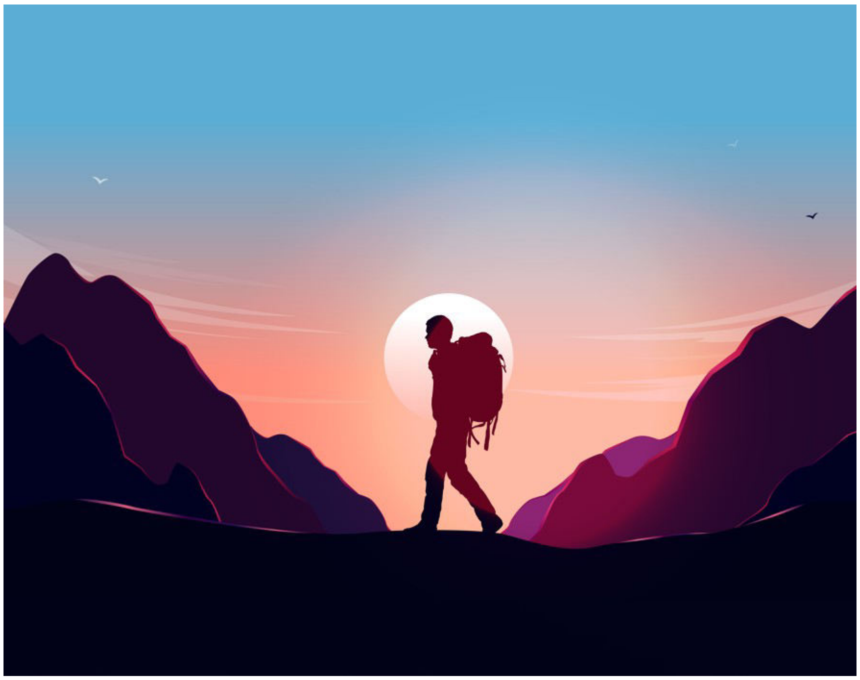
Global FX Outlook 2024

This still isn’t over



Global FX Strategy & EM Markets

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See page 105 for analyst certification and important disclosures.

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Top FX Macro Trades (Meera Chandan, Arindam Sandilya, Pat Locke, James Nelligan) Pg 4

Broad rate cuts, valuation convergence and recession sequencing are top tradable themes for 2024. Long USD vs. EUR and CAD on policy divergence. Overweight SEK on recession exit and cheap valuations amid rate cuts vs. EUR, GBP (upcoming recession) and CZK (which will become a lower yielder). Stay bearish euro bloc: GBP, EUR vs. CHF, short EUR/JPY. Buy AUD/NZD outright on policy divergences. Buy new deep OTM USD/JPY put.

J.P. Morgan FX Forecasts (Meera Chandan, Arindam Sandilya) Pg 7

EUR/USD 1H 1.00-1.05. USDJPY 151-53, 146 by 4Q. USD/CNY 7.30-7.35 in 1H. Broad USD (JBDNUSD) up 2.5% in 1H (DXY +3%, G10 high beta ex-NZD to outperform, EM FX -6% in spot, +1% on total returns).

Global FX Outlook: This still isn't over (M. Chandan, A. Sandilya, P. Locke, J. Nelligan) Pg 8

Baseline is for USD to be bumpy but elevated. Preference is to tactically buy on dips as markets vacillate between US exceptionalism and recession. Large USD weakness requires Fed cuts and better ex-US growth, but these conditions are not met yet. Rate cuts will make carry a narrower theme. Recession risk is priced in G10 high beta FX, but not in high-yielders. US elections will be an evolving theme: USD risks are skewed to the upside from possibility of new tariffs. China growth upgrades amid soggy global growth do not deliver durable commodity FX gains.

Post Mortem 2023 (Patrick Locke) Pg 24

EM: Overweight with focus on carry (A. Christovova, G. Brant, T. Wang) Pg 25

We are OW EM FX with a preference for currencies with high carry and/or attractive valuations vs. short where carry is rapidly eroding (UW COP, CZK). In Latam, we are bullish BRL, MXN and UYU. In EMEA EM, we hold longs in PLN, TRY and ILS. In EM Asia, the preference is for defensive RVs with longs backed by secular growth (IDR, INR, THB) vs. shorts in CNH, KRW, MYR. In Frontiers, we like KZT.

FX Vol: Not going anywhere fast (A. Sandilya, L. Jankovic, L. Ravagli, J. Duran-Vara) Pg 33

FX vols have de-priced and trail rates vols. We favor CNH back-end vol carry, EUR-SEK RVs, EUR/MXN calendars, 2yr ZAR calls and USD/MXN FVAs as a play on steeper vol curve. Buy BRL vs JPY vol spread and EUR/BRL riskies as carry unwind hedges. We like topside USD/JPY calendar spreads. To hedge Yen bounce own USD put/JPY call digitals or CAD/JPY puts. In a USD-centric world, cross-vols should underperform USD vols.

FX Macro Quant: The big trades are in G10 valuation gaps (A. Delair, M. Chandan, K. Padh) Pg 46

2023 was a year of strong FX carry and collapse of G10 value. The key lesson of 2023 was that yield dispersion should be respected. The attractiveness of FX carry will progressively decline as yield dispersion is forecasted to narrow to below-average by year end, opening room for value reversions.

Technical Strategy: The long wait for nonlinearity (Jason Hunter) Pg 56

The broad US dollar looks like it has more rally potential versus the other majors into 1H24 with one major exception. JPY weakness that was a dominant and consistent trend through 2023 looks exhausted and set to turn.

EUR: Patiently downbeat, pushing back recovery (Meera Chandan, Octavia Popescu) Pg 59

Bearish in 1H; 2H recovery (1Q 1.00-1.05; 4Q 1.13). Prospects for a convincing rebound appear dim with ongoing weakness not yet in ECB's outlook; restrictive real rates; and geopolitical risks. A recovery requires a Fed ease and better regional growth. Rotating EU-US growth should eventually allow a recovery in 2H, but with low visibility on timing. Strategy is tactical and sensitive to a cyclical upturn, especially if rate differentials are widening as well.

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JPY: Trend interrupted (Katsuhiro Oshima, Ikue Saito) Pg 64

Bearish JPY bias in 1H (USD/JPY 1Q: 153, 4Q: 146). Benefits from declining US rates should be partially offset by deteriorating long-run trends of higher inflation expectations and low relative productivity. The latter will inform persistent JPY discounts. Mid-year should mark a turn on NIRP exit.

GBP: Recession incoming (James Nelligan, Octavia Popescu) Pg 68

Bearish GBP (GBP/USD 1Q 1.18, 4Q 1.26) on UK recession, BoE rate cuts in 2024. Be tactical as the market oscillates between sticky inflation and weaker growth, but weakest growth globally by 4Q24 amid loosening labour market should weigh on GBP. Recession sequencing means GBP weakens vs FX where recession is already priced.

CHF: Stay safe (James Nelligan, Octavia Popescu) Pg 72

Bullish CHF (EUR/CHF 1Q 0.95, 4Q 0.96). Safe haven appeal remains, with European regional growth weak, fixed-income less of a risk hedge, strong BoP, SNB refraining from selling CHF and long-term PPP supports. CHF now offers a slightly better-yielding hedge for rising geopolitical risk premia.

NOK: Difficulties linger (James Nelligan, Octavia Popescu) Pg 76

Bearish NOK (EUR/NOK 1Q 12.05; 4Q 10.80). NOK to underperform as growth catches down to regional peers, NB is the most inflation-tolerant G10 central bank and terms of trade are expected to be unsupportive. Lower NB FX purchases should provide some relief. Cheap valuations support a NOK recovery in 2H if recession is avoided.

SEK: Cheap versus growth (James Nelligan, Octavia Popescu) Pg 80

Bullish SEK vs high beta (EUR/SEK 1Q 11.55, 4Q 10.30). After being our preferred short in 2023 given the adverse impact of higher yields on an highly levered economy, outperformance brews vs its high beta peers. SEK is already priced for recession; rate cuts next year should provide relief on the factors that drove SEK cheapness in the first place.

AUD: Reawakening commodity beta allows some recovery (Ben Jarman,Tom Kennedy) Pg 84

Bullish (1Q: 0.69, 4Q: 0.68). Commodity support and strong supply side performance will be constrained by global high beta FX drivers. RBA likely to maintain its hiking bias into 1H24 and should be later to cut than others in DM. The commodity channel reawakens and rate convergence is more plausible.

NZD: A probable early cutter; bearish near-term bias (Ben Jarman, Tom Kennedy) Pg 88

Mildly bearish (1Q 0.62, 4Q 0.60). Although valuations and fading stagflationary dynamics are supportive, the dominant near-term catalyst is expectation of RBNZ being the first DM central bank to cut. Drags come from mortgage resets; payment arrears breaching new cycle highs. RBNZ FX reserve build-up to be a persistent weight.

CAD: Structural headwinds persist (Patrick Locke, Kunj Padh) Pg 92

Bearish CAD (1Q 1.37, 4Q: 1.33). Canada is cyclically diverging from the US, in part reflecting structural drags (household debt, productivity). The range of potential domestic & global scenarios on net produces more short-CAD opportunities than long. CAD should underperform other G10 high-beta in goldilocks and vs USD in a recession.

Central bank announcement dates in 2023-2024 Pg 96

Event risk calendar Pg 97

The source for all tables and charts is J.P. Morgan estimates unless otherwise stated.

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Top FX Macro Trades

Heading into 2024, the baseline call is for USD to be bumpy but elevated. Preference is to buy on dips but with the recognition that one needs to be tactical on USD as markets vacillate between US exceptionalism and recession. Our top tradable themes stem from: (1) broad central bank rate cuts, (2) valuation convergence, and (3) recession sequencing.

Central banks will move from synchronized hikes in 2022-23 to synchronized cuts in 2024. The start of cutting cycles which will be led by the highest yielders should create a myriad of new trading themes. Yields on carry baskets will fall to sub-average by mid-2024. This should:

(a) make FX carry a narrower theme as the year progresses,

(b) reduce the pressure on FX with highly levered economies and on funders, particularly the lower-yielding, G10 high beta FX that are now cheap,

(c) allow FX markets to respond to other factors like growth or value,

(d) provide a fresh set of high beta FX hedges to underweight vs. USD as they traverse from being high-yielders previously to low-yielders, and

(e) generate RV opportunities motivated by relative sequencing of cuts (just as rate hikes did in 2023).

The nature of cuts will matter. In the last two years, we have been highlighting the differences between "bad" rate hikes (inflation driven in poor growth) vs. "good" hikes (growth rather than inflation driven). In this vein, FX with "good" cutting cycles (inflation declining, strong growth) should outperform vs. FX with "bad" cutting cycles (inflation declining amid a recession).

Themes & Trades

1. Built different (RV on CB easing/ recessions sequencing). The UK is projected to be in recession next year with the worst growth globally and among the highest inflation rates in DM. On the other hand, Sweden will exit a recession next year, and SEK is likely to benefit from rate cuts given how rate-sensitive the economy is. New Zealand is expected to be the first and the largest DM cutter in 2024 (and is also expected to have the worst current account globally) while Australia is not expected to cut at all. Risks are towards more easing from BoC than Fed as well.

- **Sell GBP/SEK at 13.0730; stop loss at 13.50.**
- **Buy AUD/NZD at 1.0870. Stop at 1.06.**

2. Don't get carried away. Rate cuts mean that some rich high-yielders are now freer to weaken vs. the lower yielding G10 high-beta like AUD and Nordics that have borne the brunt thus far. CZK & SEK are on opposite sides of the valuation spectrum despite being similar on other macro attributes (manufacturing exporters, c/a surplus, strong fiscal), while CZK is expected to have an aggressive pace of easing that the FX is not fully adjusted to yet. FX intervention policy of the two countries is also in contrast.

- **Buy SEK vs CZK. Target 2.35; review at 2.02; Spot ref 2.1419.**

3. Fortune favors the USD, but patiently. USD is expected to appreciate in majority of potential global macro environments. US exceptionalism still lingers. Given tactical risks, we hold limited USD longs, and advocate patience in resetting new USD longs. Upcoming PMIs key.

- **Hold EUR/USD 1.0450 put.**
- **Buy USD/CAD 4m 1.37/1.41 call spread for 88bp. Spot ref. 1.3728.**

4. Euro bloc underperformance persists. Prospects for a convincing Euro-area recovery appear dim as the region is flirting with recession amid restrictive rates. EUR/CHF remains well-explained by sagging growth momentum on the continent. UK growth is expected to contract in 2024 and will have the most stagflationary outlook in G10.

- **Stay short EUR/CHF and GBP/CHF in spot.**
- **Hold EUR/JPY 155.5/151 put spread.**

5. You're saying there's a chance? Were a global soft landing to occur, optimal trades are long G10 high beta as these are well-priced for recession. EUR/SEK should weaken in a soft landing but be more insulated if US rates retrace higher.

- **Buy bearish EUR/SEK 4m at-expiry digi 10.85 put. Premium paid 8.7%. Spot ref 11.4338.**

6. Cost-effective JPY lotto ticket. While not the base-case, JPY looks cheap vs. rate differentials, and notwithstanding Japan vulnerabilities, USD/JPY could decline in either a soft landing or a recession. Consider cost-effective OTM JPY topside structures.

- **Buy USD/JPY 6m at-expiry digi put struck at 133. Spot ref. 148.40. Premium paid 10%.**

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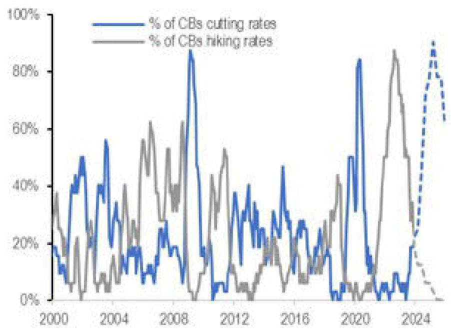
Key exhibits

Figure 1: Central banks: Flocking from a high hold to synchronized cuts...

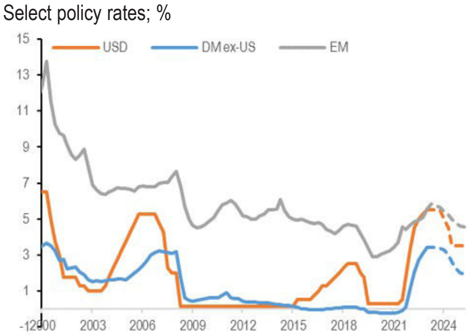
% of central banks cutting/ hiking rates



Source: J.P. Morgan

Figure 2: ...but rates are still expected to settle at high levels in the baseline

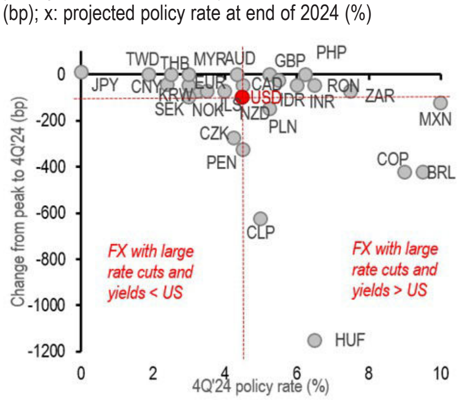
Select policy rates; %



Source: J.P. Morgan

Figure 3: Several high-yielders are projected to have large rate cuts; some will traverse to being lower-yielding than the US (like CZK)

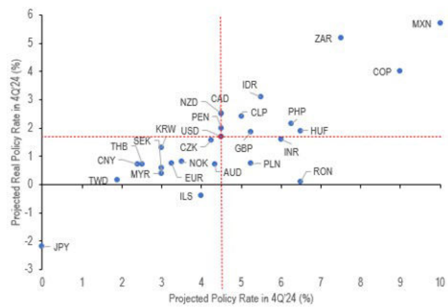
y: Projected decline in policy rates till Dec'24 from peak (bp); x: projected policy rate at end of 2024 (%)



Source: J.P. Morgan

Figure 4: ...and 56% of the currencies on a real basis by the end 2024

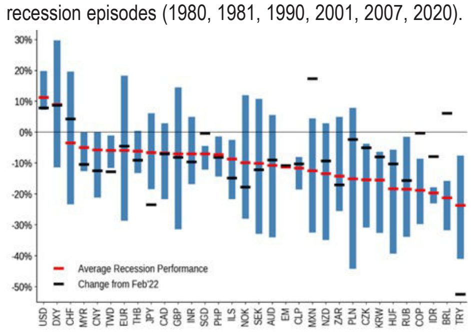
Projected nominal and real (core CPI) policy rate in 4Q'24; %



Source: J.P. Morgan Economics Research

Figure 5: Where is a recession already priced? Low-yielders are more discounted the high yielders, which have benefited from strong carry

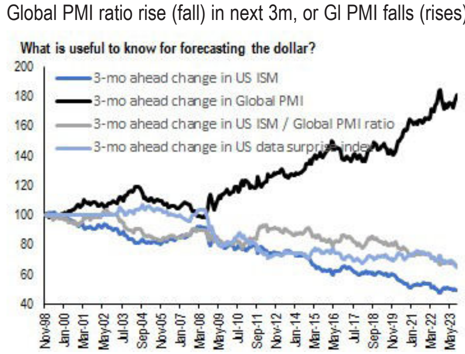
Recession returns for CCY/USD pair across past six NBER recession episodes (1980, 1981, 1990, 2001, 2007, 2020).



Source: J.P. Morgan

Figure 6: The health of the global business cycle is more informative for USD than that of US

Returns (%) when US ISM, data surprises, or US ISM / Global PMI ratio rise (fall) in next 3m, or Gl PMI falls (rises)



Source: Bloomberg Finance L.P., J.P.Morgan

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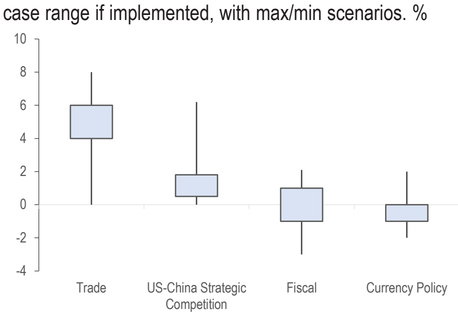
Figure 7: Macro scenarios for 2024: implications for FX

Scenarios	FX implications
1. Big squeeze - no more hikes but gradual slide in high-for-long - margin compression, high rates drag down growth - Fed cuts 25bp/meeting starting 3Q in response to recess	**USD TWI** +3-5% **USD/JPY** 145 **EUR/USD** 1.00-1.03 **High beta** FX leads weakness
Best long and short candidates	Long USD, CHF vs. EUR, GBP, Scandis, AUD,NZD
2. Round 2 KO/ Fed at 5.5% is not enough - already-sluggish growth hit by higher rates - inflation slide is limited; 2025 deep recession - More pain outside the US	**USD TWI** +5-7 % **USD/JPY** breaks 155 initially, then lower on recessi **EUR/USD** 1.00 **High beta** FX - worst case outcome for low yielders; double-digit drawdowns
Best long and short candidates	Long DXY, short high-beta FX
3. Goldilocks/ soft landing - inflation falls in 2024, no added tightening - US growth low 0.5%: no recession in EMU - central banks cut towards neutral	**USD TWI** -8 to -10% **USD/JPY** 140 **EUR/USD** 1.15+ **High beta** FX rebounds, funding currencies in G10 and Asia perform even better as shorts get unwound
Best long and short candidates	Most bearish USD scenario, especially for the funding legs of 2023's carry trades: Long Scandis, EUR, AUD, NZD, N.Asian FX vs. USD
4. Damage done/ Recession in 1Q24 - US and EU already in recession in 1Q - Fed peaks at 5.5% and cuts in 1H	**USD TWI** +5-7%, then down 8-10% **USD/JPY** low 130s **EUR/USD first weaker, eventually** 1.15+ **High beta initially** weakens led by high yielders, then rebounds
Best long and short candidates	Long JPY and CHF on crosses; Long USD vs. G10 high beta, crowded EM high yielders

Source: J.P.Morgan

Figure 8: Risks are skewed bullishly for USD from the US electoral process next year if certain policies come into play, led by tariffs

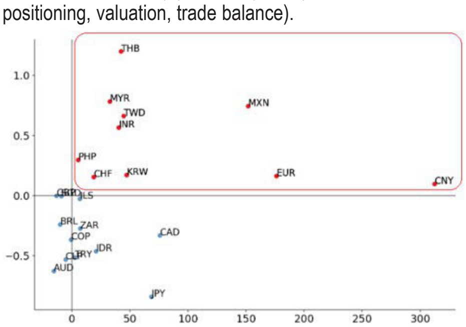
Best estimates of impact on USD across policies. Base-case range if implemented, with max/min scenarios. %



Source: J.P. Morgan

Figure 9: Blanket tariffs would broaden the pain for FX; CNY, EUR, MXN, select Asia vulnerable

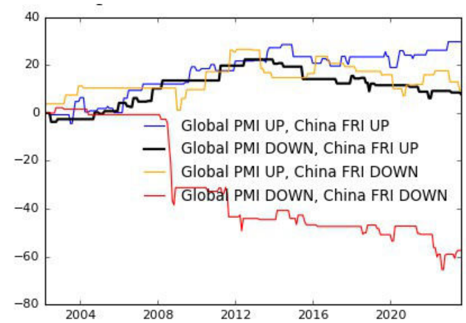
Heuristic for FX vulnerability to tariffs. (X): Nominal trade surplus with US; $b (Y): currency risk (z-score of positioning, valuation, trade balance).



Source: J.P. Morgan

Figure 10: China growth upgrades amid soggy global growth do not strengthen commodity FX

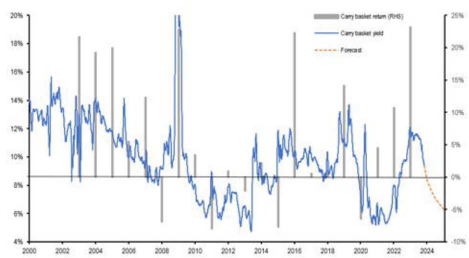
Cumulative AUD/USD spot returns (% pts.) in various up/down combinations in Global PMI and China growth FRI



Source: Bloomberg Finance L.P., J.P.Morgan

Figure 11: The FX carry trade is over as central banks cut rates: dispersion in yields to decline to sub-average in 2024, from two-decade wides

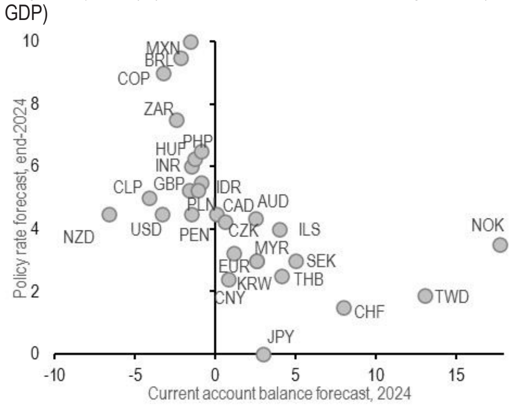
Dispersion in yields on FX carry baskets (i.e. gap between high-low yielders) vs. annual returns on FX carry baskets



Source: J.P. Morgan

Figure 12: External balances RV: NZD yields are low with the current account projected to be the highest

Projected yields (%) vs. Current account balance projections (% of GDP)



Source: J.P. Morgan economics

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J.P. Morgan FX forecasts vs. forwards & consensus

