

The EM Asia FX Strategist

Yielding to the dollar

Summary of FX views

CNY/CNH (bearish): We revise our forecasts: end-4Q23 USD/CNY to 7.5 and end-1Q 2024 to 7.70. Drivers: Diverging yield and growth differentials, unbalanced policy.

HKD (neutral): HKD funding will stay tight, and we expect the 1-month HIBOR fixing to stay close to 5% as settlement for HKD remains structurally high.

INR (neutral): Neutral on stalling portfolio inflows and elevated REER levels. Low carry against risk of spot depreciation. Revise end-2023 forecast to 84/USD.

IDR (neutral): Narrow interest-rate differentials and political uncertainty weighing on hedging behavior. Revise end-2023 forecast to 16,000/USD.

KRW (neutral): The improving export outlook but weak equity flow presents a mixed profile for USDKRW. Revise our 4Q23 USDKRW forecast higher due to weaker CNH.

MYR (bearish): Bearish outlook on correlation to China growth weakness, negative carry and BNM's low net reserves buffer. Revise end-2023 forecast to 4.90/USD.

PHP (bearish): Likely to unwind recent NEER appreciation during offshore issuance. Turn bearish on still wide twin deficits and low carry. Revise end-23 forecast to 58/USD.

SGD (neutral): Neutral on risk of correction in NEER back to around 1% above mid due to increasing growth concerns. CNY weakness may also limit SGD appreciation.

TWD (bearish): USDTWD moved higher in response to equity outflow and strong demand for bond ETF. We like top-side skews in USDTWD in 4Q23.

THB (neutral): Equity outflows continued despite fiscal stimulus. Tourism seasonality in 4Q but negative carry and strong USD weighs. Revise end-2023 forecast to 37/USD.

VND (neutral): Monetary policy easing and property/credit issues remain negative for VND. But macroeconomic and trade stabilization are offsetting this pressure.

Exhibit 1: Asia FX forecasts for next 4 quarters

Bearish CNY, MYR, PHP & TWD; Neutral HKD, INR, IDR, KRW, SGD, THB & VND

Currency	View/bias	Spot	4Q '23	1Q '24	2Q '24	3Q '24
USD/CNY	Bearish	7.31	7.5	7.7	7.6	7.4
USD/HKD	Neutral	7.82	7.83	7.83	7.8	7.8
USD/INR	Neutral	83.1	84	84	85	85.5
USD/IDR	Neutral	15868	16000	16200	16300	16200
USD/KRW	Neutral	1348	1375	1380	1360	1340
USD/MYR	Bearish	4.78	4.9	5	5	4.9
USD/PHP	Bearish	56.79	58	59	59	58.5
USD/SGD	Neutral	1.37	1.38	1.38	1.35	1.31
USD/TWD	Bearish	32.35	32.7	33.0	32.8	32.7
USD/THB	Neutral	36.16	37	38	39	38
USD/VND	Neutral	24571	24800	25000	25000	24800

Source: BofA Global Research estimates

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Refer to important disclosures on page 27 to 29. Analyst Certification on page 26. 12614076

Timestamp: 25 October 2023 05:00PM EDT

26 October 2023

GEM FI & FX Strategy
EM Asia

Table of Contents

China	2
Hong Kong	5
India	7
Indonesia	9
Korea	11
Malaysia	13
The Philippines	15
Singapore	17
Taiwan	19
Thailand	21
Vietnam	23
FX Models	24
Forecasts	24
Acronyms:	25

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China

View: Revise year-end USD/CNY to 7.50

The rift between US vs China yields and growth dynamics continues to widen, prompting us to revise our year-end USD/CNY target to 7.50 from 7.20 previously. China's central bank continues to stabilize CNY with strong USD/CNY fixings. However, the macro policy posture is still lagging the needs of the economy and the FX/monetary policy stance is tightening financial conditions. Tighter front-end liquidity and an appreciating nominal traded weighted exchange rate weighs negatively on asset prices, especially housing and equity markets. Failure to reflate in turn exerts further pressure on capital outflows. Recent fiscal stimulus increase (3.8% deficit) does not alter our GDP forecasts, but potential for another >3% deficit announcement in March '24, favors CNY appreciation from 2Q onwards.

Macro outlook: Upside risks to USD/CNY to 7.20 end-4Q forecast

3Q GDP growth came in above estimates at 4.9% yoy. Growth momentum improved sequentially (1.3% qoq, vs a revised 0.5% in 2Q). Domestic demand has bottomed out but the economy is still not back on a firm footing. Policy easing is likely to continue.

Valuation: FX COMPASS model indicates 7.09, BEER suggests 5.7

Our COMPASS model (2-3 years) is based on the estimated fair-value exchange rate consistent with an equilibrium current account. This suggests USD/CNY around 7.09, which is 3% below current spot. Our BEER model, 2Q-3Q ahead forecasting model, implies a fair value of 5.7, suggesting CNY is significantly undervalued. The divergence in valuations relates to a larger weight placed on terms of trade for the CNY BEER model.

Positioning: real money investors are bearish onshore CNY positions at -49 (-50 being maximum bearish, underweight), while hedge funds are at -7. Offshore CNH positioning is also bearish with hedge funds short at -4, while real money is reasonably long at +30 (+50 is maximum bullish) as a means of proxying onshore exposure – see [Liquid Cross Border Flows: Yielding to official pressure 23 October 2023](#)

Risk events: State leaders, regulators and top bankers will gather at the closed-door national financial work conference in Beijing on Oct. 30-31. Politburo policy statement/review Oct/Nov and December China Working Economic Committee meeting.

Corporate hedging: We recommend tactically hedging against 2H CNY weakness given the cheap hedging cost.

Rates: CGB 2s10s spread has reached the lowest level since 4Q20 due to elevated bonds supply and tight funding. Looser liquidity is a precondition for curve to re-steepen.

Exhibit 2: USD/CNY forecasts vs forwards

We expect USD/CNY at 7.50 by end-4Q23

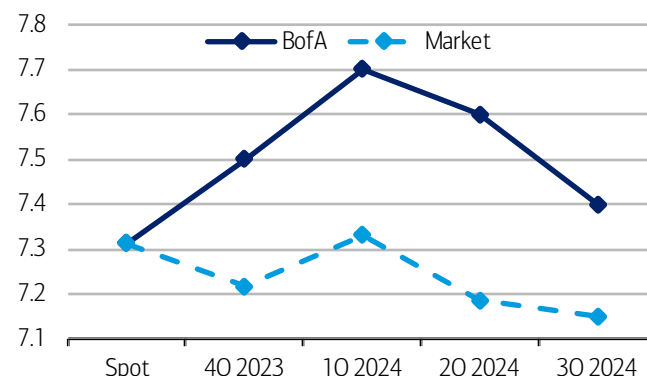
Spot	current	chg (diff)	Forward	
	7.31	+0.01		
Period	current	chg (diff)	current	chg (diff)
4Q 2023	7.50	-0.30	7.22	-0.043
1Q 2024	7.70	-0.60	7.33	+0.120
2Q 2024	7.60	-0.60	7.18	+0.015
3Q 2024	7.40	-0.60	7.15	+0.020

Source: BofA Global Research, Bloomberg

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Exhibit 3: USD/CNY forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

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Cross-currency basis USD/CNY

Exhibit 4: USD/CNY cross-currency basis

1y xccy basis at -0.41%

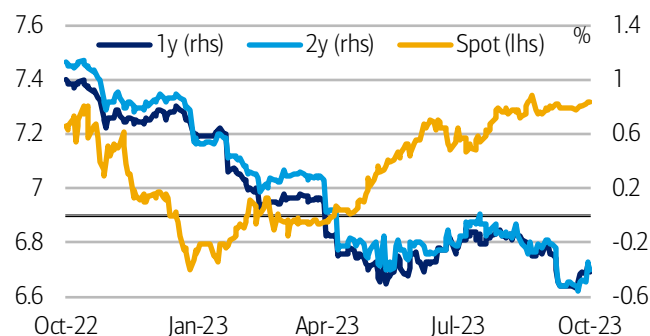
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1y	-0.41	0.01	-0.23	-1.38	-0.55		1.00	-0.09	0.10	0.70	-1.07	-0.83
2y	-0.39	0.10	-0.23	-1.49	-0.56		1.15	-0.02	0.13	0.93	-1.01	-0.92
5y	-0.26	0.14	-0.61	-1.61	-0.40		1.43	0.26	0.14	1.03	-0.89	-1.19

Note: current value 1y average. The z-score measures the distance between the current value and the mean in standard deviation units. Source: BofA Global Research, Bloomberg

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Exhibit 5: Short-term basis swaps vs USD/CNY spot

1y CNY basis flips negative as CNY moves above 7.00 against USD

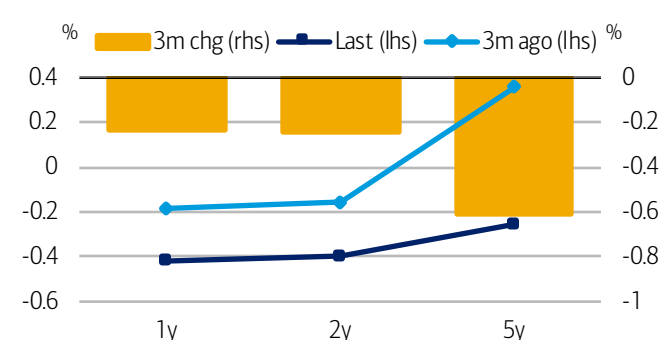


Source: BofA Global Research, Bloomberg

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Exhibit 6: Term structure of basis swap

Basis curve shifts lower and negative at the 5yr point



Source: BofA Global Research, Bloomberg

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Volatility surface: USD/CNY

Exhibit 7: Current implied volatilities

Demand for OTM USD calls remains at significant premium to puts

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	5.36	4.91	4.90	5.41	6.39
3m	5.85	5.53	5.68	6.41	7.66
6m	5.98	5.74	5.99	6.89	8.36
1y	6.16	5.88	6.17	7.23	8.99

Source: BofA Global Research

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Exhibit 8: 3m z-scores of implied volatilities

1Y implied vols remain expensive relative to 3M and 6M

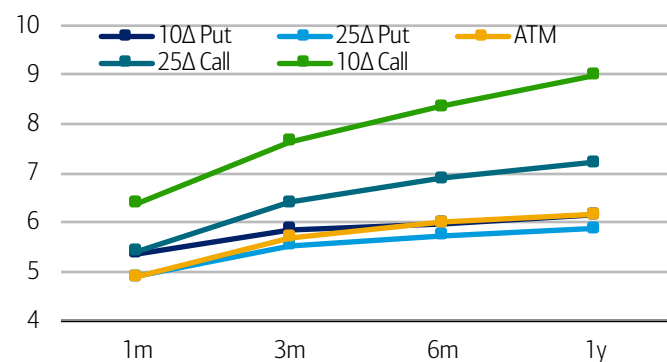
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	-0.510	-0.557	-0.215	0.025	0.100
3m	-0.138	-0.136	-0.044	0.047	0.099
6m	0.287	0.275	0.235	0.207	0.193
1y	0.382	0.657	0.511	0.302	0.238

Source: BofA Global Research

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Exhibit 9: Term structures of implied volatilities

Market is still skewed towards CNY 1yr depreciation tail risks

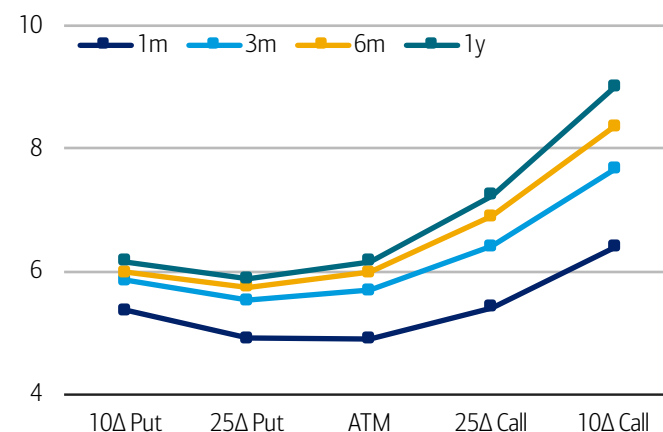


Source: BofA Global Research

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Exhibit 10: Implied volatility smiles

Implied vol smiles show increasing risk premium for 1Y and 6M USD calls



Source: BofA Global Research

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Cross-currency basis USD/CNH

