

## FX Quant Insight

## Tactically bullish USD/CAD

## Key takeaways

- Tactically bullish USD/CAD this week on bearish CAD rates signals and option flow.
- We still see current USD rally as short-term retracement within a broader USD downtrend.
- Current USD rally is driven largely by demand from Asia-trading hours.

## FX Trade of the week: Buy USD/CAD: 1.3253

**Exhibit 1: We are tactically bearish CAD this week on rates and option flow signals**

Top signals from quant models

Section	Insight	Rationale
Option Flow	Bullish JPY; bullish CAD	Option flow in JPY calls vs EUR and AUD; USD calls vs CAD last week.
Technical Matrix	Bearish JPY	Uptrend continuation signals for long EURJPY and GBPJPY positioning.
CARS	Rates regime	Regime switched from equity to rates; bullish EUR and NOK, bearish JPY and CAD last week.
Time Zone	Asia hour USD demand	USD rally last week led by demand from Asia trading hours.

Source: BofA Global Research

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## CAD to weaken on option flow and rates signals

We have had one of the more bullish CAD forecasts on the street since end of last year (see [CAD Year Ahead 04 January 2023](#) and [CAD mid-year review, 15 June 2023](#)), but we like to briefly shift to a tactically bearish CAD view after last week's soft Canada inflation print ([Canada Watch: 27 June 2023](#)). We still expect USD/CAD to grind lower in the medium-term; we currently have a Q3 forecast of 1.32 for this pair. Bullish CAD momentum from June is fading as option flow started to move for USD/CAD calls last week (Exhibit 4). With CA core inflation surprising to the downside, CA yields also start to fall (Exhibit 2). The rates market currently still prices around 50% chance of a Bank of Canada (BoC) rate hike this month but our economists' view is for a rate hold decision. Any further pricing-out of rate hike expectations heading into next week's BoC meeting should lead to weaker CAD, in our view, as short CAD positioning is no longer crowded (Exhibit 3). The risk to our tactical bullish USD/CAD view is a stronger than expected Canadian jobs data this Friday.

## Bullish USD signals for the short-term

Quant signals started to turn more bullish USD last week ([FX Quant Insight: 26 June 2023](#)), and for now, we still see the current USD rally as more of a short-term retracement within a broader USD downtrend. Short-dated skews have not materially moved for USD calls except vs CAD last week (Exhibit 5). The time-zone analysis shows demand for USD during Asia trading hours has been driving the current USD rally (Exhibit 10). The USD was in fact weaker during US trading hours last week (Exhibit 11). A more prolonged USD uptrend would require more interest to own the USD from US-based investors, in our view.

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**Refer to important disclosures on page 8 to 9. Analyst Certification on page 7.** 12575104

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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

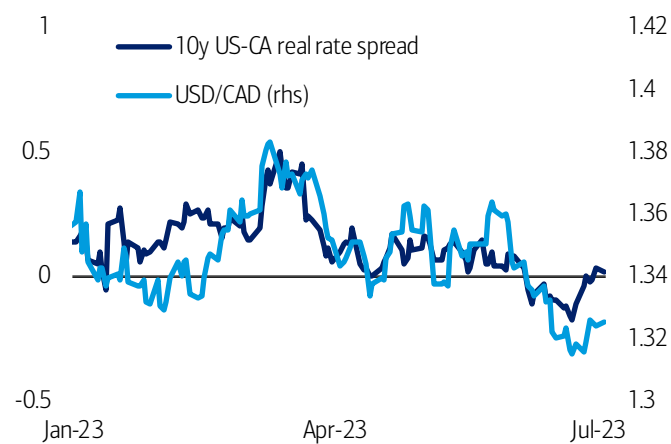
ADX: Average Directional Movement Index

DMI: Directional Movement Index

CFTC: Commodity Futures Trading Commission

**Exhibit 2: US-CA rate spread bouncing back above zero should support USD/CAD**

US-CA 10y real rate spread vs USD/CAD

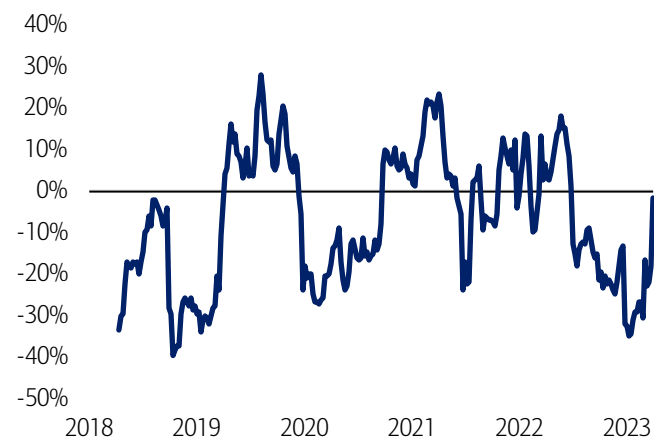


Source: BofA Global Research, Bloomberg

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**Exhibit 3: Short CAD positioning is no longer crowded**