Exchange rates vs. U.S dollar

		Current								JPM forecast gain/loss vs December 24*			Actual change in local FX vs USD			
Majors		19-Nov	Mar 24		Jun 24		Sep 24		Dec 24	Spot	Forwards	Consensus**	Past 1mo	Past 3mo	YTD	Past 12mos
	EUR	1.09	1.03		1.05		1.10		1.13	3.5%	1.6%	3.7%	3.0%	0.2%	2.0%	5.7%
	JPY	150	153		151	↑	148	↑	146	2.5%	-3.7%	-3.4%	0.2%	-2.3%	-12.4%	-6.2%
	GBP	1.25	1.18	↑	1.19	↓	1.24	↓	1.26	0.8%	0.5%	1.3%	2.4%	-2.3%	3.1%	4.8%
	AUD	0.65	0.69		0.69		0.69		0.68	4.5%	5.2%	3.0%	3.1%	1.5%	-4.4%	-2.4%
	CAD	1.37	1.37	↓	1.38	↓	1.35	↑	1.33	3.2%	2.6%	-0.8%	-0.1%	-1.3%	-1.2%	-2.5%
	NZD	0.60	0.62		0.61		0.61		0.60	0.2%	1.8%	-1.6%	2.8%	1.1%	-5.7%	-2.6%
JPM USD index		130.6	134.1	↓	133.3	↓	131.3	↓	129.7	-0.7%	-0.4%	-0.8%	-2.2%	0.1%	0.9%	-1.2%
DXY		103.9	108.9	↓	107.3	↑	102.9	↓	100.4	-3.4%	1.3%	-2.5%	-2.1%	0.6%	0.4%	-2.8%
Europe, Middle East & Africa																
	CHF	0.89	0.92		0.90	↑	0.86	↑	0.85	4.3%	0.0%	5.8%	0.7%	-0.8%	4.4%	7.8%
	ILS	3.72	3.80	↑	3.75	↑	3.65	↑	3.50	6.2%	3.4%	9.7%	9.1%	1.6%	-5.5%	-6.6%
	SEK	10.52	11.21	↑	11.05	↑	9.91	↑	9.12	15.4%	13.7%	13.7%	4.4%	4.2%	-0.9%	1.1%
	NOK	10.81	11.70	↓	11.62	↓	10.45	↓	9.56	13.1%	12.1%	6.5%	2.4%	-1.7%	-9.3%	-5.7%
	CZK	22.44	24.51	↑	24.52	↑	23.64	↑	23.23	-3.4%	-3.5%	-2.5%	3.5%	-1.7%	0.5%	5.1%
	PLN	4.02	4.27	↓	4.14	↓	3.91	↑	3.76	6.9%	7.8%	9.8%	4.7%	2.2%	8.8%	13.2%
	HUF	348	374		367	↑	359	↑	363	-4.2%	-1.3%	-2.7%	3.8%	1.1%	7.4%	13.3%
	TRY	28.70	29.50	↓	32.00	↓	33.00	↓	34.00	-15.6%	24.5%	-11.8%	-2.5%	-5.4%	-34.8%	-35.1%
	ZAR	18.34	18.75	↑	18.75	↑	19.50	↑	20.00	-8.3%	-5.1%	-7.5%	3.6%	3.4%	-7.1%	-5.9%
Americas	ARS	354	1100		1350		1400		1450	-75.6%	14.7%	-34.3%	-1.1%	-1.1%	-50.0%	-53.9%
	BRL	4.91	4.90	↑	5.00		5.05	↑	5.10	-3.7%	0.4%	-2.0%	2.5%	1.4%	7.5%	9.5%
	CLP	885	920		930		940		960	-7.8%	-5.9%	-9.4%	6.4%	0.9%	-3.8%	6.4%
	COP	4092	4450	↑	4600		4650		4700	-12.9%	-5.8%	-10.6%	3.2%	0.9%	18.6%	21.9%
	MXN	17.21	17.40	↓	17.50		17.75	↑	18.00	-4.4%	2.1%	0.9%	6.0%	-1.1%	13.3%	13.0%
	PEN	3.76	3.80		3.85		3.85		3.90	-3.5%	-2.6%	-3.8%	3.1%	-1.0%	1.2%	1.8%
Asia	CNY	7.21	7.35	↑	7.30	↑	7.25		7.15	0.9%	-1.7%	0.7%	1.4%	1.0%	-4.4%	-1.3%
	HKD	7.80	7.81	↑	7.80	↑	7.79	↑	7.78	0.2%	-0.2%	0.3%	0.4%	0.5%	0.1%	0.3%
	IDR	15493	15500	↑	15500	↑	15400	↑	14900	4.0%	4.1%	1.9%	2.5%	-1.1%	0.5%	1.3%
	INR	83.27	83.00	↑	82.80	↑	82.50	↑	82.00	1.5%	3.5%	1.2%	-0.2%	-0.2%	-0.6%	-1.9%
	KRW	1297	1340	↑	1310	↑	1275	↑	1250	3.7%	1.5%	4.4%	4.3%	3.5%	-2.4%	3.3%
	MYR	4.68	4.80	↑	4.70	↑	4.70	↑	4.60	1.8%	-0.8%	-1.1%	1.9%	-0.7%	-5.9%	-2.7%
	PHP	55.67	56.90	↑	56.40	↑	55.40	↑	54.70	1.8%	1.4%	1.5%	2.1%	0.9%	0.1%	2.8%
	SGD	1.344	1.370		1.370	↓	1.340	↑	1.310	2.6%	0.6%	1.5%	2.2%	1.0%	-0.3%	2.4%
	TWD	31.85	32.20	↑	32.00	↑	31.70	↑	31.20	2.1%	-3.3%	1.0%	1.5%	0.4%	-3.5%	-2.2%
	THB	35.10	35.50	↑	35.30	↑	34.50	↑	34.30	2.3%	-1.1%	1.3%	4.0%	0.2%	-1.4%	1.9%
EMCI		48.0	45.9	↑	45.5	↑	45.3	↑	45.1	-6.1%	0.9%	-4.0%	3.2%	0.6%	-4.0%	-3.4%
Exchange rates vs Euro													Actual change in local FX vs EUR			
	JPY	163.3	158		159	↑	163	↑	165	-1.0%	-5.2%	-6.8%	-2.8%	-2.5%	-14.0%	-11.3%
	GBP	0.88	0.87	↑	0.88	↓	0.89	↓	0.90	-2.7%	-1.1%	-2.3%	-0.6%	-2.5%	1.1%	-0.9%
	CHF	0.97	0.95		0.94	↑	0.95	↑	0.96	0.7%	-1.7%	2.1%	-2.2%	-0.9%	2.4%	2.0%
	SEK	11.48	11.55	↑	11.60	↑	10.90	↑	10.30	11.5%	5.7%	3.7%	1.3%	4.0%	-2.8%	-4.4%
	NOK	11.80	12.05	↓	12.20	↓	11.50	↓	10.80	9.2%	3.5%	-3.5%	-0.6%	-1.9%	-11.0%	-10.8%
	CZK	24.50	25.25	↑	25.75	↑	26.00	↑	26.25	-6.7%	-5.1%	-5.9%	0.4%	-1.9%	-1.4%	-0.6%
	PLN	4.39	4.40	↓	4.35	↓	4.30	↑	4.25	3.3%	6.1%	5.9%	1.6%	2.0%	6.8%	7.1%
	HUF	379	385		385	↑	395	↑	410	-7.5%	-2.9%	-6.1%	0.7%	0.9%	5.4%	7.2%
	RON	4.97	5.00		5.00		5.00		5.00	-0.5%	1.8%	0.8%	0.0%	-0.7%	-0.6%	-0.7%
	TRY	31.36	30.39	↓	33.60	↓	36.30	↓	38.42	-18.4%	22.5%	-14.9%	-5.4%	-5.6%	-36.3%	-38.6%
	BRL	5.36	5.05	↑	5.25		5.56	↑	5.76	-7.0%	-1.2%	-5.4%	-0.5%	1.2%	5.6%	3.6%
	MXN	18.81	17.92	↓	18.38		19.53	↑	20.34	-7.5%	0.5%	-2.7%	2.7%	-1.4%	11.0%	6.8%

↑ indicates a revision resulting in a stronger currency forecast, ↓ indicates a revision resulting in a weaker currency forecast. Source: J.P.Morgan

* Positive indicates JPM more bullish on local currency than spot, consensus or forward rates.

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Global FX Outlook 2024

This still isn't over

- **The top-down view is for USD to be bumpy but elevated. Preference is to buy on dips, but be tactical as markets vacillate between US exceptionalism and recession, narrowing the valley of the smile.**
- **Sustained USD weakness will require Fed cuts and better growth outside the US. Both conditions are not met yet.**
- **Central banks will move to synchronized rate cuts. USD impact will depend on the cyclical context, but size, sequencing and nature of cuts ("good" vs. "bad") should generate ample RV opportunities.**
- **2023 was the golden year for FX carry; 2024 should be the beginning of the end as high-yielders cut most. Declining yields will make carry less attractive and a narrower theme.**
- **Recession risk is well priced into low-yielding, G10 high beta FX, but not among high-yielders. Look for some convergence as yields compress.**
- **US elections will come into view next year. If current polling persists, USD risks are skewed to the upside as the market processes the possibility of new tariffs.**
- **We discuss FX in different macro scenarios; Soft landings are not always USD bearish.**
- **China growth upgrades amid soggy global growth do not tend to deliver large, durable commodity FX gains**
- **The baseline looks for the USD TWI to strengthen by 2.5% in 1H24; EUR/USD 1.00-1.05 in 1H; USD/CNH 7.30-7.35, G10 high beta ex-NZD to strengthen, but EMCI to weaken 6% in spot (+1% total).**

2023: The golden year for FX carry

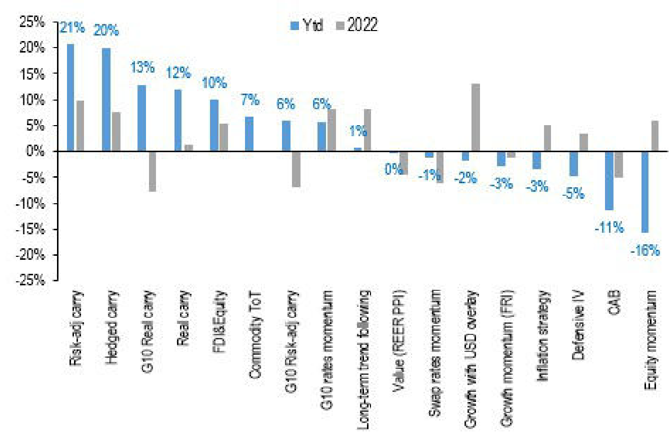
In our 2023 outlook *This isn't over*, our baseline was for renewed USD strength on the premise that a Fed pause by itself wouldn't be sufficient for USD weakness; the latter would require sustained global growth. The USD strength we envisioned was one of lower magnitude given rich valuations and of a different composition than in 2022 (high beta FX was expected to bear the brunt of slowing growth). Key macro components to the view were (a) central banks moving to a synchronized high-hold with ongoing QT and (b) late-cycle dynamics with US recession probabilities rising. The view on both euro and renminbi was downbeat: on EUR because of poor carry, still-elevated energy prices, little visibility into severity of the impending winter and longer-term ramifications of the Russian invasion; and on CNY because the path to post-COVID normalization was envisioned to be bumpy with medium-term BoP dynamics skewed to the downside.

A year-on, we got that renewed USD strength, but amid different circumstances. The Fed hiked more than anticipated, US growth was more resilient, and the growth upturn in China/ Eurozone on an abrupt COVID re-opening / slide in energy prices was sharp but ran out of steam by mid-year. What transpired then was a range-bound USD index in 1H, followed by US-exceptionalism driven dollar strength in 2H.

Some might look at the 6% peak-to-trough range in 2023 for the dollar index and conclude that the year was devoid of action in FX. In reality, this couldn't be further from the truth. **2023 will be a year remembered for many things, but for FX market participants it shall forever be known as the golden year for carry.** Global nominal carry baskets regardless of construction delivered 20% or higher returns in 2023, a record as investors sought out the widest global yield dispersion in nearly two decades amid resilient growth. Relative changes in interest rates and carry emerged as among the biggest drivers of FX returns in G10 as well (Figure 13).

Figure 13: FX carry delivered record returns in 2023, following on from an already-solid 2022

Returns from select FX single-factor strategies; % (for global FX unless specified otherwise)



Source: J.P. Morgan

Lessons learnt in 2023

First, **wide yield dispersion (i.e. yield gap between high and low yielders) should be respected**, particularly when one can earn carry while neutralizing beta. Growth stability during such periods manifests in positive returns from carry rather than lower-yielding growth outperformers. The distribution of YTD returns suggests that once markets can predict lower yields, investors are likely to shy away from carry.

Second, **when the dollar (or a defensive currency) is yielding more than high beta currencies, it strengthens** by vir-

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tue of being an attractive carry-positive risk hedge. Separately, inflation risk premium is still alive. This was an evident support to the dollar via the US rates shock in 3Q/early 4Q when bond/equity correlation once again broached 2022 levels. With the run rate on Fed's inflation measure still running high, markets will still remain sensitive to such re-pricings.

Third, **the market is more eager to position for dollar weakness than for dollar strength.** Aside from the skewness of views in client conversations – often informed by US fiscal concerns and rich long-run valuations– it has also been apparent in price action: vol of DXY up days has on average been smaller than that on down days, even excluding the outsized risk rally in Q1. This pattern is not simply a function of positioning. Take-away is that if growth outside the US is turning up, one should be quick to reduce dollar longs.

Fourth, **the dollar is resistant to rising US rates when RoW growth is doing well or if US rates are rising on term premia**. On the former, 2Q23 saw a 140bp hawkish re-pricing of the Fed's terminal rate but the broad dollar was range-bound (as market pricing for other central banks was able to keep up with the Fed). It was only in 2H when growth in China and the Eurozone started to weaken, that the dollar caught up to higher US rates. On term premia, the reduced sensitivity of some pairs to US rates was evident when US rates were rising without a Fed re-think. The beta of of USD/JPY to a 1% change in US yields ex-term premium is 7.4%, but this beta drops to half for term premium. The take-away is that if the rise in US rates comes amid solid growth in RoW or due to rising US term premium, expect USD to undershoot rates.

Fifth, **Chinese reflation today is not what it used to be**. Part of it is the nature of the stimulus itself, aimed at managing downside in growth than promoting upside, and constrained by the ongoing deleveraging in the systemically important housing sector. The correlation between China growth fluctuations and capital flows into China has weakened considerably, and is asymmetric: growth downturns spur large outflows, but upturns do not lead to equivalent inflows. Forward looking implication: upturns in China growth may not have the same reflationary / USD-depressive effect that they may have had in the past.

Finally, FX intervention can impact even DM FX. In EM FX, CNY and INR vol was reduced to near-zero in Q3 by large scale CB intervention and jawboning. The act of intervention was not a surprise, but the scale of it was. We learnt that similar jawboning strategies can work in DM too, as illustrated by USD/JPY's flat-lining sub-150. Of a different flavor, FX reserve hedging had a short-lived but meaningful impact on SEK. Forward looking implication: FX intervention or reserve management was never really an issue in DM FX strategy, but may become more germane going forward.

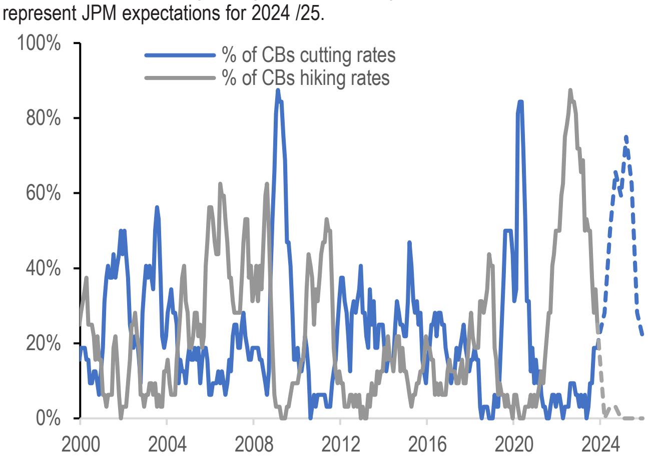
2024: From hikes to synchronized cuts

Going into 2024, the macro backdrop remains challenging with dispersion in market participants view on the macro outlook remains wide, spanning from soft-landing, additional Fed hikes to recession. Needless to say, FX market participants will need to navigate the transition among these scenarios tactically as they would imply different outcomes for the dollar (more on this below).

Key inputs to consider for our baseline view include:

Figure 14: Central banks: Flocking from a high hold to synchronized cuts…

% of central banks cutting/ hiking rates over rolling 3-mo periods. Dashed lines represent JPM expectations for 2024 /25.



Source: J.P. Morgan

(1) A large number of central banks will start cutting policy rates (Figure 1), but policy rates will nonetheless remain elevated even by end of 2024 (Figure 2). The start of cutting cycles which granularly will be led by the very highest yielders should lend itself to the creation of a myriad of new trading themes (and the receding of ones that dominated in 2023). Yields on carry baskets will fall to sub-average by mid-2024. This should make (a) FX carry less attractive and a narrower theme as the year progresses, (b) reduce the pressure on currencies with highly levered economies as well as on the funders, particularly the lower-yielding high beta FX that are now cheap, (c) allow FX markets to respond to other factors like growth or ones that have become quite stretched (like value), (d) provide a fresh set of high beta currencies to underweight vs. USD as hedges as they traverse from high-yielders to low-yielders, and (e) generate RV opportunities motivated by relative sequencing of cuts (just as rate hikes did in 2023).

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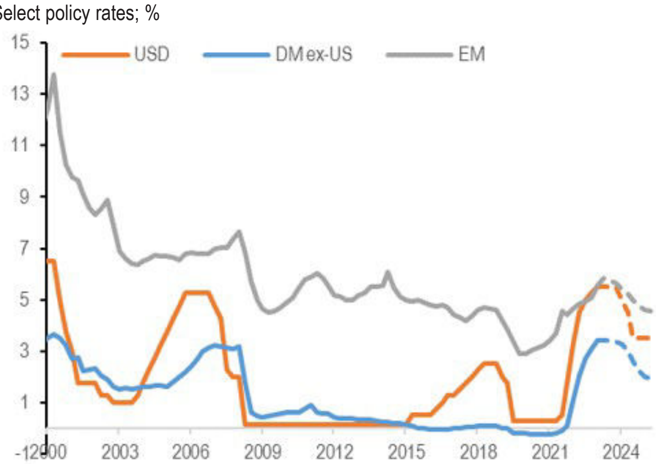
(2) The current growth backdrop is not the same as this time last year. Specifically, one-off events like the drop in TTF gas prices from €120/MWh to sub €50/MWh and a COVID re-opening that led to a level-jump in Eurozone and China sentiment will not repeat. So any recoveries in these regions should be lower intensity than last year. And while the ultimate destination is as yet unknown, the starting point for the US is stronger with the probability of recession now (40%) lower than it was this time last year (55%).

(3) **US elections** in November 2024 could emerge as a key risk for FX if current polling persists and additional trade tariffs are put on the table (see section below). Other elections include the **UK**, **Taiwan** and **Mexico**. **Geopolitics** will be centre-stage as well with ongoing conflict in the middle-east and between Russia-Ukraine, with FX markets pricing in little premium for these factors.

Figure 15: ...but rates are still expected to settle at high levels in the baseline

Select policy rates; %



Source: J.P. Morgan

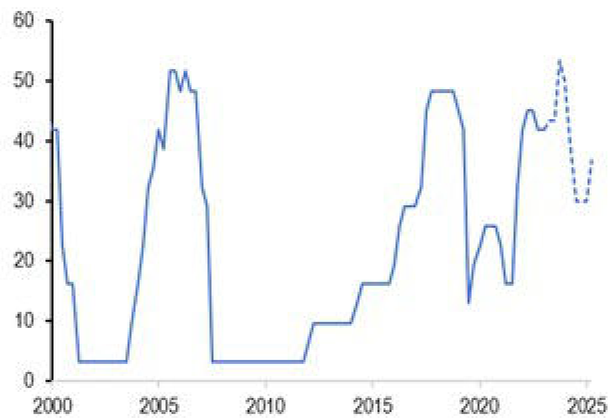
The dollar: Bumpy path, narrow smile

The top-down view is for USD to stay bumpy but at elevated levels with potential for new highs. Recommended strategy is tactical with preference to buy on dips as the market vacillates between US exceptionalism and recession, which should narrow the valley of the dollar smile.

It is premature to expect the dollar to reverse the uphill journey it started in 2021. While a large portion of the uphill climb may have been covered, one may think of the current stage as a transition to a tricky ridge amid low visibility, with several descents and ascents, even to new highs, till the ultimate destination (soft landing, hard landing, more hikes) becomes clearer. The culmination of the final descent (i.e. sustained, double-digit USD weakness) will require not just Fed cuts, but also for global growth to broadly improve.

Figure 16: Even with 100bp of rate cuts expected, the dollar is projected to yield more than 40% currencies globally on a nominal basis...

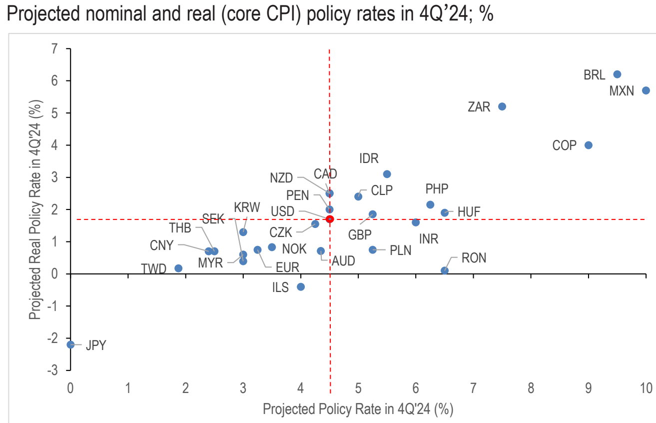
% of currencies that USD yields more than; dotted is 2024 and 2025 projection



Source: J.P. Morgan

Figure 17: ...and 56% of the currencies on a real basis by the end 2024

Projected nominal and real (core CPI) policy rates in 4Q'24; %



Source: J.P. Morgan Economics Research

These conditions are not in place yet. **Growth outside the US** is still fragile with Eurozone flirting with a recession and China's ongoing housing stresses.The **Fed** may well be taking a breather, but the odds of additional hikes are far from trivial with core measures ex-shelter still hot and US growing above potential thus far, and its output gap having closed in contrast to other regions. Our economists look for the Fed to cut rates by 100bp next year, but this is now already priced into rates markets. The overall yield advantage of the dollar will wane if these rate cuts are realized, but it would still leave **the dollar yielding more than 40% currencies globally nominally and 56% of the currencies on a real basis** in 2024, not bad for a defensive currency (Figure 16; Figure 4). Moreover, **the dollar is now undershooting rate differentials**, as it did at

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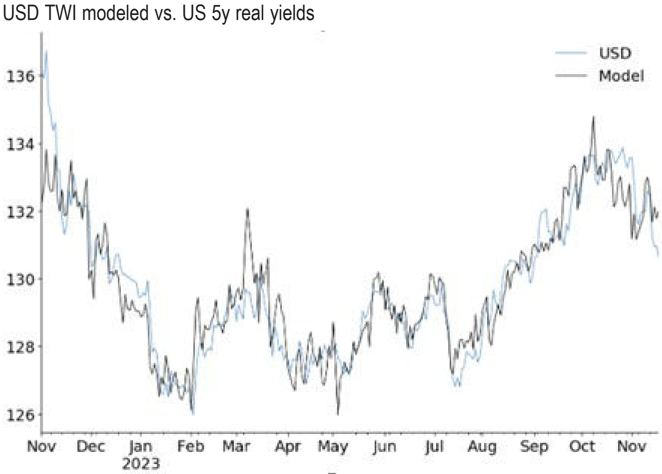
the start of 2023 and again after the soft July CPI print (Figure 18). Finally it is worth noting that **US productivity** has also been rising relative to the rest of DM (we discuss this as themes in relation several currencies in this *Outlook* - EUR, GBP, CAD, JPY; Figure 34) which should also be net-supportive of the dollar on a REER basis.

Figure 18: ... and the dollar is now undershooting real rate differentials

USD TWI modeled vs. US 5y real yields



Source: J.P. Morgan

The baseline forecast looks for DXY and the broad USD index (JBDNUSD) to strengthen by 3% and 2.5% in 1H24, respectively; for EUR/USD to weaken to between parity and 1.05 in 1H depending on extent of EMU weakness; USD/CNH to rise to 7.30-7.35 and for G10 high beta FX (AUD, CAD) to strengthen by 3-4% (Nordics by >10%) but for our EM currency index to weaken by 6% in spot terms (but still deliver modestly positive total returns).

Beyond the dollar, we address the following ten key issues for FX markets in 2024:

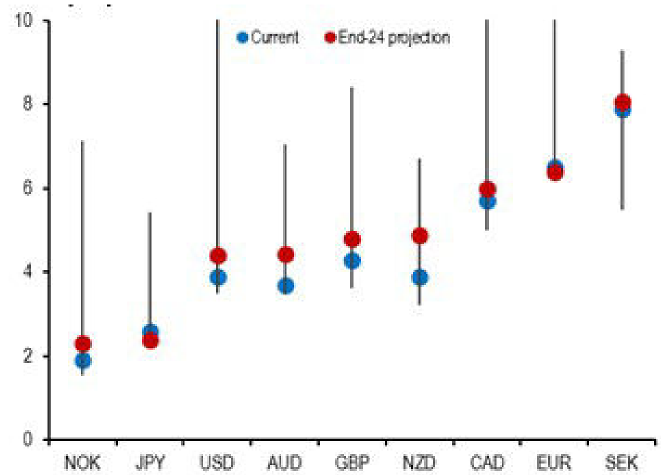
1. Central banks: Rate cuts will be broad, but not uniformly deep...

There are three implications for FX we foresee from central bank policy in 2024: (1) the possibility that broad central bank rate cuts (Figure 1) usher in broader risk relief/ USD weakness by easing financial conditions; (2) the sequencing and nature of cuts informing RV and (3) QT which is traditionally USD-bullish.

Broad rate cuts due to declining inflation should be USD-bearish in theory, but in practice monetizing this will be harder. First, rate cuts will not completely reverse 2022-23 hikes and in the baseline should settle at a still-high level relative to recent history (Figure 2). Moreover, as discussed earlier, the complication for the dollar arises from the growth backdrop under which these cuts are delivered, i.e. expectations of a soft- or a hard-landing. As data softens in reaction to lagged effects of policy tightening, the conviction level on whether we are approaching a soft or a hard landing will vacillate warranting a tactical approach (in our baseline, unemployment rates are projected to go up only modestly (Figure 19); watch this space as larger increases will inform USD strength).

Figure 19: Unemployment rates are projected to go up only modestly in the baseline

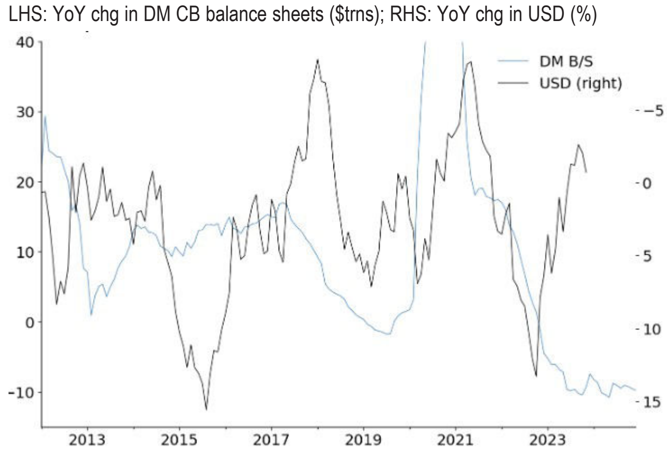
Projected unemployment rates for end 2024; %



Source: J.P. Morgan Economics

Figure 20: QT will continue for the third consecutive year in 2024 and tends be USD-supportive; the dollar is undershooting

LHS: YoY chg in DM CB balance sheets ($trns); RHS: YoY chg in USD (%)

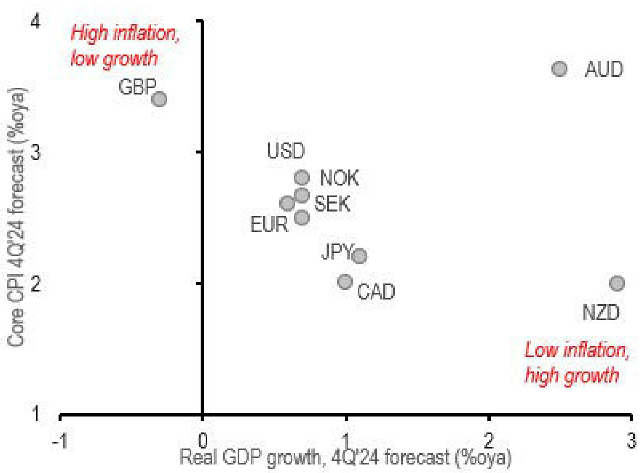


Source: J.P. Morgan

An additional factor on top of still-high policy rates and low conviction on growth is **QT**, which will still continue in full-force next year. The Fed's balance sheet will shrink by another 4%pts in 2024 and ECB's by 6% (down from 10% in 2023). On average, DM central bank balance sheets will decline by an average of 5%pts of GDP in 2024 (4% in 2023). Shrinking balance sheets have historically tended to be associated with a stronger dollar (Figure 20), so this dynamic should be at least a partial offset to rate cuts. Finally, duration supply in the US is slated to increase by 20% to a record as the Treasury terms out funding, which can re-inject term premium into the long-end and tighten financial conditions. The bottom line is that the translation of broad rate cuts into a broadly weaker dollar is not a given, and will require an optimal combination of global growth and inflation that will need to be continually assessed as the year unfolds.