Exhibit 11: USD/CNH cross-currency basis

1y xccy basis at 0.91%

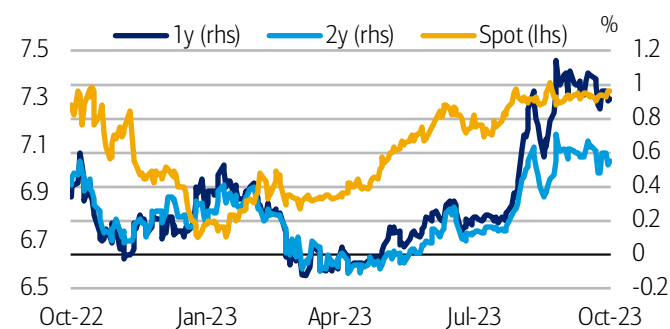
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1y	0.91	0.06	0.69	0.50	-0.13		1.14	0.30	0.13	0.96	0.66	1.93
2y	0.55	0.07	0.40	0.10	-0.11		0.71	0.22	0.10	0.72	0.64	1.64
5y	0.06	0.11	0.20	0.20	-0.46		0.14	-0.21	0.09	0.68	0.80	1.80
10y	-0.22	0.13	0.18	0.43	-0.99		-0.16	-0.60	0.13	0.90	1.04	1.68

Note: current value 1y average. The z-score measures the distance between the current value and the mean in standard deviation units. Source: BofA Global Research, Bloomberg

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Exhibit 12: Short-term basis swaps vs USD/CNH spot

1y and 2y basis is showing pressure from CNH liquidity squeeze

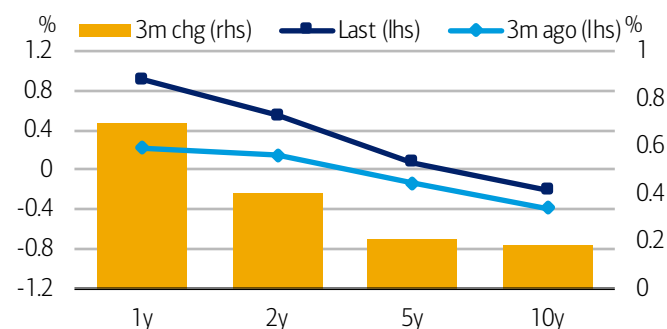


Source: BofA Global Research, Bloomberg

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Exhibit 13: Term structure of basis swaps

Basis swaps curve is inverted and squeezed higher in 1yr and 2y



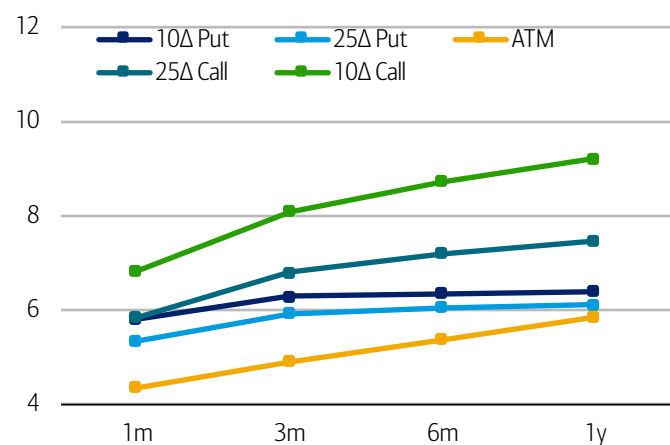
Source: BofA Global Research, Bloomberg

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Volatility surface: USD/CNH

Exhibit 14: Term structures of implied volatilities

ATM curve is very flat

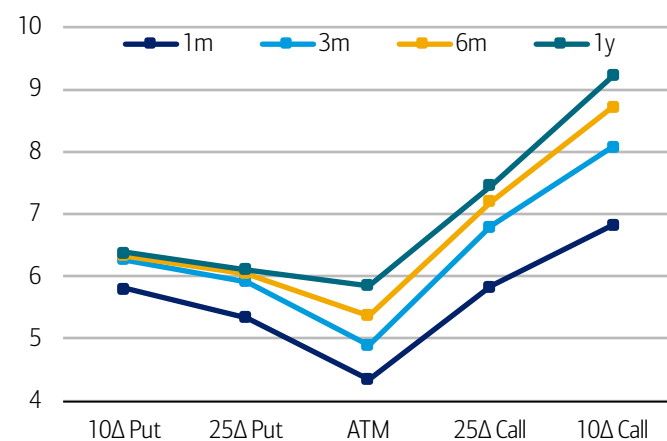


Source: BofA Global Research

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Exhibit 15: Implied volatility smiles

Implied vol smiles are skewed to CNH depreciation



Source: BofA Global Research

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Hong Kong

Macro outlook: We like to pay HIBOR on dips

After falling to below 2% in late-August, the overnight HIBOR fixing went back above 5% in late-September, reflecting the quarter-end tightness to HKD funding and the volatility of HKD funding in an environment of the aggregate balance being constrained.

As explained in [Asia FI & FX Strategy Viewpoint: Elasticity and discipline: the intra-day fluctuations in aggregate balance 07 August 2023](#), despite the daily settlement needs of the HKD system fluctuating, we see the April drain in the aggregate balance to have structurally reduced the supply of HKD liquidity and have pushed up the cost of HKD funding at all levels. As such, whenever there is a large decline in HIBOR, we like to pay on dip as the tight funding condition is skewed towards blow-up in HIBOR. Our current preferred expression of this view by paying 3x6 HKD FX forward points (see: [Asia Cross-asset Strategy: Consequences of higher-for-longer for Hong Kong 17 August 2023](#)).

Positioning: Small negative bias forward points in US\$HKD remain negative giving the market a net incentive to buy US\$. However, given the realized volatility of front-end HIBOR, there is no strong incentive to hold on to long US\$ positions, making it hard to hit the 7.85 ceiling again.

Valuation: Explicitly pegged to USD, making relative valuations vs USD irrelevant.

Risk events: November 22, 2023 is the launch of the HKEX new FINI system and can structurally reduce the demand for HKD around the time of IPOs (see: [Asia FI & FX Strategy Viewpoint: FINI: A material efficiency gain in the use of HKD liquidity 18 October 2023](#))

Corporate hedging: We believe offshore investors (ie, not Hong Kong-based corporates) should hedge against short-term FX volatility for US\$HKD due to risks from equity portfolio outflows and increased USD buying as front-end differentials widen. The widening of the FX forward points will increase the positive carry return for those seeking to hedge HKD risk.

Rates: 10-year Hong Kong IRS is almost at par with 10-year US SOFR swap. Given the difference in floating lag (HIBOR versus SOFR) and floating leg tenors (3 months versus overnight), we think long-dated Hong Kong IRS should be at a discount versus its US equivalent.

Exhibit 16: USD/HKD forecasts vs forwards

We expect USD/HKD at 7.83 by end-4Q23

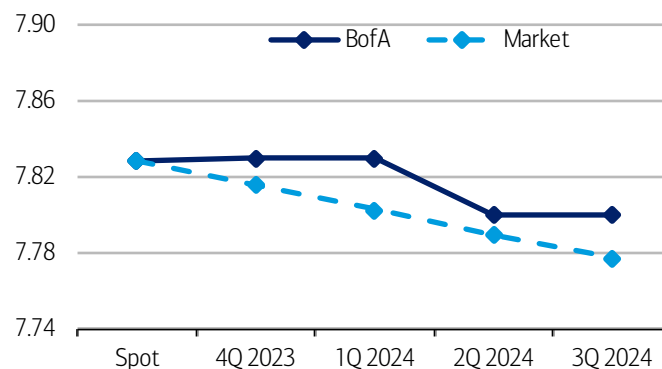
Spot	current	chg (diff)	Forward	chg (diff)
	7.83	+0.01		
Period	Forecast		Forward	
	current	chg (diff)	current	chg (diff)
4Q 2023	7.830	+0.02	7.816	+0.0089
1Q 2024	7.830	-	7.803	+0.0089
2Q 2024	7.800	+0.03	7.790	+0.0086
3Q 2024	7.800	+0.03	7.778	+0.0057

Source: BofA Global Research, Bloomberg

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Exhibit 17: USD/HKD forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

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Cross-currency basis USD/HKD

Exhibit 18: USD/HKD cross-currency basis

1y xccy basis at -32bp

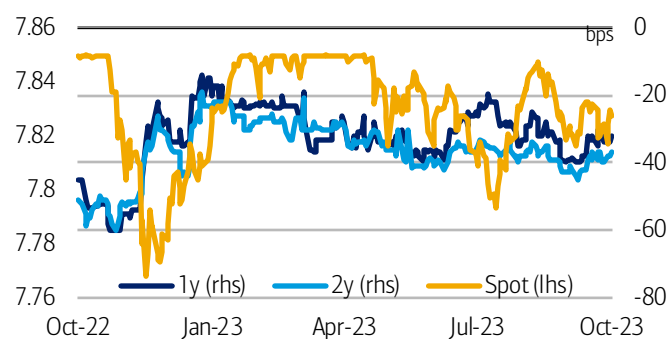
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1y	-32.00	0.00	-6.00	13.00	-60.00		-14.00	-32.24	5.96	42.94	-0.09	0.03
2y	-37.00	3.00	-2.00	14.50	-60.00		-19.00	-36.36	5.47	39.42	0.43	-0.08
5y	-57.00	0.00	-9.00	13.00	-78.00		-24.50	-44.47	5.31	38.27	-0.42	-1.08
10y	-68.00	-1.00	-6.00	11.00	-94.00		-34.00	-57.16	5.99	43.17	-0.54	-0.99

Note: current value 1y average. The z-score measures the distance between the current value and the mean in standard deviation units. Source: BofA Global Research, Bloomberg

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Exhibit 19: Short-term basis swaps vs USD/HKD spot

1y basis swaps is currently stable

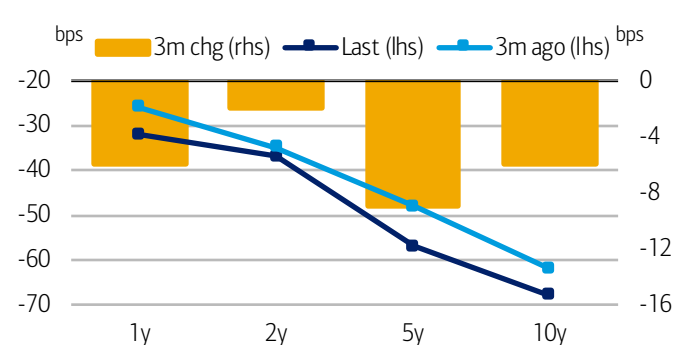


Source: BofA Global Research, Bloomberg

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Exhibit 20: Term structure of basis swaps

5-year basis swap curve recently widened vs 3 months ago



Source: BofA Global Research, Bloomberg

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Volatility surface: USD/HKD

Exhibit 21: Current implied volatilities

Skew is towards puts in USDHKD

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	1.94	1.37	1.04	0.95	0.89
3m	1.61	1.21	0.98	0.91	1.01
6m	1.95	1.23	0.97	0.93	1.26
1y	2.66	1.45	1.12	1.15	1.89

Source: BofA Global Research

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Exhibit 22: 3m z-scores of implied volatilities

Changes across time

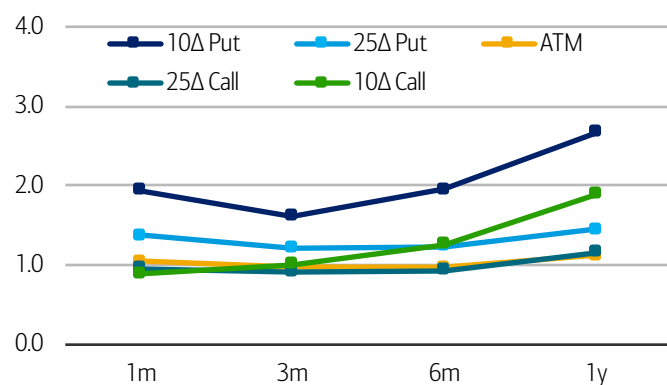
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	0.46	0.13	-0.06	-0.21	-0.37
3m	-0.36	-0.34	-0.33	-0.31	-0.29
6m	0.74	0.32	-0.29	-0.93	-1.32
1y	0.88	0.62	0.36	-0.04	-0.98

Source: BofA Global Research

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Exhibit 23: Term structures of implied volatilities

Skews for 10-delta puts remain high

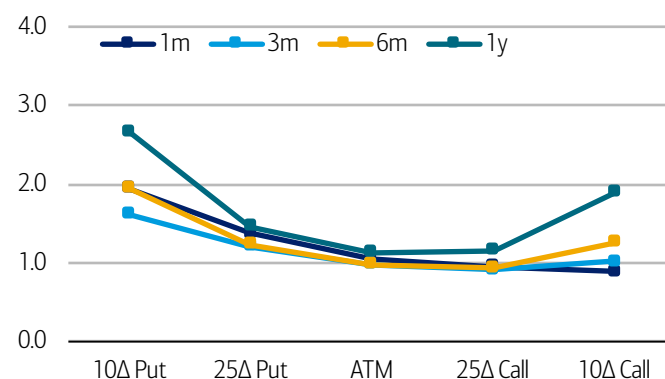


Source: BofA Global Research

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Exhibit 24: Implied volatility smiles

USDHKD risk reversals remain negative



Source: BofA Global Research

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India

View: Valuation concerns about FX and bonds

Medium-term outlook for INR is constructive but valuation concerns about both FX and bonds are weighing on the near-term flows. INR remains low beta to USD strength as RBI contains volatility but shifts trading range higher to 83-84. We revise INR forecast to 84/USD by end-2023.