CFTC net long CAD positioning



Source: BofA Global Research, Bloomberg

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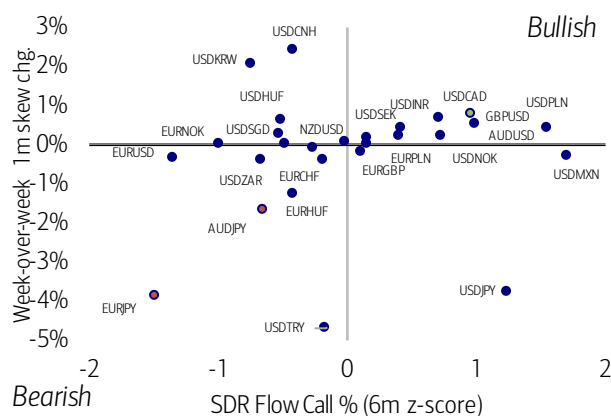
# Option Flow Signals

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 4: Option flow for JPY calls vs EUR and AUD last week; bullish USDCAD

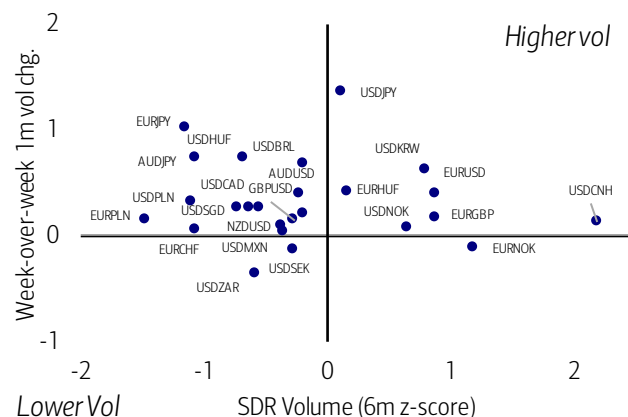
1m skew change vs call percentage z-score



Source: BofA Global Research, DTCC. Note: CNH flows are proxied by "CNY" flows in SDR  
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## Exhibit 5: Level of short-dated vols broadly increased 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 6: Last week's USD spot rally did not lead to material skew move for USD calls

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	1.0906	1.0896	6.69	0.40	6.77	0.02	-0.39	EUR	-0.09%	0.01	EUR No Signal	
USDJPY	143.51	144.90	10.57	1.36	9.64	0.13	-1.24	JPY	-0.96%	2.74	JPY No Signal	
GBPUSD	1.2713	1.2665	7.94	0.15	8.74	-0.06	-0.21	GBP	-0.38%	0.72	GBP No Signal	
USDCHF	0.8957	0.8990	6.71	0.21	7.19	0.12	-0.09	CHF	-0.37%	-0.04	CHF No Signal	
AUDUSD	0.6675	0.6648	9.95	0.39	9.91	0.05	-0.34	AUD	-0.41%	1.10	AUD No Signal	
USDCAD	1.3155	1.3250	6.09	0.27	6.27	0.00	-0.27	CAD	-0.72%	-0.54	CAD No Signal	
USDSEK	10.7369	10.8636	10.80	-0.13	10.78	-0.09	0.04	SEK	-1.17%	-0.29	SEK No Signal	
USDNOK	10.7250	10.7494	13.17	0.08	12.74	-0.03	-0.11	NOK	-0.23%	-0.17	NOK No Signal	
NZDUSD	0.6164	0.6138	9.92	0.26	10.00	0.07	-0.19	NZD	-0.42%	0.43	NZD No Signal	
USDSGD	1.3535	1.3524	4.42	0.27	4.70	0.02	-0.25	SGD	0.08%	0.22	SGD No Signal	
USDKRW	1306.0	1308.1	9.22	0.63	9.62	0.32	-0.31	KRW	-0.16%	-1.85	KRW No Signal	
USDMXN	17.1376	17.1304	9.16	0.04	11.84	0.05	0.01	MXN	0.04%	0.37	MXN No Signal	
USDTRY	25.9386	26.0746	27.33	-4.57	32.46	-2.07	2.49	TRY	-0.52%	-1.75	TRY No Signal	
USDZAR	18.6507	18.7758	13.87	-0.36	15.19	-0.11	0.25	ZAR	-0.67%	0.09	ZAR No Signal	
USDHUF	338.5	343.8	11.86	0.74	13.36	0.16	-0.58	HUF	-1.54%	0.58	HUF No Signal	
USDPLN	4.0706	4.0707	10.29	0.32	10.86	0.00	-0.32	PLN	0.00%	0.17	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 7: Uptrend continuation signals for EURJPY and GBPJPY from both positioning and ADX indicators

