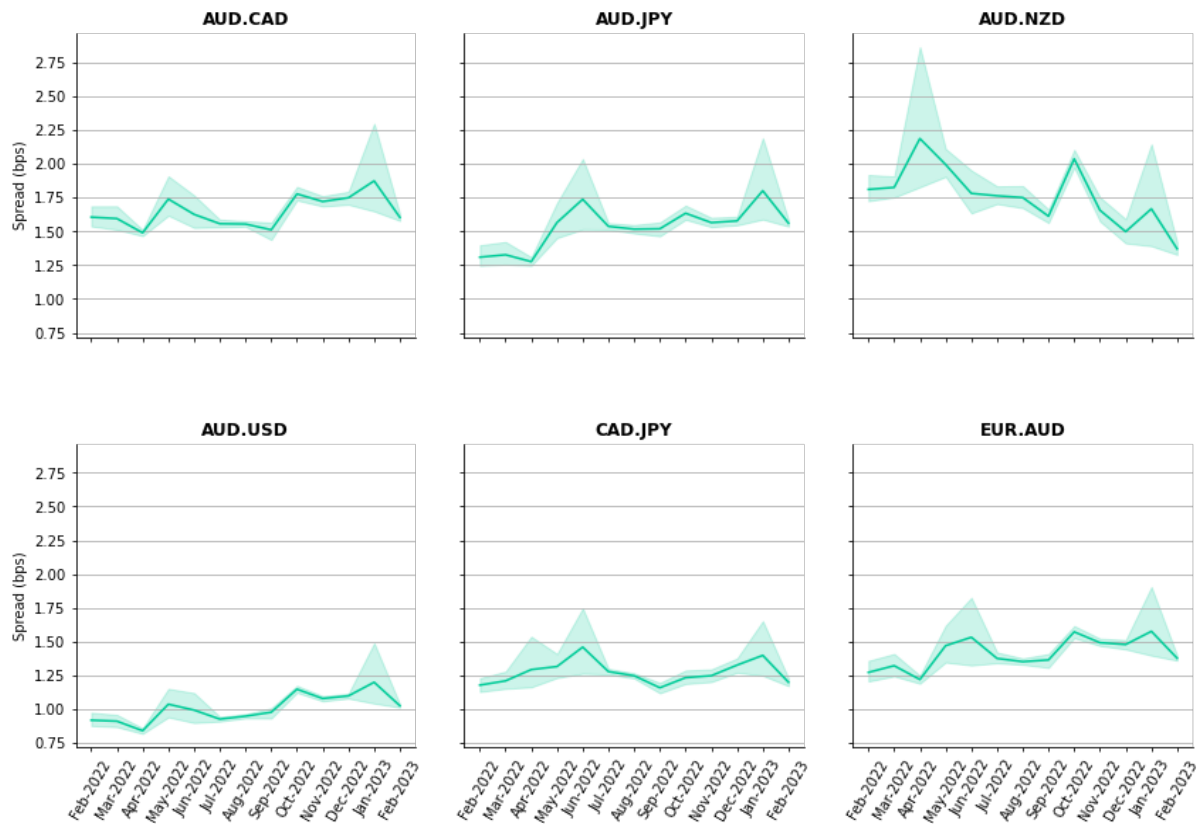
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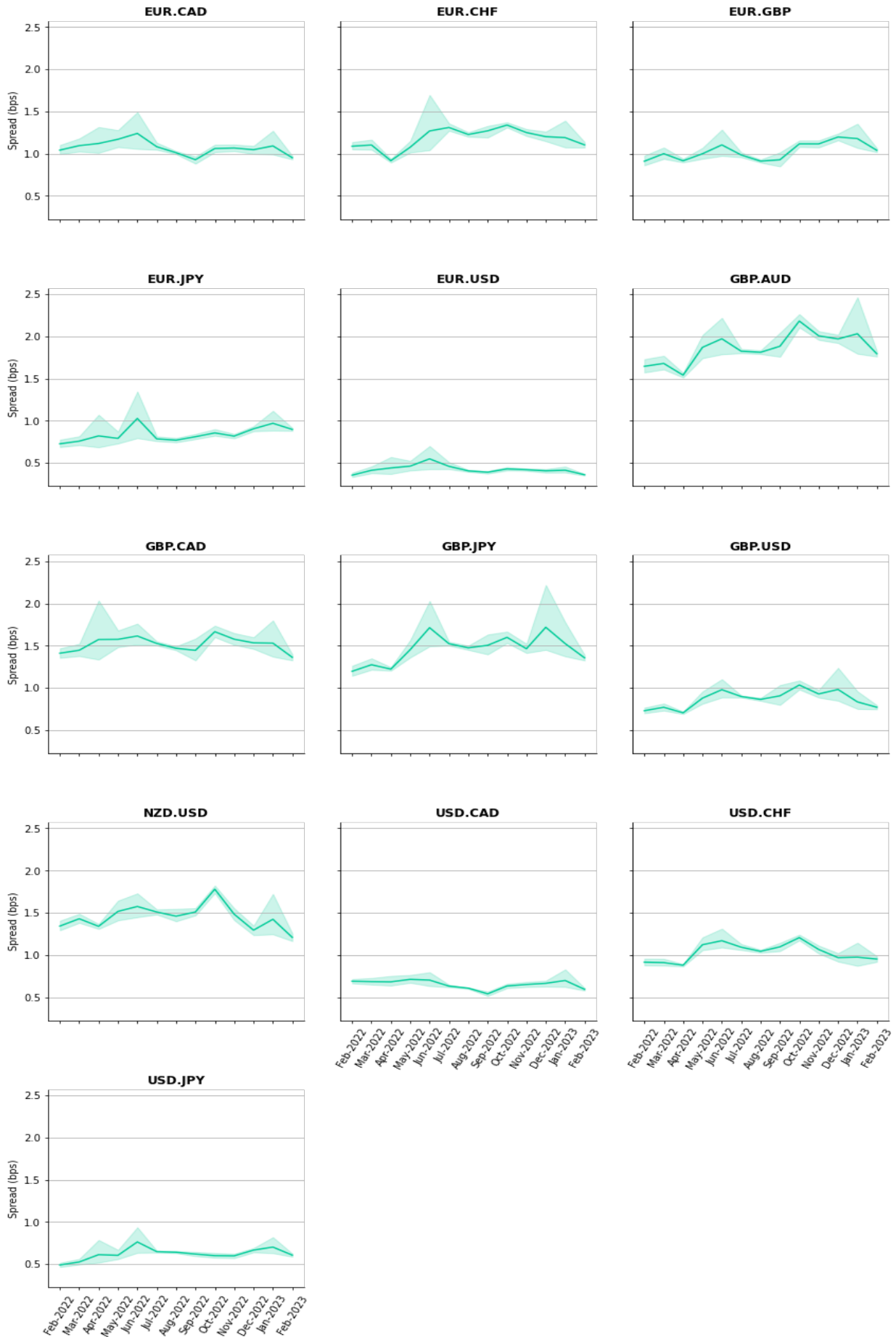
Scandinavian G-10 Currencies: Average Hourly Spread, 00:00-20:00 GMT Comparison over the past month, three months and year



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