Macro outlook: The sentiment boost from GBI-EM inclusion didn't last for long as levels on both bonds were less appealing in context of higher US rates and RBI's hawkish policy stance. Nevertheless, debt inflows continued at USD0.7bn over the last month, bringing YTD total to USD4.2bn. INR remains in a very-tight range, with realized 1-month volatility falling below 2% annualized. Despite the low volatility, carry buffer on INR is too thin to offset risk of spot moving closer to 84/USD. Also, risk of further worsening of terms of trade is increasing due to higher oil. Elevated REER level remains another concern which may skew RBI reaction function towards allowing INR weakness but limiting any appreciation.

IGB yields have moved higher over the last month as RBI hinted at possibility of OMO (open market operation) bond sales to tighten liquidity. This added to market concerns that RBI intends to maintain liquidity at tight levels and interbank rates well-above the policy rate. This also shows a preference for using bond sales to sterilize large inflows, which would not only tighten liquidity but also offset bond demand from foreign investors. While RBI has already been engaging in small OMO sales since Sep'23, we see less need to ramp-up sales in the near term as the seasonal currency leakage would tighten the liquidity further. However, the key concern for bond markets remains large issuance and low expectations of policy easing in the near term to trigger demand.

Valuation: Undervalued on Compass BEER but overvalued on long-term FX Compass.

Positioning: Crowded long among HFs but reduced over the last month. RMs added long INR.

Risk events: state elections toward end-2023 ahead of general elections next year.

Corporate Hedging: We recommend hedging INR exposure on low hedging cost and risk of spot depreciation.

Rates: Higher/steeper – Market pricing risk of rate hike and tighter liquidity keeping front-end rates higher. Curve is too flat on longer-end while issuance risks remain. We revise IGB 10y forecast to 7.5% by end-2023.

Exhibit 25: USD/INR forecasts vs forwards

We expect USD/INR at 84 by end-4Q23

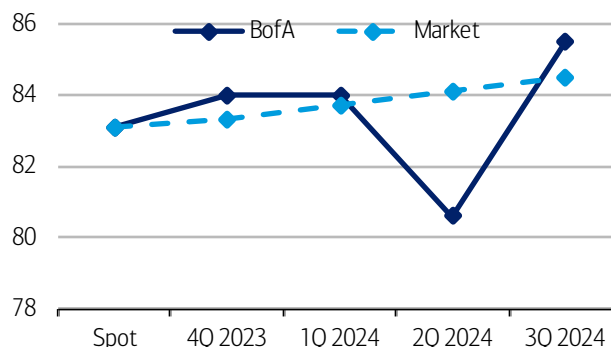
Spot	current		chg (diff)	
	83.11		-0.03	
Period	Forecast		Forward	
	current	chg (diff)	current	chg (diff)
4Q 2023	84.0	-2.00	83.31	-0.21
1Q 2024	84.0	-3.00	83.71	-0.16
2Q 2024	80.6	-0.08	84.10	-0.20
3Q 2024	85.5	-5.50	84.50	-0.19

Source: BofA Global Research, Bloomberg

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Exhibit 26: USD/INR forecasts

Our forecast path is below the forwards in 2Q24



Source: BofA Global Research, Bloomberg

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USD/INR forwards – implied yields

Exhibit 27: USD/INR NDF implied yields

1m NDF at 6.50%

Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1m	6.50	-0.45	0.78	-0.46	3.29		10.75	6.83	2.00	14.45	-0.62	-0.38
3m	7.02	-0.17	0.95	-0.94	6.07		9.40	7.21	0.80	5.76	-0.05	-0.38
6m	7.44	0.04	0.77	-1.06	6.66		9.11	7.35	0.43	3.13	0.89	0.20
12m	7.47	0.04	0.44	-0.90	6.75		8.57	7.40	0.31	2.23	0.77	0.23

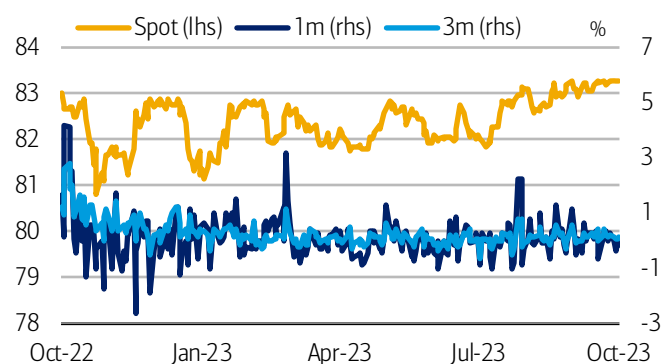
Note: current value 1y average. The z-score measures the distance between the current value and the mean in standard deviation units

Source: BofA Global Research, Bloomberg

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Exhibit 28: NDF - Onshore forward yields vs USD/INR spot

Offshore-onshore yield differential narrowed

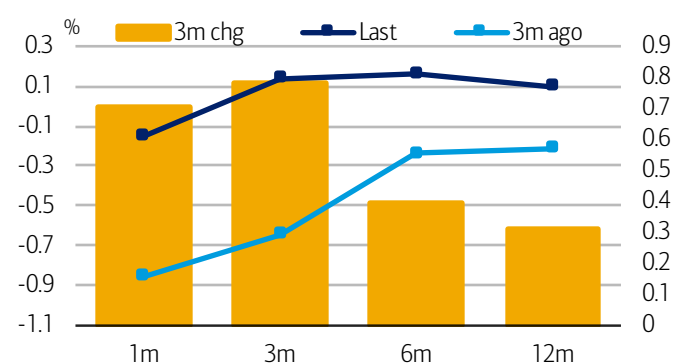


Source: BofA Global Research, Bloomberg

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Exhibit 29: Term structure of NDF – Onshore forward yields

Offshore yields higher over 3m



Source: BofA Global Research, Bloomberg

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Volatility surface: USD/INR

Exhibit 30: Current implied volatilities

Implied vols skewed towards call options

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	3.31	3.04	3.04	3.42	4.01
3m	3.81	3.51	3.53	4.04	4.83
6m	4.43	4.06	4.07	4.68	5.66
1y	5.12	4.68	4.69	5.38	6.58

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 31: 3m z-scores of implied volatilities

Implied volatilities moved lower across tenors

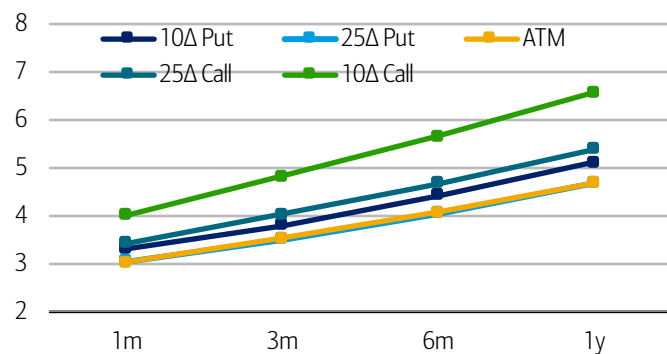
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	-2.39	-2.30	-2.11	-1.87	-1.69
3m	-2.11	-2.13	-2.09	-2.02	-1.94
6m	-1.97	-1.98	-1.98	-1.95	-1.91
1y	-1.76	-1.81	-1.86	-1.90	-1.92

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 32: Term structures of implied volatilities

Vol profile skewed towards calls

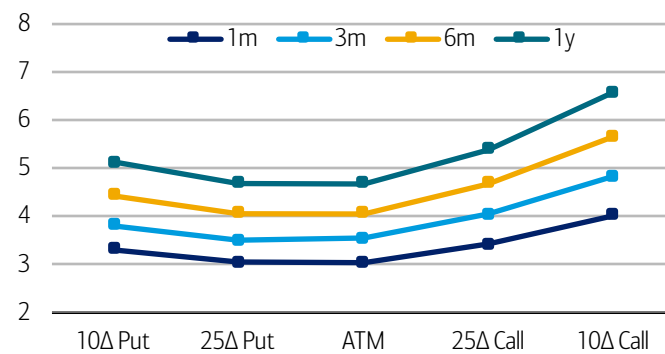


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 33: Implied volatility smiles

Implied vol smiles are skewed for upside protection in USD/INR



Source: BofA Global Research

BofA GLOBAL RESEARCH

Indonesia

View: Narrow carry and elevated NEER weigh on IDR

Rising uncertainty on political continuity and narrowing interest-rate differential likely to keep weighing on IDR until BI shows heavier resistance or USD trend softens. Export conversion remains low while market remains concerned about valuation as NEER is still elevated. We revise end-2023 forecast to 16,000/USD from 15,400/USD previously.

Macro outlook: We previously highlighted increasing concerns about Indonesia's down-streaming story amid a protracted period of political uncertainty heading into the presidential elections early next year. While trade balances have recovered recently, the export conversion remains weak. In the near term, USD strength amid narrowing carry buffer and still elevated IDR NEER leaves room for further depreciation. While policymakers have focused on putting an interest-rate defense, just 25bp hike will do little to improve IDR's carry profile, as volatility is picking up on daily moves.

However, despite various measures on export repatriation and introduction of new bills to attract foreign inflows, the success of these instruments has been limited. Market would continue to test BI's capacity to intervene on spot reserves and via DNDF book where we still see ample room for BI to maintain currency defense. USD softening would be needed to change corporate hedging behavior and stabilize IDR.

IDR volatility is spilling over to bonds as BI focuses on improving interest-rate differentials to attract capital flows. While domestic fundamentals are better due to fiscal outperformance and low and stable inflation, demand for bonds has weakened due to more bills issuance. Thus, any rally in bonds may be limited by elevated front-end yields and concerns about higher auction sizes in 1Q24.

Valuation: IDR is undervalued vs USD on Compass BEER but overvalued on long-term FX Compass model.

Positioning: HFs reduced long IDR to more moderate levels while RMs covered shorts.

Risk events: Risks from deterioration of terms-of-trade could adversely impact IDR.

Corporate hedging: We recommend hedging long IDR in the near term.

Rates: higher/flatter – We expect front-end rates to stay elevated until pressure on IDR eases-off as BI wants to ensure yields remain attractive for foreign investors. Lower duration supply to the market due to end of BI's bond sales and continued fiscal improvement could lead to flatter curve. We revise our IndoGB 10y forecast to 7.2% by end-2023 from 6.5% previously.

