

FX Quant Insight

A dovish CAD week

Key takeaways

- Models stay bullish JPY. Following inflation surprise, skew has tilted for JPY calls again.
- MAA model is bullish GBPCAD into the Bank of Canada meeting with Residual skew for CAD puts.
- CARS is also bullish GBPCAD on rates factor and mean-reverting commodities.

FX Signal of the Week: Bullish GBP/CAD at 1.7228

Exhibit 1: Option flow and the technical matrix are bearish EURJPY this week

Top signals from quant models

Section	Insight	Rationale
Option Flow	Bearish EURJPY	Options investors bought EURJPY puts last week.
Technical Matrix	Bearish EURJPY	Positioning analysis is bearish EURJPY.
CARS	Bearish CAD	CARS is bullish EUR vs CAD and CHF on rates factor.
Time Zone	Asia hour NZD demand	Asia hour demand for NZD and AUD. Asia is also not bearish JPY.

Source: BofA Global Research

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Options see more JPY upside

We remain bullish JPY on the crosses ([FX Quant Insight: EURJPY uptrend turning lower, 26-Feb-2024](#)). Following the upside Tokyo CPI surprise, JPY skew has tilted for calls in major pairs. In addition, the positioning model also sees several bullish JPY signals (Exhibit 5). The risk to this view would be BoJ staying on hold.

Bearish CAD on crosses ahead of BoC meeting

Ahead of the BoC meeting, models lean bearish CAD with a sell-off in foreign hours (Exhibit 8) after dovish RBNZ surprise as investors had priced richer high-beta put skew. CARS is also bullish GBP/CAD on relatives rates and mean-reverting commodities (Exhibit 6), while EURCAD and GBPCAD maintain their uptrends in the Technical Matrix (Exhibit 5).

Our MAA positioning model is short-term bullish GBPCAD ([Global FX weekly, 1-Mar-2024](#)). The derived Residual Skew has tilted for GBPCAD calls and is supporting the uptrend, in our view. Higher GBPCAD is also positioned for any dovish speak from the BoC next week as they open the door for cuts at one of the subsequent meetings (our Economics team's base case is first cut in June with a risk of April). By contrast, UK core inflation remains relatively high and the rates market has fewer cuts priced in Canada vs. UK the first half of 2024. This is consistent with our Global Rates team's view for rates to diverge further and they like paying UK rates vs. Canada in front end ([European Rates Alpha, 6-Feb-2024](#)). The risk to these views is an upside to Canada wage growth.

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Refer to important disclosures on page 7 to 8. Analyst Certification on page 6.

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For more details on the construction of the quant signals, please refer to the [Global Rates and FX Primer: FX Quant Insight: decipher weekly FX signals 07 September 2022](#).

CARS (model): Cross-Asset Regime Switching

SDR: Swap Data Repository

MAA: Moving Average Aggregator

UD: Up/Down volatility

RS: Residual Skew

ADX: Average Directional Movement Index

DMI: Directional Movement Index

NFP: Non-farm payrolls

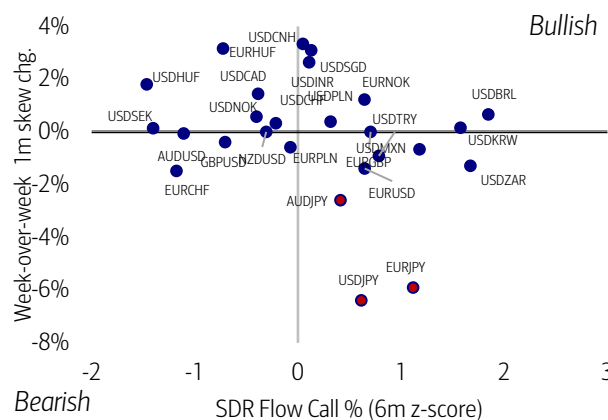
Option Flow Signals

Our options flow signals combine Event analysis framework ([FX Viewpoint: Vol-guided decisions 18 March 2021](#)) with SDR flows data ([FX Viewpoint: SDR: What do FX options flows tell us? 01 February 2021](#)) to gauge bullish and bearish sentiments.

To learn more about FX volatility and options please refer to our [FX Volatility Dashboard](#) as well as the FX Vol Dashboard Primer ([Global Rates and FX Primer: 09 March 2022](#)).