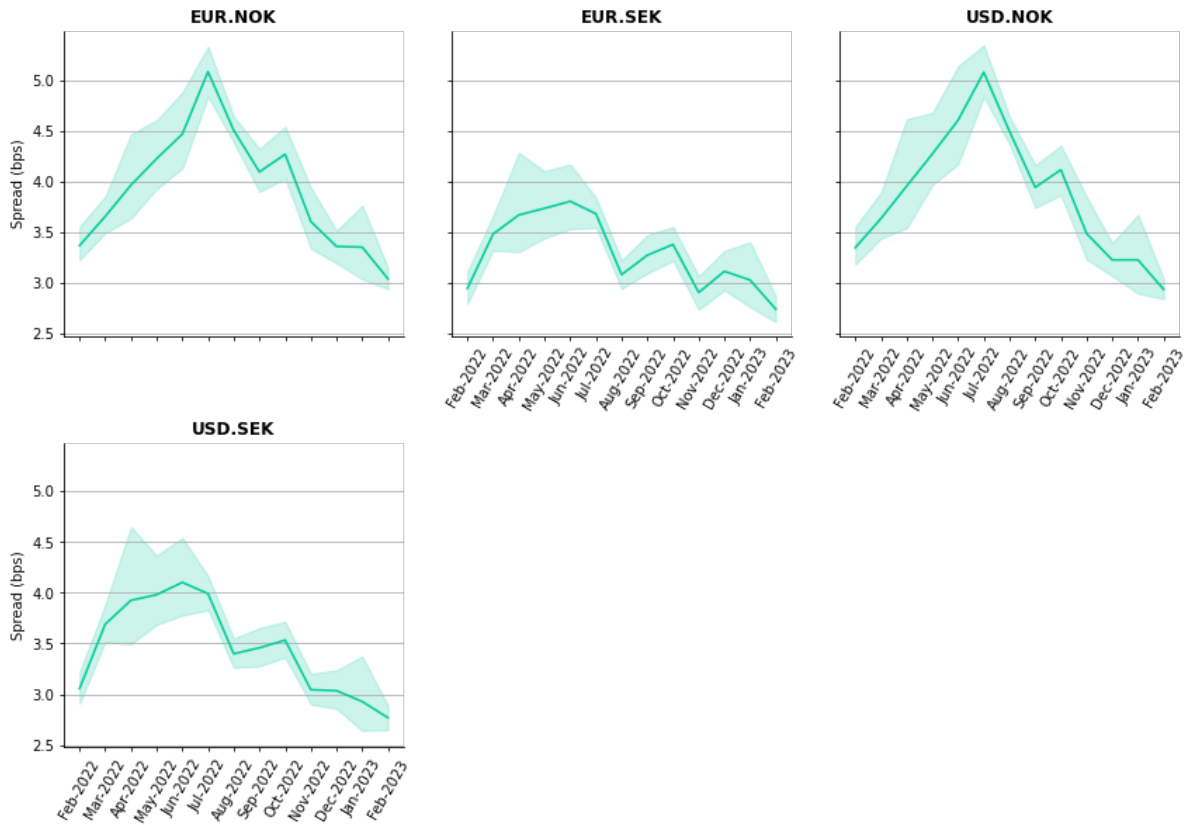
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Scandinavian G-10 Currencies: Average Daily Spread, 12:00-16:00 GMT February 2022- February 2023





VOLATILITY

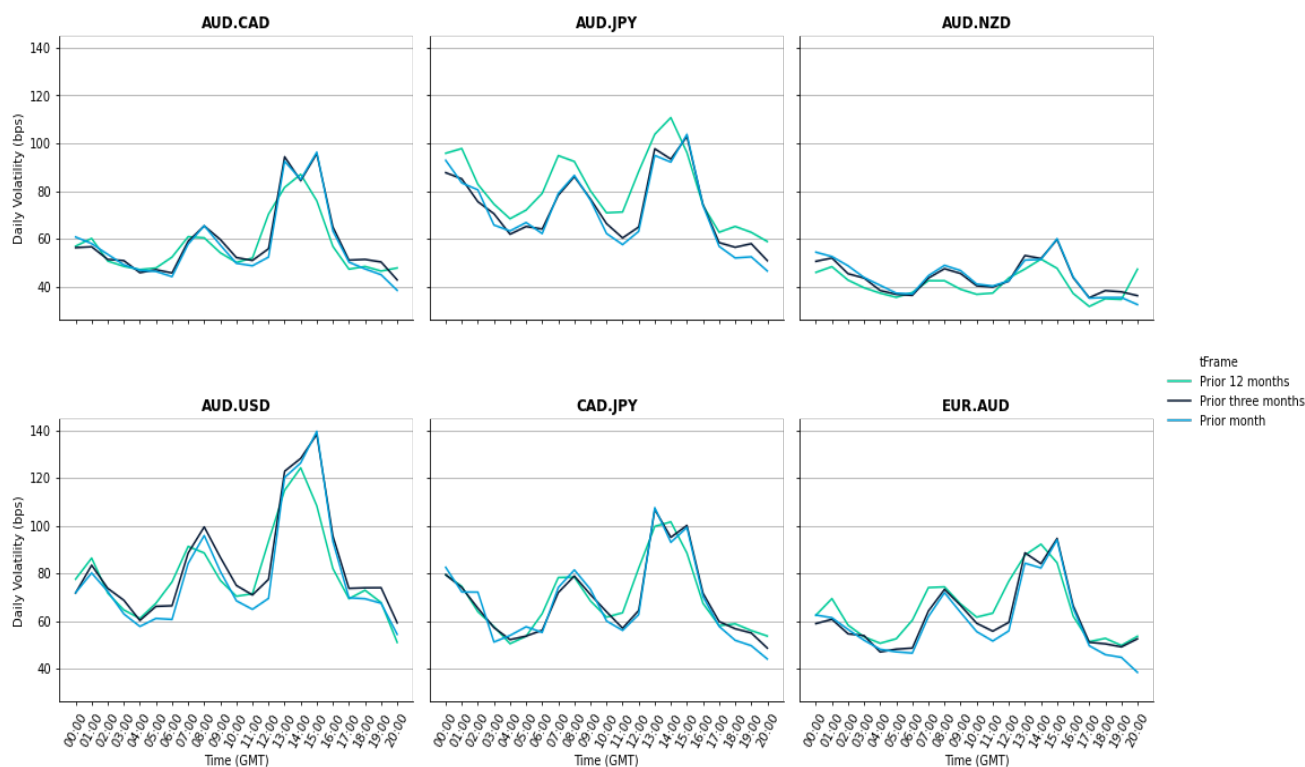
Volatility continued to slowly drop in February, falling below December's