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	1.0896	↑	No Signal	Range	None	1.0868
	USDJPY	144.83	↑	No Signal	Uptrend	None	142.51
	GBPUSD	1.2671	↑	No Signal	Range	None	1.2553
	AUDUSD	0.6648	↓	No Signal	Range	None	0.6547
	USDCHEF	0.8995	↓	No Signal	Range	None	0.8983
	USDCAD	1.3256	↓	Slightly Bullish	Transition	None	1.3205
	NZDUSD	0.6134	↓	No Signal	Range	None	0.6025
	USDSEK	10.8638	↑	Slightly Bearish	Transition	None	10.7483
EUR	USDNOK	10.7319	↔	No Signal	Range	None	10.6227
	EURGBP	0.8600	↓	No Signal	Range	None	0.8340
	EURJPY	157.8	↑	Bullish	Uptrend	None	151.07
	EURAUD	1.6390	↑	No Signal	Uptrend	None	1.6290
	EURCHF	0.98009	↔	No Signal	Range	None	0.9763
	EURCAD	1.4444	↔	No Signal	Transition	None	1.4315
	EURNZD	1.7763	↑	No Signal	Range	None	1.7616
	EURSEK	11.8374	↑	No Signal	Uptrend	None	11.5166
G10 Cross	EURNOK	11.6935	↑	Bullish	Range	None	11.4952
	AUDJPY	96.279	↑	Slightly Bearish	Uptrend	None	93.81
	AUDNZD	1.0837	↔	No Signal	Transition	None	1.0815
	AUDCAD	0.8812	↓	No Signal	Downtrend	None	0.8599
	NOKSEK	1.0122	↑	No Signal	Transition	None	1.0081
	CADJPY	109.256	↑	No Signal	Uptrend	None	104.31
	GBPJPY	183.51	↑	Bullish	Uptrend	None	174.51
	NZDJPY	88.84	↑	No Signal	Transition	None	88.17
EM	GBPCHF	1.1397	↑	No Signal	Transition	None	1.1276
	USDMXN	17.114	↓	Slightly Bullish	Downtrend	None	17.0249
	USDBRL	4.7677	↓	No Signal	Transition	None	4.7513
	USDZAR	18.7597	↑	No Signal	Transition	None	18.5355
	EURPLN	4.44	↓	No Signal	Range	None	4.4195
	EURHUF	375.31	↓	No Signal	Range	Upper	371.65
	USDKRW	1308.05	↓	No Signal	Range	None	1303.53
	USDINR	81.9563	↓	No Signal	Transition	None	81.17
	USDCNH	7.264	↑	Slightly Bearish	Uptrend	None	7.1101

Data as of 07/03/23. 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 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.

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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 8: CARS switched from equity to rates regime; bullish EUR and NOK, bearish JPY and CAD on diverging rates factor z-scores

CARS signals for a trending week (no macro shock)

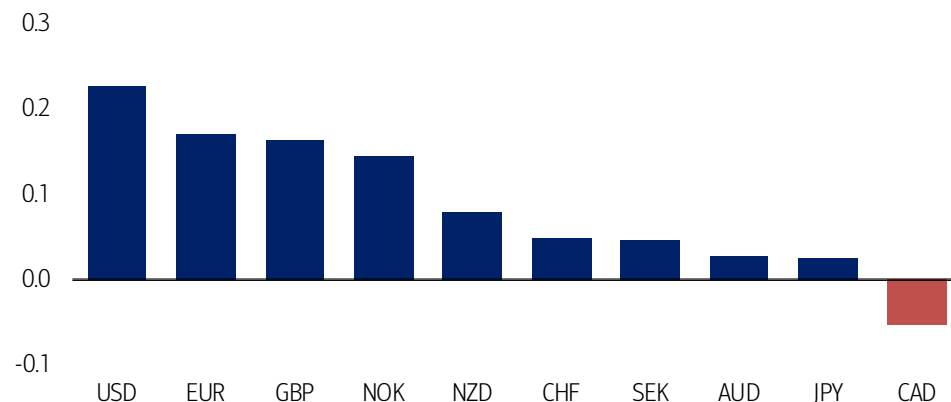
Currency	Bullish/Bearish	Equity	Rates	Commodity	Global regime	Values
EUR	Bullish	7	1	6	Commodity z-score Performing factor	-0.3
JPY	Bearish	3	9	9		Rates
GBP		9	3	4		
AUD		4	8	3		
CAD	Bearish	2	10	2	USD Equity	6
CHF		10	5	7	USD Rates	4
NZD		5	7	5		
SEK		8	6	8		
NOK	Bullish	1	2	1		

