

FX Quant Insight

Stretched G10 FX RV

Key takeaways

- European majors have more room to normalize lower vs oversold high-beta currencies in G10.
- We are bullish CAD/CHF this week on combination of options, positioning and rates signals.
- Risk to the view is a continuation of the selloff for oil to weigh on CAD.

FX Trade of the week: Buy CAD/CHF: 0.6534

Exhibit 1: Bullish CAD/CHF for this week on combination of option, positioning and rates signals

Top signals from quant models

Section	Insight	Rationale
Option Flow	Week of muted vol	1m implied chg within +/- 1 vols for all currency pairs last week. Flow was moderately bullish for CNH and CAD, bearish for JPY.
Technical Matrix CARS	Bullish CAD Rates regime	Positioning turning bullish for CAD as downtrend becomes too stretched. CARS returned to rates regime – bullish for NOK and JPY vs CHF and GBP.
Time Zone	US hour USD demand	US-based investors resumed buying the USD last week.

Source: BofA Global Research

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Fade European FX strength vs G10 “high-betas”

As we discussed in [G10 FX RV to end the year \(07 September 2023\)](#), the year-to-date rallies for European majors (EUR, GBP, CHF) vs the so-called “high-beta” currencies in G10 (AUD, NZD, CAD, NOK, and SEK) had become stretched. As the European Central Bank, Bank of England and Swiss National Bank rate hiking cycles are now on hold with European growth and inflation data softening, we fade the strength of European major currencies against the oversold high-beta currencies in G10. These G10 crosses have moderately came off from the year-to-date peak in August, but should have more room to further normalize, in our view.

Bullish CAD/CHF quant signals for this week

For this week, our positioning model shows the USD/CAD rally has become overbought. Up/down vol and residual skew indicators show the USD/CAD spot uptrend since August appears to be exhausting and could start to reverse lower (Exhibit 5). At the same time, last week’s muted option flow still showed a pick-up in demand for CAD calls (Exhibit 2). Amid two-sided USD risk on US CPI uncertainty this week, we like to express the short-term bullish CAD view vs CHF. CARS model is bearish CHF for this week on lack of pick-up in yield over the past week for the Franc. The risk to this short-term view would be a continuation of the sharp selloff in oil price for the coming week.

13 November 2023

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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

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Timestamp: 13 November 2023 04:31PM EST

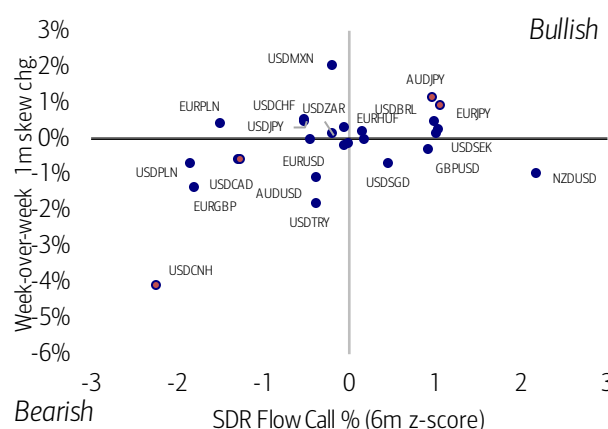
Option Flow Signals

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: Option flow moved for CNH calls, CAD calls, and JPY puts last week

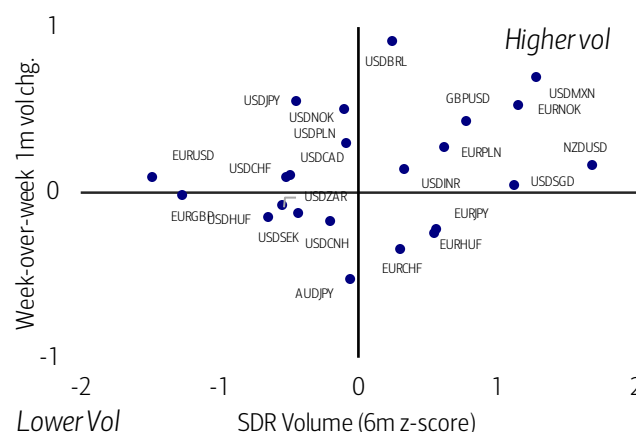
1m skew change vs call percentage z-score



