

FX Quant Insight

The big CHF short

Key takeaways

- Bullish USD signals ease as USD uptrends vs GBP and JPY could reverse; demand for USD in UK trading hours also cooled down.
- Dovish SNB last week opened the gate for CHF bears.
- Bullish EUR/CHF on option flow, Bollinger breakout, and bearish CHF rates factor.

FX Trade of the week: Buy EUR/CHF: 0.9660

Exhibit 1: Signals turn bearish CHF after dovish SNB meeting last week

Top signals from quant models

Section	Insight	Rationale
Option Flow	Bullish EUR/CHF	Option flow moved for EUR/CHF calls on dovish SNB last week.
Technical Matrix	Bearish USD	USD uptrends vs JPY and GBP are becoming stretched; bullish EUR Bollinger breakouts vs GBP and CHF.
CARS	Rates Regime	Bullish CAD and NOK, bearish CHF and GBP on rates factor.
Time Zone	USD demand eased	Bullish USD price actions during US and UK trading hours eased last week.

Source: BofA Global Research

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Bullish USD signals eased after FOMC

After last week's FOMC meeting, our quant bullish USD signals have softened. Positioning analysis shows downtrends for GBP and JPY, two of the most shorted currencies in G10 FX this month, are now stretched and at risk of reversing vs the USD (Exhibit 5). Time zone analysis also shows persistent bullish USD price actions during UK trading hours have quieted down (Exhibit 9). With the USD now trading close to a 2023 peak, it could face some short-term consolidation for the coming week, in our view.

A myriad of bearish CHF signals after dovish SNB

The dovish SNB (Swiss National Bank) monetary policy meeting last week opened the gate for CHF bears to enter the market with CHF weakening across all time zones (Exhibit 8). Option flow shows rising demand for EUR/CHF calls (Exhibit 2), amid bullish Bollinger band breakout signal for EUR/CHF spot (Exhibit 5). In addition, CARS model is also bearish CHF on the back of 1-week G10 yield changes (Exhibit 7). We like to chase EUR/CHF higher for the coming week on the back of these signals, with the risk being a weaker than expected Eurozone CPI.

25 September 2023

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Vadim Iaralov
FX Strategist
BofAS
+1 646 855 8732
vadim.iaralov@bofa.com

Howard Du, CFA
G10 FX Strategist
BofAS
+1 646 855 6586
yuhao.du@bofa.com

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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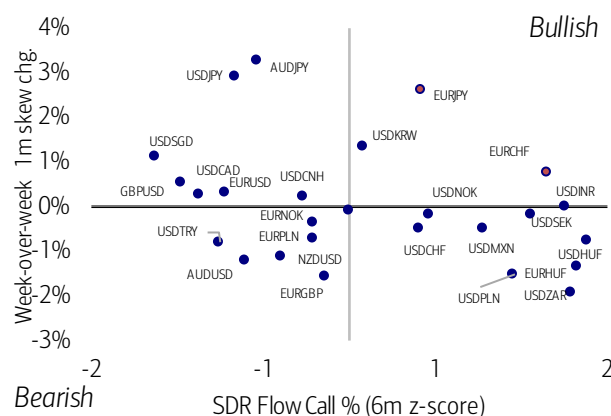
Option Flow Signals

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 EUR calls vs JPY and CHF last week

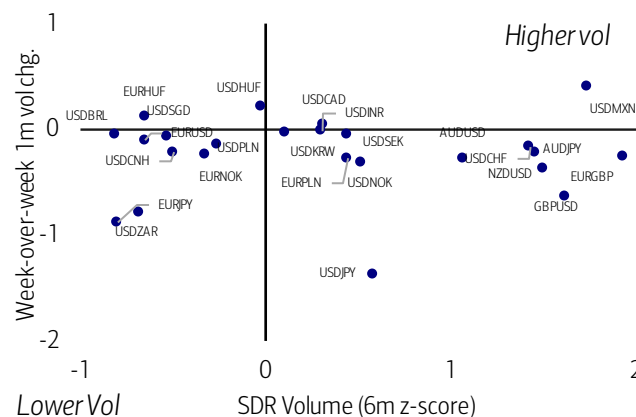
1m skew change vs call percentage z-score