Figure 21: UK is expected to be in recession next year with the worst growth globally with the highest inflation in DM

J.P. Morgan economic forecasts by currency



Source: J.P. Morgan Economic Research

...but should become a fresh source of RV: "Good" vs. "Bad" cuts

Beyond USD, the question of sequencing, size and nature of rate cuts should lead to a larger set of fresh of RV trading opportunities in 2024, just like these attributes for hikes did in 2023. Relative rates momentum was one of the best performing strategies G10 this year as the timing and size of relative rate hikes led FX returns (Figure 13). The nature of rate cuts will matter as well. Over the last two years, we have been highlighting the differences between "bad" rate hikes (inflation driven even if growth is poor) vs. "good" hikes (growth rather than inflation driven). In this vein, currencies with "good" cutting cycles (inflation declining, firm growth) should outperform vs. those experiencing "bad" cutting cycles (inflation sticky amid slowing growth / recession). An example of bad rate cuts is the **UK**, which is projected to be in recession next year with the worst growth globally and among the highest inflation rates in DM (Figure 21). On the other hand, **SEK** is net likely to (perversely) benefit from rate cuts given how leveraged and rate-sensitive the economy is, and how much the currency has weakened as rates rose (a recession is well priced in SEK; discussion below). The expectation is for Sweden to exit a recession next year; the recovery isn't expected to be pronounced but will nonetheless mark an inflection. **New Zealand** is expected to be the first and the largest DM cutter in 2024 (and also have the worst current account globally) while **Australia** is not expected to cut at all. **This context informs a relatively bearish stance on GBP and NZD relative to SEK and AUD** (see *Trade Recommendations*).

2. Cycle: Towards recession or soft-landing? FX in different macro scenarios

Wider-than-normal distribution of economic outcomes next year. The top-down cyclical call for 2024 is more treacherous than usual owing to a wide variety of potential outcomes, ranging from immaculate disinflation to an imminent recession, with equally varied odds of each scenario. This dispersion of views is in large part an artefact of 2023's humbling experience of the consensus' fairly high conviction recession call proving incorrect, leading to reassessments of private sector vulnerabilities, policy transmission lags, and trade-offs between tight monetary vs. loose fiscal stances. In terms of the forward looking view, JPM Economics downplays near-term recession risks, and is operating on a baseline "boil the frog" view that sees sluggish growth but sticky core inflation forcing central bankers to maintain restrictive stances, which in turn undermines the expansion and leads towards a recession over the next 18 months. That said, an alternate soft-landing scenario sparked by some combination of more favorable inflation and supply-side performance cannot be ruled out.

Cyclical debate unlikely to be settled in early'24, scenario based FX playbook more useful. Given the dispersion of economic outcomes, 2024 requires that we be pragmatic that it will take time to assess whether disinflation will continue without eroding economic activity in a way that permits DM central banks to ease, and that the interim journeys to a fork in the road between a recession vs. soft landing end points will likely prove indistinguishable. At this stage, the best we can do is prepare rather than predict; in this spirit, Figure 7 sketches out FX implications for each of our economists' global outlook scenarios. In a nutshell:

- **The dollar should strengthen and high beta FX should weaken, at least initially, in three of the four scenarios** that lead to recessions of varying intensity; the best recession hedges are likely to be found among high-carry EM outperformers this year where yields are projected to decline, valuations are stretched and positioning is consensus long.

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- **The worst case outcome for the dollar is soft landing**, wherein we expect beaten down G10 and North Asian FX that were widely used as funding currencies for 2023's carry trades to outperform; within G10 FX, Scandinavian FX in general and SEK in particular is likely to prove a rewarding cyclical recovery trade given valuations and easing of domestic financial conditions as interest rates fall.
- **Watch for inflections in the likes of EUR/USD and USD/JPY** before / after sharp recessions ("Round 2 KO" and "Damage done" scenarios). For instance, if additional rate hikes are required next year that eventually tip the global economy into a recession, the path for USD/JPY could be an "inverted-V" — initially following rates higher but eventually collapsing under the weight of risk-off / de-leveraging. Similarly, the aftermath of a recession can make for a V-shaped recovery for a consensus short like the Euro. Given that financial markets have behaved in a more reflexive and anticipatory fashion in recent years, the timing of such inflections may not align neatly with the onset of/exit from recessions, hence catching currency turns will require open-mindedness to counter-intuitive cyclical correlations in real time.

Figure 22: Macro scenarios for 2024 and implications for FX

Scenarios	FX implications
1. Big squeeze - no more hikes but gradual slide in high-for-long - margin compression, high rates drag down growth - Fed cuts 25bp/meeting starting 3Q in response to recession	**USD TWI** +3-5% **USD/JPY** 145 **EUR/USD** 1.00-1.03 **High beta** FX leads weakness
Best long and short candidates	Long USD, CHF vs. EUR, GBP, Scandis, AUD,NZD
2. Round 2 KO/ Fed at 5.5% is not enough - already-sluggish growth hit by higher rates - inflation slide is limited; 2025 deep recession - More pain outside the US	**USD TWI** +5-7 % **USD/JPY** breaks 155 initially, then lower on recession **EUR/USD** 1.00 **High beta** FX - worst case outcome for low yielders; double-digit drawdowns
Best long and short candidates	Long DXY, short high-beta FX
3. Goldilocks/ soft landing - inflation falls in 2024, no added tightening - US growth low 0.5%: no recession in EMU - central banks cut towards neutral	**USD TWI** -8 to -10% **USD/JPY** 140 **EUR/USD** 1.15+ **High beta** FX rebounds, funding currencies in G10 and Asia perform even better as shorts get unwound
Best long and short candidates	Most bearish USD scenario, especially for the funding legs of 2023's carry trades: Long Scandis, EUR, AUD, NZD, N.Asian FX vs. USD
4. Damage done/ Recession in 1Q24 - US and EU already in recession in 1Q - Fed peaks at 5.5% and cuts in 1H	**USD TWI** +5-7%, then down 8-10% **USD/JPY** low 130s **EUR/USD first weaker, eventually** 1.15+ **High beta initially** weakens led by high yielders, then rebounds
Best long and short candidates	Long JPY and CHF on crosses; Long USD vs. G10 high beta, crowded EM high yielders

Source: J.P.Morgan

Recession hedging via options. Prudent portfolio construction for 2024 will likely require protection for the recession scenarios described below. FX options are fit for this purpose and discussed in greater detail in the *Derivatives* section of this publication. The short version is that cross-JPY puts (CAD/JPY) and long volatility expressions in popular carry trade currencies (USD/BRL 1Y ATM vol, EUR/BRL 1Y 25D risk-reversals, USD/MXN 1Y1Y FVAs) are well-priced **convex hedges for a recessionary downturn** in risk markets.

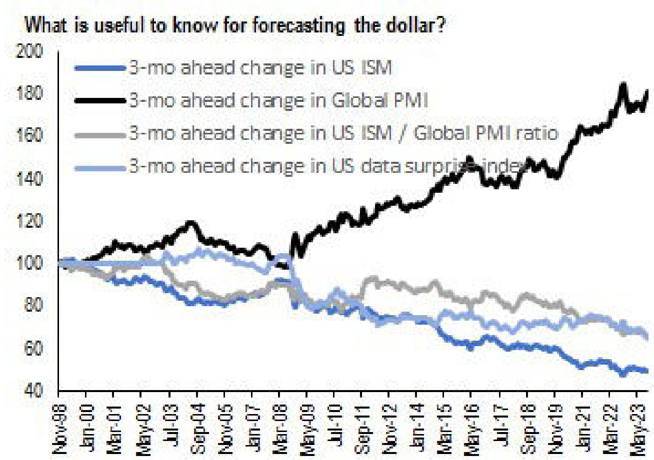
A caveat: Soft landings are not always USD bearish

Two potential blind spots FX to be mindful of:

- First, there is a disproportionate emphasis — rightfully so, from an economic standpoint — on the US business cycle in any discussion of the global outlook, to the extent that the two are often conflated. However, in an FX context, this can lead to an under-appreciation of the cyclical stresses afflicting non-USD currencies (e.g.Western Europe), and hence the extent of the default bid for the US dollar. Consider the empirical evidence of Figure 6, which shows that **perfect foreknowledge of the global cycle is infact far more useful (in a counter-cyclical, or LHS of the dollar smile sense) for a forward read on US dollar direction than the US cycle itself**.

Figure 23: The health of the global business cycle is more informative for USD direction than that of the US

Cumulative spot returns (%) of heuristics that trade the USD TWI based on ***perfect foresight*** of 3-mo ahead changes in various cyclical indicators. The USD TWI is bought (sold) if it is known with perfect certainty that US ISM, US data surprises, or US ISM / Global PMI ratio will rise (fall) over the next 3-mo, or that the Global PMI will fall (rise).



Source: Bloomberg Finance L.P., J.P.Morgan

- Second, a US soft landing is reflexively associated in most investors' minds with material USD weakness and we have pencilled in a similar outcome in Figure 7. But it is worth keeping in mind that history is more indecisive on the matter. Figure 24tabulates financial market reaction during previous epsiodes of US soft landings as identified in economic literature (*Landings, Soft and Hard: The Federal Reserve, 1965–2022*, Blinder). With the usual caveat around sample size, it is worth noting that **the US dollar did in fact *appreciate* in 2 out of the 3 episodes**

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listed, and that the most consistent price responses came from non-FX asset classes (lower UST yields, stronger SPX, higher oil/commodities). In mid-1980s, the dollar first strengthened in the hiking cycle as shown in Figure 24; the dollar eventually weakened in 1985 but that was triggered by a unique event (Plaza Accord) that is unlikely to be repeated. The dollar did weaken in the mid-1990s soft landing episode; whether the 1999 -2000 hiking cycle led to a soft landing is debatable, but the dollar strengthened during this episode. Another reminder, if it was ever needed, that market assumptions can be challenged by what has already been a weird cycle and the need for open-mindedness in navigating it.

Figure 24: The USD's response to previous episodes of US soft landing were not uniformly bearish

Asset price reaction during episodes of 'soft' or 'soft-ish' landings as identified in Alan Binder's paper on the taxonomy of US landings . Columns in orange boxes are those where the sign consistency of market reaction is uniform across episodes.

		Asset market reaction								
Start	End	UST 2Y	UST 10Y	UST 2s10s	USD TWI	SPX	HY Credit	Gold	Oil	CRB
Feb-83	Aug-84	276	197	(79)	11.4	12.0	--	(29.2)	--	--
Dec-93	Apr-95	236	131	(105)	(12.4)	9.0	(9.0)	1.7	36.9	20.0
Jan-99	Jul-00	173	133	(40)	6.6	18.0	77.0	(2.0)	138.0	45.8

Source: Bloomberg Finance L.P., J.P.Morgan

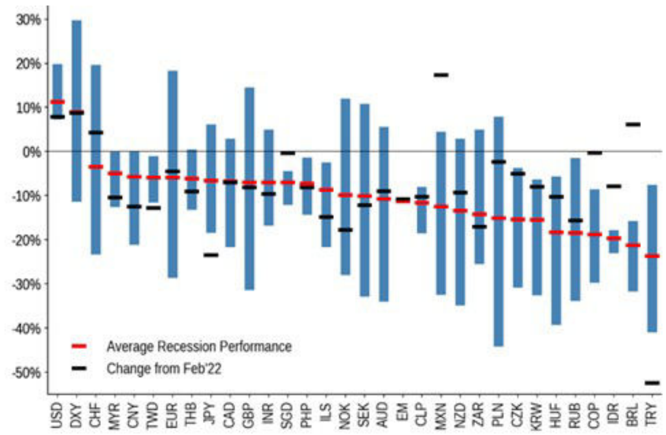
3. Where is recession already priced?

Recession risk is well priced into low-yielding, G10 high beta FX, but not among high-yielders. A cross-sectional assessment of what is roughly priced in for a global downturn (Figure 5) **reaffirms several useful historical takeaways we've observed previously:** USD & CHF are top performers; EUR weakens but with wide dispersion in episodes; and high beta FX weakens led by EM. **What makes the current set-up unusualis that the low-yielders discount a recession the most.** On average, depreciation in the low-yielding bloc is greater than that in past recessions (JPY, AUD and EM Asia). By contrast, high-yielders are much stronger compared to their average recessionary downturn (MXN, BRL, PLN, IDR). This is a straightforward consequence of strong support from carry over the last two years. But at the same time, this would arguably make the HY bloc vulnerable in a more decisive global downturn, particularly if that meant more aggressive central bank easing in those regions.

So there are pockets of value, depending on local and global developments. In EM, the new list of "lower yielders" following large rate cuts reveals some fresh candidates to be underweight. **CZK** offers value as a short on this metric with large rate cuts projected and aligns with our EM colleagues' bearish bias, as does potentially **CLP** (our strategists have been underweight, but recently took profits) and potentially **KRW**. In the G10 space, there are fewer rich alternatives; **NZD** is one that would qualify. Instead there is value in the case of a more benign soft-landing, in which case the discount in AUD, NOK & SEK could offer a nice recovery tailwind and convergence with the high yielders.

Figure 25: Where is a recession already priced? Low-yielders are more discounted the high yielders, which have benefited from strong carry

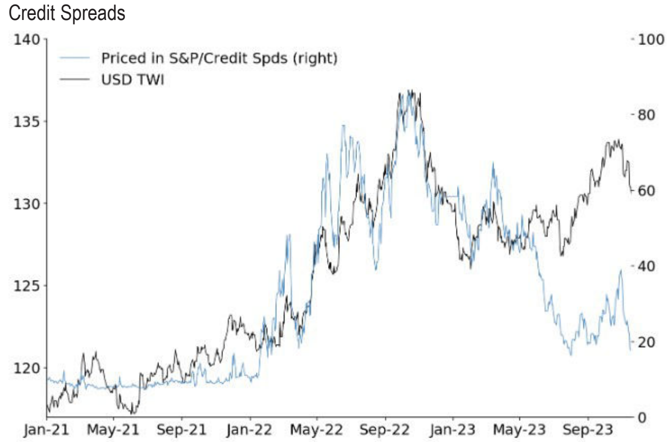
Recession performance for CCY/USD pairs across past six NBER recession episodes (1980, 1981, 1990, 2001, 2007, 2020). Blue bar indicates min/max range of performance. Red marker denotes average performance across all six episodes. Black marker denotes change from 15-Feb-22 to present. USD is USD TWI, EM is EMCI.



Source: J.P. Morgan

Figure 26: USD TWI is off the highs, consistent with lower perceived risks of a recession, but has diverged from other risk assets

LHS: USD TWI; RHS: JPM Quant Econ est. of % of recession priced into S&P500 & Credit Spreads



Source: J.P. Morgan

We would note that USD TWI has perceptible upside in a recessionary scenario, but at the same time screens more discounted to those risks than certain other global macro assets. Figure 5 suggests the trough-to-current USD rally this cycle is about 5% short of its average recessionary performance. It is not a coincidence then that the USD TWI is about

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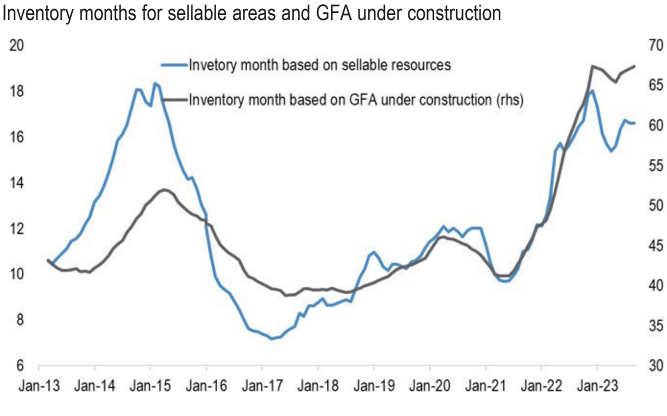
4.5% off its 2022 peak, when there was a global energy crisis and a subsequent fiscal/LDI crisis in the UK. Assessing the USD TWI against our quant economics team's S&P + credit spread-implied recessionary model, we find that all of those asset classes appeared to near-100% chance of recession at that point last year (Figure 26). But the model has come off, suggesting risk assets price a more benign 20% chance of recession, whereas the USD is more consistent with about 60% (there are explanations for the deviation - eg US exceptionalism vs RoW). Nevertheless, this too helps to frame the extent of USD upside in both positive and negative global scenarios.

4. Commodity FX amid China stimulus but slowing global growth

Anticipating only a lukewarm Chinese recovery as destocking in real estate continues. An economic rebalancing away from the housing towards advanced manufacturing is currently underway in China, and the pain associated with the transition is unlikely to wear off until more meaningful progress is made on de-stocking in the property sector (Figure 27). Hence, macro policy surprises, while being growth positive in and of themselves, may generate a limited and/or short cyclical impulse for China assets next year, leaving the shelf-life of any bullish China trades more limited vs. previous cycles. On aggregate, we look for a bounded lift with lukewarm recovery in 1H24 in the absence of bazooka-type stimulus, with above-trend growth starting to fade in 2H24.

Figure 27: Chinese property inventory is still near recent highs, implying a long road ahead for de-stocking

Inventory months for sellable areas and GFA under construction

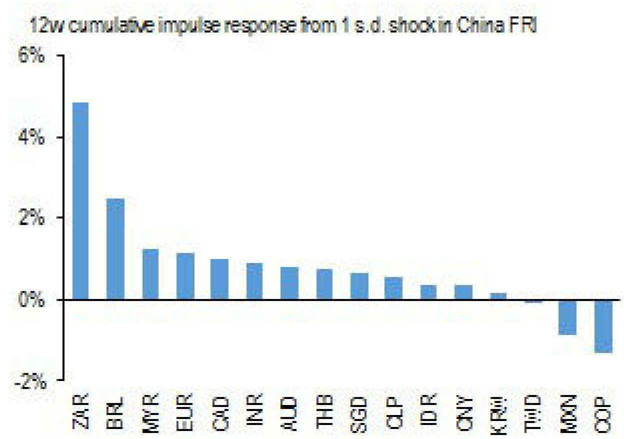


Source: Wind, J.P.Morgan

Less bearish on CNY FX heading into year-end given favorable seasonality and still UW positions, moved MW CNY FX in GBI-EM (from UW). Corporate USD selling flows tend to pick up towards year-end/pre-LNY season and support seasonal strength in CNY FX. The fact that USD/CNY has not reacted much to the recent growth upgrades amid thin market liquidity suggests that seasonal corporate dollar flows are yet to hit with full force. A year-end rally in Chinese equities amid hopes of easing geopolitical tensions could also add a potential tailwind to the RMB. We scale back bearish positions in CNY FX by moving MW CNY FX in GBI-EM (from UW), but we emphasize that this is tactical neutralization that does not change our view of longer term CNY underperformance. If the DXY does indeed weaken towards the back half of next year as the Fed delivers rate cuts, we anticipate the CNY CFETS basket weakening towards 95, with the PBoC more likely to bless benign depreciation of the RMB on a TWI basis when the dollar is slipping than outright USD/CNY strength that can raise financial stability concerns.

AUD the most likely beneficiary of any 1H24 China lift within G10 FX. Traditionally, upgrades to China growth have favored commodity exporters such as ZAR, BRL, ZAR and AUD, as Chinese reflation has leaned heavily on commodity intensive infrastructure and construction activity (Figure 28). The elasticities of currencies to additional Chinese growth upgrades next year are likely to be lower than those in Figure 28 without the housing cylinder firing as usual in this cycle, on top of uncertainty around the extent to which any commodity demand may already have been pulled forward by stockpiling over the past several quarters. That said, the relative rank order of China lift beneficiaries in FX is unlikely to change materially and suggest a preference for AUD when juxtaposed against valuations and our bottom-up discretionary currency views.

Figure 28: Commodity currencies have traditionally been the beneficiaries of China growth lift



Source: J.P.Morgan

The fly in the ointment — slowing global growth. In addition to uncertainty around the potency / durability of a positive Chinese growth impulse, soggy global growth is likely to limit the shelf life of any China reflation-lite trades. In the

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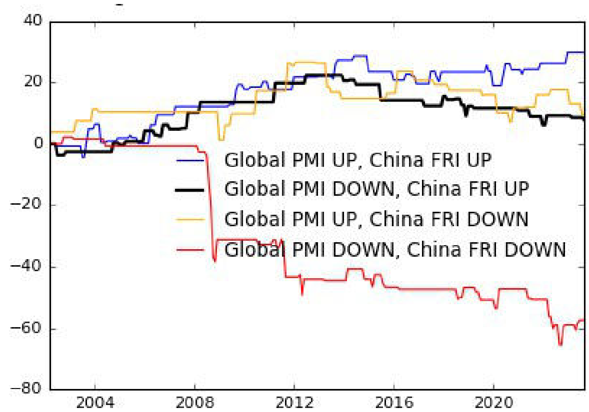
days of muscular Chinese fiscal stimulus, more upbeat Chinese and global outlooks would tend to go hand in hand, but that has not been the case for a while since the nature of Chinese stimulus changed in the mid-2010s amid an emphasis of quality over quantity of growth. Figure 10 shows that when the two diverge, large and durable gains in commodity FX are not a given, which is why we emphasize the more tactical and front-loaded nature of our China-proxy longs next year.

Figure 29: China growth upgrades against soggy global growth do not deliver large, durable commodity FX gains

Cumulative AUD/USD spot returns (% pts.) in various up/down combinations of monthly changes in Global manufacturing PMI and China growth FRI



Source: Bloomberg Finance L.P., J.P.Morgan

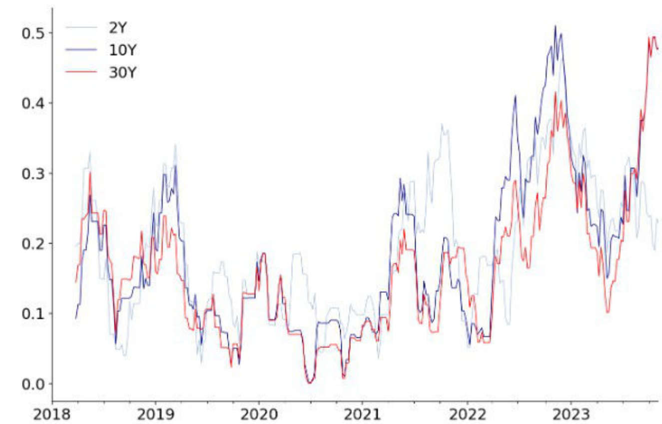
5. Fiscal — cyclical support, medium-term question mark

Fiscal policy has proven dollar-positive this cycle on the back of growth-led US exceptionalism. Even though there was some consternation in US rates reflecting greater-than-expected supply, that repricing alongside still-strong US cyclicals led to a linear appreciation in the USD TWI through the third quarter of this year. Even when growth is not being repriced higher, we find that the USD TWI exhibits a positive (albeit somewhat lesser - see EUR & JPY chapters) beta to term premium to the broad dollar, illustrating that to this point, the US' fiscal position has not been an obvious drag on the dollar (Figure 30).

While the growing supply-demand imbalance in the UST market is notable, we think foreign inflows are sufficient from an FX perspective so as to prohibit a sharp dollar depreciation adjustment. Foreign ownership of USTs has been falling in recent years. We note that, over time, the share of foreign ownership is inversely correlated to the level of USD (ie lower percentage ownership has not meant a weaker USD - Figure 31). We find as well that the absolute level of foreign holdings is about flat; we would look for more evidence of selling to become more concerned about USD weakening in tandem. And overall, we think the twin deficits remain reasonably-financed given the persistent inflows for US assets more broadly (Figure 32). On top of this, there remains strong demand for USD liabilities in addition (see also *Deciphering de-dollarization*, June 2023).

Figure 30: To the extent fiscal concerns have contributed to higher US yields in recent months, that has actually proven tactically dollar-positive, not negative

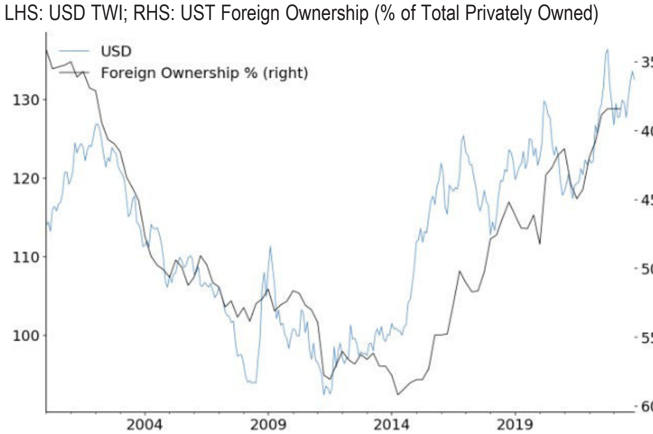
Rolling Rsq of USD TWI vs US rates, by sector (rolling 3m avg of weekly Rsq)



Source: J.P. Morgan

Figure 31: The percentage foreign ownership of USTs has decreased as the USD TWI has appreciated in recent years

LHS: USD TWI; RHS: UST Foreign Ownership (% of Total Privately Owned)



Source: J.P. Morgan, Haver

Questions persist over just how long the USD can withstand persistent fiscal concerns. **Our view is that 1) a convergence lower in the USD REER will occur not in isolation just because of the US' fiscal position, but could add to cyclically-driven weakness depending on macro environment (like coming out of a recession), and 2) there are other structural supports in the USD TWI that can offset some of the depreciative pressure from wide deficits**. The dollar is uniquely strong relative to the level of its external imbalances, and it has become even more dislocated from the level

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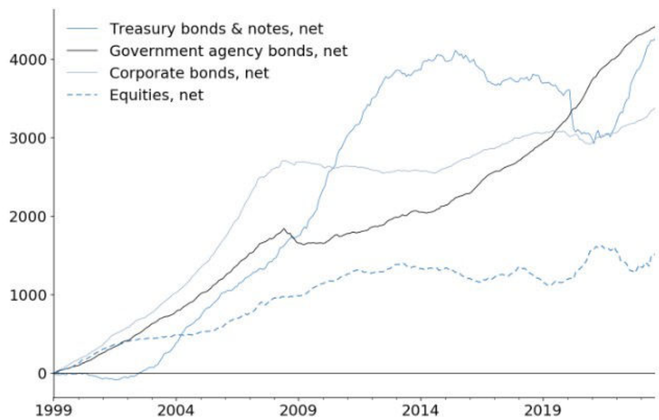
of fiscal deficits over the last several years (Figure 33). But at the same time, other structural and cyclical factors have improved for USD - notably productivity relative to DM peers (Figure 34) as well as relative terms of trade and manufacturing (lead indicators for manufacturing such as orders/inventories spreads have outperformed in US vs Europe and UK). Moreover, relative equity performance should also continue to favour US. In that sense, these are potential offsetting to factors to a fiscal dynamic that is otherwise a theoretical drag for the USD.

