

## FX Quant Insight

## The bearish CHF train for 2024

## Key takeaways

- Quant signals are broadly bullish USD for now; we prefer to express any bullish USD view vs CHF.
- Trend-followers who follow systematic signals should stay bullish USD, but DXY 200d SMA and new high for SPX are headwinds.
- More bearish CHF conviction on option flow & rates; short CHF is consensus 2024 view but not fully reflected in positioning.

## FX Signal of the Week: Bullish USD/CHF at: 0.8689

## Exhibit 1: Bullish USD/CHF this week on option flow and CARS signals

Top signals from quant models

Section	Insight	Rationale
Option Flow	USD calls/CHF puts	Option flow moved broadly for USD calls and CHF puts last week.
Technical Matrix	Bullish USD	Positioning analysis shows several bullish continuation signals for USD-pairs.
CARS	Rates regime	Bullish CAD and JPY vs CHF and NZD on rates factor divergence.
Time Zone	European hour CHF supply	Europe-based investors are driving the current CHF selloff with follow-through from US and Asia-based investors

Source: BofA Global Research

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## Quant signals bullish USD for now

Our latest quant signals are bullish for the USD. Last week's option flow and skew move show demand for USD calls vs G10 majors. Positioning analysis has bullish continuation signals for several USD-pairs in both G10 (vs JPY) and EM (vs ZAR, HUF, KRW, and CNH) space. Last week, interest rate differentials also moved in favor of the USD vs G10 FX (ex-CAD, see Exhibit 7). US-based investors remain short USD year-to-date, but demand for the USD from Europe and Asia trading hours has been driving the USD higher.

## CHF may be the best short leg for any bullish USD view

Trend-followers who trade FX similarly to our quant framework may continue to buy the USD in the next few weeks ([Systematic Flows Monitor: 19 January 2024](#)), but rallies for both DXY and BBDXY indices have met strong resistance at the 200d SMA. Prolonged benign risk sentiment after the S&P 500 reached a new all-time high at end of last week could also pose some headwind for the USD to further rally, in our view. For now, we prefer to express any bullish USD view against CHF this week. Option flow shows demand for CHF puts against both the USD and EUR (Exhibit 2). CARS model is also bearish CHF in G10, given yields broadly rose by more for other currencies (Exhibit 6). We believe bearish CHF for 2024 is a consensus view ([Liquid Insight: 10 January 2024](#)) that has not been fully reflected in the positioning ([Liquid Cross Border Flows: 15 January 2024](#)) and price actions. Risk to our bullish USDCHF view this week may be a weaker the expected Q4 '23 US GDP, which could drive the USD broadly weaker.

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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

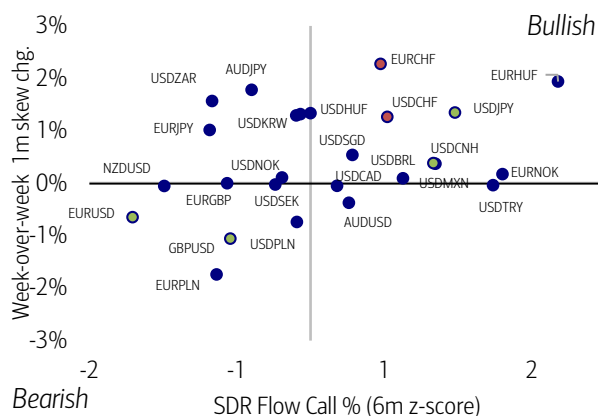
# Option Flow Signals

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: Options market moved for USD calls and CHF puts last week

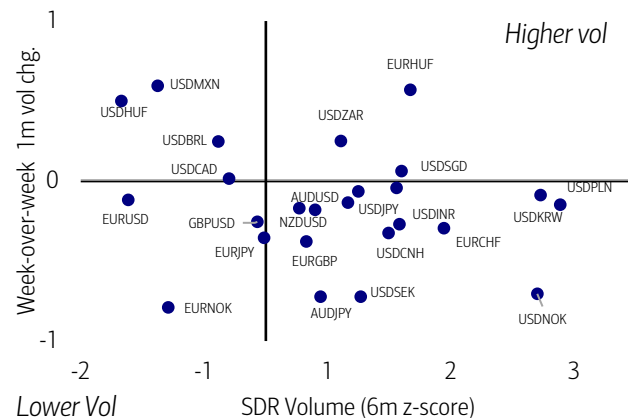
1m skew change vs call percentage z-score



Source: BofA Global Research, DTCC. Note: CNH flows are proxied by "CNY" flows in SDR.  
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## Exhibit 3: Implied vols declined for most currency pairs 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 (ex USDMXN) broadly fell despite broad-based USD spot rallies