Source: BofA Global Research, DTCC. Note: CNH flows are proxied by "CNY" flows in SDR
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Exhibit 3: FX vols broadly moved lower last week

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: Short-dated implied vols broadly declined last week after a slew of central bank meetings

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	1.0692	1.0636	6.53	-0.11	6.95	-0.01	0.11	EUR	-0.53%	0.21	EUR No Signal	
USDJPY	147.61	148.64	7.69	-1.38	9.23	-0.09	1.29	JPY	-0.70%	-0.99	JPY No Signal	
GBPUSD	1.2383	1.2231	7.17	-0.63	8.23	-0.13	0.51	GBP	-1.24%	-0.10	GBP No Signal	
USDCHF	0.8971	0.9100	6.51	-0.17	7.15	-0.02	0.15	CHF	-1.43%	0.56	CHF No Signal	
AUDUSD	0.6437	0.6427	9.41	-0.28	10.19	-0.05	0.23	AUD	-0.16%	-1.39	AUD No Signal	
USDCAD	1.3486	1.3460	5.48	0.03	6.17	0.05	0.02	CAD	0.19%	-0.24	CAD No Signal	
USDSEK	11.1464	11.0272	10.48	-0.06	10.89	0.01	0.07	SEK	1.08%	0.12	SEK No Signal	
USDNOK	10.8069	10.7474	10.97	-0.33	11.98	-0.09	0.24	NOK	0.55%	0.00	NOK No Signal	
NZDUSD	0.5917	0.5966	9.44	-0.37	10.25	-0.03	0.34	NZD	0.82%	-1.32	NZD No Signal	
USDSGD	1.3633	1.3658	4.46	-0.07	4.62	0.02	0.09	SGD	-0.18%	-1.18	SGD No Signal	
USDKRW	1324.4	1336.6	8.50	-0.04	9.02	-0.24	-0.21	KRW	-0.92%	-1.33	KRW No Signal	
USDMXN	17.1355	17.2383	11.32	0.40	12.20	0.18	-0.22	MXN	-0.60%	1.66	MXN No Signal	
USDTRY	27.0243	27.2072	13.86	-1.59	28.06	-0.91	0.68	TRY	-0.67%	-2.35	TRY No Signal	
USDZAR	19.0115	18.7238	14.00	-0.79	15.51	-0.10	0.69	ZAR	1.52%	1.23	ZAR No Signal	
USDHUF	358.8	367.8	12.97	0.21	13.85	-0.03	-0.24	HUF	-2.49%	1.13	HUF No Signal	
USDPLN	4.3397	4.3116	10.89	-0.14	10.99	-0.01	0.13	PLN	0.65%	1.27	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: Bearish JPY and GBP positioning are becoming stretched vs USD; EUR broke out above upper Bollinger band vs GBP and CHF