Exhibit 34: USD/IDR forecasts vs forwards

We expect USD/IDR at 16,000 by end-4Q23

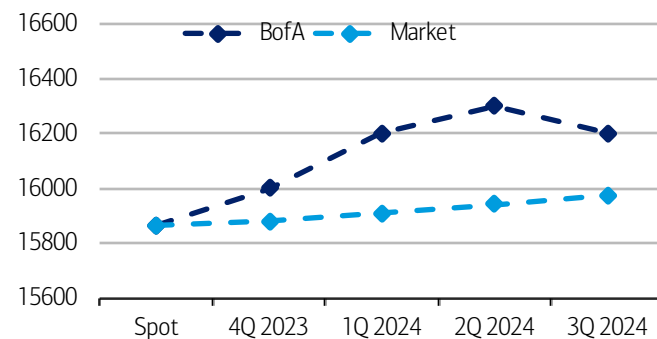
Spot	current	chg (diff)		
	15866	+415.00		
	Forecast		Forward	
Period	current	chg (diff)	current	chg (diff)
4Q 2023	16000	-600.00	15882	409.64
1Q 2024	16200	-900.00	15909	418.08
2Q 2024	16300	-1100.00	15942	425.54
3Q 2024	16200	-1100.00	15976	441.24

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 35: USD/IDR forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

USD/IDR forwards – implied yields

Exhibit 36: USD/IDR NDF implied yields

1m NDF at 6.75%

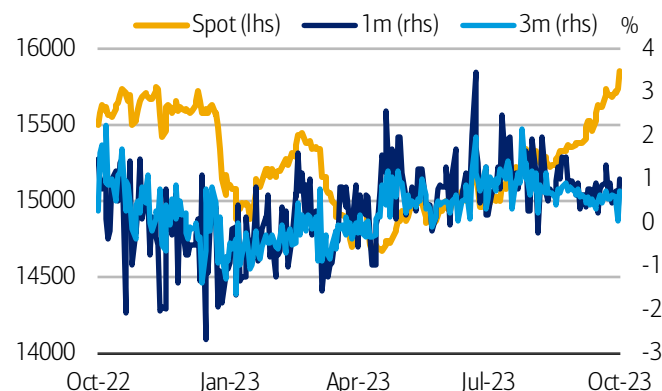
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1m	6.75	0.36	0.65	1.16	2.01		9.03	5.73	1.95	14.05	0.50	0.90
3m	6.34	0.26	-0.30	-0.47	3.66		7.75	5.82	1.13	8.14	0.04	0.77
6m	6.25	0.12	0.10	-0.44	4.56		7.12	5.93	0.66	4.77	-0.03	0.73
12m	6.22	0.12	0.13	-0.40	5.08		7.01	6.00	0.42	3.04	0.43	0.70

Note: current value 1y average. The z-score measures the distance between the current value and the mean in standard deviation units. Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 37: Onshore forward yields vs USD/IDR spot

NDF yields moved lower

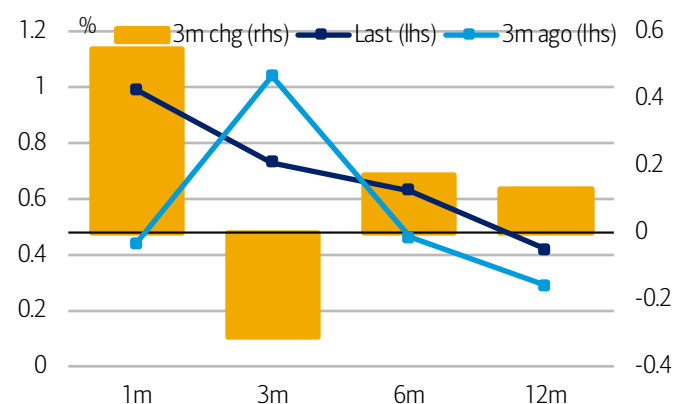


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 38: Term structure of NDF – Onshore forward yields

Offshore yields above onshore in 1m tenor



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 39: Current implied volatilities

Vol surface highly skewed towards call options

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	6.43	6.02	6.11	6.87	7.96
3m	6.86	6.51	6.72	7.66	8.98
6m	7.45	7.07	7.36	8.57	10.29
1y	8.17	7.77	8.13	9.64	11.93

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 40: 3m z-scores of implied volatilities

Vols moved lower across tenors

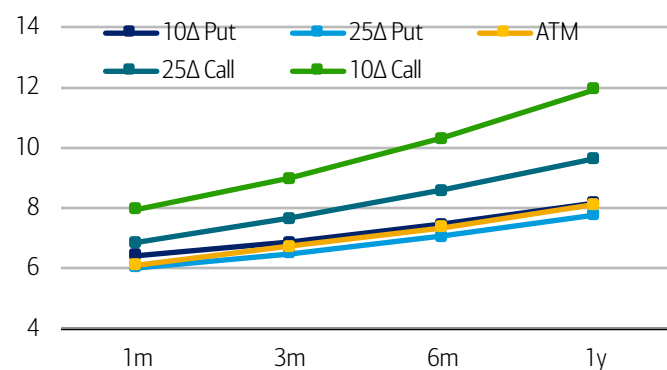
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	-0.37	-0.16	0.09	0.33	0.48
3m	-0.21	-0.16	-0.09	-0.03	0.01
6m	0.12	0.01	-0.10	-0.21	-0.31
1y	0.56	0.10	-0.27	-0.55	-0.76

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 41: Term structures of implied volatilities

Steepervol term structure for upside USD/IDR

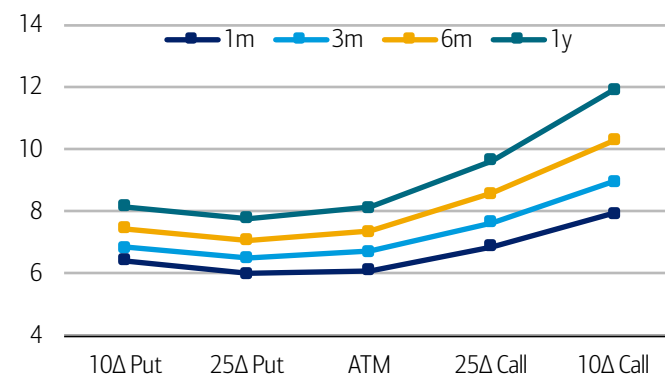


Source: BofA Global Research

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Exhibit 42: Implied volatility smiles

Higher skew in longer tenor vols



Source: BofA Global Research

BofA GLOBAL RESEARCH

Korea

Macro: A mixed outlook on better exports but weaker equity sentiments

The recent trade data from Korea is encouraging and suggests that the Korean Won should be able to recover from a trade-weighted basis. The latest year-on-year figure for per day 20-day exports has turned positive for the first time in 12 months tied to the rising prices for memory chips. The recovery in the spot price of memory chips signals the end of the period of inventory drawdown and a rebound in the memory chips cycle. This is a bullish tailwind for Korea's terms-of-trade.

However, rising tensions in the Middle East and continued sell-off in global technology stocks are rising headwinds, leading us to turn neutral (from bullish) on the Korean Won. If a regional war does materialize in the Middle East, the Korean Won would be impacted through three channels: 1) its high-beta to a strong USD due to a global risk-off; 2) weaker trade balance because of rising oil prices; and 3) increased equity outflow as investors exit from high-beta equity positions.

With the persistent of USD strength and expectation for additional CNY weakness, we pencil in for USDKRW higher, at 1,375, by year-end.

Positioning: Slight negative on the back of accelerating equity outflow.

Valuation (Compass says 1,421, BEER says 1,191) – BEER estimates of fair value for USDKRW place it at 1,191 vs the current spot level of 1,342. Our FX Compass model suggests a fair value of 1,404, indicating the current value of USDKRW is too low relative to its fundamental value.

Risk events: Any announcement of Chinese stimulus that can increase expectations for export performance. Any strong sentiment around the AI sector that can result in either additional inflows or outflows. A faster recovery in the memory chips cycle.

Corporate hedging: With spot USDKRW rising, Korea corporates should take advantage of the high US dollar vs the Korean won and sell US\$ forward to hedge their foreign earnings. Offshore (non-Korea) corporates should buy US\$ forward to hedge the likelihood of additional Korean won depreciation.

Rates: Korean rates followed the bear-steepening pattern of the US given its high-beta to US rates. With core inflation on a strong path of decline in Korea and the BoK quite unlikely to further hike, we like fading the recent bear-steepening.

Exhibit 43: USD/KRW forecasts vs forwards

We expect USD/KRW at 1,375 by end-4Q23

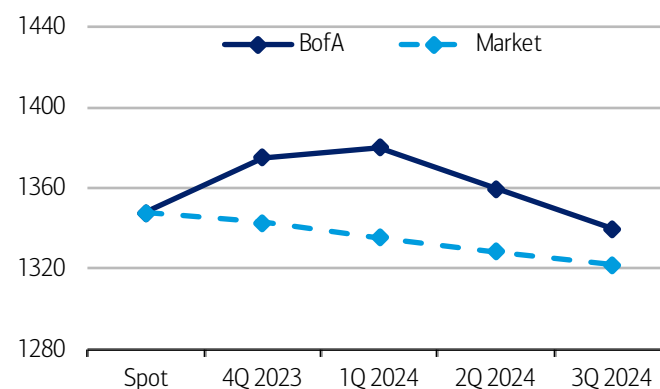
Spot	current	chg (diff)		
	1347.94	+8.04		
	Forecast		Forward	
Period	current	chg (diff)	current	chg (diff)
4Q 2023	1375	-45	1343.09	+10.63
1Q 2024	1380	-75	1335.61	+10.88
2Q 2024	1360	-80	1328.71	+11.40
3Q 2024	1340	-130	1322.15	+11.53

Source: BofA Global Research, Bloomberg

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Exhibit 44: USD/KRW forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Cross-currency basis USD/KRW

Exhibit 45: USD/KRW cross-currency basis

1y xccy basis at -76.5bp

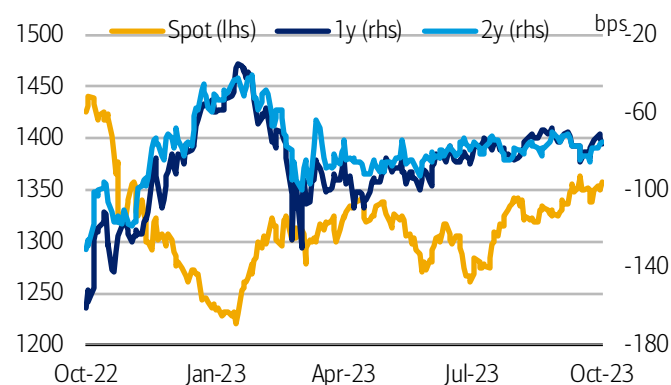
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1y	-76.50	-0.50	2.25	75.50	-158.00		-34.75	-85.67	13.95	100.59	-0.15	0.43
2y	-76.25	2.00	0.25	49.50	-128.50		-40.50	-79.00	9.69	69.88	0.39	0.17
5y	-73.50	-6.75	-31.50	36.75	-114.75		-15.00	-60.67	11.08	79.88	-1.65	-0.77
10y	-83.50	-10.25	-42.25	31.50	-121.00		-18.50	-62.95	12.08	87.13	-1.87	-1.20

Note: ● current value ◆ 1y average. The z-score measures the distance between the current value and the mean in standard deviation units. Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 46: Short-term basis swaps vs USD/KRW spot

KRW 1-year xccy basis swaps recently stabilized

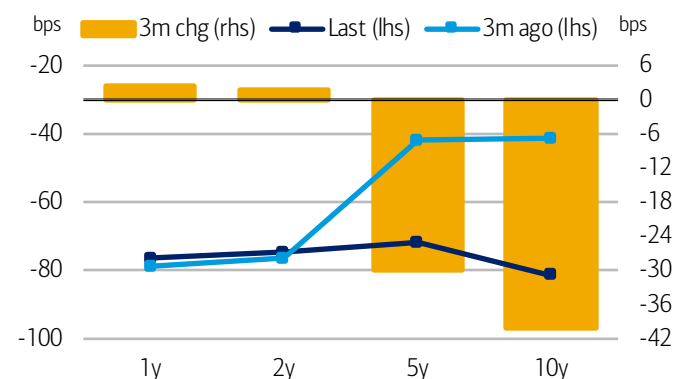


Source: BofA Global Research, Bloomberg

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Exhibit 47: Term structure of basis swaps

10-year xccy basis swap widened the most in the past 3 months



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Volatility surface: USD/KRW

Exhibit 48: Current implied volatilities

Implied vol remains skewed towards calls

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	9.13	8.85	8.83	9.18	9.75
3m	9.15	8.89	9.01	9.64	10.57
6m	9.24	9.02	9.23	10.07	11.27
1y	9.40	9.18	9.47	10.55	12.12

Source: BofA Global Research

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Exhibit 49: 3m z-scores of implied volatilities