Figure 32: There is still cross-asset demand for US assets on a net basis

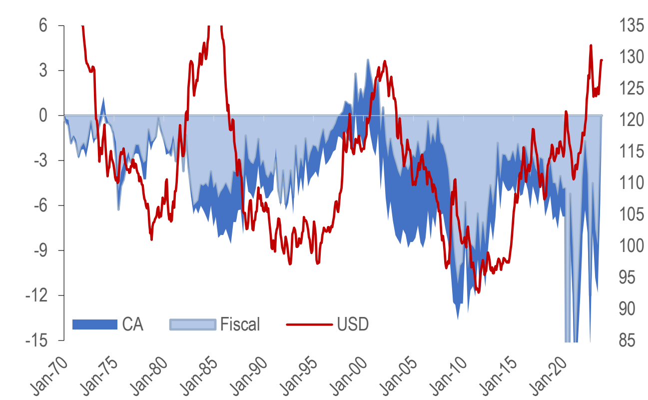
Cumulative net inflows, $bns



Source: J.P. Morgan, Haver, UST TIC

Figure 33: USD is elevated relative to the twin deficits but has structural supports elsewhere

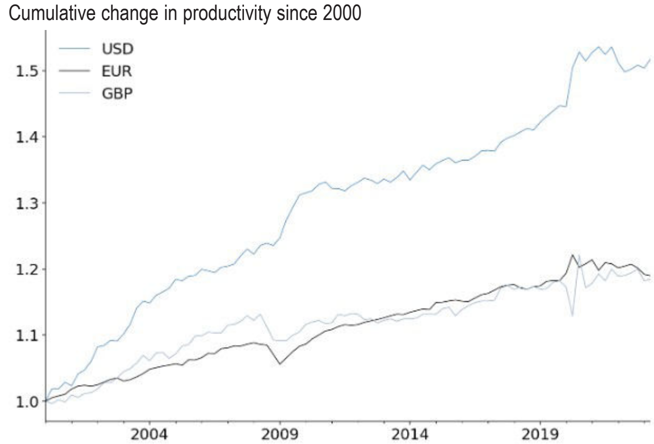
LHS: Twin deficits (% GDP); RHS: USD REER-CPI



Source: J.P. Morgan

Figure 34: Productivity has outpaced DM peers for some time, and has widened its advantage more recently

Cumulative change in productivity since 2000



Source: J.P. Morgan

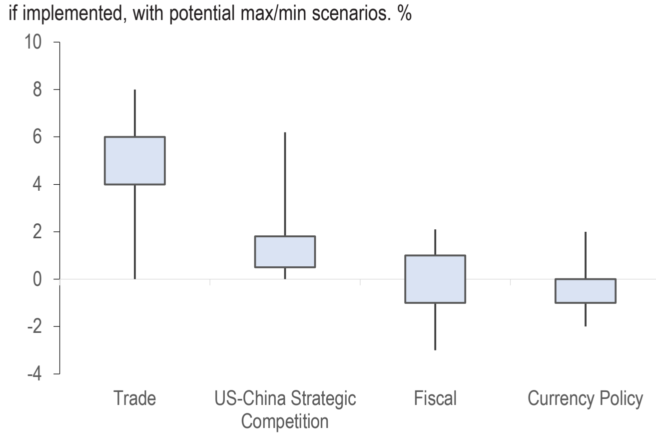
6. The US elections as a potential source of USD strength...

Politics and geopolitical tension should feature prominently for FX into 2024. US elections will headline event risk.

If current US presidential polling persists, risks to the dollar from the elections will be skewed to the upside as the market processes the possibility of new tariffs. President Joe Biden and former President Donald Trump are currently polling similarly one year ahead of the election. **We see several policy channels that could impact FX**: trade policy/tariffs, US-China relations, fiscal policy and currency policy.

Figure 35: Risks are skewed bullishly for USD from the electoral process next year if certain policies come into play, led by tariff risk

Best estimates of potential impact on USD across policies. Includes base-case range if implemented, with potential max/min scenarios. %



Source: J.P. Morgan

In our view, tariffs are dollar-positive and the likely dominant channel of FX risk premium (Figure 8). Broadening of the US-China conflict is also dollar-positive. Fiscal policy

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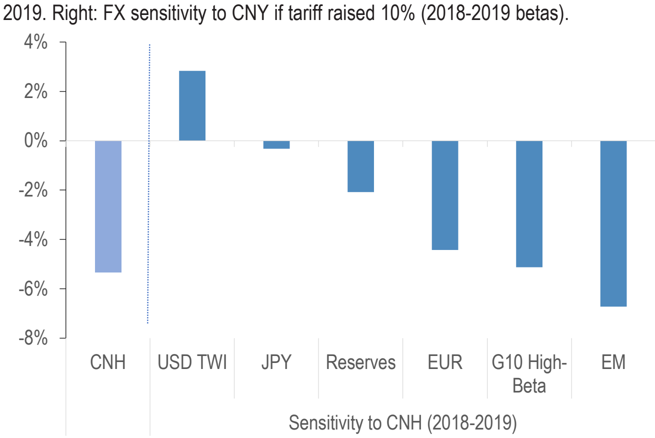
should command less FX risk premium this cycle that in the past, with any tariffs proposal taking centre-stage and less scope for transformative policy relative to 2016 and 2020. Structural deficit questions loom for USD, however, as does a potential fiscal cliff in 2025, but these are not decisive bearish risks to the USD just yet. And FX policy can return to the foreground, especially given current rich USD valuations, but is really a second-order tactical consideration for the dollar next year.

Main takeaways for FX around potentially new tariffs:

- **FX is one of the asset classes most geared to tariffs** given competitiveness adjustments to offset export price pressures and the negative spillover on global growth.
- **FX markets should price in election risk premium early next year** depending on how polls evolve, in part because trade policy is implemented unilaterally (ie without Congressional constraints).
- **CNY will be a point of focus like 2018-2019, but 1) the ex-ante setup is different now** vs then for CNY (fundamental concerns with domestic economy, tariffs already in place, positioning & realized outflows from CNY assets), and **2) a universal tariff broadens the scope of impact well beyond CNY** (we see EUR, MXN and select EM Asia as potentially at risk from new tariffs).
- **CHF & JPY could perform**, conditional on local factors and any perceived risks of trade contributing to global inflation. **G10 high-beta is at risk from any negative hits to global growth**, though is already somewhat cheap.
- **On net, we see the USD TWI potentially 4-6% higher** if a universal tariff were to be instituted, with upside risks.

Figure 36: There was a direct impact on CNY FX from tariffs, which spilled over to global FX via betas to USD/CNY and global growth

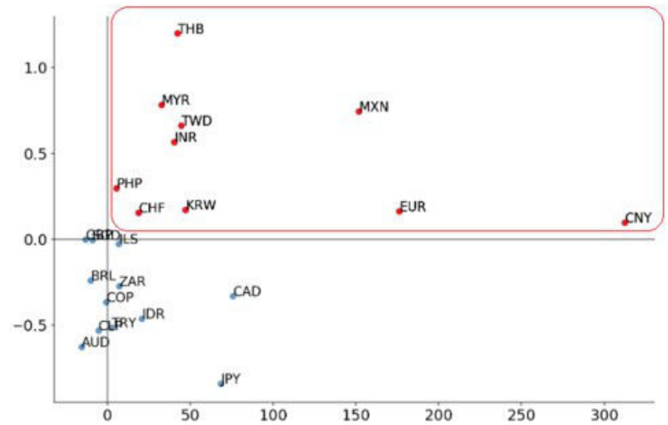
Left: CNY sensitivity of FX to a 10% increase in the effective tariff rate from 2018-2019. Right: FX sensitivity to CNY if tariff raised 10% (2018-2019 betas).



Source: J.P. Morgan

Figure 37: Imposition of blanket tariffs would broaden the pain for FX. In addition to CNY, EUR, MXN and select Asia stand out

Heuristic for assessing risks of FX vulnerability to tariffs. (X): Nominal trade surplus with US (proxy for tariff risk) (USD bns) (Y): tactical currency risk (cross-sectional z-score averaging positioning, valuation (CPI REER 20Y) and trade balance as a % of domestic GDP).



Source: J.P. Morgan

...and global politics

At the global level, other elections include : the UK in May or November. Our initial assessment is there will be limited ramifications for GBP given political restraints/ alignment on unfunded spending commitments and limits on how much the relationship with the EU can improve (Labour currently leads the polls; see *GBP*) but more clarity will emerge closer to the date; **Taiwan** presidential election (January 13) where polls indicate that the ruling, traditionally pro-independence Democratic Progressive Party (DPP) is leading vs. the main opposition party Kuomintang (KMT), which traditionally holds a benign cross-strait policy tone. The KMT and TPP are in talks to run a united campaign, which would pose a formidable challenge to the DPP. The Taiwan presidential election outlook will have significant implications on cross-strait and US-China relations for the coming years (*Emerging Markets*). And in **Mexico**, (federal elections June 2nd) where polls give incumbent Morena a wide double digit lead over opposition coalition FAM, and the social democracy party MC. We expect Morena's Claudia Sheinbaum to win and keep Morena in power for another six-year term. Polls suggest both chambers will reflect a more balanced Congress that would prevent constitutional changes from populist Morena.

More broadly, the spike in geopolitical risk this cycle keeps us guarded, particularly given the still-muted level of FX vol. Geopolitical risk spiked again this quarter with the outbreak of the Middle East conflict, and has taken a global metric of geopolitical risk to one the highest readings in thirty years. But we find that FX vol failed to sustain any meaningful bounce in conjunction (Figure 38). This is understandable as past episodes - notably the Russian invasion of Ukraine

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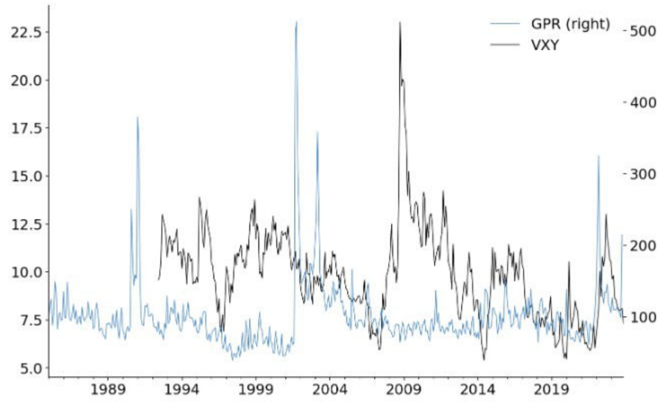
last year - have had a more direct and straightforward transmission through to macro assets (for instance, via energy channels), that passed through to the EUR & the FX space more broadly. With the index on average higher than it has been the early 2000s, we remain wary of any spillover that more directly impacts macro markets.

Figure 38: VXY screens low relative to the spike in geopolitical risk

LHS: VXY G7; RHS: Geopolitical risk index



Source: Caldara & Iacoviello Geopolitical Risk Index, J.P. Morgan

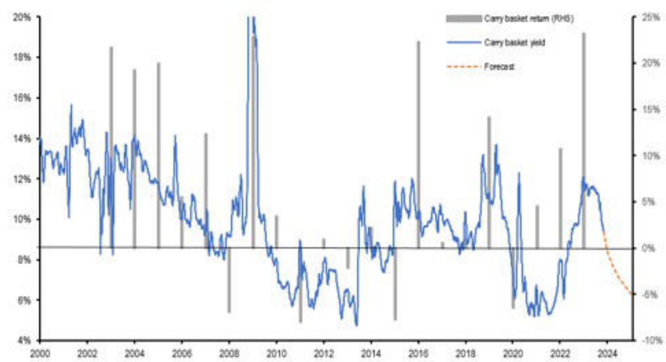
7. Adios carry, welcome value

The key question for next year is: Will FX carry be able to deliver following two years of outsized returns? We don't think so, if central banks deliver the rate cuts our economists expect. The highest yielders are expected to cut rates the most, meaning that **the dispersion in FX yields is projected to decline from nearly two-decade wides to sub-average in 2024 and even lower beyond**. The level of ex-ante yields has tended to inform subsequent returns on carry, hence this is a meaningful development (Figure 11). 2021-22 were exceptions as we had positive returns with narrow yield dispersion, but those were years in which the forward expectation was of policy rates to rise and terms of trade gains accrued to the high yielders (which are also commodity exporters), while now the outlook is for rate cuts (so rates momentum is negative as well). This doesn't mean carry baskets will abruptly start posting negative returns imminently- after all, there are several high-yielders with double-digit yields that are too expensive to be outright underweight and for some (BRL, MXN), yields are still projected to stay in double-digits next year (Figure 40). This will likely be a transition to more moderate returns rather than an abrupt switch with a narrower subset of high yielders still potentially resilient.

With carry less of a driver, other factors can start to come into play. For instance, valuations which are currently the most distressed in G10 (near four decade wides; see *FX Macro Quant*) can start to converge. JPY does not necessarily qualify with rates still essentially at zero, but value reversals could be more meaningful for other currencies. For instance, **low-yielding cyclical FX that have been used as funders and are now cheap (AUD, Nordics) could strengthen versus certain high-beta currencies that are rich due to carry being high thus far**, but will have large rate cuts (CZK, potentially CLP; Figure 40)

Figure 39: The FX carry trade is over as central banks cut rates: dispersion in FX yields is projected to decline to sub-average in 2024, from near two-decade wides

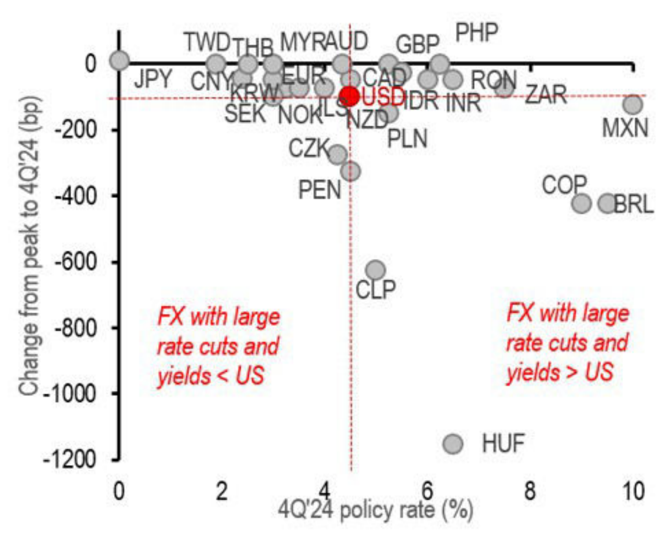
Dispersion in yields on FX carry baskets (i.e. gap between high and low yielders) vs. annual returns on FX carry baskets



Source: J.P. Morgan

Figure 40: Several high-yielders are projected to have large rate cuts; some will traverse to being lower-yielding than the US (like CZK)

y: Projected decline in policy rates till Dec'24 from peak (bp); x: projected policy rate at end of 2024 (%)



Source: J.P. Morgan

8. FX Volatility: Not going anywhere fast

FX volatility is entering 2024 having unwound nearly all of its post-Ukraine conflict risk premium from last year and screening significantly cheap to rate vol (Figure 41). Howev-

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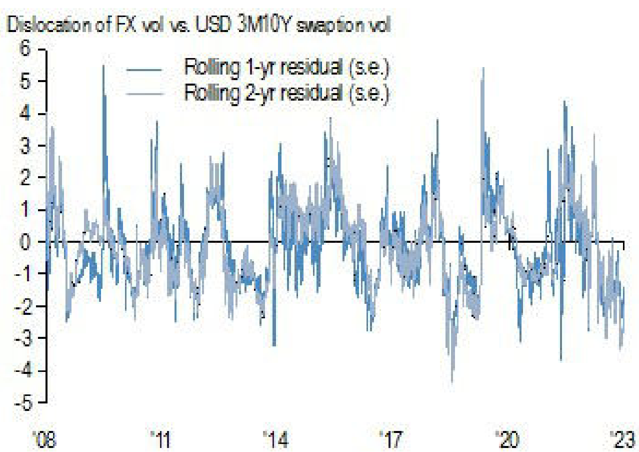
er, the uninspiring empirical regularity is that they can continue to remain low for an extended period of time — 1 - 1.5 quarters of sidewinding at/near local chart lows is the norm, not the exception — before an exogenous macro/market force upends the complacency. The likely macro context of 1H24 — a Fed on hold through H1 and relatively capped ranges on the dollar — should also limit upside on vol over the next couple of quarters. However, we need to remain vigilant around asymmetric upside risks to vol stemming from cyclical (recession) and political (US election) wildcards in the context of already heavy FX carry positioning.

FX option trade recommendation themes entering 2024 reflect a mix of open-mindedness to a risk-friendly environment in the near-term as Fed hike angst recedes, and caution around thin risk premia going into a potentially eventful year for the business cycle and in politics:

1. **Earning vol carry selectively in a low vol world**: Prefer earning vol curve roll-down in longer expiries over selling gamma (short CNH 6m6m FVAs vs. long SGD 6m6m FVAs), collecting premium via conditional USD puts (short USD puts/SEK calls vs. long EUR calls/USD puts) , and premium rolldown on high carry-to-vol curves (-3M / +6M EUR put/MXN call digital calendar spreads)

Figure 41: FX vol is entering 2024 priced at a large discount to rate vol



Source: J.P.Morgan

2. **Continued underperformance of JPY / cross-JPY vol**: Earning levered carry via -3M/+1Y USD call/JPY put digital calendars, long USD/CHF vs. short CHF/JPY 3M vol spreads

3. **Asymmetric hedges for a FX carry washout:** long 1Y 25D EUR/BRL risk-reversals, long USD/BRL vs. short USD/JPY 1Y ATM vol spreads

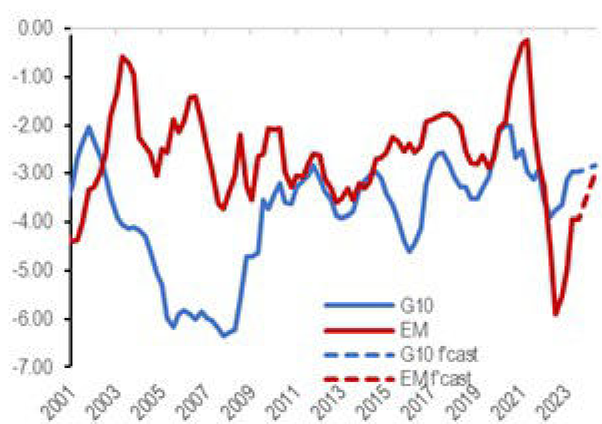
4. **Fading the flatness of the long-end (>1Y) of EM vol curves** that should in theory be materially steeper in light of wider rate differential levels as well as rate volatility, but are likely suppressed by structured / corporate flows: long USD/MXN 1Y1Y FVAs outright or weighted spreads vs. short 6M6M FVAs

9. Vulnerabilities: RV rather than systemic on external balances...

Current account balances of deficit countries have improved and projected to stay on a benign trajectory (Figure 42), so this factor doesn't present much by way of systemic risks. This is especially the case when one accounts for yields which are currently elevated for deficit countries when adjusted for the size of deficits (Figure 43). **Investor focus here should thus be on relative value** instead. For instance, **NZD** yields are low in a global context with the current account deficit projected to be the largest globally. Compare that to the likes of **BRL** and **MXN** with much higher yields and better external balances; or to **AUD** with similar projected yields and a surplus. If the RBNZ doesn't cut rates as our economists expect, NZD could still benefit from the high carry but would be particularly vulnerable to vol shocks. Finally, **JPY** stands out as a surplus country with the worst yields globally; but the external balances are markedly worse. The basic balance for Japan is in deficit and real yields are the most negative globally (Figure 5), hence pressure is on JPY to weaken without a material change in the yield differential vs. US.

Figure 42: Current account balances of deficit countries have improved and projected to stay on a benign trajectory

Worst quintile of C/A balances across G10 and EM countries; % of GDP



Source: J.P. Morgan, Bloomberg Finance L.P.

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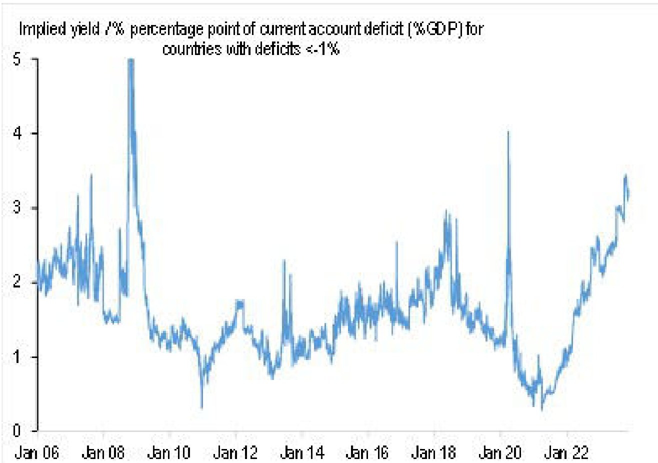
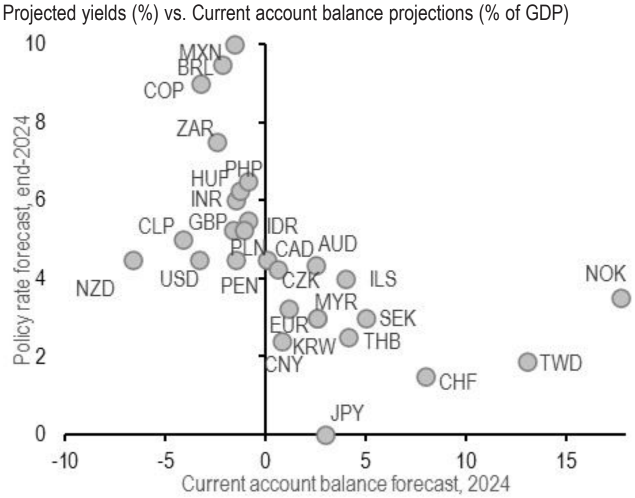
Figure 43: Yield compensation for C/A deficits are quite high



Source: J.P. Morgan

Figure 44: Focus on selective RV instead: NZD yields are low in the global context with the current account projected to be the highest

Projected yields (%) vs. Current account balance projections (% of GDP)



Source: J.P. Morgan economics

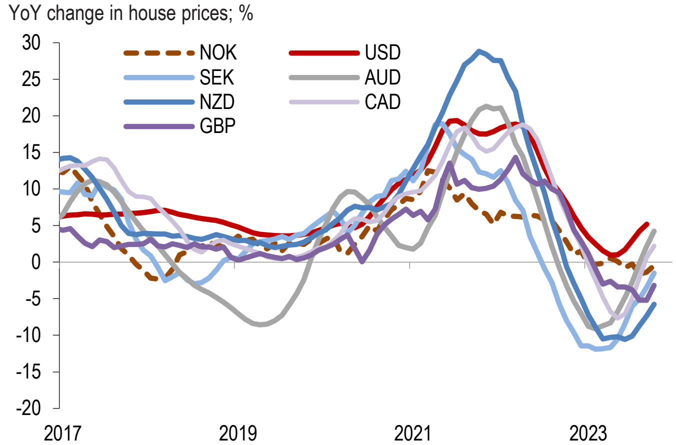
10. …but more concerns on leverage

Last year, we identified the degree of leverage and the sensitivity of the economy to rising policy rates as a differentiator of currency returns, flagging NZD, CAD and SEK as the most vulnerable currencies in this regard. This view panned out well as cross-sectional G10 currency returns were correlated with the decline in house prices in the past year (*Mid-Year FX Outlook*; Figure 10).

Looking ahead, this factor should recede in 2024 for some countries as they cut rates, but not completely dissipate. House prices have already started to base (Figure 45) but our economists note that this has been generally on low transaction volumes and more likely constituting unlevered buyers. With rates not fully expected to unwind their recent increase even with rate cuts, the construction sector will likely continue to languish and mortgage rates will gradually continue to reset higher. **Lower interest rates might help some countries like Sweden** where the transmission of rate hikes was the quickest. But **for others where the effects of policy hikes are lagged due to mortgages being termed out for a few years, this will become more problematic** as mortgages reset higher in 2025. Figure 46 and Figure 47 show that the transmission of high rates across DM countries has been uneven with Nordics the most affected this year.

Figure 45: DM house prices have turned a corner; future rate cuts should help further

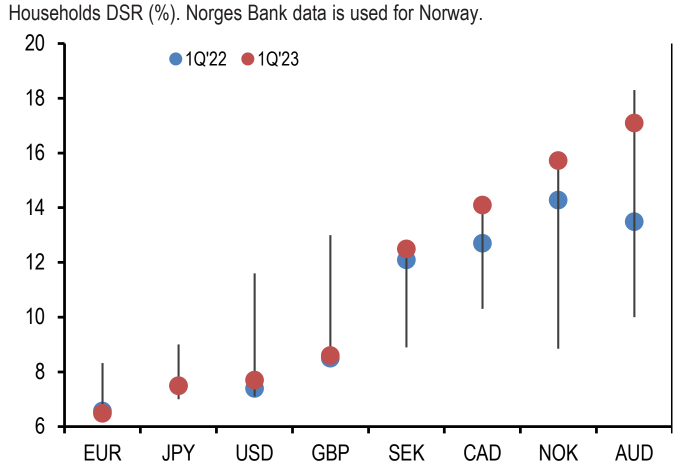
YoY change in house prices; %



Source: Bloomberg L.P., SBAB, Haver, J.P. Morgan; uses CoreLogic for NZ but other metrics indicate deeper declines at par with Sweden.

Figure 46: The debt servicing ratio is the highest for Australia, Norway, Canada and Sweden

Households DSR (%). Norges Bank data is used for Norway.



Source: BIS, Haver, Norges Bank, J.P. Morgan

Since policy rates are not projected to decline to pre-pandemic levels, this will still result in higher monthly debt servicing payments. **The US will be more resilient** given the high pro-

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portion of 30-year fixed-rate mortgages (and a lack of housing supply). But in some countries, the high share of variable rate mortgages allowed the bulk of the pass-through to households to already materialise this year, namely:

- In **Australia**, policy transmission is faster thanks to the largely variable rate structure, so RBA hikes are largely reflected already: average mortgage rates are the highest in DM, along with Norway (source: RBA). We expect around 30bp repricing to come in average mortgage rates.

- On several metrics, **Norway** ranks the most interest rate sensitive country in DM with ~95% of households/corporates on a 3m variable mortgage rate, which accelerated pass-through to mortgage rates (UK vs Scandies: Higher rates, varied sensitivity, Monks & Lund). Private consumption and house prices have been depressed over the past year as a result, but a mix of a housing supply squeeze, easing macro-prudential measures, willingness to dip into savings, and strong labour markets have prevented an even deeper downturn. Even with the cut in rates, our economists expect private consumption to remain sluggish in 2024 while housing prices are likely to fall a further 3-5%.

- In **Sweden**, only 20% of homeowners have fixed rates with maturities longer than 2 years – this last group should begin to bear the brunt of higher rates next year. With a bit over half of the increase so far passed on to households, there is more to go compared to Norway and Australia but it is in a less vulnerable place relative to others in DM, as rate cuts will also be passed on with immediacy.