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	1.0632	↓	Slightly Bullish	Downtrend	None	1.0611	1.0830
	USDJPY	148.66	↑	Bearish	Transition	None	144.93	151.95
	GBPUSD	1.2226	↓	Bullish	Downtrend	None	1.2148	1.2435
	AUDUSD	0.6427	↓	No Signal	Range	None	0.6170	0.6515
	USDCHEF	0.9101	↑	No Signal	Uptrend	Upper	0.9033	0.9162
	USDCAD	1.346	↔	No Signal	Downtrend	None	1.3446	1.3460
	NZDUSD	0.5966	↓	No Signal	Range	None	0.5904	0.6011
	USDSEK	11.031	↑	No Signal	Transition	None	10.9758	11.4967
	USDNOK	10.7498	↑	Slightly Bearish	Range	None	10.6872	11.2986
EUR	EURGBP	0.8697	↑	Bullish	Range	Upper	0.8604	0.8712
	EURJPY	158.06	↑	No Signal	Range	None	157.55	159.76
	EURAUD	1.6544	↔	No Signal	Range	None	1.6477	1.6691
	EURCHF	0.96767	↔	No Signal	Transition	Upper	0.9663	0.9688
	EURCAD	1.4311	↓	No Signal	Downtrend	None	1.4119	1.4353
	EURNZD	1.7822	↔	No Signal	Transition	Lower	1.7656	1.7847
	EURSEK	11.7284	↑	No Signal	Transition	Lower	11.6907	11.7850
	EURNOK	11.4297	↔	No Signal	Range	None	11.3972	11.5313
G10 Cross	AUDJPY	95.539	↑	Slightly Bearish	Range	None	94.39	97.68
	AUDNZD	1.0772	↔	No Signal	Range	Lower	1.0471	1.0823
	AUDCAD	0.865	↓	Slightly Bullish	Range	None	0.8599	0.8759
	NOKSEK	1.0261	↑	No Signal	Range	None	1.0151	1.0304
	CADJPY	110.452	↑	Slightly Bearish	Range	None	107.77	110.48
	GBPJPY	181.76	↔	No Signal	Range	None	180.18	183.28
	NZDJPY	88.69	↑	Slightly Bearish	Range	Upper	88.17	89.70
	GBPCHEF	1.1127	↓	Slightly Bullish	Downtrend	None	1.1000	1.1136
EM	USDMXN	17.237	↔	No Signal	Transition	None	17.1901	17.8802
	USDBRL	4.9399	↔	No Signal	Range	None	4.8881	5.0147
	USDZAR	18.7548	↑	Bullish	Range	None	18.6883	18.7643
	EURPLN	4.5898	↑	No Signal	Uptrend	None	4.5894	4.6483
	EURHUF	391.1	↑	Slightly Bearish	Uptrend	Upper	384.44	393.04
	USDKRW	1336.55	↑	No Signal	Range	None	1330.45	1357.37
	USDINR	83.1487	↑	Bearish	Range	None	82.67	83.29
	USDCNH	7.3118	↑	Slightly Bearish	Range	None	7.2596	7.3749

Data as of 09/25/23. 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 CARSmodel 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 is bullish CAD and NOK vs bearish GBP and CHF on rates divergence

CARS signals for a trending week (no macro shock)

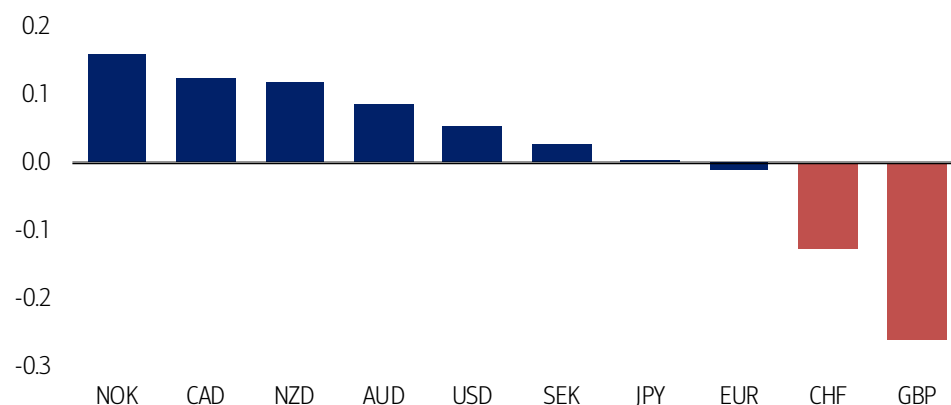
Currency	Bullish/Bearish	Equity	Rates	Commodity	Global regime	Values
EUR		4	8	5	Commodity z-score	-0.6
JPY		8	5	9	Performing factor	Rates
GBP	Bearish	2	10	8		
AUD		6	4	3		
CAD	Bullish	10	2	2	USD Equity	9
CHF	Bearish	3	9	7	USD Rates	6
NZD		1	3	6		
SEK		5	7	4		
NOK	Bullish	7	1	1		

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: CHF and GBP yields fell the most in G10 due to dovish central bank meetings last week