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 USD	Signals
EURUSD	1.0950	1.0886	6.18	-0.12	6.85	0.21	0.33	EUR	-0.59%	-0.68	EUR No Signal
USDJPY	145.73	147.76	9.28	-0.14	9.64	0.22	0.35	JPY	-1.38%	-1.18	JPY No Signal
GBPUSD	1.2727	1.2720	6.86	-0.26	8.15	0.09	0.35	GBP	-0.06%	-1.15	GBP No Signal
USDCHF	0.8558	0.8682	6.91	-0.04	7.37	0.12	0.16	CHF	-1.44%	-1.24	CHF No Signal
AUDUSD	0.6660	0.6585	9.43	-0.18	9.95	0.11	0.29	AUD	-1.13%	-0.44	AUD No Signal
USDCAD	1.3428	1.3438	5.15	0.01	5.90	0.06	0.04	CAD	-0.07%	0.06	CAD No Signal
USDSEK	10.3215	10.4376	10.48	-0.72	10.91	0.00	0.72	SEK	-1.12%	-0.29	SEK No Signal
USDNOK	10.3481	10.5167	11.42	-0.71	12.09	0.02	0.73	NOK	-1.62%	-0.25	NOK No Signal
NZDUSD	0.6200	0.6111	9.60	-0.17	10.12	0.12	0.29	NZD	-1.45%	-0.12	NZD No Signal
USDSGD	1.3334	1.3416	4.18	0.06	4.62	0.05	-0.01	SGD	-0.61%	-0.52	SGD No Signal
USDKRW	1320.3	1338.8	8.90	-0.09	9.42	-0.04	0.05	KRW	-1.40%	-1.30	KRW No Signal
USDMXN	16.8821	17.0812	10.72	0.60	12.55	-0.04	-0.64	MXN	-1.17%	1.06	MXN No Signal
USDTRY	30.0827	30.2498	7.04	0.22	20.99	-0.21	-0.43	TRY	-0.55%	0.94	TRY No Signal
USDZAR	18.6752	19.1679	13.57	0.25	15.14	0.11	-0.14	ZAR	-2.60%	-1.39	ZAR No Signal
USDHUF	346.0	352.1	10.62	0.50	11.83	0.25	-0.25	HUF	-1.75%	-0.56	HUF No Signal
USDPLN	3.9892	4.0043	9.49	-0.15	10.28	-0.04	0.11	PLN	-0.38%	0.52	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 shows several bullish continuation signals for USD-pairs both in G10 and vs EM FX

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	1.0891	↔	No Signal	Range	None	1.0862	1.0922
	USDJPY	147.85	↑	Bullish	Uptrend	None	147.45	151.91
	GBPUSD	1.272	↑	Slightly Bearish	Range	None	1.2646	1.3142
	AUDUSD	0.6585	↔	No Signal	Downtrend	None	0.6581	0.6609
	USDCHE	0.8683	↓	No Signal	Uptrend	None	0.8662	0.8756
	USDCAD	1.3443	↓	No Signal	Uptrend	None	1.3401	1.3473
	NZDUSD	0.6112	↔	No Signal	Downtrend	None	0.6091	0.6156
	USDSEK	10.433	↔	No Signal	Uptrend	None	10.4268	10.5875
USDNOK	10.5115	↓	No Signal	Transition	None	10.3594	10.5387	
EUR	EURGBP	0.8562	↓	No Signal	Range	None	0.8493	0.8638
	EURJPY	161.02	↑	Bullish	Transition	None	159.24	164.30
	EURAUD	1.6539	↑	No Signal	Uptrend	None	1.6529	1.7065
	EURCHF	0.94569	↓	No Signal	Uptrend	None	0.9255	0.9472
	EURCAD	1.4641	↑	Bullish	Range	None	1.4635	1.4717
	EURNZD	1.782	↔	No Signal	Transition	None	1.7814	1.7831
	EURSEK	11.3628	↔	No Signal	Uptrend	None	11.2962	11.3730
EURNOK	11.4481	↓	No Signal	Range	None	11.3716	11.5233	
G10 Cross	AUDJPY	97.362	↑	Bullish	Range	None	96.93	98.62
	AUDNZD	1.0775	↓	Slightly Bullish	Range	None	1.0762	1.0776
	AUDCAD	0.8853	↓	No Signal	Downtrend	None	0.8842	0.8869
	NOKSEK	0.9925	↔	No Signal	Uptrend	None	0.9879	0.9961
	CADJPY	109.98	↑	Bullish	Range	None	108.71	111.17
	GBPJPY	188.06	↑	Bullish	Transition	None	184.36	188.66
	NZDJPY	90.36	↑	Bullish	Range	None	89.92	91.52
GBPCHF	1.1045	↔	No Signal	Transition	None	1.1014	1.1072	
EM	USDMXN	17.0811	↓	No Signal	Transition	None	16.6262	17.1461
	USDBRL	4.9555	↔	No Signal	Range	None	4.9435	4.9761
	USDZAR	19.1725	↑	Bullish	Transition	Upper	18.7952	19.9204
	EURPLN	4.3606	↔	No Signal	Transition	None	4.3481	4.4436
	EURHUF	383	↑	Bullish	Range	None	382.70	385.02
	USDKRW	1338.80	↑	Bullish	Range	None	1323.09	1363.55
	USDINR	83.0675	↔	No Signal	Range	None	82.74	83.18
	USDCNH	7.2031	↑	Bullish	Transition	None	7.1872	7.2408