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 9: CAD yield declined last week as investors pared back pricing for July BoC rate hike

1-week global rate change



Source: BofA Global Research, Bloomberg

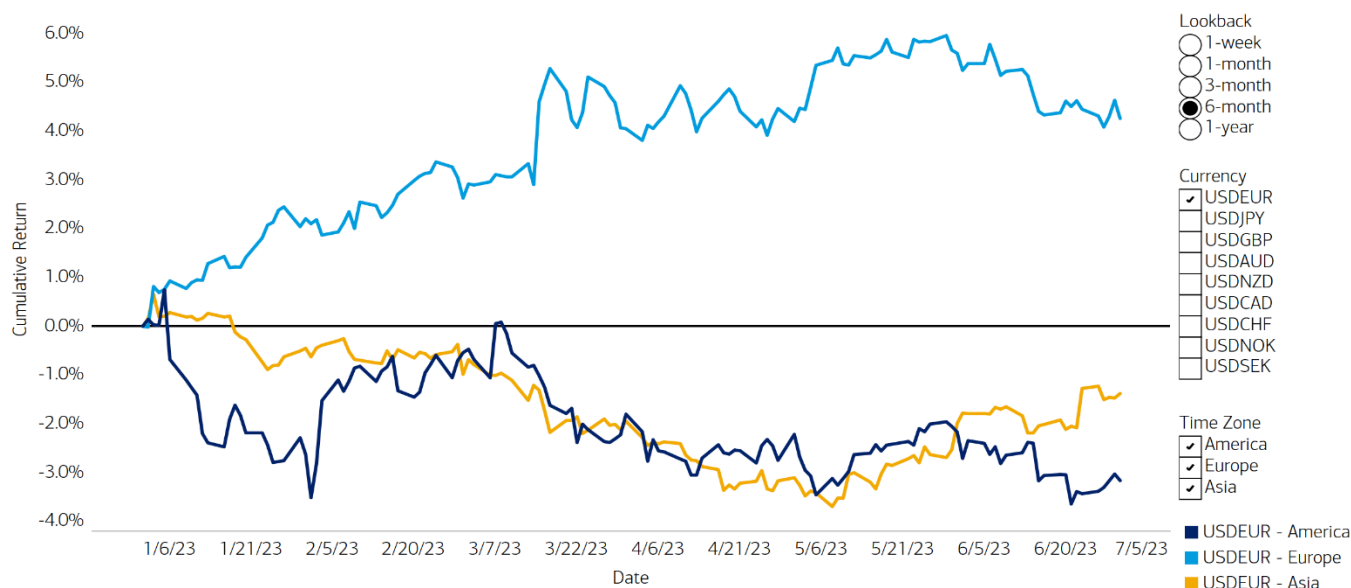
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## Interactive Time Zone

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 10: Asia-based investors pared back short USD positions, driving latest USD rally

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 11: USD was broadly weaker in US trading hours but higher in 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	-0.2%	-0.1%	0.3%	0.0%	0.1%	0.4%	0.1%	-0.3%	1-week
USDJPY	-0.2%	0.7%	0.1%	0.1%	-0.1%	0.9%	0.2%	-0.2%	1-month
USDGBP	0.4%	0.3%	-0.5%	0.3%	0.1%	0.9%	0.1%	-0.5%	3-month
USDAUD	0.3%	0.0%	-0.3%	0.5%	0.0%	0.8%	-0.4%	0.1%	6-month
USDNZD	0.3%	0.0%	-0.6%	0.3%	0.4%	1.1%	-0.4%	0.3%	1-year
USDCAD	0.4%	0.3%	-0.4%	0.1%	0.1%	0.6%	0.1%	-0.1%	
USDCHE	-0.2%	0.0%	-0.2%	0.2%	0.1%	0.3%	0.1%	-0.1%	
USDNOK	-0.5%	0.4%	-0.2%	0.3%	0.2%	-0.2%	0.0%	-0.9%	
USDSEK	0.4%	0.8%	-0.5%	0.2%	0.2%	1.4%	0.2%	-0.4%	

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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