Changes across time

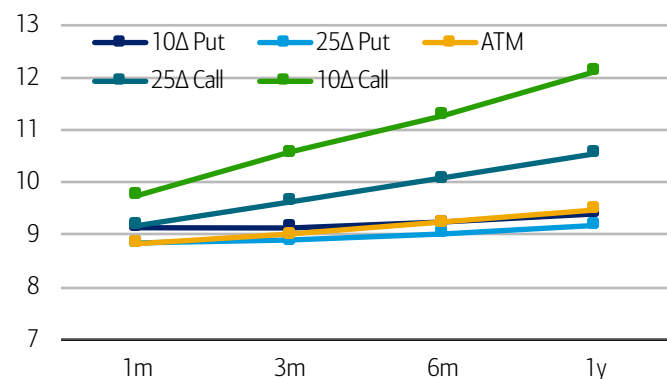
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	-1.05	-0.99	-0.96	-0.99	-1.04
3m	-0.86	-0.83	-0.80	-0.76	-0.74
6m	-0.29	-0.28	-0.30	-0.37	-0.45
1y	0.07	0.03	-0.08	-0.28	-0.48

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 50: Term structures of implied volatilities

Flatter profile for puts vs calls

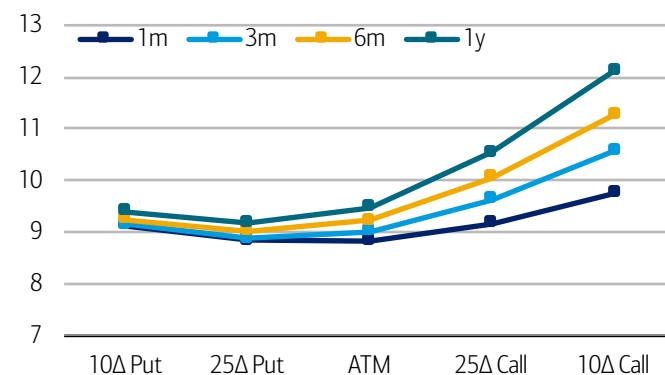


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 51: Implied volatility smiles

Implied vol smiles are skewed toward calls



Source: BofA Global Research

BofA GLOBAL RESEARCH

Malaysia

View: Risk from negative carry and weak China growth

We keep our bearish view on MYR due to risks to exports outlook, negative carry and concerns about BNM's short forward book which would need to be unwound if MYR appreciates. We revise end-2023 MYR forecast higher to 4.9/USD.

Macro outlook: External headwinds from tighter Fed policy and weak China growth continue to weigh on MYR. Questions on Malaysia have focused on the potential policy measures to contain further MYR weakness due to concerns about BNM's net FX reserves. While headline reserves are at USD110bn, net reserves come down to around USD70-75bn, after adjusting for FX forwards short USD book and other short-term FX liabilities.

Tighter liquidity and higher interbank rates appear consistent with that outlook but interest-rate differential against the US remains too wide. BNM may continue to lean on a combination of intervention and window guidance to increase conversion of export proceeds and reduce capital outflows may help support MYR if it comes under pressure.

Bonds have continued selling off after breaking out of a tight range earlier. Duration demand for long-end would likely return as levels are more attractive for pension funds and the net flows are strong. But, further sell-off in 10y bond is likely as MGS yields still offer little premium to global rates on hedged basis. Despite further fiscal consolidation in 2024, overall issuance remains high and would depend on banks for funding.

Valuation: MYR is undervalued on Compass BEER model. The long-term FX Compass model suggests neutral valuation with a fair value of 4.78/USD.

Positioning: HF's moderately long MYR while RM's slightly underweight.

Risk events: Expansionary fiscal stance could increase the potential for negative rating actions over time due to debt-sustainability issues.

Corporate hedging: We recommend hedging MYR exposure as we have a bearish view, and implied yields are lower than US rates, thus hedging provides positive carry.

Rates: Higher – We expect rates to move higher due to pass through of higher interbank rates. Some steepening is possible in line with global rates. We revise MGS 10y forecast to 4.4% by end-2023 from 4.1% earlier.

Exhibit 52: USD/MYR forecasts vs forwards

We expect USD/MYR at 4.9 by end-4Q23

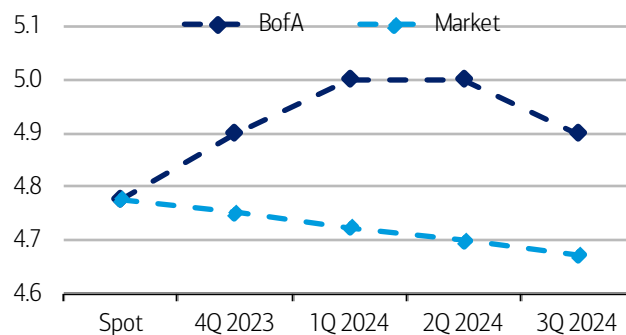
Spot	current 4.78	chg (diff) +0.09		
	Forecast		Forward	
Period	current	chg (diff)	current	chg (diff)
4Q 2023	4.90	-0.24	4.75	+0.092
1Q 2024	5.00	-0.38	4.72	+0.095
2Q 2024	5.00	-0.42	4.70	+0.099
3Q 2024	4.90	-0.34	4.67	+0.093

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 53: USD/MYR forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Cross-currency basis USD/MYR

Exhibit 54: USD/MYR cross-currency basis

1y xccy basis at -44bp

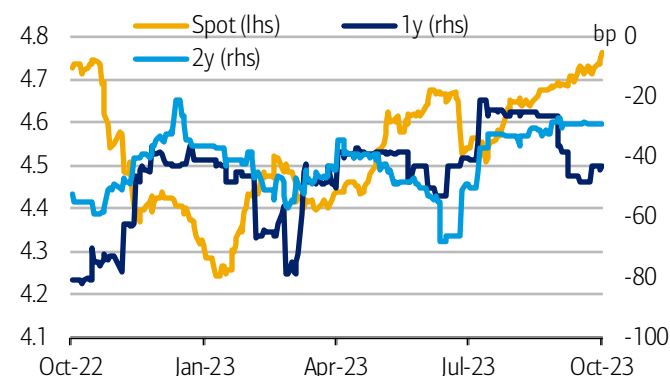
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1y	-44.00	-1.00	-3.00	37.00	-82.00		-21.00	-46.02	8.45	60.91	-1.23	0.13
2y	-29.00	0.00	21.00	23.00	-68.00		-21.00	-42.21	5.15	37.11	0.66	1.32
5y	-38.00	0.00	13.00	13.00	-70.00		-30.00	-45.69	4.73	34.07	1.16	0.92
10y	-56.00	0.00	7.00	8.00	-77.00		-53.00	-59.42	3.36	24.23	-0.05	0.66

Note: current value 1y average. The z-score measures the distance between the current value and the mean in standard deviation units. Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 55: Short-term basis swaps vs USD/MYR spot

Basis narrowed

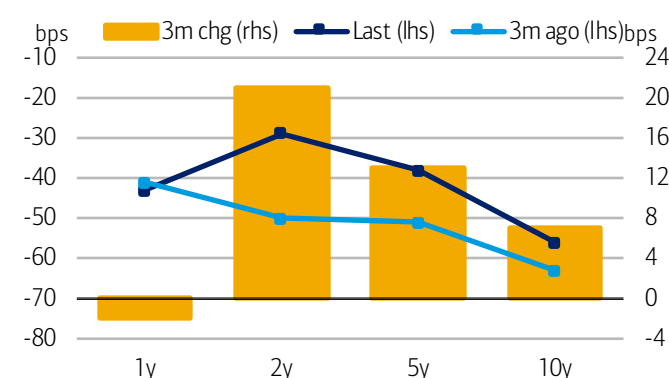


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 56: Term structure of basis swaps

Basis higher across most tenors over 3m period



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Volatility surface: USD/MYR

Exhibit 57: Current implied volatilities

High skew for upside USD/MYR

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	5.35	5.37	5.95	7.42	9.43
3m	5.52	5.47	6.33	8.15	10.55
6m	6.37	6.14	7.01	9.05	11.88
1y	7.32	6.89	7.82	10.22	13.62

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 58: 3m z-scores of implied volatilities

Lower vols across most tenors except 1y

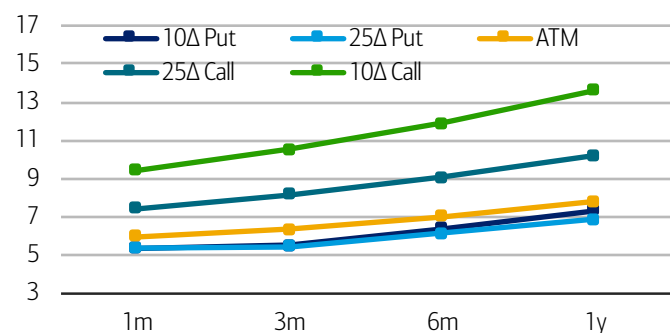
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	-1.52	-1.52	-1.79	-1.26	-1.11
3m	-1.98	-2.09	-2.50	-1.82	-1.09
6m	-1.21	-1.55	-1.73	-0.62	0.02
1y	1.09	1.10	1.74	1.10	1.12

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 59: Term structures of implied volatilities

Skewed term structure for topside USD/MYR

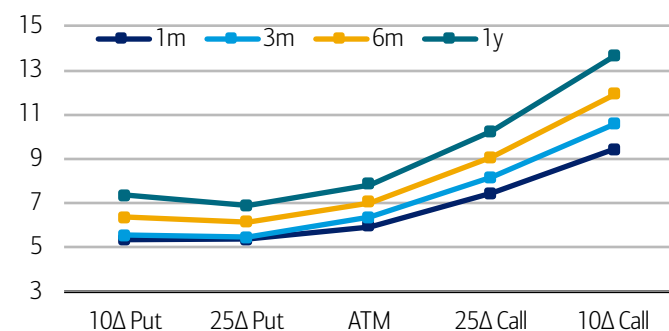


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 60: Implied volatility smiles

Higher skew in longer tenor



Source: BofA Global Research

BofA GLOBAL RESEARCH

The Philippines

View: PHP may weaken as offshore debt issuance ends

PHP found support from the offshore USD retail bond issuance over the last few weeks. That opens a window for PHP weakness before year-end remittance seasonality. BSP's hawkish turn could also keep interest-rate differentials more favorable. We revise end-2023 forecast higher to 58/USD from 56.5 earlier.

Macro outlook: PHP has remained relatively stable despite weak fundamental outlook and still wide current account deficit. A combination of government funding and banking system flows have supported PHP but recent issuance-related flows are over now. Apart from that, BSP's hawkish comments recently indicating a potential off-cycle hike ahead of the next meeting have also supported PHP against further narrowing of interest-rate differentials.

However, PHP has appreciated on a relative basis, which is reflected in its elevated NEER. CA deficit is likely to deteriorate due to higher oil imports and weakening terms of trade (ToT). We believe PHP has room to weaken over the next month as fundamental outlook remains weak for Philippines.

Towards late-November, the positive year-end seasonality again kicks-in for PHP due to higher remittance flows ahead of holiday period. The government also plans a Sukuk issuance later this year, by end-November, which could support PHP if it flows through the banks rather than directly add to BSP's reserves.

Valuation: PHP is undervalued on Compass BEER model. But, our long-term FX Compass model suggests around 16% overvaluation for PHP, indicating fair value at 67.73, likely due to wider current account deficit compared to historically sustainable levels.

Positioning: Low or negative front-end points imply that bearish PHP positioning may have been squeezed.

Risk events: Food price shock, and higher commodity prices in general, remain the key risk for the Philippines, leading to widening of twin deficits.

Corporate hedging: We recommend hedging PHP as hedging costs remain low and our view on the currency is bearish.

Rates: Higher/flatter – BSP's hawkish bias could lead to front-end, leading the sell-off in rates. Fiscal funding would be supported by retail issuance which reduces need to borrow further from domestic sources, thus reducing the duration supply to the market. That may exert flattening pressure on mid- to longer- tenor rates.