In others, the worse is yet to come as more mortgages reset in 2024:

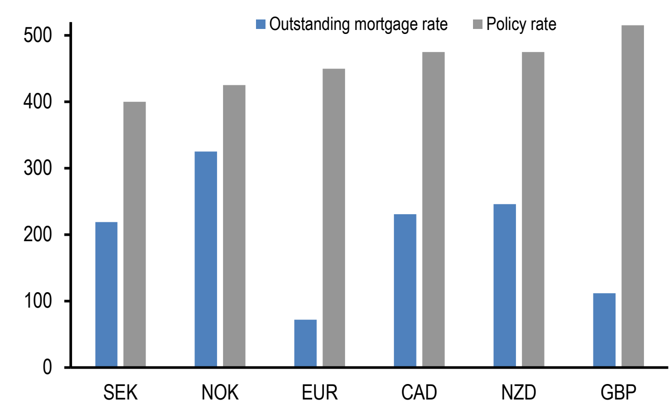
- UK housing market is the most vulnerable due to shorter-term mortgage structure / resets (Global housing: The great supply and demand imbalance, Joyce Chang). With 1.6mn mortgages to be refinanced by 2024 (or ~28% of total owner-occupied mortgages), refinancing from a 2% into a 4.5% mortgage means that an extra 8-10% of household disposable income will be used towards higher mortgage payments.

- **New Zealand will also be vulnerable** to this dynamic with average outstanding mortgage rates slated to rise by around 150bp by mid-24 as mortgages refix, unless market rates move substantially lower. This informs our call for the RBNZ to shift its guidance at upcoming meetings and be the first cutter in DM (May).

- In **Canada**, our expectation for a slow-burning consumption drag from household leverage is coming to fruition; BoC Governor Macklem recently noted that Canadians are increasingly stockpiling savings to help offset rising costs, something not seen in the US. We expect more squeeze into next year as mortgage resets continue, negatively impacting the FX (see also *Housing a medium-term structural support for USD/CAD*, June 2023). In 2024 and 2025, an estimated 2.2 million mortgages will be facing interest rate shock, representing 45% of all outstanding mortgages in Canada. Most of these borrowers contracted their fixed-rate mortgages at record-low interest rates and, most likely, at or near the peak of housing prices around 2020 – 2021. The total amount of mortgage loans to be renewed during this period is estimated to be north of C$675 billion, representing close to 40% of Canadian GDP (Source: CMHC).

Figure 47: Nordics have seen the largest transmission of rate hikes so rate cuts will help quicker; other DMs are yet to experience this

Changes in the policy rate and average rate on the outstanding stock of mortgages since start of each hiking cycle (bp)



Source: Haver, BoE, RBNZ, Statistics Canada, J.P. Morgan

Wildcards

Aside from fat economic tails already discussed in our economists' scenarios, the following are somewhat realistic and will prove market-moving: (1) another round of **US banking sector stress**, this time involving larger banks; (2) voluntary Saudi / OPEC supply curbs reversed, **oil prices fall** sharply into the $50s; (3) politics upends economics as a market driver as **Trump** wins by landslide in the early Republican primaries; (4) opposition victory in the **Taiwan** Presidential elections abruptly eases market perceptions around cross-Strait tensions; (5) **Fiscal sustainability** and **term premium** will likely get more attention for various DMs if growth slows further and central banks continue QT.

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Main trade recommendations

Trade type	Currency	Trade	P/L
Macro portfolio			
Cash (new trades)	**GBP/SEK**	— Sell GBP/SEK	-
	AUD/NZD	— Buy AUD/NZD	-
	SEK/CZK	— Buy SEK/CZK	-
Cash (existing)	**EUR/CHF**	— Sell EUR/CHF	-0.49%
	GBP/CHF	— Sell GBP/CHF	0.32%
Options (new)	**USD/CAD**	— Buy USD/CAD 4m call spread. K = 1.37 / 1.41. Spot ref 1.3728. Cost 88bps.	-
	EUR/SEK	— Buy EUR/SEK 4m at-expiry digi put struck at 10.85. Spot ref 11.4338. Premium paid 8.7%.	-
	USD/JPY	— Buy USD/JPY 6m at-expiry digi put struck at 133. Spot ref 148.40. Premium paid 10%.	-
Options (existing)	**EUR/USD**	— Hold EUR/USD 3m vanilla put. K = 1.0450 (previously unwound far strike of put spread). Cost 77bps.	-0.74%
	EUR/JPY	— Hold EUR/JPY 3m put spread. K = 155.50 / 151.00. Spot ref 157.13. Cost 99bps.	-0.79%
Closed	**USD/CNH**	— Closed USD/CNH 3m vanilla call on 14-Nov. K = 7.30 (previously unwound far strike of call spread). Cost 59bps.	-0.55%
Derivatives portfolio			
RV (new trades)	**USD/CNH-USD/SGD**	— Sell USD/CNH 6M6M FVA vol pts vs. buy USD/SGD 6M6M FVA	-0.4 vol
	EUR/MXN	— Sell 3M 18.15 strike EUR put/MXN call at-expiry digital vs. Buy 6M 18.15 strike EUR put/MXN call digital	-1.25%
	USD/BRL-USD/JPY	— Buy a 1y ATM Vol Swap in USD/BRL and sell in USD/JPY	-0.4 vol
	CHF/JPY-USD/CHF	— Sell CHF/JPY vs buy 3M USD/CHF ATM vol spread	-0.3 vol
	USD/MXN	— Buy USD/MXN 1Y1Y FVA	-0.3 vol
RV (existing)	**USD/JPY**	— Buy 1Y 155 USD/JPY digi call, sell 3M 155 digi call	3%
	XAU/USD	— Buy XAU/USD 1Y 2150 Call, Sell XAU/USD 2050 Call	-8 bp
RV (closed)	**EUR/USD-EUR/CNH**	— Buy 3M 1% OTMS EUR puts/USD calls vs. Sell 3M 1% OTMS EUR puts/CNH calls	-31 bp
	USD/SEK-EUR/SEK	— Buy 3M USD/SEK vs. EUR/SEK ATM straddle spread	0.6 vol
	USD/BRL	— Buy USD/BRL 3M3M FVA	-1.6 vol
	AUD/USD	— Buy AUD/USD 3M Vol Swap	-0.2 vol

Source: J.P. Morgan

Post Mortem 2023

FX forecasts

2023 will likely be remembered as a year that upended consensus views unlike any other. This time last year, markets were coalescing around the clear-consensus view that the US would enter a recession this year. FX investors meanwhile were still in the early stages of digesting the most bearish USD backdrop since the back half of 2020. China reopening and lower EU gas prices, overlaid against the first meaningful signs of disinflation (October US CPI), meant the broad dollar ultimately slumped 8% in just three months into 1Q. We held a more cautious (less bearish) view of the dollar in spite of the price action through year-end. We projected +2% USD TWI appreciation by end-2023.

Yet early-year consensus trades failed to pan out. Price action in GBP and NZD early on belied deep market pessimism on both, and highlighted the role of carry and rates momentum that persisted throughout the year. USD/JPY bears were frustrated early in the year as US growth pivoted stronger in February.

The most memorable event of 2023 though was high-for-long claiming its first casualty in March – the banking crisis. But like much of 1H, the initial market response was short-lived and gave way to a much-faster-than-expected recovery. The quick roll-out of emergency Fed facilities helped stem the initial bleeding, and while several other banks failed, the contagion was ultimately contained. The recession-like global rates repricing nevertheless gave way to a move higher as US growth prospects and stubborn inflation that displaced concerns of an imminent end to the cycle. And so for FX traders, 1H was again challenging as fresh long-USD and long-JPY positions on the back of the shock were ultimately short lived.

That was not the last tactical blow to the USD TWI, but we stuck with the constructive view which improved PnL in 2H relative to 1H. USD weakness following June US CPI marked a turning point, as the USD rallied linearly for the next three months on the back of surging US growth and repricing of UST term premium. In the bigger picture, not only did the US avoid recession in 2H, it ended up growing at one the fastest non-recovery rates in many years in 3Q.

On the whole, this marks the end of a broadly-challenging year. **We can say several of our strategic views were prescient – sticking with a strong-dollar view and staying bearish and short EUR, among others, but monetizing the views was harder.** Staying bearish CNY managed to catch one of the few trending moves in global FX this year. **But overall we posted the lowest average PnL in our macro portfolio in quite a few years**, rivaled recently only by 2017. We can at least say we were discriminate in our navigation of such difficult markets; we put on fewer than half cash trades we normally do in a given year, and by extension, roughly double the amount of options trades. By currency, we had particular success trading SEK from the short side, whereas GBP led losses. In retrospect, we could have added more high-quality EM carry to the portfolio throughout the year, which was likely the primary source of FX investors' total positive PnL in an otherwise unforgiving year.

Our derivative r.v. portfolio, however, saw more success. Vol carry harvesting dominated both in outright and vol RV format while defensive positions struggled to break even despite the multiple vol bouts (banking crisis, debt-ceiling) as realized vol around the major event risks were too few to offset the decay in between. x-JPY skew harvesting generated strong returns through the up and down cycles around the BoJ meetings. Among directionals, EUR trades financed via RV format vs Asia EM carry and EUR proxy won big but highlighted the importance of sizing the RV legs.

Trade recommendations

Since 2008 J.P. Morgan's FX trade recommendations have been detailed each Friday in the *FX Markets Weekly*. They are classified as either: (1) macro directional trades (cash, non-digital options and digital options); (2) derivatives relative value. Trades are marked to market every 10 minutes on the web-based tool, FX Trade Tracker (see User's guide for the JPM FX Trade Tracker from July 22, 2016). That tool carries an inventory of closed trades along with performance metrics such as average returns per trade and success rate.

Macro cash trades returned an average of -0.9% on a limited number of recommendations. Our derivative r.v. portfolio saw a success rate of +61%, returning +0.2 vol per trade, on average.

I. Macro trade recommendations

Macro cash trades returned an about-average +47% hit rate on trades, but averaged -0.9% per trade. We executed only 15 trades, the lowest on record (since 2008).

II. Relative value derivatives recommendations

Our derivatives portfolio saw success across both r.v. (61% hit rate, +0.2 vol avg) and directional r.v. (71% hit rate, +53bps avg). The 80-day average holding period was a bit longer than 10Y average of ~69 days.

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Emerging Markets FX

- **Stay OW EM FX favoring the high carry basket.**
- **EMEA EM FX:** We stay OW overall with focus on recovery trades and carry. We hold OWs in PLN and TRY as well as outright longs in PLN, TRY, ILS and KZT. We remain UW CZK with outright shorts in CZK vs. EUR and SEK.
- **Latin America FX:** We go into 2024 with bullish views underpinned by still appealing carry, manageable current accounts, low political risk and an improving story in China. We are OW MXN, BRL, UYU vs. UW COP.
- **EM Asia FX:** We turn MW EM Asia FX (from UW) as rate differentials, energy prices and exports reverse into 2024. Our current preference of domestically oriented high yielders favours the INR (vs CNH), while the ongoing tourism recovery leaves us bullish on the THB (vs KRW)

Stay OW EM FX with a focus on the high carry basket

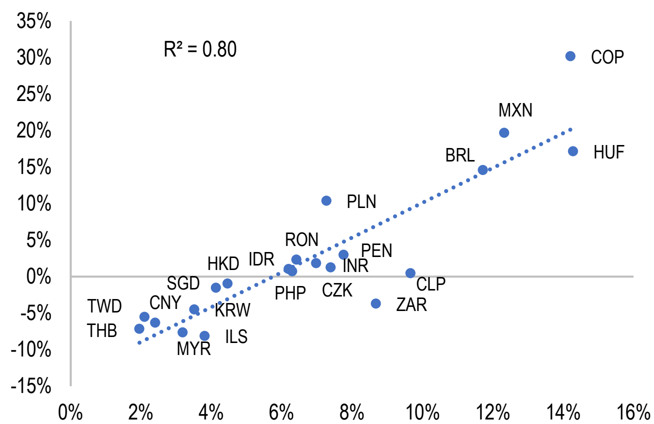
We moved OW EM FX (from MW) at the start of November (see here). We saw a set of bullish triggers for EM FX in the form of a peak in US yields, upward growth revisions globally, a hawkish set of moves from EM central banks and low positioning. EM currencies have already rallied and positioning is turning less negative, but we think this trade has further to go.

Stay long EM FX carry and short currencies where carry is rapidly eroding. In our high carry basket, we are bullish BRL and MXN, two currencies we have been constructive on through most of 2023. Additionally we think carry is attractive in UYU and DOP. In EMEA EM, we are bullish on PLN and TRY, with a bullish bias in HUF (though tactically we took profits on our long position there recently). Stay short / UW FX where carry is going to erode rapidly due to rapid rate cuts. In this category we are UW COP and CZK; we also have had a short bias in CLP but took profits on this recently after the central bank paused its FX accumulation program.

The FX carry trade has been the star of EM fixed income in 2023, following its historical relationship with financial conditions and US growth. Back in April, we showed how EM FX carry had become a major factor driving EM FX (see here). Carry has remained the main driver of EM FX throughout the year, explaining 80% of cross currency differentiation in YTD performance (Figure 48). A natural question that arises is how to reconcile this performance with the move higher in UST yields this year. In order to address this, we look at historical performance of EM carry in different US growth and financial conditions environments (Figure 49). We find that good performance of EM FX currencies has, on average, taken place on quarters with US growth above median and loosening financial conditions (falling 10y UST TIPS yields). Figure 50 shows that this relationship has been persistent in the post-COVID period (including this year) with most of the quarters when EM FX carry has performed well having higher US growth and falling 10 UST TIPS yields.

Figure 48: Carry has driven EM FX performance in 2023

Horizontal axis (%): Average 3m FX implied yields since 01-Jan-2023. Vertical axis(%): Total FX return YTD against USD using 3m carry.



Source: J.P. Morgan.

Figure 49: High carry currencies perform well when US growth is above median and financial conditions are getting looser

Average quarterly return of a top 20% (top 4) carry currencies (using sample from Figure 48). We split the sample according to US %q/q GDP growth based on median since 2000 and if change in 10y UST TIPS has been positive or negative in any given quarter.

	Financial conditions loosening	Financial conditions tightening
US GDP growth above median	2.54%	0.10%
US GDP growth below median	0.36%	-0.03%

Source: J.P. Morgan, Haver Analytics, Bloomberg Finance L.P.

We believe the current rally in EM FX still has legs, with carry outperformance continuing. Looking ahead, even though we don't expect EM currencies to be driven as much by carry in 2024 as they have been this year, we still think the EM FX carry trade has room to deliver positive returns. Focusing on consensus expectations for policy rates and current account balances at the end of 2024 shows that high carry currencies have a premium in terms of compensation for their balance of payments profile, with BRL and MXN standing out as being the most attractive ones (Figure 51). We hold bullish recommendations in both BRL and MXN going into 2024. Long-term valuations also provide an additional layer of support for EM FX, with current bilateral real exchange

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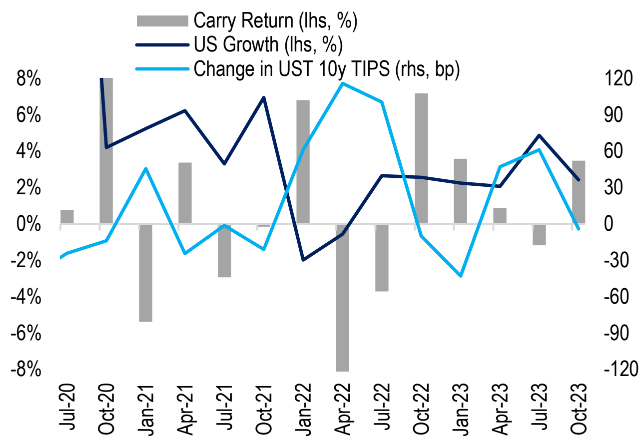
rates being below historical levels for most countries (Figure 52). All together, we believe the current EM FX rally still has legs and we hold onto our EM FX OW in the GBI-EM Model Portfolio entered in early November (see here).

Figure 50: This pattern has persisted since COVID, with carry performing better with higher US growth and falling 10y TIPS yields

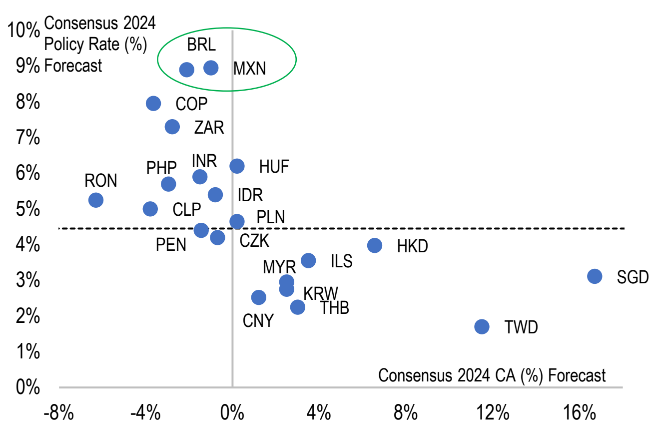
Left vertical axis(%): US %q/q saar GDP growth and average quarterly return of a top 20% (top 4) carry currencies (using sample from Figure 48). Right vertical axis (bp): quarterly change in 10y UST TIPS yields.



Source: J.P. Morgan, Haver Analytics, Bloomberg Finance L.P.

Figure 51: BRL and MXN offer the best carry compensation given consensus policy rate and current account forecasts for 2024

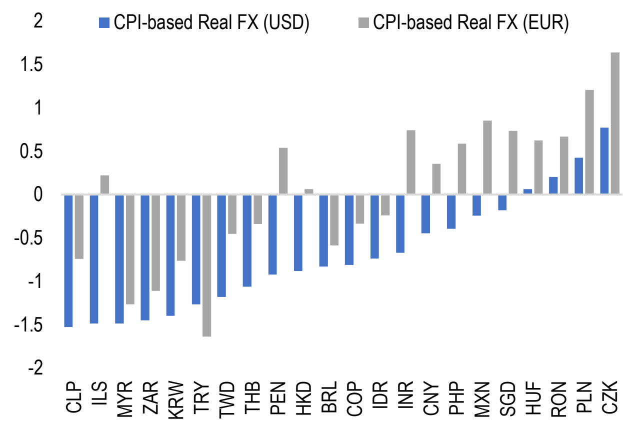
Horizontal axis (% GDP): Bloomberg consensus 2024 current account forecasts. Vertical axis (%): Bloomberg consensus policy rate forecasts for 4Q24.Dotter line shows 4Q24 consensus forecasts for US policy rates.



Source: J.P. Morgan, Bloomberg Finance L.P.

Figure 52: EM FX long term valuations look attractive outside of CEE

Vertical axis (z-score): 30y Z-Score of CPI-based bilateral real exchange rates.



Source: J.P. Morgan, Haver Analytics, Bloomberg Finance L.P.

EMEA EM FX - Recovery trades

We turned OW (from MW) EMEA EM FX region at the start of October (see here). This was based on the near extreme negative levels of our EM FX risk appetite index and on the judgement that several EMEA EM markets were better placed for recovery/resilience, given that they did not attract much of the carry inflows; in some cases screened as under-valued and some have enjoyed positive idiosyncratic triggers (see here). While the EM FX risk appetite index has since corrected back to almost neutral levels, we see potential for some of these EMEA EM recovery trades to take a more structural form into 2024.

The recovery trades theme encompasses primarily TRY and PLN. Turkey fits the recovery theme most clearly after concerted efforts by local authorities to correct imbalances and bring inflation sustainably lower. We judge that this effort should start to yield results over 2024 and add an outright 6-month USDTRY short in forwards to our existing OW on TRY (see tables below). We are also bullishly inclined in TURKGBs, but wait for yields to get closer to fair levels. Poland fits the recovery theme primarily on an RV basis with Poland's local markets undervalued and underpositioned vs. CEE peers (CZK in particular). Following the elections, we expect markets to price an outlook for improving EU relations and a stronger institutional backdrop and favor both Zloty and POLGBs (see here).

The recovery theme has also some potential for ILS and ZAR, but here catalysts are only tentative. In Israel, we believe potential rolling over of geopolitical or political risks could trigger some rebalancing back to local assets following a year where local institutional investors increased their shares of foreign/FX assets to record levels. From a starting point of ILS being about 2 st.dev. cheap in our models, we

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believe it is worth owning optionality in this direction (we favor 1x1.5 EURILS put spreads, see here). We also perceive a potential inflection point in South Africa, where SARB is relatively hawkish (and ZAR has crawled its way back into the top 5 EM carry currencies globally), there are hopes of improvements in the fiscal framework and energy shortages are past their peak. Valuations support though only OW SAGBs while in FX, ZAR currently screens as expensive and a tactical approach is needed (see here and here).

A second theme for this region are easing cycles in CEE, which bias us towards receivers and FX depreciation in this region but with some tactical scope to trade around that (see here). Amid regional/European growth weakness and progressing disinflation, easing cycles can extend in CEE, in our view, or, in the case of the Czech Republic, start imminently. Macro-economic data would suggest the Czech Republic is the poster child to express these themes, even as CNB has been reluctant to embrace the easing direction. We stick to bearish CZK views through various expressions (including an RV vs. SEK).We have now taken profits on our OW in HUF, while in PLN we rather expect the recovery theme to dominate especially into year-end and remain bullish.

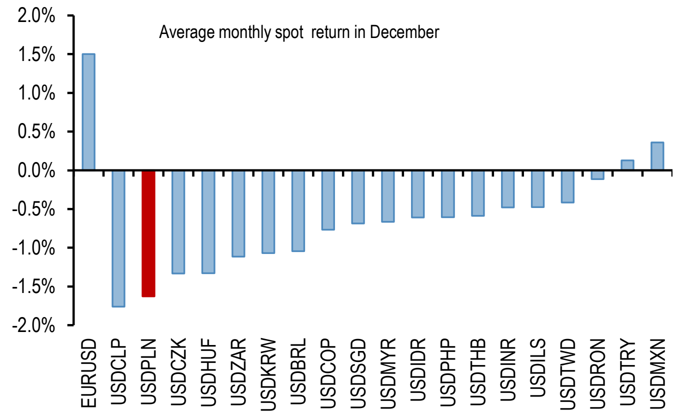
Finally, an idiosyncratic carry candidate is KZT where we run a short 12-month USDKZT NDF recommendation (see here). KZT offers a good carry compensation for underlying macro-economic risks, in our view. The real carry profile is amongst the best in EM with the BoP position broadly flat.

Key EMEA EM currency outlook:

PLN: Into the year-end, we prefer outright short USDPLN even as long PLNCZK is our favorite structural expression; stay OW in the GBI-EM model portfolio. We have been arguing for a bullish Zloty view since May (see here) and upgraded our forecasts post the elections (see here) for PLNCZK to hit 6. We consider Zloty undervalued and underpositioned (see the chart pack at the end of this piece). The undervaluation is visible in real productivity differentials, BoP performance and rising export shares. Local markets are under-owned mostly in POLGBs and we expect portfolio inflows to pick up. Into the year-end we take strong positive seasonality into account, with USDPLN lower through December in 20 out of the past 24 years.

Figure 53: PLN tends to do well vs. USD in December

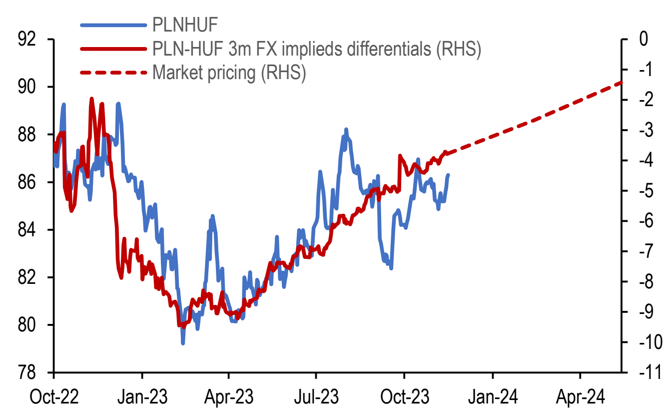
Averages since 1999



Source: J.P.Morgan, Bloomberg Finance L.P.

HUF: Neutral at current levels; we took profits on our OW in HUF last week (see here). We remain medium-term constructive on HUF with carry levels still sufficient versus the improvements in the current account position. However, we view EURHUF primarily as a range trade; hence, entry levels are crucial for total returns. So, after strong HUF gains recently, we believe it is worth stepping aside. EURHUF range trading also reflects the tendency for local authorities (NBH and fiscal) to be more dovish in response to stronger FX levels and more cautious on weaker FX levels. Finally, we see upside potential for PLNHUF from current levels based on the path of interest rate differentials; hence, we prefer OW PLN to OW HUF.

Figure 54: We favor PLN over HUF from current levels



Source: J.P.Morgan, Bloomberg Finance L.P.

CZK: Stay UW CZK; hold onto long EURCZK and add a long SEKCZK. CZK screens overvalued vs. long term REER averages as well as in our models vs. productivity differentials. Within CEE it stands out with the weakest growth backdrop and scope for an imminent extensive monetary policy easing cycle with headline inflation due to drop sub 3%

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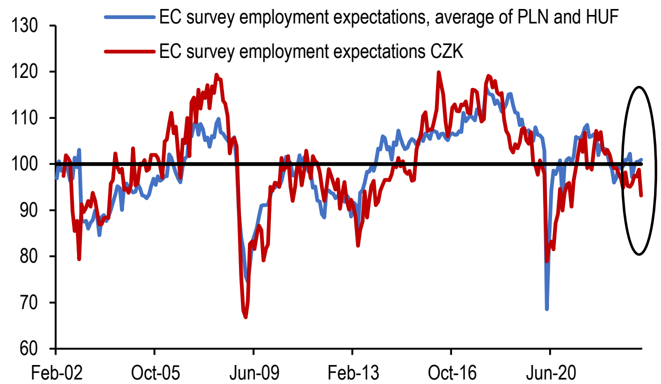
from January. While CNB has so far been reluctant to start cutting, we believe the risks are for a faster and deeper cutting cycle than the market currently prices. Interestingly, recent surveys suggest some larger risks for labor market weakness, which would be an important trigger.