1-week global rate change



Source: BofA Global Research, Bloomberg

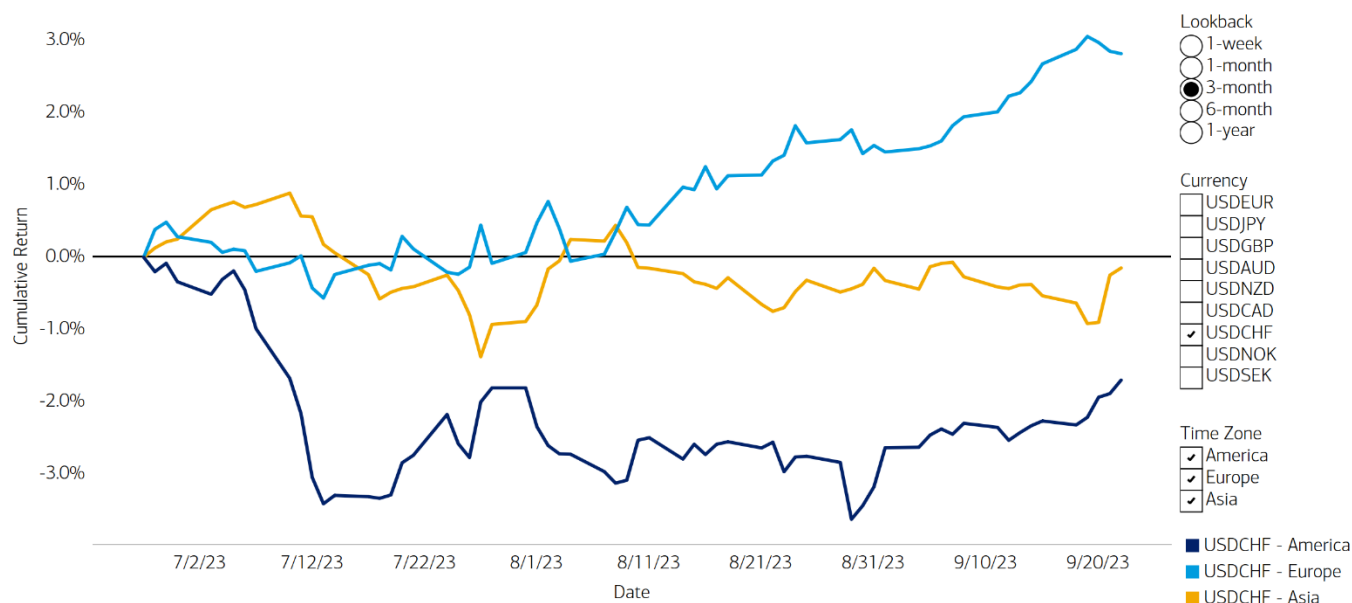
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Interactive Time Zone

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 (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: Investors across all 3 time zones turned bearish CHF after dovish SNB 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: Bullish USD flow during UK and US trading hours eased 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%	-0.5%	0.9%	-0.2%	0.2%	-0.1%	-0.3%	1-week
USDJPY	-0.6%	0.1%	-0.3%	0.5%	0.0%	-0.2%	0.2%	0.3%	1-month
USDGBP	0.0%	0.0%	-0.3%	0.8%	0.0%	0.9%	-0.1%	0.5%	3-month
USDAUD	-0.5%	-0.2%	-0.4%	1.2%	-0.1%	0.3%	-0.1%	-0.5%	6-month
USDNZD	-0.7%	-0.1%	-0.5%	1.0%	-0.5%	-0.5%	-0.1%	-0.6%	1-year
USDCAD	-0.3%	-0.3%	-0.1%	0.7%	0.0%	-0.3%	-0.1%	-0.2%	
USDCHF	0.3%	0.0%	-0.3%	0.7%	0.0%	0.8%	0.0%	0.2%	
USDNOK	-0.8%	-0.2%	-0.8%	1.4%	-0.1%	0.1%	-0.1%	0.0%	
USDSEK	0.4%	-0.4%	-1.0%	1.2%	0.1%	0.2%	0.0%	-1.0%	

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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