Exhibit 61: USD/PHP forecasts vs forwards

We expect USD/PHP at 58 by end-4Q23

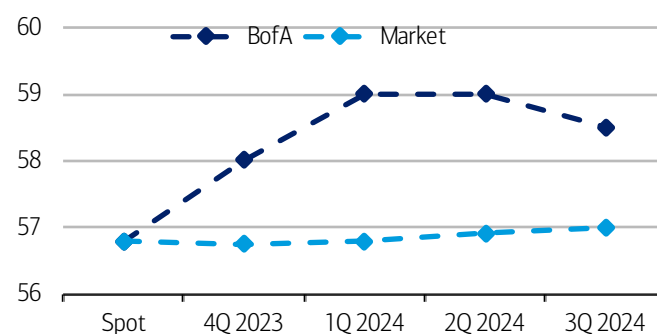
Spot	current 56.79		chg (diff) -0.05	
	Forecast		Forward	
Period	current	chg (diff)	current	chg (diff)
4Q 2023	58.00	-1.50	56.75	-0.20
1Q 2024	59.00	-2.50	56.80	-0.24
2Q 2024	59.00	-3.00	56.91	-0.21
3Q 2024	58.50	-2.50	57.00	-0.22

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 62: USD/PHP forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH



USD/PHP forwards – implied yields

Exhibit 63: USD/PHP NDF implied yields

1m NDF at 5.88%

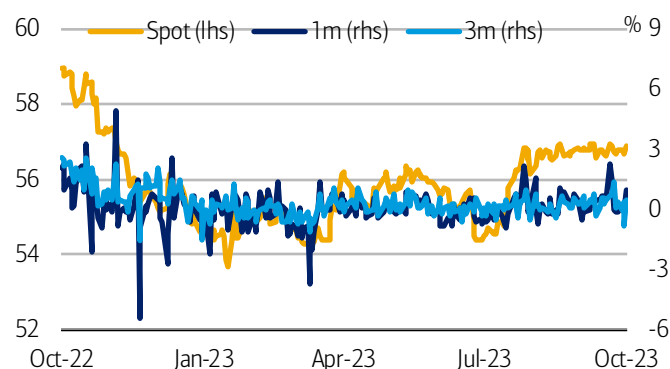
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1m	5.88	0.83	0.92	-0.52	-0.54		9.24	5.58	2.52	18.16	0.21	0.28
3m	5.88	0.37	0.29	-1.18	3.33		7.49	6.00	1.38	9.98	-0.24	-0.19
6m	5.96	0.15	0.02	-1.42	4.90		7.54	6.14	0.74	5.36	-0.51	-0.41
12m	6.00	0.06	-0.04	-1.24	4.98		7.37	6.07	0.47	3.42	-0.07	-0.15

Note: current value 1y average. The z-score measures the distance between the current value and the mean in standard deviation units. Source: BofA Global Research

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Exhibit 64: NDF - Onshore forward yields vs USD/PHP spot

Offshore implied yields slightly higher over the month

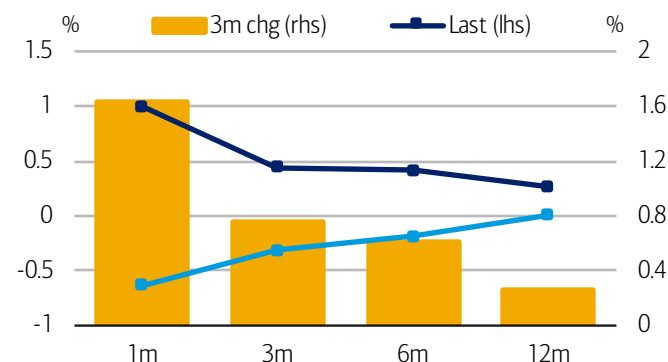


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 65: Term structure of NDF – Onshore forward yields

Offshore yields spread higher from 3-month ago



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Volatility surface: USD/PHP

Exhibit 66: Current implied volatilities

Higher vol to hedge PHP depreciation risk

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	6.36	6.12	6.14	6.57	7.21
3m	6.41	6.18	6.29	6.88	7.75
6m	6.55	6.30	6.43	7.15	8.19
1y	6.87	6.53	6.67	7.53	8.82

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 67: 3m z-scores of implied volatilities

Vols moved lower across tenors

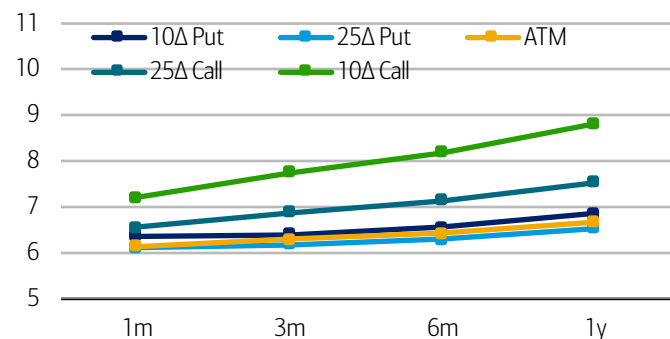
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	-0.80	-0.78	-0.76	-0.73	-0.71
3m	-0.94	-0.92	-0.88	-0.83	-0.79
6m	-0.80	-0.72	-0.63	-0.58	-0.57
1y	-0.07	-0.07	-0.07	-0.07	-0.07

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 68: Term structures of implied volatilities

Flat term structure across strikes except OTM call USD/PHP

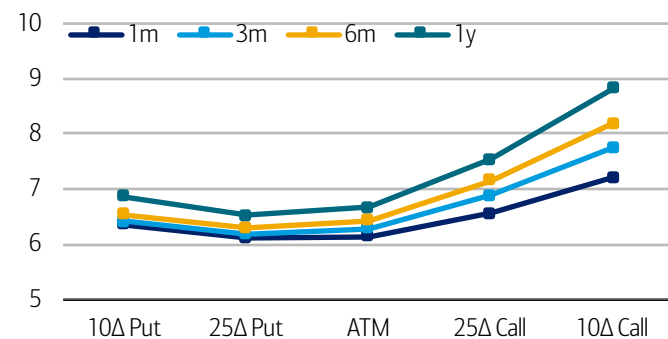


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 69: Implied volatility smiles

Upside USD/PHP vols much higher, indicating hedging demand



Source: BofA Global Research

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Singapore

View: SGD NEER risk-reward neutral at current levels

We expect SGD NEER to trade around 1% above mid vs currently around 1.2% which leaves some room for correction if global risk-sentiment sours. We revise SGD forecast for end-2023 to 1.38/USD on the back of broader USD strength.

Macro outlook: The SGD NEER remained steady around 1.4-1.7% above mid, on our model, providing steady carry from slope with low volatility. Basket yields on SGD NEER are still only 10-15bp higher than SORA 1y which indicates that front-end rates remain well above those implied by uncovered interest-rate parity. Higher implied yields on SGD forwards make long SGD NEER as an attractive carry position compared to its volatility.

But current levels also leave room for correction within the band in the hard-landing scenario leading to risk-off move. On the other hand, oil price spike due to geopolitical events may keep SGD NEER elevated.

We expect SGD NEER to continue trading around 1% above the mid which offers a neutral risk-reward against downside risks. On bilateral basis vs USD, SGD could face further pressure as CNY weakness and NEER correction could add to broader USD strength.

SORA (Singapore overnight rate average) fixings have been steady despite higher US rates, which reflects MAS's comfort with the current policy settings as being sufficiently tight. With fixings staying steady, SGD rates have shown a low-beta to US rates compared to last year.

Valuation: SGD come across as slightly overvalued on our medium-term FX compass model. Our short-term model Compass BEER, however, indicates large undervaluation.

Positioning: Both HFs and RMs remain underweight. Our data shows SGD as the most-underweight currency across EM.

Risk events: Hard-landing scenario remains key risk for SGD as it could lead to stronger USD and SGD NEER correction within the band.

Corporate hedging: Low hedging costs and a negative basis vs USD indicate a small yield pick-up for bond investors. We recommend hedging long SGD exposure near-term.

Rates: Flatter – Front-end rates may remain sticky with low-beta to US rates. Longer tenor SGS demand is likely to improve which could lead to 10s30s part flattening. We revise forecast for SGS 10y to 3.3% by end-2023 from 3.2% earlier.

Exhibit 70: USD/SGD forecasts vs forwards

We expect USD/SGD at 1.37 by end-4Q23

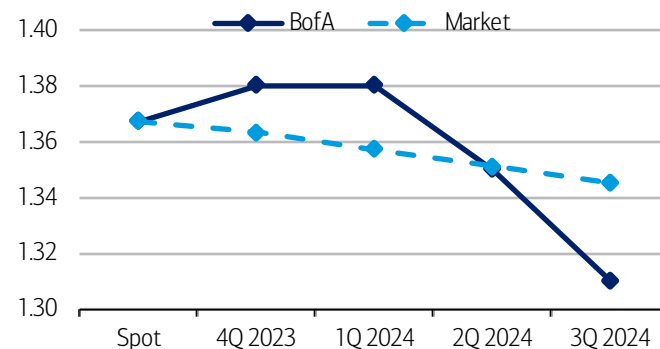
Spot	current	chg (diff)		
	1.37	0.00		
	Forecast		Forward	
Period	current	chg (diff)	current	chg (diff)
4Q 2023	1.38	-0.03	1.363	+0.0013
1Q 2024	1.38	-0.04	1.357	+0.0022
2Q 2024	1.35	-0.03	1.351	+0.0021
3Q 2024	1.31	-0.01	1.345	+0.0012

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 71: USD/SGD forecasts

Our forecast path is below the forwards from 2Q24



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH



Cross-currency basis USD/SGD

Exhibit 72: USD/SGD cross-currency basis

1y xccy basis at -3.25bp

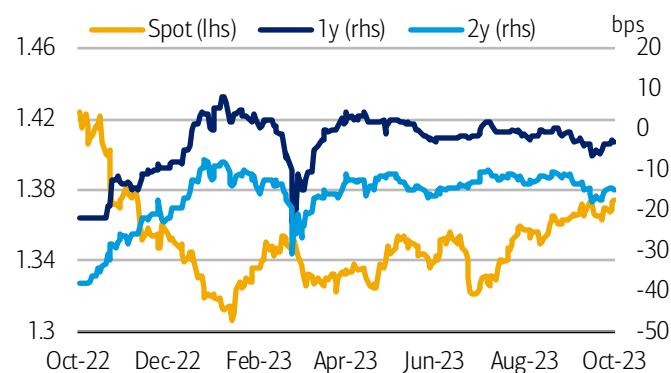
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1y	-3.25	0.50	-3.25	18.75	-23.00		8.00	-3.11	3.70	26.66	-0.83	-0.02
2y	-15.00	0.25	-4.25	23.00	-38.00		-7.50	-16.03	3.43	24.71	-1.08	0.16
5y	-45.00	3.00	0.50	30.00	-77.00		-35.50	-48.89	4.54	32.70	-0.11	0.52
10y	-76.00	2.75	3.25	20.00	-98.50		-53.00	-74.63	5.39	38.88	-0.35	-0.17

Note: ● current value ◆ 1y average. The z-score measures the distance between the current value and the mean in standard deviation units Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 73: Short-term basis swaps vs USD/SGD spot

Basis narrowed in both 1y and 2y

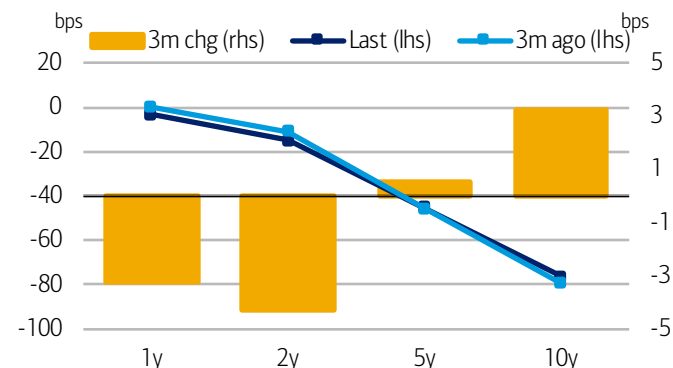


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 74: Term structure of basis swaps

Basis swaps moved lower in front end



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Volatility surface: USD/SGD

Exhibit 75: Current implied volatilities

Higher skew for upside protection

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	4.53	4.47	4.49	4.62	4.81
3m	4.71	4.56	4.60	4.91	5.35
6m	4.82	4.63	4.68	5.08	5.66
1y	4.96	4.68	4.73	5.23	5.99

Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 76: 3m z-scores of implied volatilities

Lower vols across most tenors and strikes

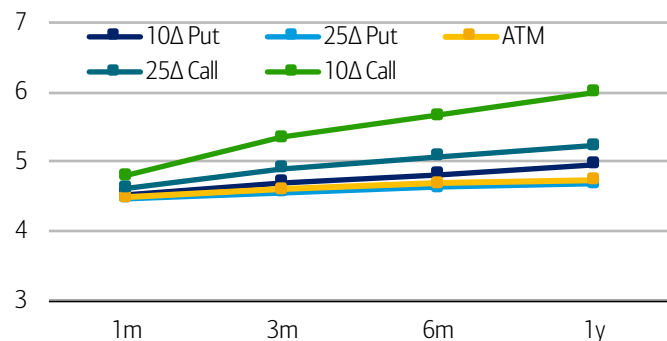
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	-1.39	-0.99	-0.91	-1.17	-1.58
3m	-0.85	-0.63	-0.54	-0.55	-0.73
6m	-0.28	-0.01	0.04	-0.01	-0.31
1y	-0.44	-0.17	-0.06	-0.08	-0.43

Source: BofA Global Research

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Exhibit 77: Term structures of implied volatilities

10d call vols show higher skew

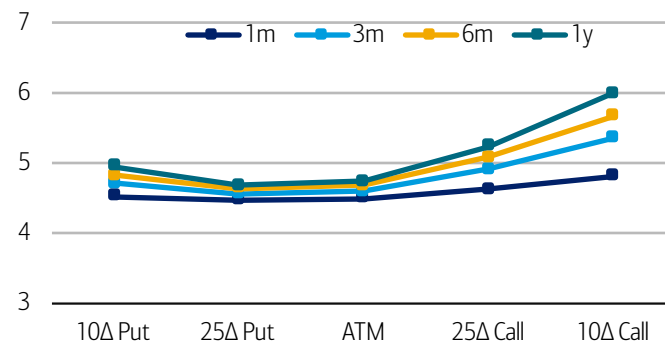


Source: BofA Global Research

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Exhibit 78: Implied volatility smiles

Higher skew in OTM call vols



Source: BofA Global Research

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Taiwan

Macro outlook: Bearish on the back of additional outflows

We revise our 4Q23 USDTWD forecast to 32.7 and have pushed up our expected peak in the USDTWD to 33 for 1Q24. The combination of strong USD, continued equity outflows, and USD buying by bond ETFs will keep spot USDTWD on the rise. Taiwan's improving trade balance, off the back of strong AI exports, have yet to filter into stronger USD selling by Taiwanese corporates as these corporates also prefer to maintain their foreign earnings in USD to earn the higher yields offered by SOFR.