Data as of 01/22/24. 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: Model is bullish CAD and JPY vs CHF and NZD on rates factor

CARS signals for a trending week (no macro shock)

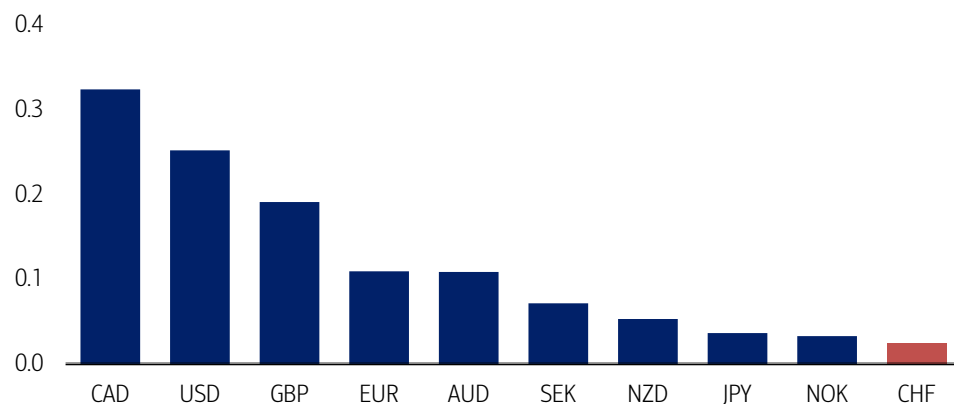
Currency	Bullish/Bearish	Equity	Rates	Commodity	Global regime	Values
EUR		4	6	4	Commodity z-score	-0.5
JPY	Bullish	1	2	9	Performing factor	Rates
GBP		10	4	6		
AUD		5	5	3		
CAD	Bullish	8	1	2	USD Equity	2
CHF	Bearish	3	10	5	USD Rates	3
NZD	Bearish	9	9	8		
SEK		6	7	7		
NOK		7	8	1		

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: 2y yields broadly increased but by the least amount for CHF last week

2y global yield change



Source: BofA Global Research, Bloomberg

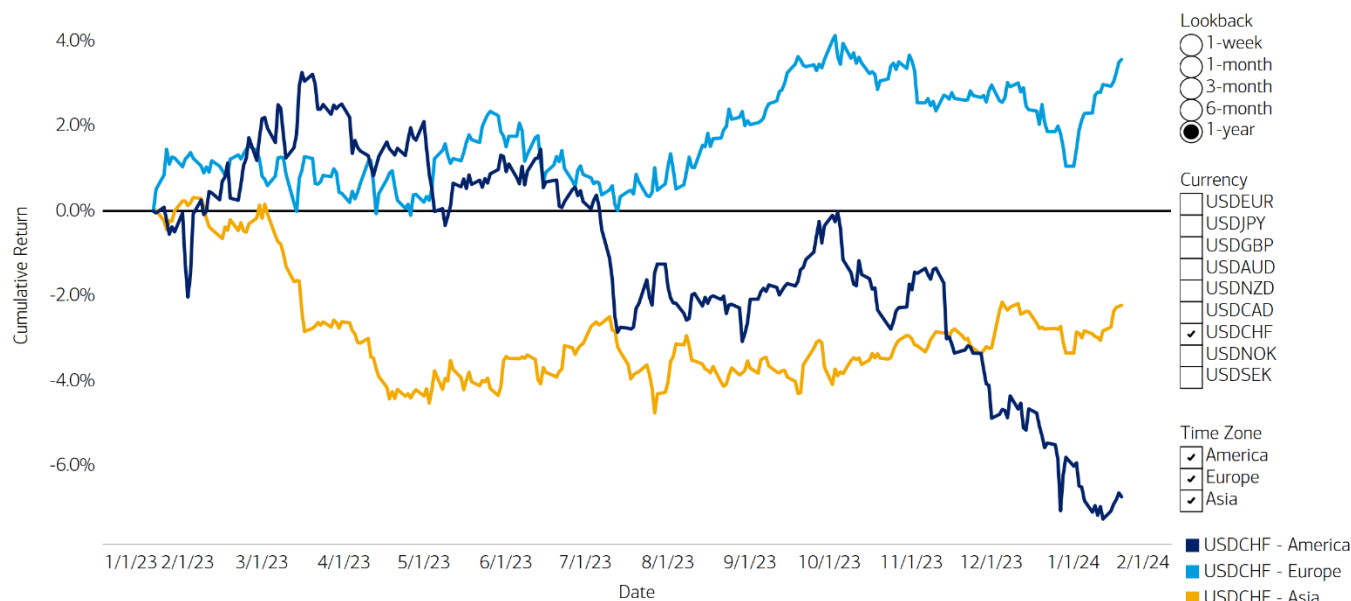
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# Interactive Time Zone

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: Europe-based investors are currently driving the CHF selloff, with follow-through from US and Asia-based investors

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 Europe and Asia-trading hours last week, with modest weakness in US hours

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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## Options Risk Statement

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