Figure 55: A whiff of labor market weakness

European Commission Survey, latest data is for October 2023

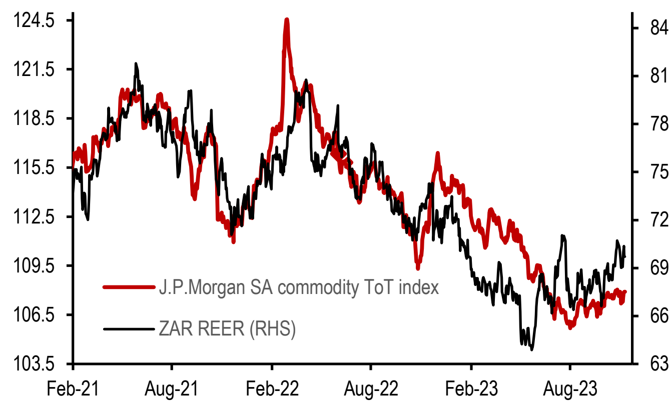


Source: J.P.Morgan, Haver Analytics

ILS: Hold 6-months EURILS 1x1.5 put spreads (3.98/3.75). Even following the recent rally, we judge ILS as about 5-6% cheap vs. USD in our financial markets models and about 7-9% cheap in our BEER FV model (see here). This is close to 2 st.dev. cheap. However, with long USDILS positioning squeezed out, additional catalysts for ILS gains will likely take some time to play out. Such catalysts could take the form of an eventual end to the war or post-war domestic developments. Such developments could trigger normalization in local institutional portfolios from record amounts allocated to foreign assets over the past year. We believe it is worth holding optionality in this direction given the supportive valuations. On the other hand, weaker data in the near term and likely lower FX carry could weigh on ILS.

ZAR: Currently neutral, but inflection point in ZAR's outlook has likely been reached. We recently took profits on USDZAR put spreads (see here), following a sharp rally. While ZAR has rallied, SA's commodity ToT index has improved only marginally, leaving ZAR rather expensive. In our BEER FV model, that overvaluation is now as much as 16%, which is close to 2 st.dev. of the model (see here for a more detailed discussion). While tactically we thus see little additional scope at this moment, we believe we may have reached an inflection point in ZAR's structural outlook. First, thanks to SARB's hawkish stance while other EM central banks have commenced cutting cycles, ZAR's carry is now back in the top 5 ranking. Second, there are some signs of structural change - loadshedding should practically disappear by H2 2024 and there is a hope of a fiscal consolidation framework. Finally, stimulus in China could spur turnaround in the commodity ToT outlook.

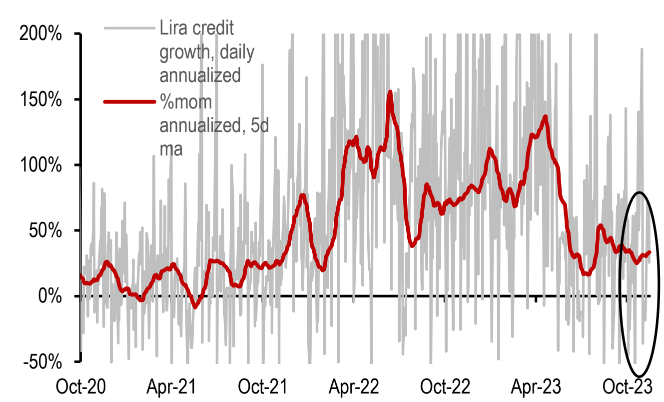
Figure 56: Recent ZAR rally has well surpassed the improvement in commodity ToT



Source: J.P.Morgan

TRY: We add short in 6-month USDTRY forwards to our exiting OW in TRY. We have argued for a bullish TRY view since early July. We added outright OW in FX to our GBI-EM model portfolio at the start of September (see here). Returns since then have been positive, but arguably very small. Nevertheless, as tight policy continues to take hold and the global carry environment tactically improves, we believe the lira will benefit to a much larger degree. This goes hand in hand with our judgement that macro-economic policy mix should start to see successes in structurally improving the CA position and lowering inflation over 2024. Additionally, portfolio flows are likely to pick up now as bond yields are starting to approach fair levels.

Figure 57: Credit growth remains low in Turkey



Source: J.P.Morgan, Haver Analytics

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Latin America FX: Another strong year in sight

We go into 2024 with bullish views for Latam FX, underpinned by a supportive global backdrop (for now). A base case of a resilient US economy avoiding an ugly recession but slowing down sufficiently to prompt Fed cuts screens as a positive one for Latam currencies. Moreover, Chinese growth seems to be recovering, while US back-end rates have stabilized after some volatile months. Despite a less supportive starting point after two years of strong outperformance, we think Latam can deliver positive total returns next year. This warrants keeping our OWs in FX and rates into 2024.

The beginning of 2023 saw a bullish trifecta coming together for Latam FX. A combination of cheap valuations, high carry and an increasingly positive external backdrop led to double-digit returns across the board, particularly during the first half of the year. Effectively, after significant currency depreciation during the second and third quarters of 2022, Latam central banks were finally able to get ahead of the curve, with appealing ex-ante real rates as inflation had begun a downtrend. Tighter monetary conditions also led to a recovery of multi-year wide current account deficits into average-like levels, further propelling currencies. Finally, the global backdrop improved, with Chinese reopening optimism and the dollar weakening.

The conditions for 2024, while not perfect, appear still positive for Latam currencies; stay OW Latam FX. Valuations have recovered but do not screen rich. An average of the main Latam currencies real effective exchange rates deviations from their 10y averages is at 1.5%. Parting ways in terms of monetary policy cycles will result in different performances in currencies. On one end of the spectrum, we note the hawks at Banxico and moderate easers at BCB will allow real rates to remain high for MXN and BRL, while external accounts stay relatively strong. This justifies keeping OWs in MXN and BRL. In Uruguay, we also expect high real rates and strong FDI inflows, and we are OW UYU. On the opposite front, Chile stands out having embarked on a more aggressive easing cycle, and with a current account deficit in the order of 4% of GDP next year has seen large currency depreciation. In Colombia, while worse inflation dynamics have prevented BanRep from initiating the easing cycle earlier on, we think cuts are likely to have a more negative impact on the currency, having appreciated substantively in 2023 partly due to technical factors likely to dissipate in 2024. This warrants staying UW COP.

Improving Chinese growth and continued stockpiling of key commodities by China should benefit the Latam exporters. A rebound in growth expectations, at least in the short term, should be positive for China's key trading partners in Latam. Chile, Brazil and Peru export between 5 and 12%-pts of GDP to China annually, and naturally their external accounts correlate to the fate of the Chinese economy. Moreover, we have seen a trend of stockpiling of commodities by China, with imports deviating from what manufacturing PMIs, the credit cycle and FAI would imply. Effectively, exports to China from Latam have remained around all-time highs despite weaker economic data throughout 2023. The geopolitical rather than economic nature of the policy makes it hard to make high-conviction assertions about its longevity, but the strategic importance of the measure amid heightened geopolitical risks worldwide suggests to us Latam external accounts should remain well supported going into 2024.

Idiosyncratic risks appear quite low for the first time in many years. Governments which were elected on the basis of sweeping agendas and once startled the market have seen strong institutions limiting the scope of their proposed reforms. This is likely to remain the case in 2024. The Presidential elections in Mexico and Uruguay are unlikely to materially impact local markets. Conversely, we see three main risks to our view, stemming from uncertainty on the external front: 1) US Treasuries resuming a disorderly sell-off into 2024; 2) less resilient data suggesting a more severe US recession is in sight; and 3) sticky inflation leading to further tightening by the Fed.

Key Latin America currency outlook:

BRL: A cautious central bank is likely to keep real rates high; stay OW. BRL will remain the currency with the highest real carry in EM next year as well, and we think it will be able to withstand cuts without seeing an important depreciation. External accounts are strong and continue beating expectations. The trade balance as a % of GDP is close to the highs of the early 2000s, partly thanks to a good year for agriculture activities, but also to continued strong imports of commodities from China, which we think is likely to go on next year. After some convoluted years with heated discussions around fiscal budgets and frameworks, elections, inflation targets and more, idiosyncratic risks for next year appear unusually low. We have seen renewed fiscal noise these past weeks, but we think market concerns are overblown at the time. Lula's comments about the 2024 zero primary fiscal target likely not being met revived fiscal concerns. However, with market participants already expecting a primary deficit of 0.8% according to BCB survey, we think risks are actually skewed to outperforming fiscally.

MXN: Mexico will have one of the highest real rates in EM for another year; stay OW. Banxico's latest meeting was slightly less hawkish than initially expected, supporting the case for a first cut in March next year. However, it is still

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fair to assume they will proceed with caution, cementing the case for continued currency strength, especially given the economy is in a solid position. Valuations look on the rich side, but we think these are justified on the potentially regime-changing story of nearshoring. External accounts will remain strong; we expect a current account deficit of 1.6% of GDP for 2024. Elections next year are unlikely to be a big driver for local markets, and seem slightly bullish in the medium term.

COP: The peso is likely to weaken in 2024. With 425bp of easing expected next year, we think COP will weaken, similarly to the Chilean case, where the currency depreciated materially on expectations of an aggressive easing cycle. Technicals have also improved, with the spike in the basis beginning to correct and lowering the cost of holdings shorts. 1m COP xccy basis is now trading inside the 12m, evidencing the continued improvement in liquidity conditions, partly driven by the pickup in fiscal spending toward the last months of the year. Positioning seems fairly long COP relative to history.

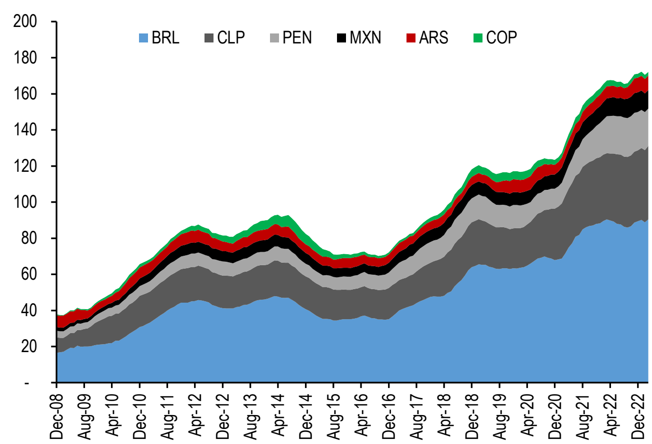
CLP: We are neutral after closing our UW a few weeks ago. On the one hand, short term and REER models do not suggest valuations are meaningfully dislocated, the Treasury resumed in November sales of US dollars and better sentiment on China could favorably impact CLP, particularly given Chile's strong ties to the Chinese economy. On the other hand, Chile's easing cycle is more aggressive relative to its peers and will likely see a more pronounced current account deficit. Foreign positioning is short CLP, but looks average. For now, this warrants staying neutral CLP, in our view. In terms of idiosyncratic political risk, we think the trend of gradual decline since the 2019 and mid-2022 peaks is likely to continue next year. A new constitution will be voted by the people in a second referendum on 17 December 2023. With this being a more moderate version, polls suggesting it will be in any case rejected, and Boric affirming they would not make a third rewriting attempt, we think the referendum results are unlikely to be big market drivers.

PEN: Stay neutral. We think the currency is likely to continue trading with a lower beta to the rest of the region, with some downside protection stemming from BCRP's continued commitment to intervene in the currency if needed, curbing the effect of lower interest rate differentials. Peru is another place where political risks have significantly diminished throughout the year. From an attempted coup by former President Castillo in December last year, to a somewhat weak start of the government of President Boluarte rooted in widespread protests and the threat of early elections, we have now converged to a base case scenario of elections to be held in 2026.

UYU: Stay OW as part of our OW rates, FX unhedged trade. We had been cautious on the FX front earlier on the year on the back of drought concerns and somewhat expensive valuations on a REER basis. However, the currency was able to withstand the most important months for the harvest (May-July) without harm, and after adjusting with the global risk off backdrop seen in 3Q, we think any potential FX depreciation ahead would be moderate and more than compensated by high nominal and real carry. Moreover, the government has announced new projects of renewable energy for USD 4bn starting in 2024, which represents 228% of 2021 FDI and 120% of 2022 FDI. There is some debate among the locals regarding whether these projects would actually start in 2024 or rather will be pushed to 2025. A weather normalization next year should also allow Uruguay to recover exports in any case, with the drought having had an impact of around USD 1-1.5bn this year, while the new UPM pulp plant operating at full capacity should further improve UYU's fundamentals.

Figure 58: Exports to China from Latam are around all-time highs

Exports to China; last 12M sum; USDbn



Source: J.P. Morgan, Bloomberg Finance L.P.

EM Asia FX: Looking through the trough; Turning MW FX

EM Asia FX has underperformed the EM FX complex through the global tightening cycle. Widening rate differentials, firmer energy prices and slowing demand for manufactured goods have eroded external balances and limited portfolio flows for Asia. While many Asian economies continue to run current account surpluses, this buffer has been eroded by outbound investment flows. Motivations for this recycling have been wide yield differentials, demographics or political uncertainty, resulting in a build up of FX holdings, particularly amongst exporters.

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We turn MW EM Asia FX as the year ahead potentially sees all three factors reverse. Timing the turn remains tricky as we note weaker activity data will be the catalyst needed for Fed easing and energy prices falling – two key requirements for EM Asia FX outperformance. Trade has begun to pick up, but the uplift is very gradual thus far and remains vulnerable to a further slowdown in the global cycle. A more durable export recovery beyond the turn could drive EM Asia FX outperformance early in the next cycle, though headwinds from weaker DM capex and re-shoring efforts remain a headwind.

The defensive nature of EM Asia FX may drive outperformance in selloffs. Bouts of USD strength remain a key risk early in the year if newsflow deteriorates further, particularly with several elections due in the Taiwan, Indonesia, India and Korea. Counter-cyclical policy makes Asian currencies like the CNY a low-yielding proxy for the USD on a trade weighted basis, driving it to outperform FX selloffs in 1H, but ultimately underperform FX rallies once the cycle turns. This dynamic also extends to the RMB vs China-reliant cluster, which favours the latter once the cycle turns. Summer remains a key vulnerability for most Asian currencies as seasonal dividend outflows weigh on current accounts, but a turning USD should leave any weakness manageable for Asian central banks. EM Asia's lower beta may make it a haven if downside risks materialize, though the region may still underperform EM FX peers on a total return basis due to lower carry.

Differentiation remains within EM Asia along the trade reliance and terms of trade axes. Slowing activity favours domestically oriented high yielders over trade reliant low yielders late in the cycle. Secular growth stories like India and Indonesia – where inflation is well managed and risk premia remains attractive – will continue to attract capital, potentially at the expense of Taiwan and Korea – where expectations of an electronics cycle upswing are already well priced into equities. Commodity prices – particularly Crude oil – will also be key, with the trade reliant cluster largely running energy deficits. Rising downside risks to oil are a key upside scenario for Asia to begin to outperform EM FX peers.

We add THBKRW longs to play the tourism recovery and CNHINR shorts for carry as activity slows. A seasonal uptick in European tourists should boost per arrival receipts in Thailand, while winter also lifts energy import volumes for Korea. Similar exposures to energy and trade make the won an ideal hedge for the baht as the goods to services rotation continues to play out. Meanwhile CNHINR shorts continue to offer decent carry amid a slowing in activity, with the rupee likely to be a key beneficiary should downside risks to growth materialize.

Key EM Asia currency outlook:

CNY: Not out of the woods yet. Unlike in 4Q22 when China-linked assets started to price in cyclical upturns way ahead of actual data surprises, financial markets today are much less forward looking with asset prices barely tracking economic data flows. On one side, this preserves room for more bullish pricing should recent policy surprises lead to further upside in activity data in the coming months while our economists have already baked in above trend growth for 1H24. Taking into account also seasonality around year-end, we see room for further improvement in market sentiment around China over the short run and have thus neutralized our long-held bearish positioning in CNY FX, looking to participate in any seasonal CNY strength by receiving 1y CNH CCS (note). On the other side, from a medium term perspective, we have sympathy with the view of only a bounded lift in China's growth next year. An economic rebalancing is currently underway and the pain associated with the transition period is unlikely to wear off soon as de-stocking in the property sector drags on. This could risk more limited shelf life of bullish China trades going forward compared to previous cycles. For CNY FX, while easing external drags and a durable downshift in core yields portend a path of lower USD/CNY, a limited growth impulse and still punitive carry would warrant a risk premium to be embedded. In general we expect USD/CNY to trade above its fair value based off JPM forecast on rate differentials.

INR: Carry on till the end. In our view, the rupee remains the ideal late cycle, counter-cyclical carry trade in Asia, particularly with seasonal patterns improving into 2024. A well-behaved current account remains supported by the boom in service exports, helping to mitigate the sluggishness of FDI. This makes the rupee a favored carry trade into the new year, though a turn in the USD cycle may bring underperformance versus the trade weighted basket in the 2H.

IDR: Secular gains amid a cyclical slowdown. Indonesia's current account continues to be supported by the boost from metals export volumes as the domestic industry moves further up the value chain, though weakening commodity prices pose a risk to Indonesia's external balance. Risk premia remains a key concern, particularly in an election year when yields are compressed versus global peers. Risks to the IDR look to be manageable overall, with more upside to play out one the USD turns.

MYR: FOMO on a FX rally. The trade reliant ringgit has been plagued by poor FX conversion amid a slowing global cycle, a pattern that may accelerate into the turn. Yield differentials may retrace in 2024, however, presenting a key catalyst for some mean reversion. Till then, the ringgit will likely track the EUR and RMB, but cheap valuations and built up

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USD holdings could drive outperformance with a more convincing turn in the USD.

PHP: Carry attractive as current account bottoms. The Peso has been an outperformer despite weaker fundamentals, with more expensive energy imports and infrastructure spending weighing on the current account. An aggressive hiking cycle has helped to stabilize the currency alongside firm growth in remittances. Carry remains attractive with a still hawkish BSP, particularly close to festive seasons when remittances pick up.

SGD: NEER likely to peak in 2024. With MAS having ended its tightening cycle and price pressures showing continued signs of easing in the city state, the next major move in the SGD NEER is likely to be a lower rather than higher. The SGD NEER tends to gravitate towards the midpoint late in the business cycle, which may limit its performance given its current position +190bps above the midpoint and the 150bps slope of the bands. The SGD is thus likely to track the broader USD with its typically low beta, but we note the risk reward will begin to skew towards SGD shorts as the business cycle turns.

KRW: Too late to be short, too early to be long. The won continues to suffer from the late cycle dynamic of sluggish trade and elevated energy prices. 2024 is likely to see a turn in the overall cycle, however, with lower energy prices and a pick up in trade constituting a key upside risk to the won. Till the cycle turns, however, we retain a mildly bearish bias on the won as the cycle continues to slow, particularly into winter when energy import volumes rise, amplifying the effects of elevated energy prices.

TWD: Squeezing though the turn. The Taiwan dollar has been the markets favorite funder as aging demographics limited rate hikes, geopolitics limited portfolio flows, and the electronics cycle rolled over. Signs of turn are emerging in the latter two factors, though a more meaningful uplift in trade remains a quarter or two away. Cheaper valuations allow room for outperformance once the cycle turns, raising the potential for a sharp turnaround in positioning, particularly when rate differentials and hedging costs reverse.

THB: Think tourism and less terms of trade. The baht remains caught between a bumpy tourism recovery and the hit from energy prices, though the former is gradually beginning to dominate the latter. Seasonal swings in tourist arrivals and the current account should continue to drive the currency, with a pick up over Q4-Q1, before softer receipts into summer. Supply constraints in aviation or energy are a lingering risk, though the latter may be mitigated by the baht's high correlation with gold prices. Overall, we turn more bullish on the baht, but are mindful of seasonal variations through the year.

Emerging Markets FX

Figure 59: GBI-EM Model Portfolio

	Bond View	FX View
GBI-EM	MW	OW
EM Asia	MW	OW
EMEA EM	OW	OW
Latin America	OW	OW
China	MW	MW
Indonesia	OW	OW
Malaysia	MW	UW
Philippines	MW	MW
Thailand	UW	OW
Czech Republic	MW	UW
Egypt	MW	MW
Hungary	MW	MW
Poland	OW	OW
Romania	MW	MW
Turkey	MW	OW
Serbia	MW	MW
South Africa	OW	MW
Brazil	OW	OW
Chile	MW	MW
Colombia	OW	UW
Dominican Republic	MW	MW
Mexico	MW	OW
Peru	MW	MW
Uruguay	OW	OW

Source: J.P. Morgan

Table 1: Outright trade recommendations

EM Asia	Entry	Target	Stop	Entry
Short CNH/INR	11.60	11.10	11.80	21-Nov-23
Long THB/KRW	36.80	38.50	36.20	21-Nov-23
EMEA EM	**Entry**	**Target**	**Stop**	**Entry**
Short USDTRY 6m forwards (21/05/2024)	34.02	30.00	36.50	21-Nov-23
Long SEK/CZK	2.14	2.35	2.02	21-Nov-23
Short USD/PLN	4.04	3.88	4.12	16-Nov-23
6-months (13/05/2024) EURILS 1x1.5 put spreads (3.98/3.75)	0.97%			10-Nov-23
Short USDKZT 12m NDF (01/11/2024)	516.48	480	540	01-Nov-23
Long EUR/CZK	24.37	25.50	24.00	07-Sep-23
Long USD/KES via 6m NDFs	113.55	126	108	24-Jan-22
LATAM	**Entry**	**Target**	**Stop**	**Entry**
5-Jan USDBRL 1x1 put spreads 5.00/4.70; spot ref. 5.1714	0.69%			05-Oct-23
Long BRL/COP	841.58	890.00	810.00	05-Oct-23
Long MXN vs. basket (50% EUR, 50% USD)	17.59/18.84	17.50	18.70	08-Sep-23

Source: J.P. Morgan

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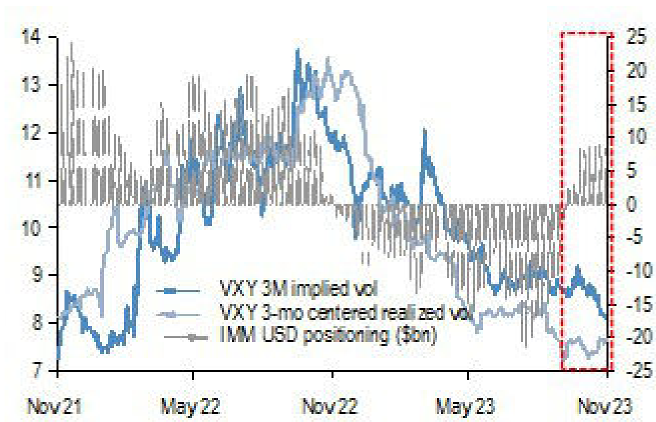
FX Volatility

Not going anywhere fast

- **FX volatility is entering 2024 having unwound nearly all of its post-Ukraine conflict risk premium from last year and screening significantly cheap to rate vol. However, a Fed on hold through H1 and relatively capped ranges on the dollar should limit upside on vol over the next couple of quarters. Upside risks to vol stem from cyclical (recession) and political (US election) wild cards in the context of heavy FX carry positioning.**
- **We propose three ways of earning carry in a low vol climate: rolling down steep vol curves at the back-end (CNH), premium-collecting market-neutral RVs of USD puts (long EUR calls vs. short SEK calls), and calendar spreads along high carry-to-vol curves to earn well-levered premium roll down (-3M / +6M EUR puts/MXN calls)**
- **One of the highest carry-to-vol ratios in USD/JPY in 15 years allows for cost effective +1Y/-3M topside digital and vanilla calendar spreads. USD put/JPY call hedges are affordable on low vol level, as 6M digital puts or via 6M CAD/JPY puts with 2M window. In a USD-centric world, JPY x-vols should underperform USD vols. Buy 3M USD/CHF vs sell CHF/JPY vol.**
- **Stretched carry currency valuations, particularly in MXN and BRL, motivate a search for hedges going into 2024. Our mean-reversion model is in favor of buying back end vols in USD/BRL or BRL/JPY which we pair with selling back end vols in JPY and/or NZD given soft realized vols, steep roll-downs, and less sensitivity to large carry drawdowns than BRL vols. Also, the EUR/BRL risk reversal screens cheap versus carry and ATM vols, making it a good alternative hedge.**
- **Spot vs. rates differentials dynamics tend to support steeper vol curves in EM. We see room for buying outright 1y1y FVAs on USD/MXN, or to pair them in a carry friendly way with short 6M6M FVAs.**
- **US election pricing is tracking the last two cycles, though on the lower side of the historical ranges. Pricing packs less premia in Asian FX and more in MXN. While still too early for such trades, we note that calendar spreads that sell pre- and buy post-election options currently screen most favorably in EUR, CNH and TWD.**
- **Dealers' long convexity exposure on USD/ZAR made vols sticky despite large spot moves in recent times. Low vol and vol-of-vol cheapen long-dated OTM optionality for carry purposes.**

Back to where it all started from. The overarching narrative for FX volatility in 2023 was the unwinding of last year's risk-off, starting with the China re-opening mania of Q1 followed by periodic bouts of Fed pivot optimism that saw 2022's extended USD length undergo a 180-degree reversal through the course of the year. The recession dog that did not bark this year left its imprint on vols more acutely than the dollar itself, showcased by their continued drift lower through the DXY revival of Q3 even as USD positions reversed (Figure 60). This was in part due to idiosyncratic circumstances surrounding two major currencies — JPY and CNH — that were capped within extremely narrow ranges by varying degrees of central bank / MOF jawboning and/or intervention. Whether this policymaker reaction function changes next year is anyone's guess, but the net result is there is no trace of any cyclical or geopolitical risk premium left in the VXY, unlike at this time last year.

Figure 60: 2023 undid almost the entirety of 2022's FX vol strength as USD length was unwound through the year, but the continuation of subdued vol through's Q3's DXY rally defied historical norms



Source: J.P.Morgan

FX vol is priced at a large discount to rate vol. A notable feature of FX vol pricing entering 2024 — and a by-product of it reverting back to pre-Ukraine war levels — is its nearly 2 s.d. disconnect to rate vol (Figure 61). This is surprising given the outsized swings in UST yields at various points this year (SVB rally and the subsequent reversal, the post-August QRA sell-off, etc.), and the centrality of the US rates narrative to the USD and FX markets more broadly. However the uninspiring empirical regularity is that Newton's second law applies to low FX vols, which can continue to remain low for an extended period of time — 1 - 1.5 quarters of sidewinding at/near local chart lows is the norm, not the exception — before an exogenous macro/market force upends the complacency (Figure 62). This is an uncomfortable historical precedent for a market that is currently grappling with late-cycle anxieties, historically overvalued equity markets (especially

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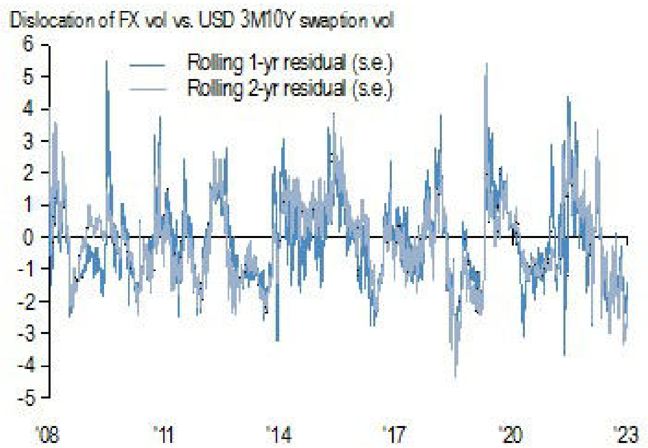
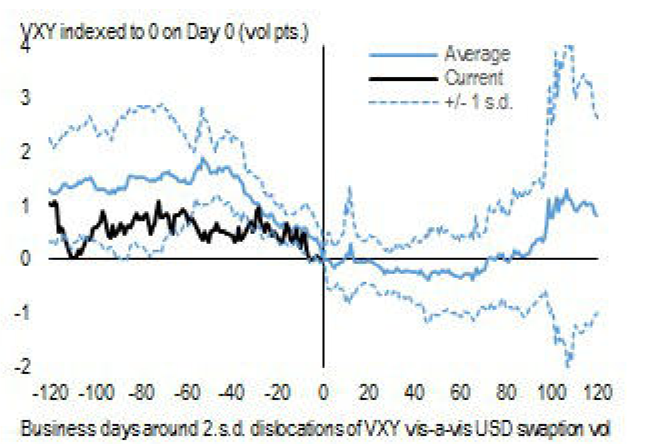
megacap US stocks), and elevated US rates uncertainty, even without invoking another Presidential election cycle and the possibility of a Trump candidacy.