We do not see the CBC to be materially concerned about FX weakness as the recent rebound in inflation is caused by rising fuel prices. Core inflation has remained on a downward trend since January 2023. As such, we think the CBC is happy to keep the Taiwanese Dollar on the weaker side but we can expect to see smoothing action around key level to reduced realized FX volatility.

Positioning – Bearish: Wide interest rate differential rewards buying US\$ while the continued equity outflows will keep spot USDTWD bid.

Valuation: BEER says 28.6 – BEER estimate puts the fair value of USDTWD at 28.6 vs spot level of 32.3. According to the CBC's measures of the fair value based on a 36-month moving average of the TWD NEER, the TWD NEER is currently in the lower half of this band but remains around 4% from the weak side, resulting in us judging there is further room for TWD depreciation.

Risks: Any mainland comments or action taken prior to the Taiwan's Presidential election scheduled for January 2024. Any global risk-off sentiment that can result in further accelerated pace of portfolio outflows.

Corporate hedging: Taiwan forward points are deeply negative due to the significant imbalance between Taiwan ownership of foreign assets vs foreign ownership of Taiwan assets. Non-local corporates should always seek to hedge TWD risk due to the deep FX carry offered on the Taiwan NDF curve.

Rates: The global bear steepening also impacted the Taiwan NDIRS and pushed TWD NDIRS 2s10s to its highest level since 1Q22. We favor flatter TWD NDIRS curve as the move is mostly lend by global factors and independent of CBC's medium-term policy stance.

Exhibit 79: USD/TWD forecasts vs forwards

We expect USD/TWD at 32.7 by end-4Q23

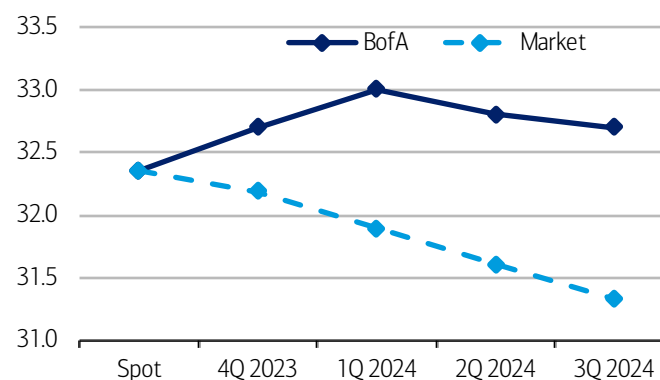
Spot	current 32.35	chg (diff) +0.22		
	Forecast		Forward	
Period	current	chg (diff)	current	chg (diff)
4Q 2023	32.70	-1.00	32.19	+0.24
1Q 2024	33.00	-1.50	31.90	+0.24
2Q 2024	32.80	-1.60	31.61	+0.22
3Q 2024	32.70	-2.40	31.33	+0.20

Source: BofA Global Research, Bloomberg

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Exhibit 80: USD/TWD forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Cross-currency swap USD/TWD

Exhibit 81: USD/TWD short-term non-deliverable swap

1y NDS at -1.70%

Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1y	-1.70	-1.40	-1.40	-1.40	-1.70		-0.30	-0.38	0.96	6.96	-3.11	-4.06
2y	2.00	0.30	1.05	0.05	-0.43		2.20	0.91	0.47	3.38	1.40	1.68

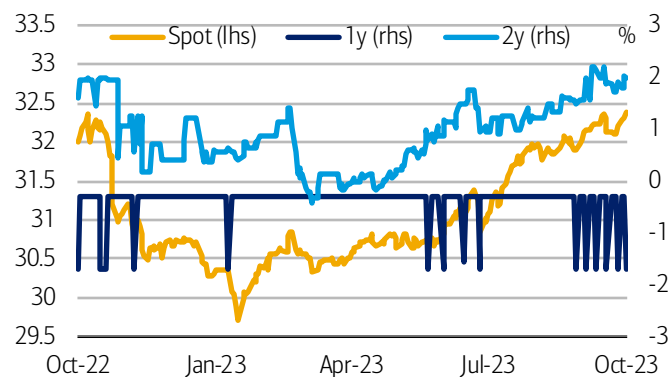
Note: ● current value ◆ 1y average. The z-score measures the distance between the current value and the mean in standard deviation units.

Source: BofA Global Research, Bloomberg

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Exhibit 82: Short-term NDS vs USD/TWD spot

2y TWD basis fluctuates within a narrow band

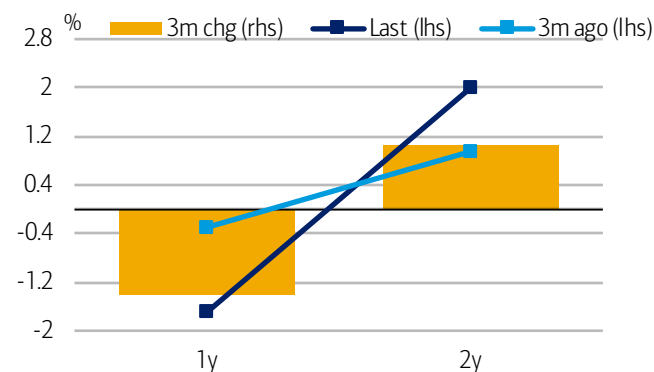


Source: BofA Global Research, Bloomberg

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Exhibit 83: Term structure of NDS

2y NDS increased in the past 3 months



Source: BofA Global Research, Bloomberg

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Volatility surface: USD/TWD

Exhibit 84: Current implied volatilities

Skew towards call and higher US\$

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	5.98	5.56	5.44	5.71	6.27
3m	6.33	5.96	5.97	6.48	7.32
6m	6.68	6.26	6.33	7.03	8.25
1y	7.22	6.71	6.77	7.66	9.16

Source: BofA Global Research

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Exhibit 85: 3m z-scores of implied volatilities

Changes across time

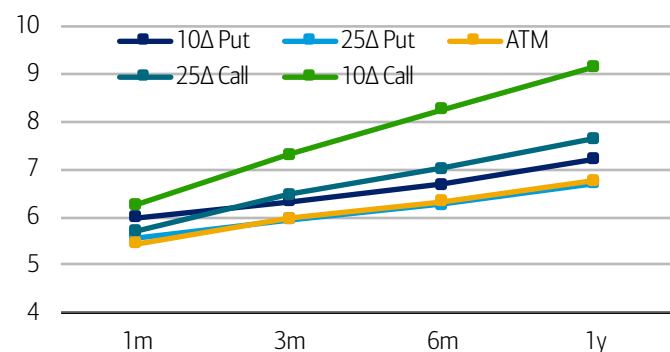
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	-0.50	-0.55	-0.61	-0.66	-0.70
3m	-0.44	-0.44	-0.44	-0.44	-0.43
6m	-0.59	-0.61	-0.60	-0.59	-0.51
1y	-0.72	-0.79	-0.84	-0.89	-0.92

Source: BofA Global Research

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Exhibit 86: Term structures of implied volatilities

Term structure is in favor of OTM calls

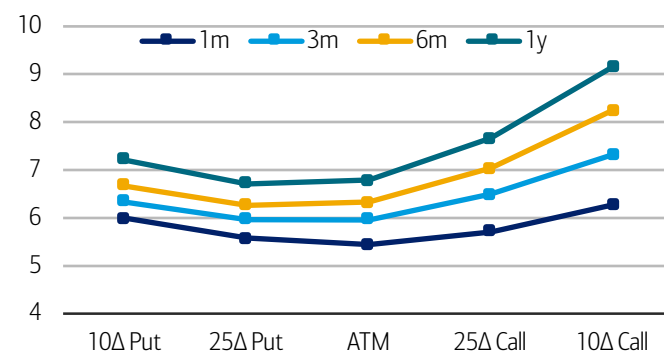


Source: BofA Global Research

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Exhibit 87: Implied volatility smiles

Implied vol smiles are skewed towards calls



Source: BofA Global Research

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Thailand

View: High beta to USD moves amid low CA buffer

THB continues to trade with a high-beta to USD moves due to limited buffer from current account along with negative carry. Equity outflows have continued despite fiscal stimulus while higher oil prices continue to pose risk to CA recovery. We revise our end-2023 forecast for THB to 37/USD on expectations of continued USD strength.

Macro outlook: THB has found limited support from the government expansionary policies due to continued equity outflows and weak trade data. Thailand's goods trade deficit remains wide due to elevated energy imports and weak exports. Along with weaker tourism spend and higher imports of other goods, this has weighed on the current account recovery. A further pick-up in tourism in a seasonally strong 4Q would help improve THB's prospects toward end-2023 but any further increase in oil prices and USD strength could pose risk to that outlook.

On the rates front, the new government is pushing ahead with their campaign promise for a fiscal stimulus to boost consumption. Bonds have weakened due to concerns about higher issuance in FY24. But demand for bonds stabilized slightly in recent auctions after assurances of reduction in long-end supply. BoT hikes policy rate in the last meeting on expectations of fiscal stimulus and kept door open for more hikes next year. Hawkish BoT bias continues to weigh on duration demand from domestic investors.

Valuation: THB is mixed, with Compass BEER model pointing to undervaluation vs fair value of 32.9. But long-term FX Compass model indicates slight over-valuation with an estimated fair value at 37.64/USD, which likely reflects Thailand's potential for CA surplus over the medium term as tourism recovers.

Positioning: HFs added further to short THB, while RMs added long position.

Risk events: Oil price spike due to geopolitical events or disruption to the tourism recovery could have a negative impact on THB.

Corporate hedging: Hedging costs in THB remain low, and a negative basis vs USD adds to the yield pick-up. We recommend hedging long THB exposure near-term.

Rates: higher/steeper – While front-end has priced a full-hike, risk of further hikes may as well be priced. Hawkish BoT and concerns about issuance may continue to put bear-steepening on the curve. We revise our ThaiGB 10y forecast to 3.5% by end-2023.