Exhibit 2: The skew had moved in favor of JPY calls last week

1m skew change vs call percentage z-score

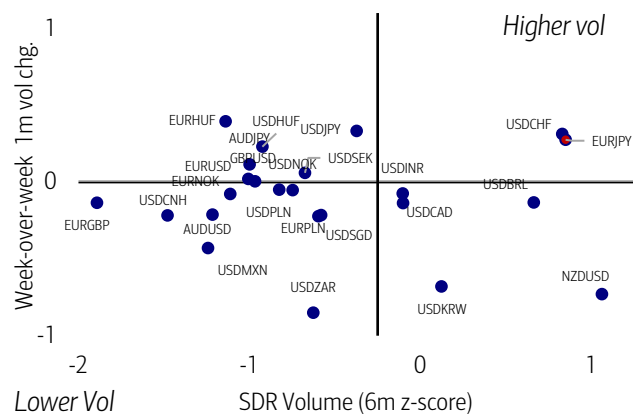


Source: BofA Global Research, DTCC. Note: CNH flows are proxied by "CNY" flows in SDR.

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Exhibit 3: Short-dated volumes and volatility had picked up in EURJPY

1m implied vol change vs volume z-score



Source: BofA Global Research, DTCC. Note: CNH flows are proxied by "CNY" flows in SDR.

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Exhibit 4: USDJPY skew has tilted for USD puts / JPY calls after upside Tokyo CPI surprise

Event analysis signals after last week's spot and vol moves

Pair	Old spot	New spot	1m vol	1m vol chg	1y vol	1y vol chg	1y - 1m chg	Currency	Return vs USD	1m skew % chg vs		Signals
										USD	USD	
EURUSD	1.0851	1.0851	5.68	0.13	6.41	0.05	-0.07	EUR	0.00%	-1.23		EUR No Signal
USDJPY	150.70	150.41	7.66	0.33	8.55	0.02	-0.30	JPY	0.19%	5.78		JPY No Signal
GBPUSD	1.2685	1.2678	5.89	0.09	7.35	-0.03	-0.12	GBP	-0.06%	-0.38		GBP No Signal
USDCHF	0.8800	0.8844	6.78	0.22	6.97	-0.02	-0.24	CHF	-0.50%	-0.28		CHF No Signal
AUDUSD	0.6540	0.6521	8.03	-0.07	9.05	0.00	0.07	AUD	-0.29%	-0.28		AUD No Signal
USDCAD	1.3505	1.3569	5.03	0.03	5.84	0.04	0.00	CAD	-0.47%	-1.48		CAD No Signal
USDSEK	10.2848	10.3617	9.18	0.18	9.95	-0.03	-0.20	SEK	-0.74%	0.05		SEK No Signal
USDNOK	10.5122	10.5457	9.41	0.19	10.88	0.02	-0.17	NOK	-0.32%	-0.60		NOK No Signal
NZDUSD	0.6173	0.6099	8.05	-0.59	9.13	-0.09	0.50	NZD	-1.21%	-0.29		NZD No Signal
USDSGD	1.3444	1.3431	3.29	-0.16	4.33	-0.05	0.10	SGD	0.10%	-3.36		SGD No Signal
USDKRW	1331.1	1331.3	6.57	-0.63	8.00	-0.52	0.10	KRW	-0.01%	-0.06		KRW No Signal
USDMXN	17.0988	17.0130	7.70	-0.26	10.67	-0.20	0.05	MXN	0.50%	-0.30		MXN No Signal
USDTRY	31.1247	31.5285	7.11	0.97	18.75	0.26	-0.71	TRY	-1.29%	-0.03		TRY No Signal
USDZAR	19.2913	19.0620	11.99	-0.71	14.77	-0.09	0.61	ZAR	1.20%	0.33		ZAR No Signal
USDHUF	358.8	364.2	9.54	0.48	10.82	-0.18	-0.65	HUF	-1.50%	-1.30		HUF No Signal
USDPLN	3.9717	3.9822	8.58	0.15	9.74	-0.05	-0.20	PLN	-0.26%	0.42		PLN No Signal

Source: BofA Global Research, Bloomberg.

The table shows the 1-year percentile and 1-week change in 1m and 1y implied vol, the 1y-1m spread, and the 1m 25 delta risk reversal as a percentage of the ATM. For a currency with a put skew, the rules for generating the signal column are the following:

- [1] Bearish Continuation: Spot change < -1%, 1m vol change > 0.5%, 1y vol change > 0%, 1m skew chg. < -2; [2] Bearish Contrarian: Spot change > 1%, 1m skew change < -2; [3] Bullish Continuation: Spot change > 2%, 1y-1m change < -0.1%, 1m skew change > 2; [4] Bullish Contrarian Spot change < -1%, 1m vol change < -0.2%, 1m skew chg. > 1.