lows. Among the 23 pairs that we monitor, only EUR.SEK had higher volatility during the 12:00-16:00 pre-WMR Fixing window, and this pair was the only one to register higher volatility compared to three months ago. Only EUR.SEK and AUD.NZD had higher volatility than six months ago. Overall, the markets remained quiet in February.

A similar pattern holds if we look at the hourly volatility pattern. No pair has shown a consistent increase in median hourly volatility in Tokyo, London or New York trading hours for the past three months, except for the EUR.SEK which has been more volatile in London and New York hours. If we look back six months, only AUD.JPY and EUR.SEK have registered higher volatility throughout the trading day. USD.JPY has shown increased volatility in London and New York trading..

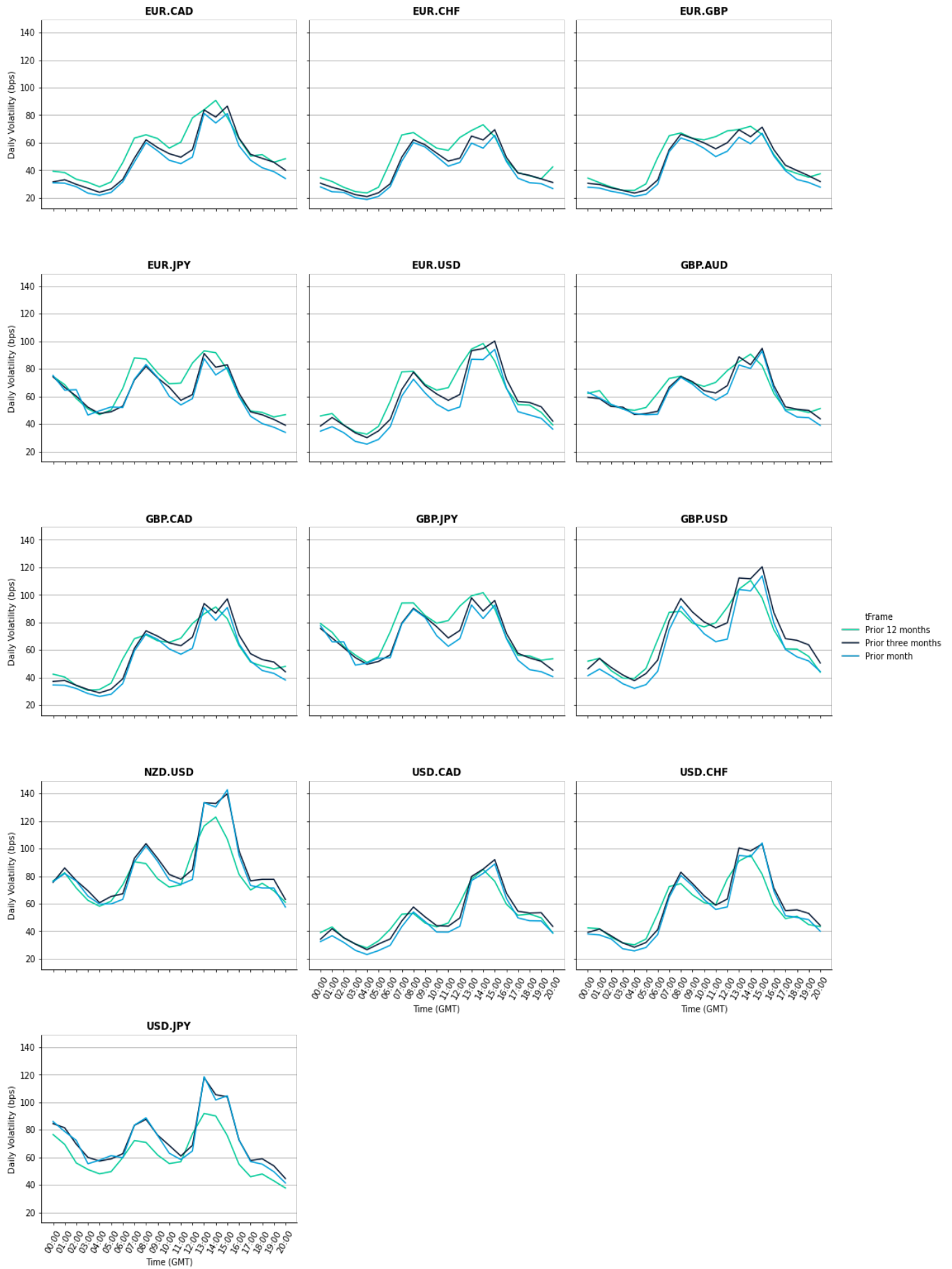
Overall, we have observed a slight increase in volatility just before and after 16:00 GMT and at the end of the