Source: BofA Global Research, DTCC. Note: CNH flows are proxied by "CNY" flows in SDR
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Exhibit 3: FX options market was muted last week as no currency pairs saw 1m implied change of more than +/- 1 vol

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: Rising implied vol and 1m put skew over the past week is moderately bearish for JPY

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	1.0718	1.0670	6.47	0.08	6.88	-0.02	-0.10	EUR	-0.45%	-0.23		EUR No Signal
USDJPY	150.07	151.86	7.74	0.54	9.70	0.33	-0.21	JPY	-1.19%	-1.02		JPY No Signal
GBPUSD	1.2344	1.2237	7.42	0.41	8.31	0.12	-0.30	GBP	-0.87%	-0.11		GBP No Signal
USDCHF	0.8994	0.9041	6.42	0.08	7.11	-0.06	-0.15	CHF	-0.52%	-0.46		CHF No Signal
AUDUSD	0.6489	0.6366	9.66	-0.03	10.39	0.20	0.23	AUD	-1.91%	-1.16		AUD No Signal
USDCAD	1.3700	1.3821	5.58	0.07	6.16	-0.03	-0.10	CAD	-0.88%	0.73		CAD No Signal
USDSEK	10.9146	10.8782	10.36	-0.14	10.87	-0.12	0.02	SEK	0.33%	-0.13		SEK No Signal
USDNOK	11.0599	11.1351	11.46	0.49	12.08	0.11	-0.38	NOK	-0.68%	0.33		NOK No Signal
NZDUSD	0.5964	0.5874	9.67	0.15	10.40	0.15	0.00	NZD	-1.52%	-0.94		NZD No Signal
USDSGD	1.3506	1.3611	4.48	0.03	4.82	0.02	-0.01	SGD	-0.77%	0.81		SGD No Signal
USDKRW	1297.5	1325.1	9.05	-0.02	9.42	-0.03	-0.01	KRW	-2.11%	0.08		KRW No Signal
USDMXN	17.5475	17.6962	13.27	0.68	13.02	0.07	-0.61	MXN	-0.84%	-0.89		MXN No Signal
USDTRY	28.4364	28.5893	7.53	-0.80	23.93	-1.50	-0.70	TRY	-0.54%	-2.59		TRY No Signal
USDZAR	18.2926	18.7817	13.97	-0.09	15.66	-0.06	0.03	ZAR	-2.64%	-0.17		ZAR No Signal
USDHUF	354.0	354.2	11.60	-0.17	13.29	-0.28	-0.12	HUF	-0.05%	-0.45		HUF No Signal
USDPLN	4.1571	4.1481	10.57	0.28	11.05	0.19	-0.09	PLN	0.22%	1.19		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 is becoming bullish for CAD with CAD downtrend now stretched