Figure 61: FX vol is priced at a large discount to rate vol ...



Source: J.P.Morgan

Figure 62: ..but materially low FX vol relative to FX vol does not mean-revert immediately, a quarter or so of sidewinding at/near local lows is the norm



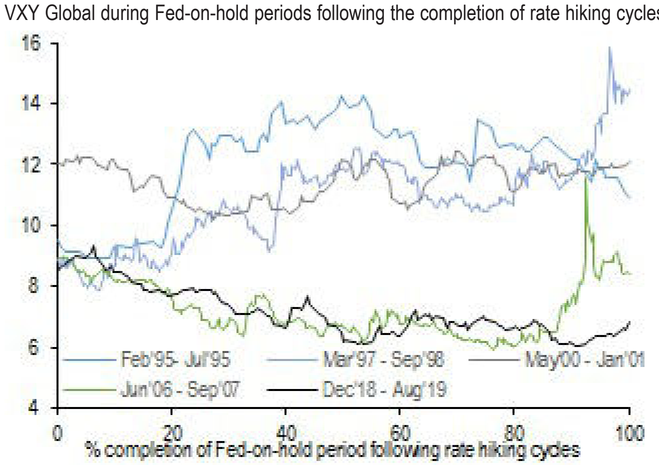
Source: J.P.Morgan

Relatively bounded USD ranges could make for an uninspiring H1 for vol. In addition to a very different starting point for FX vol going into 2024 vs. at the same time last year, a key difference to next year's outlook is the relatively low conviction on the directional USD view over the next couple of quarters. Macro conviction is positively correlated to vol outcomes either because it exacerbates spot trends if proven correct, or leads to painful squeezes of crowded positions if proven wrong. But above-average uncertainty for next year's outlook, particularly in 1H24, reflects in below-average USD positioning, and does not inspire confidence that currencies will be particularly volatile before the delivery of mooted Fed easing in H2 prompts a resurgence in FX activity.

An on-hold Fed does not conclusively kill FX vol, context matters. The two most recent Fed cycles that prominently featured a 'Fed put' were characterized by a steady leak lower in FX vol through the course of the on-hold period, but the '95, '97-'98 and '00-'01 episodes experienced rising FX vol despite an inactive Fed owing to stresses elsewhere in the global financial system (Figure 63). In particular, the back half of Fed-on-hold periods needs careful navigating as bond markets begin to rally aggressively in anticipation of recessions, leading to a sharp rise in swaption vols. But with the Fed not expected to ease until 2H24 in the JPM baseline, and negative shocks out of Europe or China not anticipated early in the year (with the caveat that shocks never are), it is not unreasonable expect a quiescent vol environment through at least Q1. That said, we need to remain vigilant about the possibility that the Fed could be forced off the sidelines to hike again, or (the lower odds outcome of) rate cuts currently pencilled in for H2 having to be sharply pulled forward in the event of a recession.

Figure 63: Fed-on-hold periods are not conclusively bearish for FX vol

VXY Global during Fed-on-hold periods following the completion of rate hiking cycles



Source: Bloomberg Finance L.P., J.P.Morgan

Wild cards for 2024 — cyclical and political. It is a near-truism of *Year Ahead Outlooks* that projections of low-drama vol environments tend to frequently extrapolate similar quiet periods in the recent past, hence it is worth exploring potential surprises that could turn vol generative. **First**, the recession that many have written off could come back to haunt markets earlier than investors think, prompting earlier-than-envisaged easing and de-leveraging of FX carry trades. **Second**, 2024 is slated to be an election year in the US; a potential Trump candidacy can revive the geopolitical playbook of 2018/'19, with attendant stresses on stocks and upward pressure on the dollar that upends the goldilocks / soft-landing narrative. With FX carry trades having performed exception-

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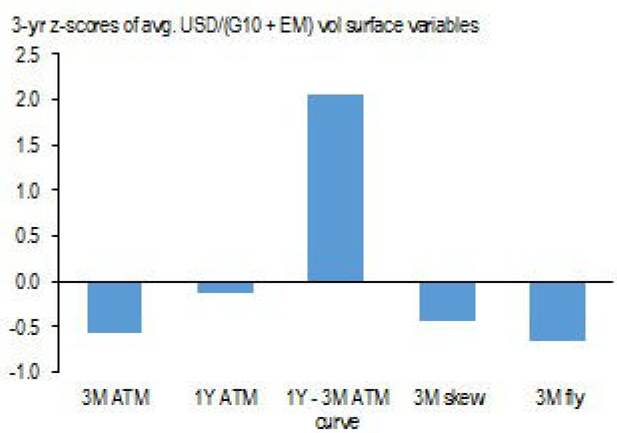
ally well over the past two years and likely to be well subscribed to, there is a pocket of positioning vulnerability should either shock materialize.

1. The challenge of earning vol carry in a low vol world

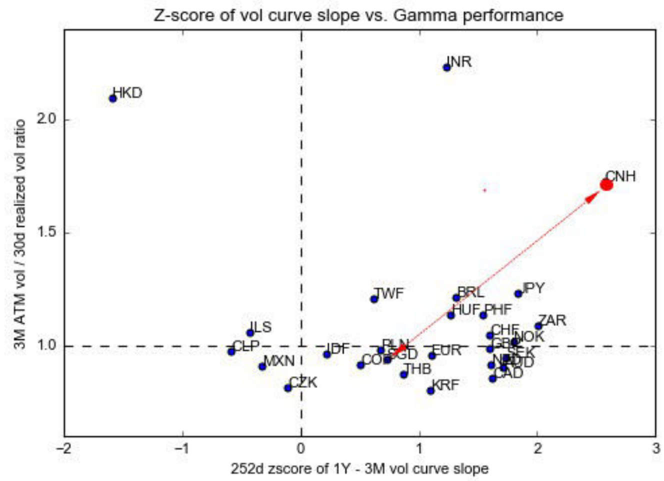
Prefer vol curve roll-down in longer expiries to short gamma. Initial conditions for vol pricing across liquid USD pairs suggests maximum relative value lies in targeting the long-end of vol curves with a view to monetizing above-average rolldown (Figure 64). There is a clear outlier on this front at present — **CNH** (**Figure 65**) — where the best-in-class vol slide is complemented by sizeable implied - realized vol risk premium thanks to the heavily managed nature of the currrency. Seasonally, early January also tends to be a period of corporate vega supply in CNH. Despite the alignment of most stars for selling CNH vol, it has to be acknowledged that absolute vol levels are no longer elevated after a quarter of flatline CNY fixings, hence we recommend buying some beta protection by **pairing short CNH vega with long SGD vega via 6M6M FVAs**.

Figure 64: Initial conditions for vol pricing suggest maximum relative value in earning rolldown along steep vol curves



Source: J.P.Morgan

Figure 65: Sizeable gamma risk premium and an uber steep curve render CNH the standout vega short in FX, and is well paired with long SGD vol along a much flatter curve



Source: J.P.Morgan

Premium-collecting conditional USD puts to sidestep the risk-off bullish USD tail. Despite traditionally commanding a premium on the vol surface, selling USD calls for collecting premium has historically been fraught with drawdown risk given the dollar's flight-to-quality bid in times of stress. Directional premium-earning option constructs therefore tend to lean towards USD puts, which in the current context comes with two additional advantages: (a) USD puts have materially richened in premium as a result of the rise in USD yields; and (b) our view on the US dollar continues to be biased asymmetrically higher heading into a year that has non-negligible odds of featuring a US recession, meaning that a protracted washout of USD longs is low odds in our mind, especially after the post-November FOMC / QRA squeeze. Indeed, market-neutral **long/short USD put RVs** that net collect premium have stood us in good stead in our trade recommendations this year, and we continue to see them as reliable alpha generators through a period of capped dollar weakness, if any. Consider ***selling 3M 2% OTMS USD puts/SEK calls vs. buying 3M 2% OTMS EUR calls/USD puts in 100:150 notional ratios*** (~inverse vol weighting). Figure 66 shows that the ratio of SEK vs. EUR implied vols is not far from the year's highs, and is discounting far greater SEK strength relative to EUR than has been delivered in recent quarters. Similar technical set-ups also exist for **short USD puts/TWD calls vs. long USD puts/SGD calls**, and selling USD/TWD downside has been a highly profitable stance this year, but we refrain from pulling the trigger just yet heading into a potentially pivotal Taiwanese Presidential election in January.

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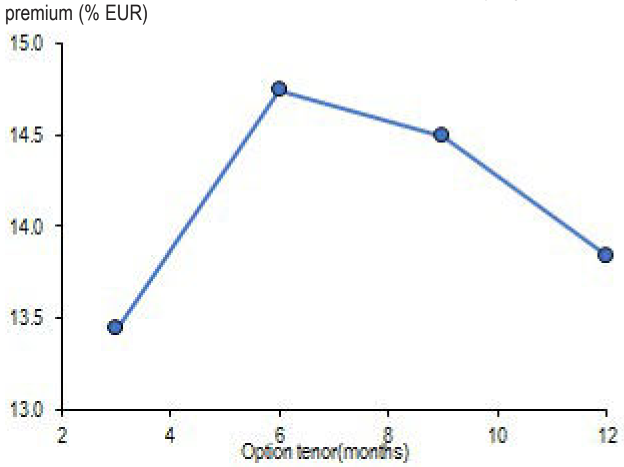
Figure 66: Option markets are pricing significantly greater SEK strength relative to EUR than has been delivered in recent history

Source: J.P.Morgan

Calendar spreads in high carry-to-vol curves to earn premium roll-down. Outsized forward point carry-to-vol ratios have been a persistent feature of the FXO landscape all year, and not much has changed on this front except that the stellar run of delta-one FX carry has reduced conviction somewhat in the continued outperformance of the theme (will MXN/JPY really rally another 25% next year?).

Figure 67: Thanks to elevated carry / vol, longer-expiry pro-carry digital options in the likes of EUR/MXN not only do not bleed but can even roll *up* in premium over time

Term structure of EUR put/MXN call 4% OTMS strike at-expiry digital option premium (% EUR)



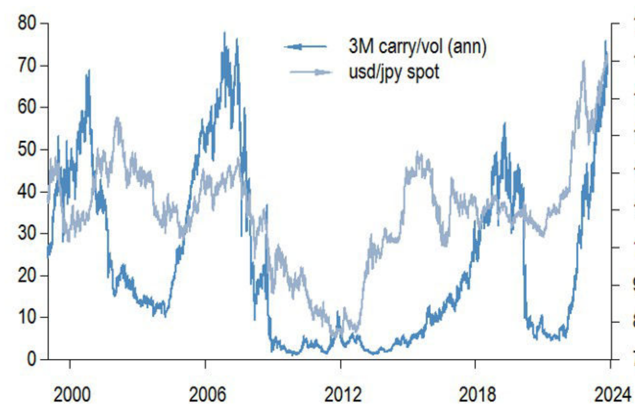
Source: J.P.Morgan

As an alternative to vanilla ATMF vs. ATMS option spreads that capture forward point carry, **calendar spreads** are well placed to benefit from this year's dominant spot trends tiring, even as a full-blown rinse of carry trades is possibly some distance off. Thanks to elevated carry-to-vol, longer-dated options in the direction of positive carry bleed very little; hence pairing them with faster decaying shorter-dated options generates attractive static payout ratios in excess of those offered by ATMF / ATMS spreads. Vanillas / vanilla spreads/ at-expiry digitals with their greater rates / forward point sensitivity are much better suited for this purpose than popular one-touch calendars. Along these lines, we are already running *-3M/+1Y 155 strike at-expiry digital USD call/JPY put calendars* in our model portfolio; we add a **-3M / +6M at-expiry digital EUR put /MXN call calendar** to the list, which has next to no bleed on the back leg over the life of the short leg.

2. Carry boosting USD/JPY topside calendars; x-JPY vols to underperform in the dollar world

For more than a year now, BoJ/MoF policy has been in focus, prompting periodic sharp repricing in JPY and JPY vols. During this period, USD/JPY 3M vol has been almost 3 %pts. rich and as much as much as 2% pts. cheap at various points relative to a simple average of global ATM vols. Currently , Yen vol is undershooting by 0.7pts on this simple cross-sectional comparison, similar to the situation last November.

Figure 68: Carry/vol is at the levels not seen in more than 15 years

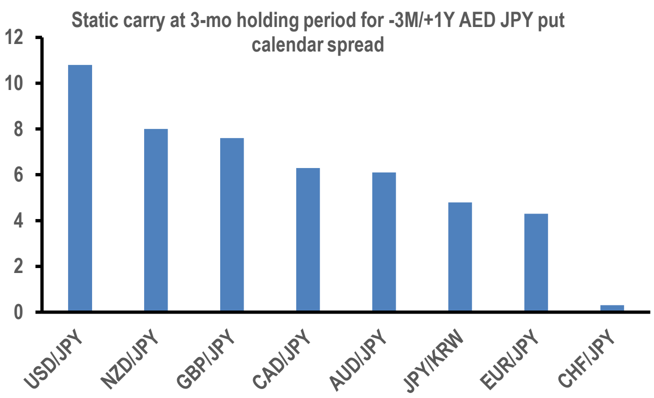


Source: J.P. Morgan

<u>**Carry-to-vol perpetuating USD/JPY topside play:**</u> As JPY front end vol is lingering near 18-month lows, risk reversals are near the tightest in a year reflecting investors' consensus preference for JPY weakness views/expressions, and carry-to-vol in Yen options is at levels not seen in more than 15 years (**Figure 68**). Despite the USD/JPY vol curve being the steepest since 2020, topside calendar spreads screen as well worth owning (**Figure 69**) thanks to high forward point carry.

Figure 69: Despite the steep vol curve topside USD/JPY calendar spreads well worth owning

AED = at-expiry digital options. Strikes for both 3M and 1Y legs set at the same level , corresponding to TV of 15% on the long leg



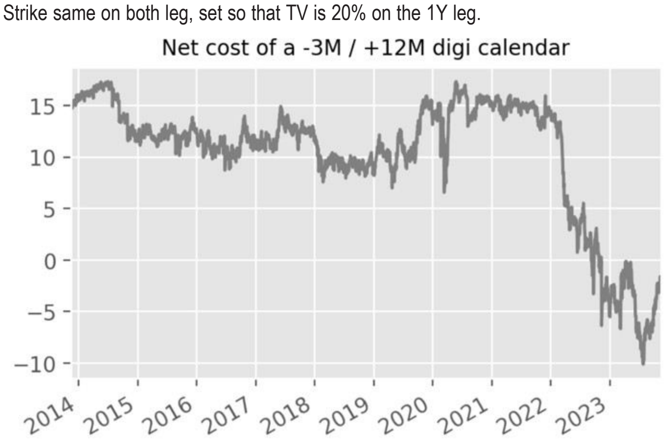
Source: J.P. Morgan

Calendar spreads of USD calls/JPY puts struck around 155 (~15% TV) offer high leverage since they cost a fraction of an outright long USD/JPY call thanks to the ~100% premium offset from selling the short leg, and bode well for *ex-post* returns given that the ongoing pressure on UST yields can keep a lid on near-term USD strength even as the structural upshift in Japanese inflation keeps USD/JPY's medium-term uptrend intact.

- Long 1Y USD call/JPY put 153 at-expiry digital @15.1/16.1 vs short 3M 153 strike USD call/JPY put at-expiry digital @13.55

Figure 70: 1Y is currently fully funded by selling 3M

Strike same on both leg, set so that TV is 20% on the 1Y leg.



Source: J.P. Morgan

Alternatively express the same topside view via vanillas in form of:

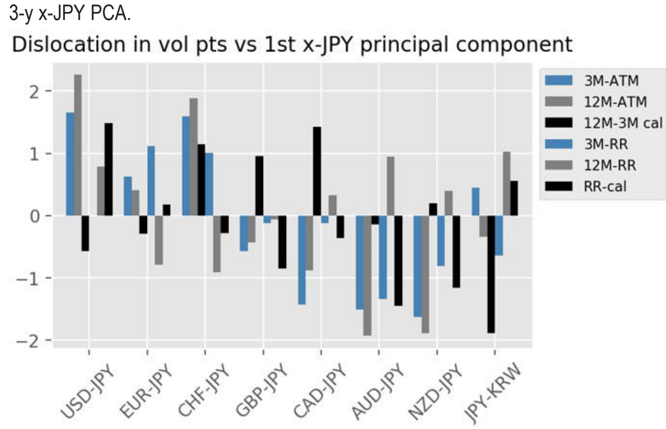
- Buy 1Y 153/163 call spread vs sell 3M 153/163 USD/JPY call spread @ net cost of 32bps - max payout of 650bps and 20X gearing vs 10X gearing for the outright call spread

<u>USD/JPY downside hedges:</u> While weak Yen is the consensus baseline for next year, a slow grind higher in USD/JPY is not given, which was clearly on display during last week's post-CPI price action. One doesn't have to go back further than 2022/Q4 -2023/Q1 for a history lesson on how swift JPY reversals can be. Cost of carry penalty for USD/JPY puts is substantial however, though the subdued vol pricing (near the lowest in more than a year and half) makes outright option ownership worth considering (e.g., spot-to-strike distance of 10%TV digital USD puts/JPY calls is more than 1.5sigma below 1-y average) in terms of tail event hedging with the price targeting levels seen in January:

- Buy 6M USD/JPY 135 at-expiry digital @12.8% TV. USD/JPY declined all the way to 128 in January

Figure 71: CAD/JPY, AUD/JPY and NZD/JPY relatively better priced within JPY vol space

3-y x-JPY PCA.



Source: J.P. Morgan

Alternatively, and on a more medium term basis, consider cross-JPY options. A PCA analysis in **Figure 71** finds CAD/JPY, AUD/JPY and NZD/JPY vols to be relatively better priced, though the Q4-Q1 episode suggests that CAD/JPY is the only reliable USD/JPY proxy as stubborly high USD correlations tend to keep cross vol subdued, especially when USD leg is the epicenter of a reversal. Screening as one of the best tactical range trades, CAD/JPY additonally allows for adding efficiency via short-term windows on top of vanilla puts; such structures express a long-term view, but also leverage muted price action in the near term:

- Buy 6M 103 strike CAD put/JPY call with 2M 111.5/105.5 window at net cost of 31bps, which is 82% discounted to outright vanilla. Max payout if spot retraces the Q1 low is on order of 750bps.

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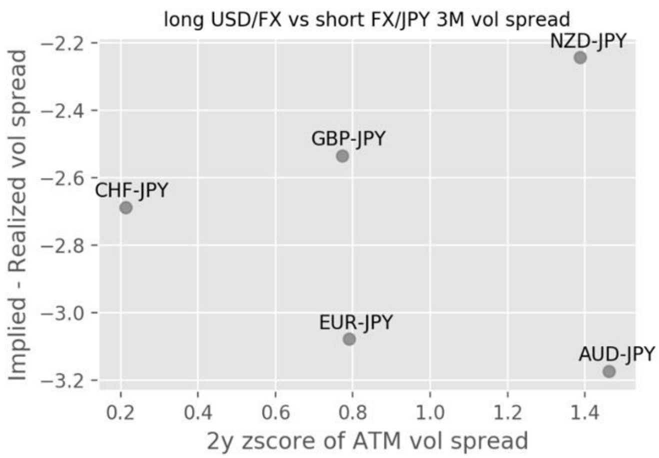
Figure 72: Flat front USD/CHF vol curve and steep CHF/JPY curve bode well for a vol RV

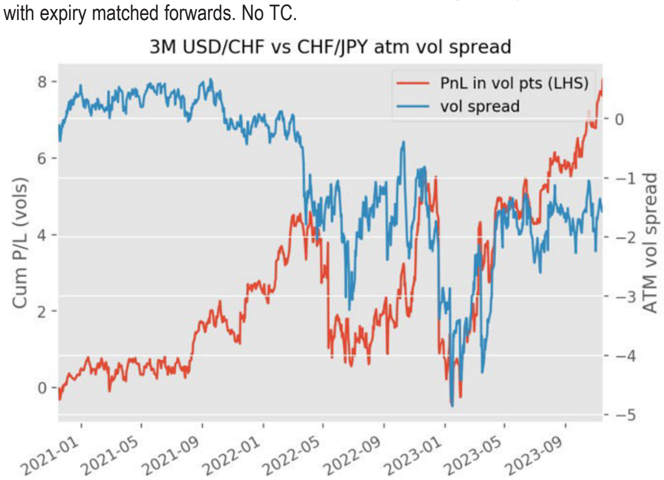


Source: J.P. Morgan

Intra cross-JPY vol RVs: In a USD centric world, cross-JPY vols should underperform USD-pairs, which opens up opportunity to finance USD vols with cross-JPY vols. Within this space, **USD/CHF vs. CHF/JPY** vol spread screens as the most optimal currently (**Figure 72**).

Figure 73: Long USD/CHF vs short CHF/JPY atm vol spread should continue performing in a USD centric world

3M USD/CHF atm vs CHF/JPY atm vol spread. Delta-hedged daily at smile delta with expiry matched forwards. No TC.



Source: J.P. Morgan

The vol spread is realizing (+1vol), and the USD/CHF vol curve is flat while CHF/JPY slides down by more than 1vol. Recent performance has been strong at a rate of 12vol pts ann (**Figure 73**) and should continue so long as the markets remain oversensitive on Fed and US data while MoF/BoJ keep JPY subdued. One risk is an idiosycratic JPY vol event that would result in a drawdown of the type seen in January; active investors may want to tactically manage the Yen risk ahead of BOJ meetings.

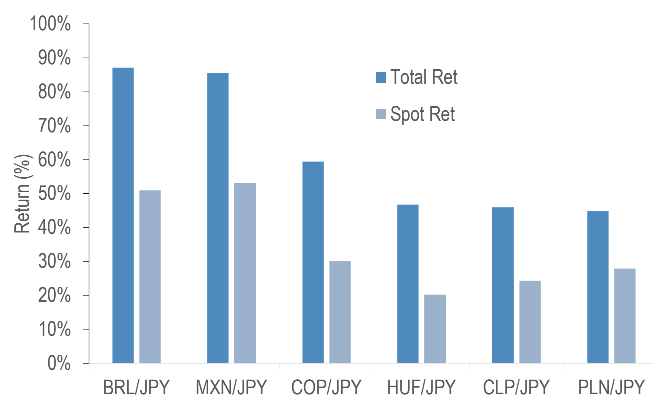
- Sell CHF/JPY vs buy 3M USD/CHF delta-hedged straddles in vega neutral ratio @1.65 (1.9 on mids).

3. Carry Trade Hedges

Since the start of 2022, the carry trade has been the winning strategy in the FX spot market, producing clear winners (BRL, MXN, COP, HUF, etc.) and clear losers (JPY, CNH, etc). However, in June we started highlighting the risk associated with overstretched carry currency valuations and positioning. Back then we proposed to buy a 6M6M FVA in MXN/JPY, and sell in USD/JPY. Since then, the spread in the 1y tenor has moved in favor of the trade by +1.5 vol pts, as worries about the carry trade have repriced the spread higher, given its high beta to MXN drawdowns.

Figure 74: Spot returns account for a very significant part of the total returns of the carry trade

Total and spot returns of the x-JPY carry pairs since January 2022



Source: J.P Morgan

Fast forward and the carry trade still looks over stretched going into 2024 - even though there has been a modest repricing of some related spot and vol assets since June. Indeed, the BRL and MXN are the most overvalued currencies on a REER-PPI basis in EM (18% and 11% respectively, see here), while some funding currencies such as JPY (-27%) and CNH (-12%) are some of the most undervalued.

Meanwhile, in Figure 74, we can see the magnitude of the problem. These x-JPY pairs are some of the largest movers in FX since the start of the carry trade. For instance, since January 2022 BRL/JPY and MXN/JPY have returned almost 90%, while 60% of those returns are due to spot moves rather than pure carry returns. The latter fact means that they are more primed for a reversal. In COP/JPY, HUF/JPY, CLP/JPY and PLN/JPY, the other major x-JPY carry currencies, the moves are smaller in magnitude, while their returns are due to a larger extent to carry rather than spot moves (except PLN).

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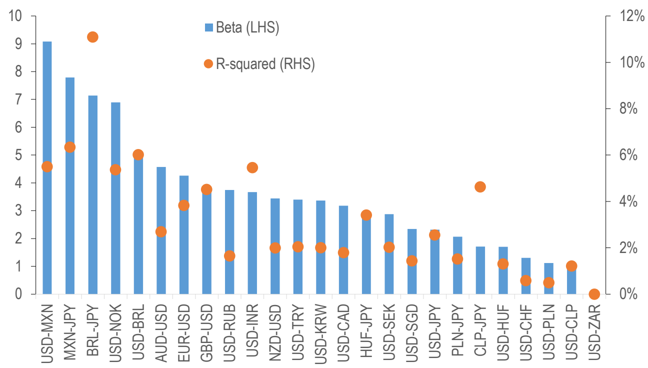
Thus, given that BRL and MXN seem to be the most over-stretched carry currencies in terms of valuations, positioning, and also in terms of spot/carry returns, we should try to find hedges for the carry trade for 2024 in the vol surfaces of these two currencies.

Figure 75: Sensitivity to carry drawdowns (carry basket stress periods) - beta in the tails

1Y ATM vol betas and correlations to a global carry basket (Jan 2009 - today) (3M changes in both cases) during times when the basket had more than a 8% drawdown in 3M



Source: J.P. Morgan

In our mean reversion model, see here, that looks at 1y ATM spreads, USD/BRL vols are flagging as a 'buy' against half of the other pairs, while USD/MXN vols are flagging as a 'sell' against 10 out of 18 pairs. Hence, we favor buying BRL vol as a hedge over MXN vol.