New York trading day compared to six months ago. Despite the headlines—war in Ukraine enters its second year while China reopens after its long COVID lockdown—FX markets appear to have stabilized.

G-10 Currencies: Average Hourly Volatility, 00:00-20:00 GMT

Comparison over the past month, three months and year



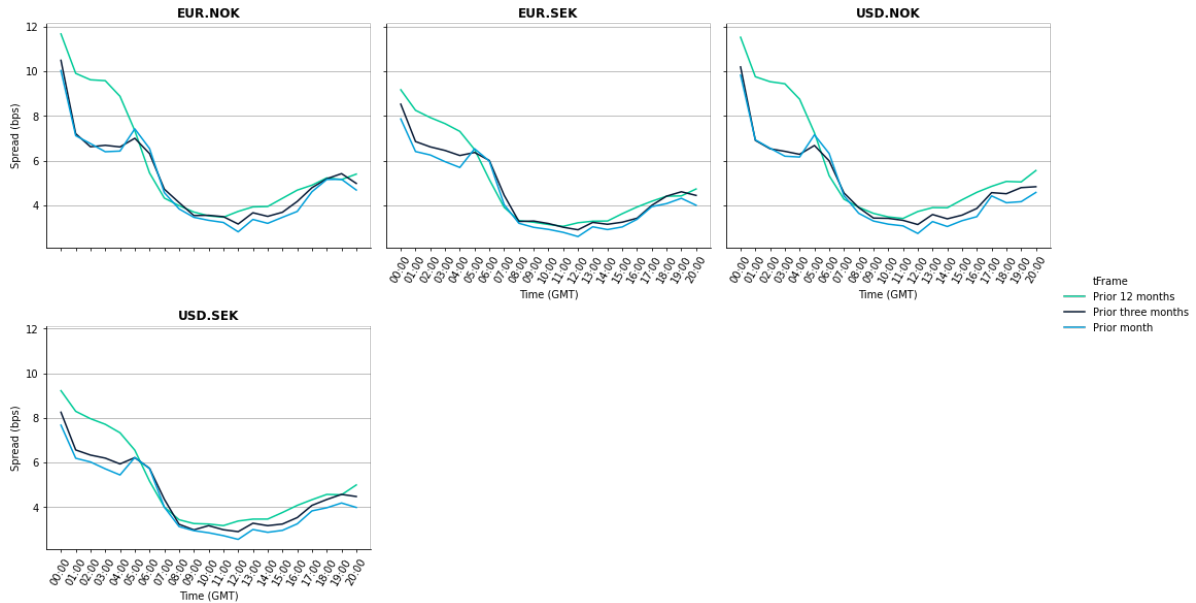
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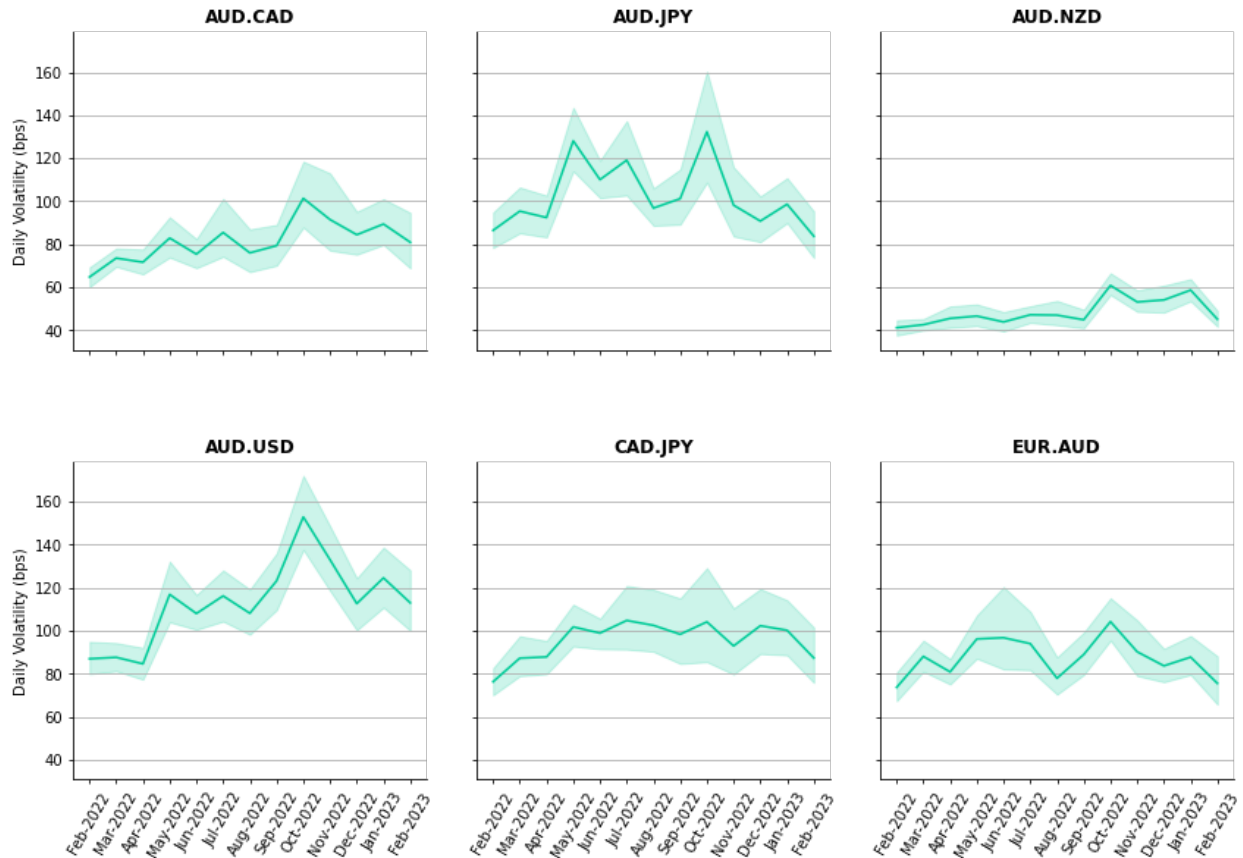
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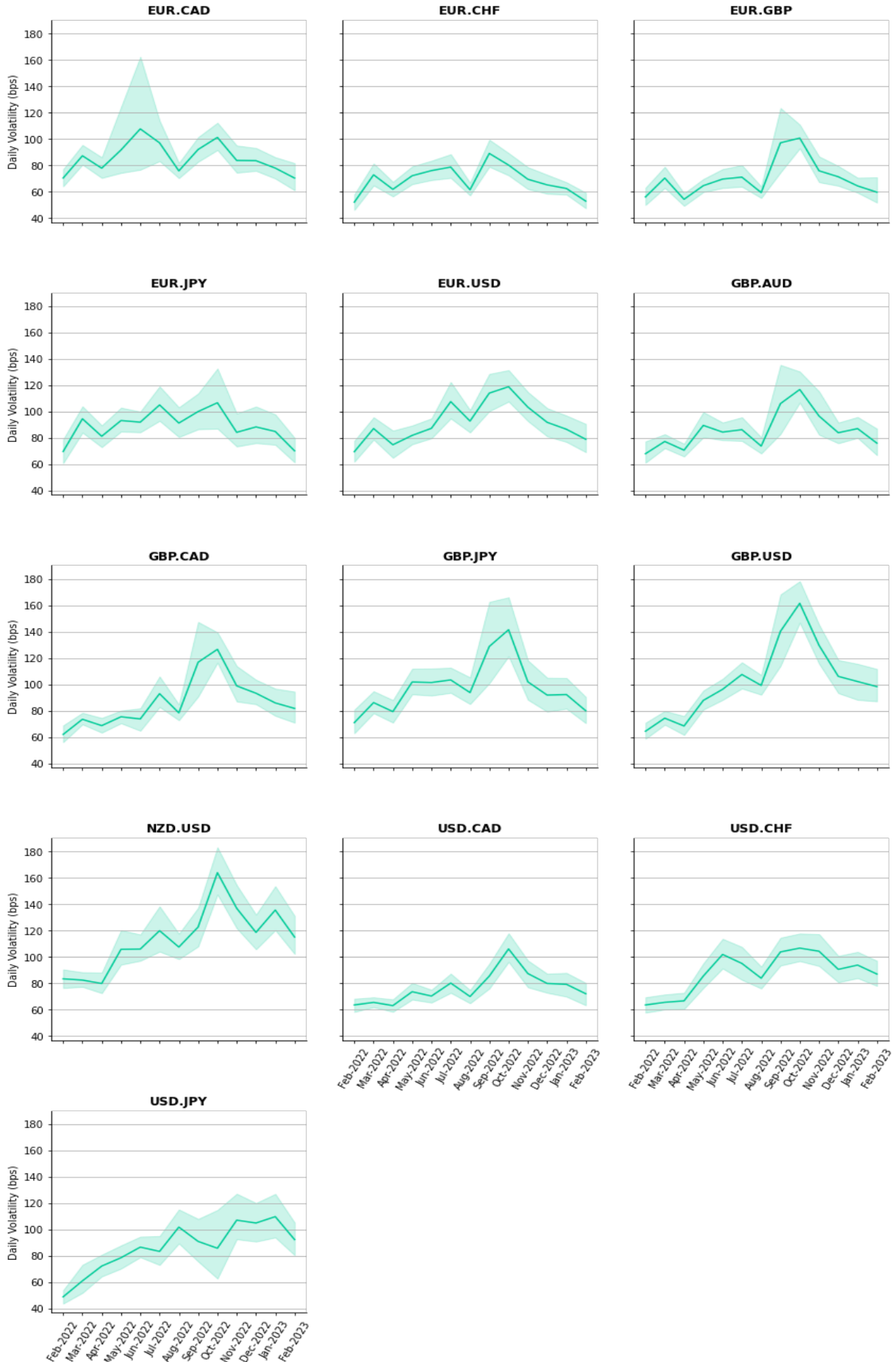
Scandinavian G-10 Currencies: Average Hourly Volatility, 00:00-20:00 GMT Past month, three months and year