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	1.0679	↔	No Signal	Transition	None	1.0625	1.0750
	USDJPY	151.51	↑	Bullish	Range	None	149.22	151.91
	GBPUSD	1.2248	↓	No Signal	Range	None	1.1741	1.2261
	AUDUSD	0.6373	↓	No Signal	Range	None	0.6270	0.6386
	USDCHE	0.9027	↑	No Signal	Range	None	0.9024	0.9076
	USDCAD	1.3812	↑	Bearish	Transition	None	1.3656	1.3899
	NZDUSD	0.5881	↓	Slightly Bullish	Range	None	0.5774	0.5910
	USDSEK	10.8658	↔	No Signal	Range	None	10.8347	10.8719
	USDNOK	11.1151	↑	No Signal	Transition	None	10.9314	11.2986
EUR	EURGBP	0.8720	↑	No Signal	Transition	None	0.8688	0.8736
	EURJPY	161.8	↑	Bullish	Uptrend	None	158.48	162.37
	EURAUD	1.6758	↑	Slightly Bearish	Range	None	1.6630	1.7065
	EURCHF	0.96401	↔	No Signal	Transition	None	0.9606	0.9677
	EURCAD	1.4750	↑	Slightly Bearish	Uptrend	None	1.4584	1.5113
	EURNZD	1.816	↑	Slightly Bearish	Range	None	1.7978	1.8462
	EURSEK	11.604	↓	No Signal	Transition	None	11.5399	11.7275
	EURNOK	11.8701	↑	Bullish	Uptrend	None	11.6094	12.1064
G10 Cross	AUDJPY	96.547	↑	Bullish	Range	None	95.30	97.68
	AUDNZD	1.0837	↑	No Signal	Downtrend	None	1.0816	1.0852
	AUDCAD	0.8802	↔	No Signal	Range	None	0.8767	0.8914
	NOKSEK	0.9775	↓	Bearish	Downtrend	None	0.9498	0.9961
	CADJPY	109.695	↑	Bullish	Range	None	109.27	110.64
	GBPJPY	185.56	↑	Bullish	Transition	None	182.98	186.77
	NZDJPY	89.10	↑	Bullish	Range	None	88.18	90.20
	GBPCHF	1.1056	↓	No Signal	Transition	None	1.0783	1.1064
EM	USDMXN	17.6383	↔	No Signal	Transition	None	17.3443	17.6725
	USDBRL	4.9258	↓	No Signal	Transition	None	4.9194	4.9902
	USDZAR	18.7529	↔	No Signal	Range	None	18.7255	18.9247
	EURPLN	4.4231	↓	Slightly Bullish	Downtrend	Lower	4.3986	4.4959
	EURHUF	377.58	↓	Bearish	Range	None	367.59	380.13
	USDKRW	1325.10	↔	No Signal	Transition	None	1324.35	1336.65
	USDINR	83.3313	↑	Slightly Bearish	Range	None	83.29	83.50
	USDCNH	7.2969	↑	No Signal	Range	None	7.2723	7.3105

Data as of 11/13/23. **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 lookahead 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.

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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: Model resumed back to rates regime this week – bearish CHF and GBP vs JPY and NOK on rates divergence

CARS signals for a trending week (no macro shock)

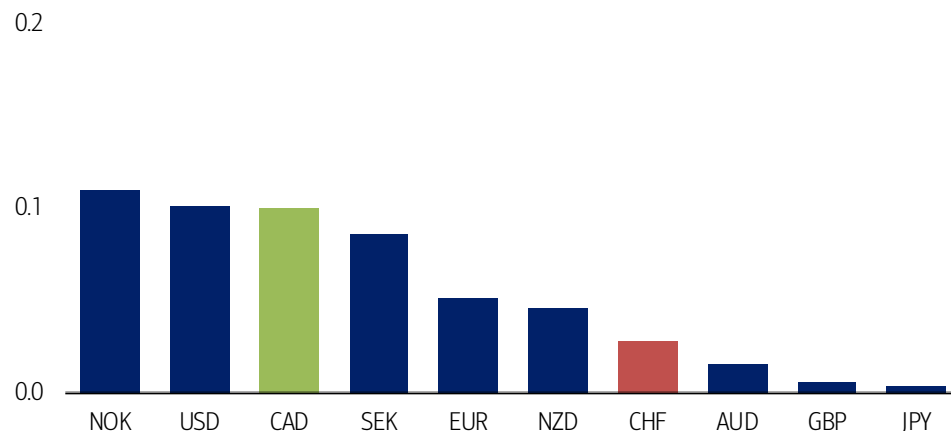
Currency	Bullish/Bearish	Equity	Rates	Commodity	Global regime	Values
EUR		1	6	4	Commodity z-score	-1.3
JPY	Bullish	8	1	9	Performing factor	Rates
GBP	Bearish	5	10	6		
AUD		9	7	3		
CAD		7	4	2	USD Equity	2
CHF	Bearish	6	9	5	USD Rates	5
NZD		10	8	8		
SEK		4	3	7		
NOK	Bullish	3	2	1		