Exhibit 88: USD/THB forecasts vs forwards

We expect USD/THB at 37 by end-4Q23

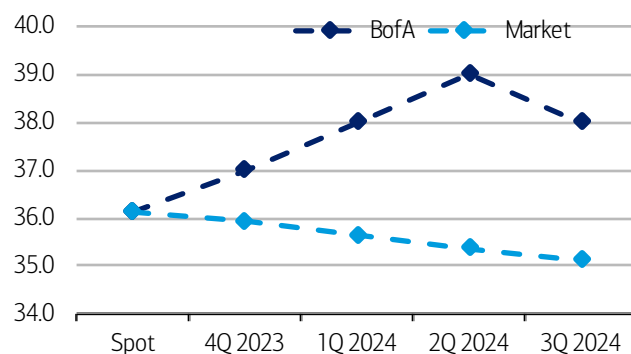
Spot	current	chg (diff)		
	36.12	-0.18		
	Forecast		Forward	
Period	current	chg (diff)	current	chg (diff)
4Q 2023	37.00	-2.00	35.92	-0.109
1Q 2024	38.00	-3.50	35.64	-0.081
2Q 2024	39.00	-5.00	35.36	-0.077
3Q 2024	38.00	-4.50	35.11	-0.098

Source: BofA Global Research, Bloomberg

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Exhibit 89: USD/THB forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

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Cross-currency basis USD/THB

Exhibit 90: USD/THB cross-currency basis

1y xccy basis at -35.5bp

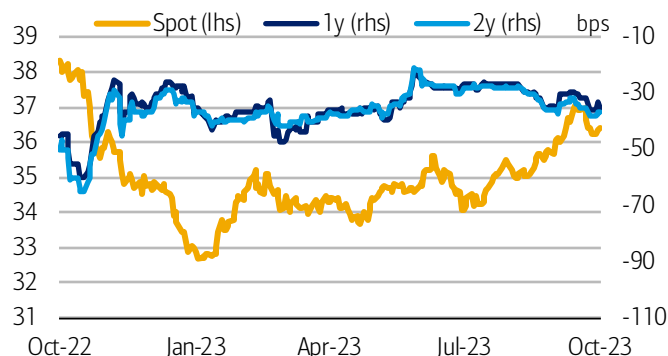
Maturity	Last	1w chg	3m chg	1y chg	Min	Last vs 1y Avg	Max	1y Avg	1w vol	3m vol	3m z-score	1y z-score
1y	-35.50	0.50	-8.50	9.50	-60.00		-21.50	-34.65	4.72	34.03	-1.60	-0.11
2y	-36.50	1.50	-8.00	10.50	-65.00		-21.00	-35.93	4.50	32.45	-1.28	-0.07
5y	-42.00	4.00	1.50	29.75	-82.50		-30.00	-49.68	4.59	33.13	0.37	0.77
10y	-81.50	2.00	6.50	36.00	-134.00		-75.00	-95.26	5.38	38.83	0.62	1.12

Note: current value 1y average. The z-score measures the distance between the current value and the mean in standard deviation units. Source: BofA Global Research, Bloomberg

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Exhibit 91: Short-term basis swaps vs USD/THB spot

Basis flat vs last month

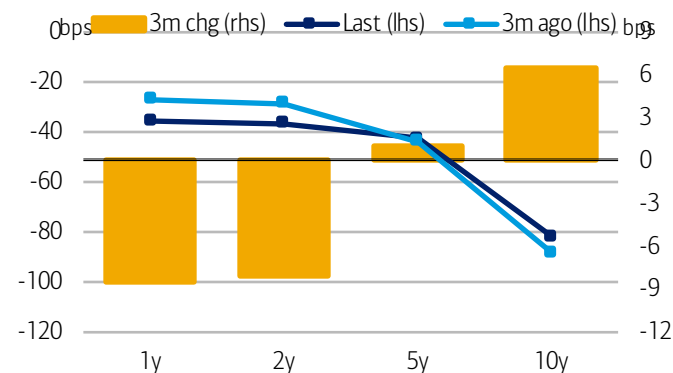


Source: BofA Global Research, Bloomberg

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Exhibit 92: Term structure of basis swaps

Basis lower in front end



Source: BofA Global Research, Bloomberg

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Volatility surface: USD/THB

Exhibit 93: Current implied volatilities

Upside vols much higher than the rest of the curve

	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	9.63	9.34	9.31	9.69	10.35
3m	9.09	8.81	8.84	9.38	10.26
6m	8.90	8.58	8.65	9.30	10.32
1y	8.80	8.43	8.52	9.28	10.43

Source: BofA Global Research

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Exhibit 94: 3m z-scores of implied volatilities

Vols moved higher across most tenors

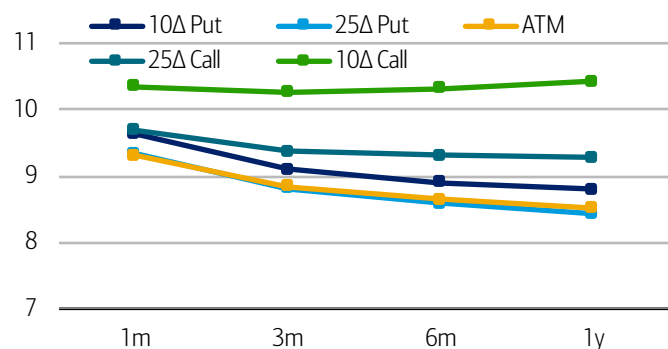
	10Δ Put	25Δ Put	ATM	25Δ Call	10Δ Call
1m	1.00	1.03	1.07	1.11	1.14
3m	0.68	0.76	0.88	0.99	1.08
6m	0.96	1.05	1.15	1.25	1.31
1y	1.26	1.35	1.42	1.49	1.52

Source: BofA Global Research

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Exhibit 95: Term structures of implied volatilities

Inverted term structures for puts and ATM

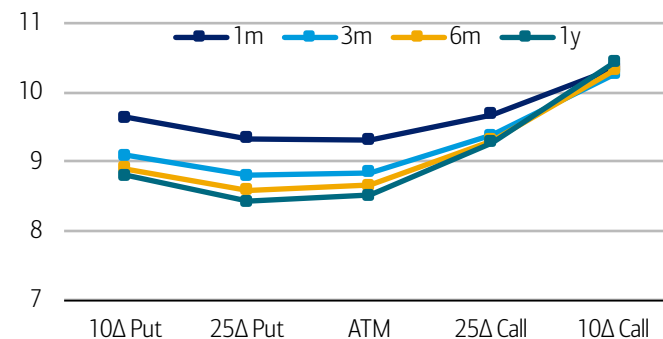


Source: BofA Global Research

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Exhibit 96: Implied volatility smiles

Higher skew towards calls



Source: BofA Global Research

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Vietnam

View: Navigating headwinds

We review our USD/VND forecast profile to capture USD strength and negative spillover from CNY weakness until 1H 2024. Year-end USD/VND forecast is revised to USD/VND 24,800 from 24,000 previously. VND weakness is expected to extend to 25,000 in 2Q 2024, just above the NDF outright rate of 24,663.

Overall, the Vietnam economy continues to show signs of stabilization. Unfortunately, however, rising US yields and USD strength continue to prove a headwind for VND. We only expect VND to show shallow appreciation in 2H 2024, once the US Fed easing cycle begins.

Macro outlook: Maintain USD/VND 2400 end-3Q and end-4Q

GDP growth improved to 5.3% in 3Q vs 4.1% in 2Q on manufacturing rebound, but below our earlier forecast of 5.5-6%. External-oriented indicators are encouraging, with exports up 5% yoy, Aug PMI above 50-mark and business sentiment firmer. We have lowered our '23 GDP forecast by 30bp to 5.1% ('market-to-market' adjustment), but outlook for activities appears stronger. – see [Vietnam Watch: 3Q GDP recovery below expectations, but some hopes of better days ahead 29 September 2023](#)

Positioning: Very difficult to gauge with limited data. 3M NDF points are 62 points above spot, which is significantly below the 2-year average of +189pts, suggesting risk premium has subsided after being extremely elevated in 4Q 2022. Overall sentiment is constructive with inflation falling away.

Valuation: Difficult to gauge with limited data, and no liquid financial instruments to price expectations reliably. Relative to the official trading band, VND is trading rich. Examining the REER, this is trading modestly 4% lower than the 20-year trend appreciation.

Event risk: Vietnam's high leverage ratio, at 146% of GDP, remains a key source of medium-term risk to financial and economic stability. More recently, political risks have risen amid an anti-corruption campaign.

Corporate hedging: Limited, due to liquidity constraints, and focused on 1M NDF tenor or shorter.

Curve outlook – steeper on lower inflation, but improving growth

Exhibit 97: USD/VND forecasts vs forwards

We expect USD/VND at 24,800 by end-4Q23

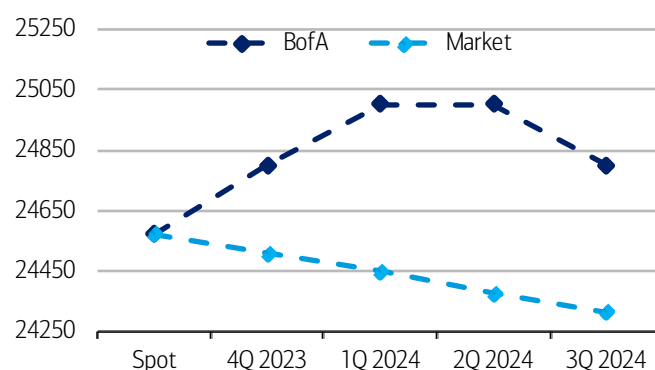
Spot	current 24571	chg (diff) +276.00	Forward	
	Forecast			
Period	current	chg (diff)	current	chg (diff)
4Q 2023	24800	-800.00	24508	+363.72
1Q 2024	25000	-1100.00	24449	+317.76
2Q 2024	25000	-1200.00	24376	+260.70
3Q 2024	24800	-1100.00	24313	+262.83

Source: BofA Global Research, Bloomberg

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Exhibit 98: USD/VND forecasts

Our forecast path is above the forwards



Source: BofA Global Research, Bloomberg

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FX Models

Exhibit 99: FX Compass

Long-term currency valuation

Country	Fair Value vs USD	Spot vs USD	Bilateral Misalignment vs USD (%)	Trade-weighted Misalignment (%) 1/
Asia			3.9	3.1
China	7.09	7.32	(3.2)	(5.9)
India	88.59	83.15	6.1	5.5
Indonesia	16359.69	15947.00	2.5	1.3
Korea	1420.99	1353.70	4.7	4.4
Malaysia	4.78	4.78	(0.1)	(1.2)
Philippines	67.73	56.85	16.1	18.2
Singapore	1.40	1.37	1.8	0.6
Thailand	37.64	36.51	3.0	1.8

Source: BofA Global Research, Bloomberg. Note: Fair values are updated using forecasts. Spot is for October 23, 2023. 1/ Trade-weighted misalignment is the deviation of current REER from Compass fair values.

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Exhibit 100: Compass BEER

Currency valuation

Currency	Spot vs USD	Compass BEER		
		Fair value vs USD	Bilateral valuation (%)	Multilateral valuation (%) (i)
Asia				
CNY	7.30	5.70	-42%	-17%
INR	83.20	68.80	-10%	-8%
IDR	15867.00	12044.90	-24%	-14%
KRW	1350.90	1190.90	-21%	0%
MYR	4.80	3.30	-30%	-25%
PHP	56.80	45.40	-37%	-10%
SGD	1.40	1.10	-38%	-5%
THB	36.50	32.90	-20%	2%
TWD	32.40	28.60	-18%	-12%

Source: BofA Global Research estimates, Bloomberg

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Forecasts

Exhibit 101: Asia FX forecasts

We forecast CNY at 7.5 by end-4Q23

Currency	4Q '23	1Q '24	2Q '24	3Q '24
USD/CNY	7.5	7.7	7.6	7.4
USD/HKD	7.83	7.83	7.8	7.8
USD/INR	84	84	85	85.5
USD/IDR	16000	16200	16300	16200
USD/KRW	1375	1380	1360	1340
USD/MYR	4.9	5	5	4.9
USD/PHP	58	59	59	58.5
USD/SGD	1.38	1.38	1.35	1.31
USD/TWD	32.7	33.0	32.8	32.7
USD/THB	37	38	39	38
USD/VND	24800	25000	25000	24800

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH



Acronyms:

AB – Aggregate balance

BEER - Behavioural Equilibrium Exchange Rate

BNM – Bank Negara Malaysia

BOK - Bank of Korea

CA – Current account

CBC – Central Bank of China (Taiwan)

CGB – China government bond

CPC – Communist Party Congress

CPI - Consumer price index

FDI - Foreign Direct Investment

HF – Hedge fund

HIBOR – Hong Kong Interbank Offer Rate

HKMA – Hong Kong Monetary Authority

IGB – Indian government bond

LIBOR – London Interbank Offer Rate

NEER – Nominal effective exchange rate

NDF - Non-deliverable forward

NPS - National Pension Service

REER – Real effective exchange rate

RM – Real money

SBV - State Bank of Vietnam

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Potential Risk at Expiry & Options Limited Duration Risk

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<http://www.theocc.com/about/publications/character-risks.jsp>

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