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



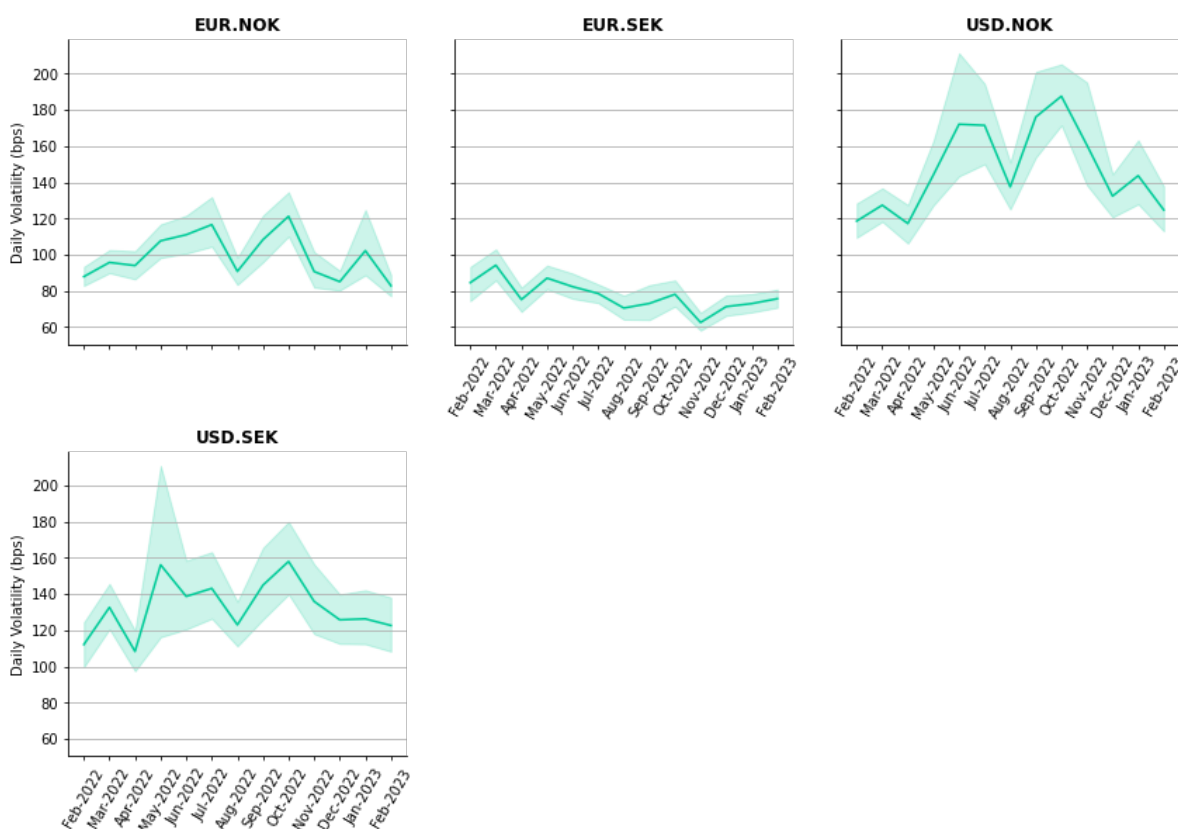
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Scandinavian G-10 Currencies: Average Daily Volatility, 12:00-16:00 GMT February 2022-February 2023



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