Parameters that triggered a bearish condition are colored in red; parameters that triggered a bullish condition are colored in green.

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Technical Matrix

The Technical Matrix is a table of technical indicators ([Get to know even more technical strategy, 24 January 2022](#)) and BofA positioning analysis ([Global Rates and FX Primer: 01 October 2018](#)) that look at trend following and reversal signals. To learn more about a variety of technical strategies, please see [Technicals Explained primer](#), as well as our Quantifying Technicals publications for [the ADX](#) and [Bollinger indicators](#).

Exhibit 5: Positioning analysis is bullish GBPCHF and bullish JPY on the crosses

Technical matrix with positioning analysis and key levels to watch

		Spot	Positioning Trend	Bullish / Bearish	ADX Trend	Bollinger Bands	Next Support	Next Resistance
USD	EURUSD	1.0851	↔	No Signal	Transition	None	1.0830	1.0862
	USDJPY	150.41	↑	Slightly Bearish	Range	None	147.68	151.91
	GBPUSD	1.2678	↑	No Signal	Range	None	1.2675	1.3142
	AUDUSD	0.652	↓	No Signal	Transition	None	0.6511	0.6562
	USDCHE	0.8845	↑	Bullish	Transition	None	0.8830	0.8886
	USDCAD	1.3568	↑	No Signal	Range	None	1.3538	1.3591
	NZDUSD	0.6099	↔	No Signal	Range	None	0.6098	0.6165
	USDSEK	10.3644	↓	No Signal	Range	None	10.3513	10.4268
	USDNOK	10.547	↔	No Signal	Range	None	10.4514	10.6118
EUR	EURGBP	0.8559	↓	No Signal	Range	None	0.8493	0.8575
	EURJPY	163.21	↑	Slightly Bearish	Transition	None	160.19	164.30
	EURAUD	1.6642	↑	No Signal	Uptrend	None	1.6544	1.7065
	EURCHF	0.95973	↑	Bullish	Uptrend	None	0.9565	0.9626
	EURCAD	1.4722	↑	Bullish	Uptrend	None	1.4656	1.4748
	EURNZD	1.7791	↔	No Signal	Range	None	1.7763	1.7825
	EURSEK	11.2463	↓	Slightly Bullish	Transition	None	11.0030	11.2478
	EURNOK	11.4447	↔	No Signal	Range	None	11.3582	11.4506
G10 Cross	AUDJPY	98.068	↑	Bearish	Range	None	97.31	98.62
	AUDNZD	1.069	↓	No Signal	Range	None	1.0560	1.0713
	AUDCAD	0.8846	↔	No Signal	Range	None	0.8842	0.8875
	NOKSEK	0.9827	↓	No Signal	Downtrend	None	0.9497	0.9853
	CADJPY	110.862	↑	No Signal	Range	None	109.67	111.17
	GBPJPY	190.69	↑	Bearish	Uptrend	None	188.66	191.32
	NZDJPY	91.74	↑	Slightly Bearish	Transition	None	91.52	93.45
	GBPCHF	1.1213	↑	Bullish	Uptrend	None	1.1174	1.1506
EM	USDMXN	17.0155	↓	No Signal	Range	None	16.6262	17.0675
	USDBRL	4.9571	↑	No Signal	Range	None	4.9424	5.0184
	USDZAR	19.0627	↑	Bullish	Range	None	18.9650	19.9204
	EURPLN	4.3203	↓	No Signal	Range	None	4.2935	4.3425
	EURHUF	395.26	↑	Slightly Bearish	Uptrend	Upper	389.13	402.45
	USDKRW	1331.27	↑	Bullish	Range	None	1325.14	1363.67
	USDINR	82.89	↓	No Signal	Transition	None	82.87	83.07
	USDCNH	7.2116	↔	No Signal	Range	None	7.2100	7.2236

Data as of 03/04/24. Source: BofA Global Research, Bloomberg.

Positioning uptrend has MAA > 60, downtrend MAA < 40. Positioning uptrend reversal likely if MAA/UD/RS > 80, continuation likely if UD, RS < 50. Positioning downtrend reversal likely if MAA/UD/RS < 20, and continuation likely if UD, RS > 50. UD and RS are 1y percentile and MAA is in %.

Positioning is bullish (green) if matrix shows downtrend reversal or uptrend continuation; Positioning is bearish (red) if matrix shows uptrend reversal or downtrend continuation.

Positioning is slightly bullish or slightly bearish (yellow) if only one of UD or RS supports the signal.