Source: BofA Global Research, Bloomberg

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Exhibit 7: Rate differential supports higher CAD/CHF

1-week global 2y yield changes



Source: BofA Global Research, Bloomberg

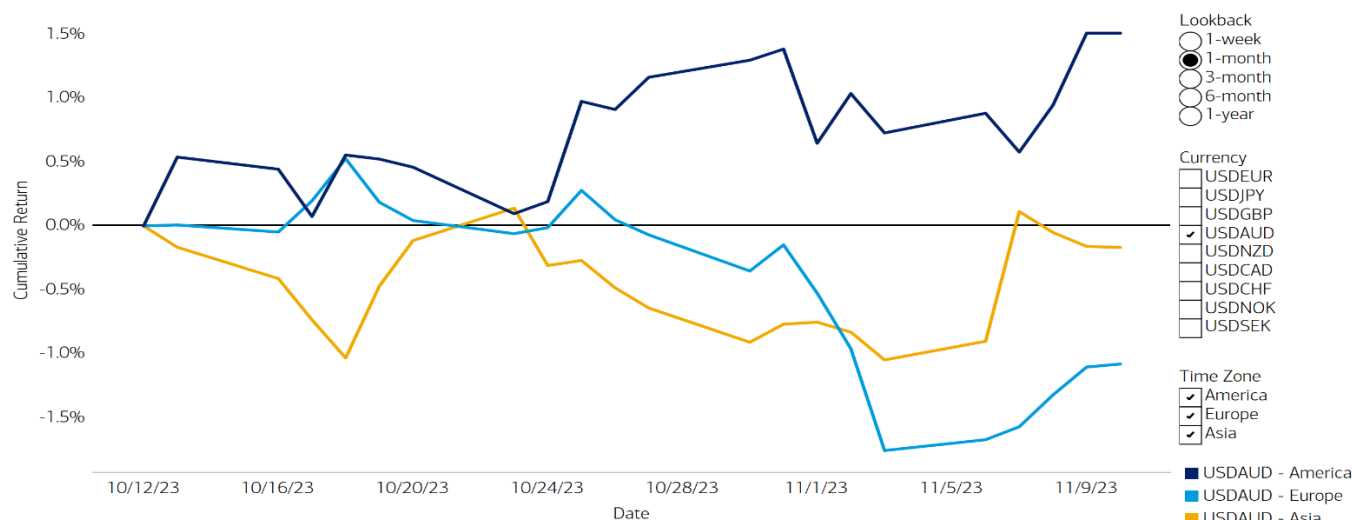
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Interactive Time Zone

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 (9am-8pm EDT), Europe time zone as between 8am-1pm UTC (4am-9am EDT), and Asia time zone as between 12am to 8am UTC (8pm-4am EDT).

Exhibit 8: US-based investors resumed buying USD 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



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 rallied in US and Asia 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	0.1%	-0.1%	-0.4%	0.5%	-0.1%	0.5%	0.0%	0.3%	1-week
USDJPY	0.1%	0.2%	0.0%	0.5%	-0.2%	1.2%	0.2%	0.4%	1-month
USDGBP	0.1%	0.2%	-0.1%	0.7%	-0.1%	1.0%	0.1%	0.1%	3-month
USDAUD	0.4%	0.0%	0.1%	1.0%	-0.1%	2.3%	0.6%	0.2%	6-month
USDNZD	0.3%	0.0%	-0.2%	1.0%	0.2%	1.6%	-0.1%	0.3%	1-year
USDCAD	0.1%	0.3%	0.1%	0.3%	-0.2%	0.9%	0.1%	0.1%	
USDCHF	-0.5%	0.2%	-0.3%	0.7%	-0.2%	0.3%	0.1%	0.3%	
USDNOK	-0.2%	-0.3%	0.6%	0.8%	-0.4%	1.7%	0.1%	0.0%	
USDSEK	-0.9%	-0.1%	-0.1%	0.8%	-0.1%	0.2%	0.0%	0.3%	

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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