ADX downtrend if ADX > 25 and DMI+ is below DMI-. ADX uptrend if ADX > 25 and DMI+ is above DMI-. ADX shows Transition if ADX is between 20 and 25, and Range if ADX < 20. Cells in the ADX Trend column are colored with more intensity if the ADX trend signal matches the positioning signal. 14-day lookback is used for the ADX indicators.

The Bollinger Bands column shows 'Upper' if spot is above the +2 std bollinger band, and 'Lower' if spot is below the -2 std band. 20-day SMA is used for Bollinger indicators.

Cells in Next Support and Next Resistance columns are colored if spot is within 0.5% of the support or resistance level.

CARS Signals

CARS ("cross-asset regime-switching") is a systematic model that makes weekly buy/sell decisions for G10 currencies based on cross-asset factors (equity, rates, and commodities). FX's relationship with other asset classes is not constant over time, and investors could flock to own haven currencies during shock periods. The CARS model chooses the most performing factor for the appropriate macro regime of the week ([FX Viewpoint: CARS model: weekly FX cross-asset drivers 22 June 2022](#)).

Exhibit 6: CARS is bullish GBP vs. CHF and CAD on rates factor and commodity reversion

CARS signals for a trending week (no macro shock)

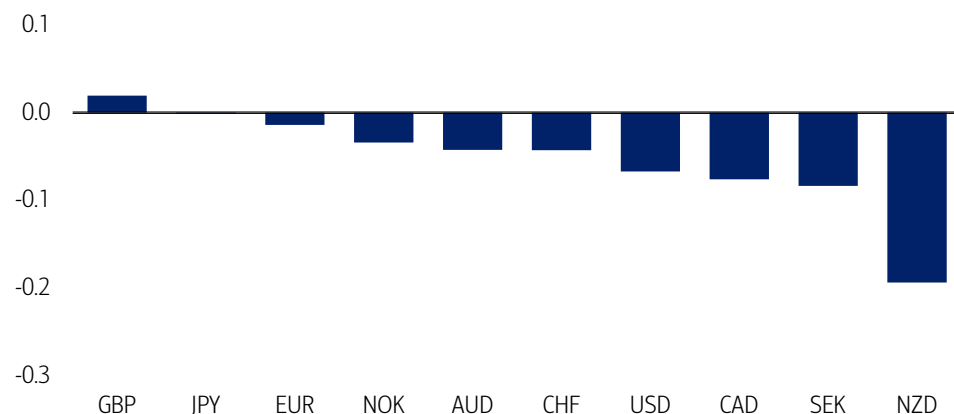
Currency	Bullish/Bearish	Equity	Rates	Commodity	Global regime	Values
EUR		5	3	4	Commodity z-score	1.3
JPY	Bullish	1	1	9	Performing factor	Rates
GBP	Bullish	10	2	6		
AUD		2	5	3		
CAD	Bearish	4	7	1	USD Equity	3
CHF		8	8	5	USD Rates	6
NZD	Bearish	9	10	8		
SEK	Bearish	7	9	7		
NOK	Bearish	6	4	2		

The Equity ranking is ordered by 5y z-score of 1-week equity return. The Rates ranking is ordered by 5y z-score of 1-week rate change and level of 2y swap rate. The Commodity ranking is ordered by 52-week FX correlation with BCOM. The Commodity z-score is the 1y z-score of 1-week BCOM Index return.

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Exhibit 7: 2y swap rates broadly rose for GBP, while falling for NZD last week

2y global yield change



Source: BofA Global Research, Bloomberg

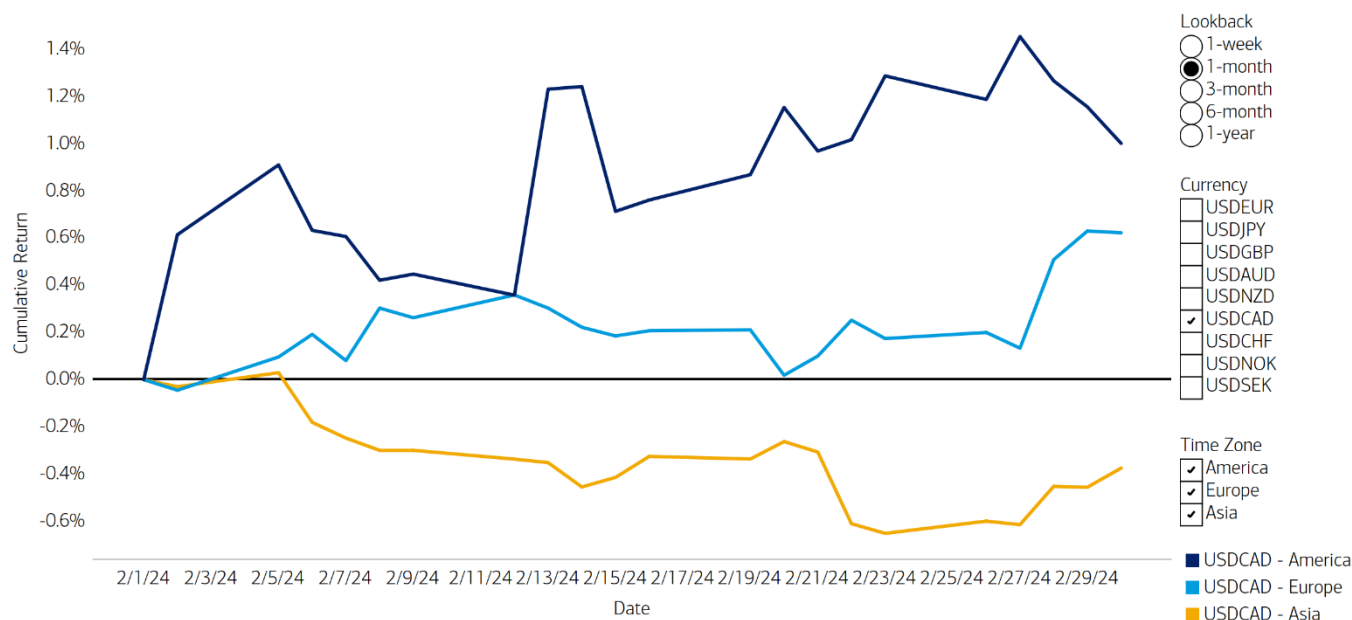
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Interactive Time Zone

Expanding exhibits in the HTML view shows cumulative FX returns at different lookback periods, currency groupings, and time zones ([FX Watch: Interacting with time zones 06 July 2022](#)). Hours are shown in Coordinated Universal Time (UTC). We define America time zone as 1pm-12am UTC (8am-7pm EST), Europe time zone as between 8am-1pm UTC (3am-8am EST), and Asia time zone as between 12am to 8am UTC (7pm-3am EST).

Exhibit 8: USDCAD has sold off in foreign hours after dovish RBNZ surprise

Interactive time zone plot. For readers of the web-formatted version of this report, access interactive features of the visualization by clicking on the image. Use Google Chrome or Microsoft Edge browsers for the best experience



We denote America time zone as between 1pm to 12am UTC, Europe time zone as between 8am to 1pm UTC, and Asia time zone as between 12am to 8am UTC.

Source: BofA Global Research, Bloomberg

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Exhibit 9: USD gained in European trading hours and fell in US trading hours last week

Interactive time zone plot. For readers of the web-formatted version of this report, access interactive features of the visualization by clicking on the image. Use Google Chrome or Microsoft Edge browsers for the best experience

	8am-11am	11am-2pm	2pm-5pm	5pm-8pm	8pm-11pm	11pm-2am	2am-5am	5am-8am	Lookback
USDEUR	0.4%	0.4%	-0.1%	-0.2%	-0.2%	0.6%	0.1%	0.2%	1-week
USDJPY	0.2%	0.6%	0.5%	0.1%	-0.3%	2.1%	0.3%	0.4%	1-month
USDGBP	0.4%	0.5%	-0.5%	-0.1%	-0.2%	0.2%	0.2%	-0.1%	3-month
USDAUD	0.0%	0.6%	0.0%	-0.1%	-0.4%	1.6%	0.7%	0.5%	6-month
USDNZD	0.1%	0.8%	0.0%	0.1%	-0.5%	1.9%	1.0%	0.5%	1-year
USDCAD	0.0%	0.1%	0.0%	-0.2%	-0.3%	0.6%	0.2%	0.4%	
USDCHF	0.4%	0.8%	0.2%	0.1%	-0.3%	1.7%	0.3%	0.3%	
USDNOK	-0.2%	1.3%	0.5%	0.0%	-0.5%	2.2%	0.1%	0.6%	
USDSEK	0.4%	0.8%	0.3%	0.4%	-0.6%	2.0%	0.3%	0.2%	

Hours are as of UTC. Currency pairs with greater loss over the lookback period are colored in darker red. Currency pairs with greater gain over the lookback period are colored in darker green. We denote America time zone as between 1pm to 12am UTC, Europe time zone as between 8am to 1pm UTC, and Asia time zone as between 12am to 8am UTC.

Source: BofA Global Research, Bloomberg

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