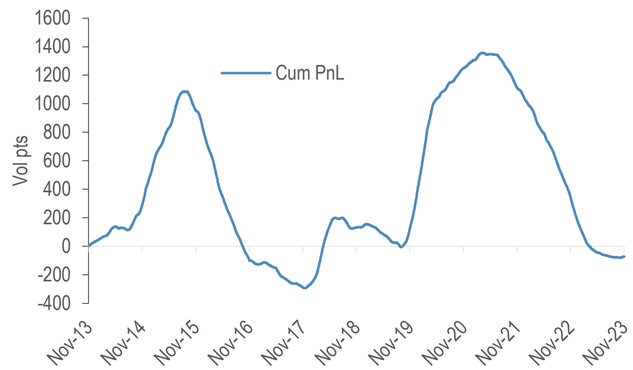
However, there are a number of issues regarding buying BRL vols outright. Namely, the volatility is not performing (by around 3 vol pts) and also (partly as a result) the vol curve is steep in nominal terms (0.8 vol pts in the 12m-6m spread). For that reason, and also because we do not want to go long vol outright given the negative expected payoff of the trade, we try to find a volatility pair to match it with in an RV format. Such volatility should also have a lower beta to large carry trade drawdowns; see Figure 75.

We find NZD and JPY vols to be a good pairings. Both are flagged as RVs buys vs BRL in the mean reversion model. Both have underperforming vols (1.2 and 2.2 vol pts., respectively), and both have a significant vol roll-downs as well (0.35 and 0.4 vol pts.). Finally, back-ends of both volatility curves are flagging as sells in our mean-reversion of the curve framework (see details here) - given that both are at a +1.9 two-yr z-score for their 12M-6M spread. Finally they have a significantly lower R-square and beta to large carry drawdowns than BRL - Figure 75.

In Figure 17, we can see for instance that during the last 10 years, the proposed RV in 1y BRL vs JPY vols (via vol swaps) has been associated with an almost flat final PnL while serving as a profitable hedge during times of large BRL spot drawdowns, such as in 2015 or 2020.

Figure 76: Long USD/BRL 1y ATM Vol Swap vs short USD/JPY 1y ATM Swap

Cumulative PnL (no MtM) associated with long USD/BRL 1y ATM Vol Swap vs Short USD/JPY 1y ATM Swap. 6m holding period. New trade entered every day. No costs included.



Source: J.P. Morgan

Finally, as an alternative one could substitute USD/BRL vol with BRL/JPY vol given that this RV would also be activated in the mean-reversion model, that it has an even greater sensitivity to carry drawdowns (Figure 75) and that it has an even higher carry-to-vol ratio. However, the costs are higher for the trade in this format. Consider:

- *Buy a 1y ATM Vol Swap in USD/BRL and sell in USD/JPY for 4.85 vol pts. Costs included.*
- *Buy a 1y ATM Vol Swap in USD/BRL and sell in NZD/USD for 4.15 vol pts. Costs included.*
- *Buy a 6M6M FVA in BRL/JPY and sell in USD/JPY for 5.75 vol pts. Costs included.*

Another ccy/BRL vol parameter (and carry trade hedge) that screens cheap is the **EUR/BRL risk reversal**. We traditionally analyze skew richness via a two-factor regression model that regresses market quoted risk reversal prices vs atm vols and carry, the model was introduced here.

In Figure 77 we use that same framework on a 20yr time-series model that pits 25D EUR/BRL 12M risk reversal vs 12M ATM vol and 12M implied carry in EUR/BRL. The market-model gap is at a whopping 2 vol pts, implying that EUR/BRL calls are cheap vs puts. For those reasons, it makes sense to own a 1Y 25D risk-reversal in EUR/BRL, as a hedge to a possible carry trade drawdown in 2024.

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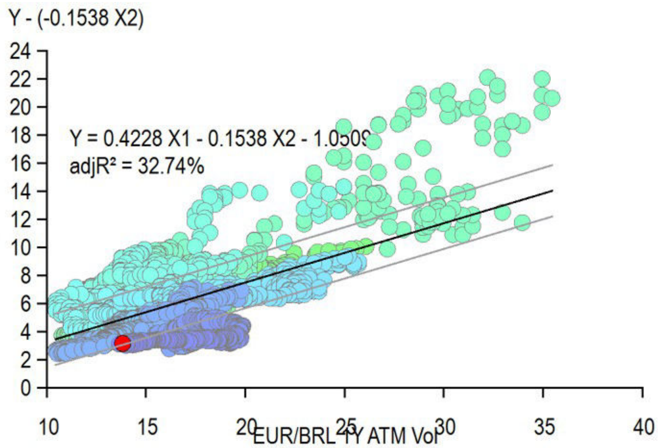
Figure 77: EUR/BRL risk reversals are screening cheap

1Y EUR/BRL 25D Risk Reversal vs model of Risk Reversal using 12M carry and ATM Vol in a two-factor regression (20Y data; 33% Adj. R-squared). The two-factor regression where Y is the Risk Reversal, X2 is the 12m nominal – the current residual is almost negative 2 vol pts



Source: J.P. Morgan

Further, this contrasts versus other x-BRL and x-MXN risk reversals that do not screen cheap (see here). Further, the risk reversal structure can be used on a standalone basis as a pure hedge, or in combination with a short EUR/BRL cash position to limit the possible downside. Consider:

- *Buy a 1Y EUR/BRL 25D risk reversal (EUR call - EUR put) for 2.4 vol pts. Keep live.*

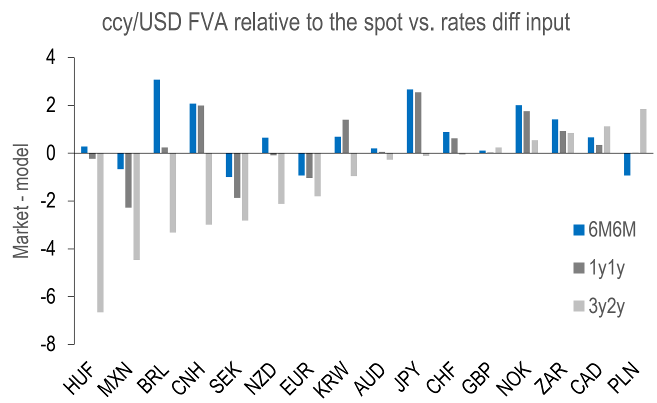
4. Opportunities in the Vega end of vol curves

Current market pricing is such that FX vols are generally below long-dated averages, putting aside a few outliers in the EMFX space, and vol curves are generally gently upward sloping. These features, along with the observation of a favorable entry point relative to rates vols, and the evidence that long-dated vols suffer less time decay than front-dated ones makes the search for candidate trades worth carrying out.

We have previously investigated the interplay between shape of vol curves and correlation between spot and rates differentials (see here). A negative spot vs. rates diff. correlation calls for steeper vol curves, as widening in the implied carry is boosted (and not countered) by spot market moves. It is in fact empirical evidence that realized volatility of fwds tends to rise with maturities on pairs, such as select EM ones, where the currency drops on higher interest rates (and vice versa).

Figure 78: Plenty of opportunities to play for higher vols and steeper vol curves in the Vega segment

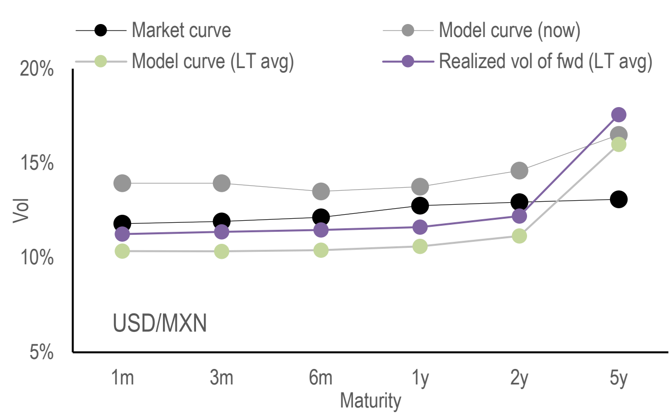
Model accounts for the correlation dynamics between spot and rates differentials



Source: J.P. Morgan

Figure 78displays the relative mispricing of FVAs relative to the model, for different segments of liquid vol curves (ccy vs. USD, illiquid vols such as RUB and TRY were excluded). It appears that the farther end of vol curves (i.e., >2yr) are those offering more potential for playing for steeper curves and higher vols. Liquidity needs to be addressed before recommending candidate trades, given the less "pure flow" nature of such segments of vol curves.

Figure 79: Case study on the USD/MXN vol curve



Source: J.P. Morgan

Out of the liquid candidates, the setup on MXN allows for a clear expression of the steeper vol curve theme. The market vol curve is rather flat, although base levels have notched up ~0.5 vol pts. higher since the escalation of the conflict in the Middle East. The macro view on MXN remains supportive (see for instance here) but the gradual build-up of carry trades finds hedging opportunities with modest time decay as timely. BRL follows next on the cheaper long-dated FVA, but it has

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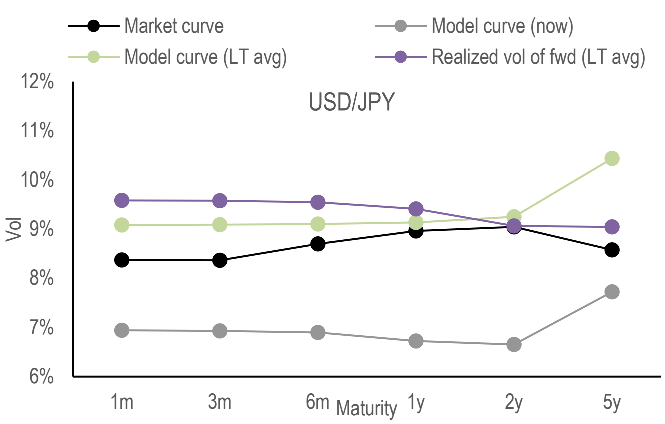
less potential for buying shorter-dated FVAs.

Yen is not the ideal case study for playing that specific driver, as the ~40% drop of the currency vs. the US Dollar since early 2021 was driven primarily by widening rates differentials (i.e., the opposite effect as for some EM currencies). As such, the model curve as predicted by the correlation input is structurally below the market one, and by a significant margin. Still, the market curve presents a steady inversion for maturities >2yr which, liquidity permitting, allows for further investigation in that segment. The inversion of the curve is such as to grant a long FVA trade a very modest time decay, in addition to the positive sensitivity to a repricing in implied vols. We consider the outright long FVA trade, offering long vol exposure with a contained time decay profile, or the roughly market neutral short 6m6m / long 1.5 * 1y1y setup, which earns vol rolldown carry thanks to a steep vol curve at the front. We suggest:

- On USD/MXN buy 1y in 1y FVA at 12.9/13.45 vol pts.
- On USD/MXN sell 6m6m FVA at 13.65 vol pts. ch., buy 1y in 1y FVA at 12.9/13.45 vol pts., in -1/+1.5 Vegas

Figure 80: Case study on the USD/JPY vol curve



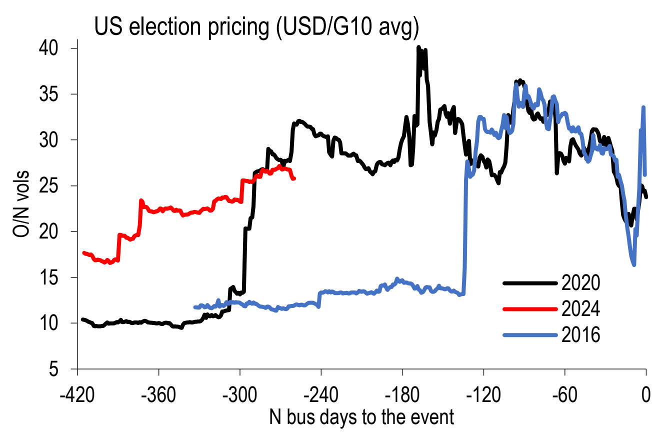
Source: J.P. Morgan

Macro view on JPY (see here) could still see room for an extended drop until 1H 2024, driven by rates differentials and higher long-run inflation expectation for Japan. However, the looming sword of Damocles on a possible risk of FX intervention (so far the key threshold of 150 in USD/JPY was breached with no FX intervention by MoF) still makes the search for "cheap" hedges relevant, especially over medium-term horizons. Furthermore, the use of FVAs comes in handy given the floating nature of the strikes, allowing an exposure to the future forward implied volatility regardless of the magnitude of the spot moves. Such long-dated products are tradeable although liquidity is drier than for shorter-dated vols. Smile adjustments here play an adverse role, leading to significant time decay for the FVA, despite the supportive shape of the ATM vol curve, reducing the feasibility of trading the structures.

5. US election tracking the 2016 and 2020 cycle

Option markets are using the 2016 and 2020 template for pricing the 2024 US election (**Figure 81**). 1yr expiry options have just started to cover the election, allowing for a marginally better assessment of event pricing. There has been a steady trend in event pricings to kick in earlier over the years. The 2008 US election started receiving significant vol uptick only month and half before the event, and needless to say that the spike in the election vols overlapped with the onset of GFC, making it hard to decouple the two. 2016 pricing kicked in once the GOP nomination crystallized, incidentally coming close to the 6-mo mark before Election Day, and 2020 at more than 1yr ahead of the event. FX base vols were about 1.5vol pts lower in 2020 than now but almost 3vol higher in 2016. Nevertheless, headline levels are only marginally different among the three, with the 2024 pricing 5-6vol softer suggesting ~20-30% uncertainty in the nominations if 2020 and 2016 vols are taken at face value.

Figure 81: Pricing of the upcoming 2024 US election at 1-year mark ahead of the event is nearly identical to the 2020 cycle in absolute terms, and the 2016 once the GOP nomination crystallized around 6-mo ahead of the election day



Source: J.P. Morgan

In the 2020 cycle, USD/G10 election O/Ns traded within a 25-40 range in the first half (amplified by the COVID shock), later on to tighten into a 27-36vol range. 2024 O/N pricing is at the low end of that historical range. Following the event, the USD TWI election vol realized at ~17% both in 2016 and 2020. Those numbers hide large dispersion across currencies, with MXN posting a remarkable 200% in annualized realized vol, CAD clocking a notable 25% in 2016 , and CNH realizing at 21% in 2020.

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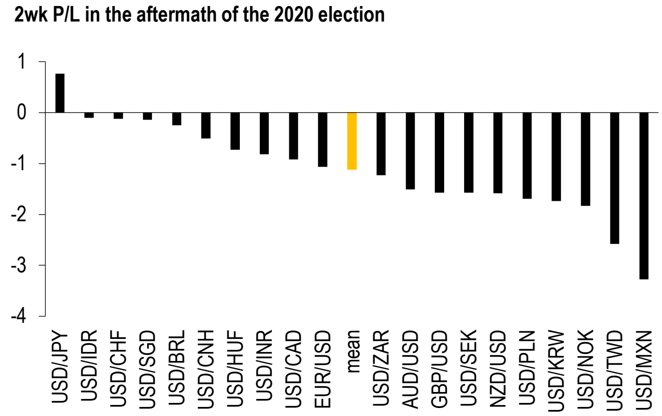
Figure 82: Despite the post-2020 election uncertainty delta-hedged straddles underperformed

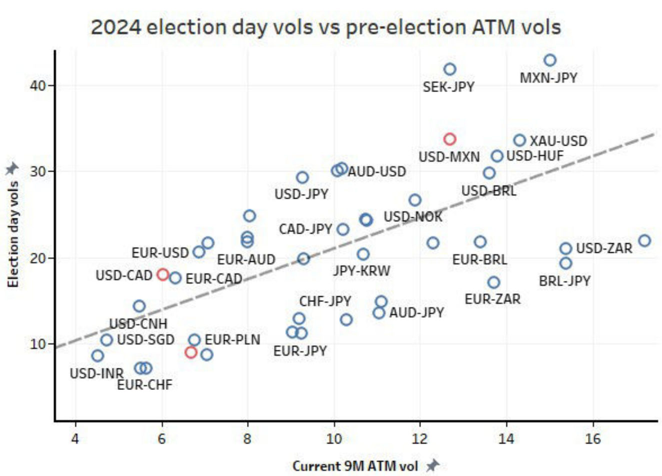
3M delta-hedged straddles.



Source: J.P. Morgan

Owning US elections passively in the form of a broad basket of USD vols and holding it through the event has been a losing proposition. **Figure 82** shows that the post-election realized vol in 2020 was insufficient for delta-hedged straddles to offset the steep rolldown in O/N vols (JPY was the only exception), and vols failed to bounce despite the prolonged vote count.

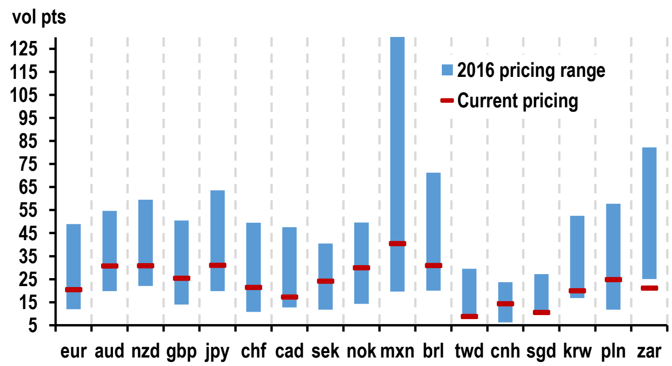
Figure 83: TWD pricing lagging, CAD in line with most of the major USD pairs and MXN is quite notable



Source: J.P. Morgan

From the point of relative pricing, the 2024 cycle, as was the case in 2020, places less focus on Asia. MXN vol packs in the most election premium overall (in terms of spread to its base vols; middling in terms of vol ratio because of the still elevated MXN base vols). Gold vol resurfaced this time (Figure 84) vs being largely absent in 2020 and 2016. Among the liquid x-vols only MXN/JPY stands out, with both MXN election vols and BoJ spillover back end JPY vols pushing it higher.

Figure 84: Without factoring in the difference in base vols, most USD pairs are near the low end of their 2016 election O/N range

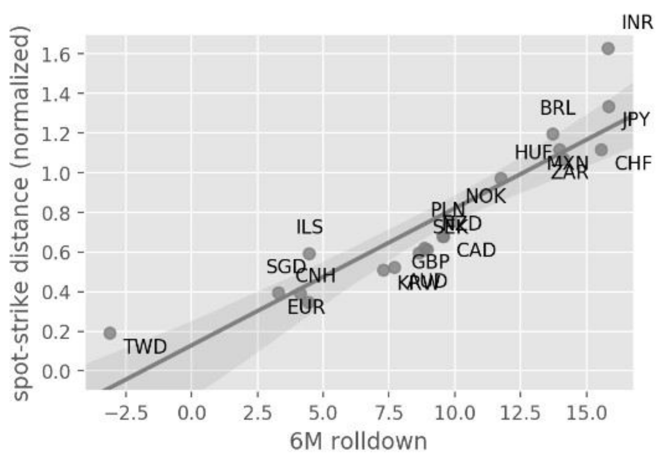


Source: J.P. Morgan

How to position? Calendar structures that tightly sell pre- and buy post-election options are the traditional go to structures for liquid exposure to the election event. Alongside MXN, CAD and KRW, EUR, CNH and TWD are the most likely pain points in this election cycle.

Figure 85: TWD, EUR, CNH then KRW and CAD most suitable as US election hedges based on pricing and roll-down

9M at-expiry digitals, strikes set so that TV is 20%. USD/JPY and USD/CHF are USD puts, the rest are USD calls.



Source: J.P. Morgan

Considering the current pricing and historical headroom to reprice, EUR, CNH and TWD screen favorably, with all three having ~13vol of upside potential while MXN is already topping the vol election pricing ranking. MXN is also one of the least favorable on the grid that screens the USD/FX universe in terms of long expiry digital options (**Figure 85**). Once again CNH, EUR and TWD fare favorably, but KRW is also a decent pick.

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6. Low premium directional trades

FX vols fell sharply after the latest Fed meeting and US inflation data release, leaving the J.P. Morgan VXY G7 vol index at the lowest level since the start of the war in Ukraine. In the G10 space, the setup offers several vols (both crosses and vs. USD) at near 15yr lows, such as EUR/GBP (1y at the lowest 0.1% percentile), CAD/CHF (3.4%) and GBP/NZD (3.5%). The undervaluation relative to long-term averages is less marked for USD/EM (Figure 80), with USD/ZAR, USD/BRL and USD/PLN as the main outliers in that respect.

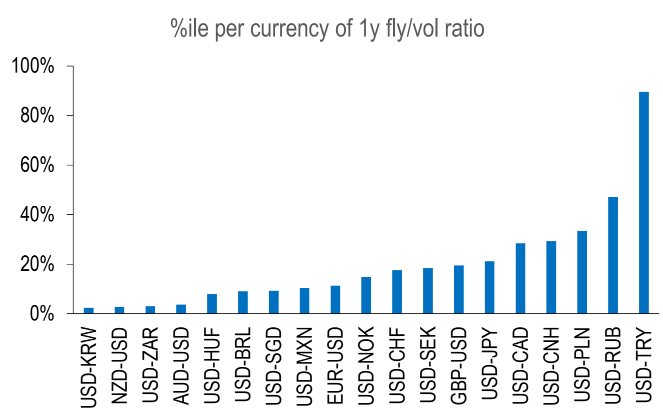
Figure 86: Several USD/EM vols are now below long-term averages

1y vol	Top 5 buy USD/EM vol				
15y	USD/ZAR	USD/BRL	USD/PLN	USD/KRW	USD/MXN
Current	15.3	14.0	10.8	9.4	12.8
Average	16.7	15.9	13.1	10.6	13.0
Median	16.1	15.7	12.0	9.9	13.0
Min	12.0	9.8	6.9	6.5	7.8
25%	15.4	13.9	9.9	8.7	11.8
75%	17.6	17.8	15.5	12.0	14.0
Max	25.6	24.4	25.4	22.7	24.5
%ile	22.2%	27.2%	37.0%	37.5%	45.2%
3M real	14.1	10.6	11.7	8.7	13.5

Source: J.P. Morgan

If ever, a more severe undervaluation is at play for FX Vol convexity (Figure 87). While we have extensively detailed the presence of vol-convexity premium (see, for instance, here), the current pricing landscape for the parameter appears entirely consistent with a goldilocks scenario, accounting for no additional risk premium for a still uncertain macroeconomic outcome.

Figure 87: FX vol convexity is now well below long-term average

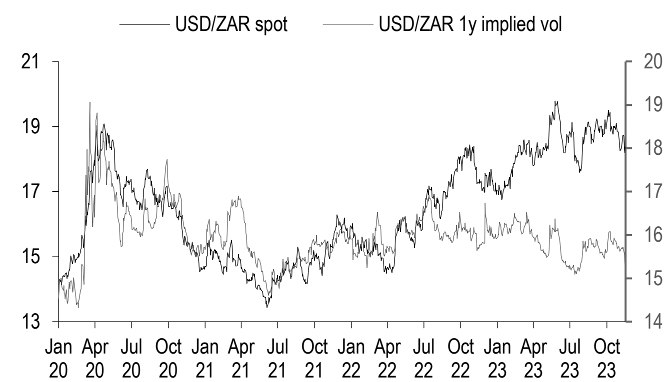


Source: J.P. Morgan

As we had already reviewed in previous notes, beyond long Var / short Vol trades that are subject to severe time decay, a pure-vol structure which is long vol-of-vol not overly subject to time decay is calendars of flies (short front / long far end) (see here).

Alternatively, the current landscape opens the way for straightforward directional implementations. USD/ZAR has undergone large fluctuations over the past few years, yet the 1y vol has remained confined in a relatively tight range (Figure 88), which can be explained via the dealers being long vol-of-vol, having a dampening effect on the vols themselves. Locals being outright sellers of risk-reversals caps further any possible repricing in vols. In other words, the previous charts and market exposure point to an attractive entry point for owning OTM optionality on USD/ZAR.

Figure 88: USD/ZAR 1y implied vol sticky despite large fluctuations in the spot market



Source: J.P. Morgan

Similar trades had been proposed in the vol outlook for 2023 (see here), with a positive PnL locked-in on a digital USD/ZAR call exited in June, benefiting from local political noise. The EM strategy team is now taking a more supportive stance on ZAR given the improving inflation outlook; however, the large fluctuations undergone in both directions and undervalued vol convexity could favor taking a two-sided view. Flattish vol curve in the 18M-2y segment can make the entry point appealing on 2yr OTM (such as 10delta) USD/ZAR live puts. Consider:

- Buy a 2yr 10delta put on USD/ZAR @ USD 84/92 bps (spot ref. 18.42)

Model portfolio Update

New trades:

1. Sell USD/CNH 6M6M FVA @ 5.9/6.3 vol pts vs. buy

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USD/SGD 6M6M FVA @ 4.6/5.0 vol pts

2. Sell 3M 18.15 strike EUR put/MXN call at-expiry digital vs. Buy 6M 18.15 strike EUR put/MXN call digital, net cost of 2.55%
3. *Buy a 1y ATM Vol Swap in USD/BRL and sell in USD/JPY for 4.85 vol pts*
4. Sell CHF/JPY vs buy 3M USD/CHF ATM vol spread @1.65
5. Buy USD/MXN 1Y1Y FVA @ 12.9/13.45 vol pts

Closed trades:

1. Take profits on long USD/SEK vs. short EUR/SEK 3M straddle spread. P/L +0.6 vol pts
2. Take losses on long EUR put/USD call vs. short EUR put / CNH call option spread. P/L -31bp
3. Take losses on long USD/BRL 3M3M FVA.P/L - 1.6 vol pts
4. Take losses on long AUD/USD 3M vol swap -0.2 vol pts

Current trade recommendations and P/L

	Description	Entry date	Entry	Current mid	P/L	P/L units	Remarks
New	Sell USD/CNH 6M6M FVA vol pts vs. buy USD/SGD 6M6M FVA	20-Nov-23	-0.90	-1.30	-0.4	vol pts	High vol carry and best-in-class vol slide in CNH
New	Sell 3M 18.15 strike EUR put/MXN call at-expiry digital vs. Buy 6M 18.15 strike EUR put/MXN call digital	20-Nov-23	2.55	1.30	-1.25	%	Calendar spreads in high carry-to-vol curves to earn premium roll-down
New	Buy a 1y ATM Vol Swap in USD/BRL and sell in USD/JPY for 4.85 vol pts	20-Nov-23	4.9	4.5	-0.4	vol pts	Carry trade hedge
New	Sell CHF/JPY vs buy 3M USD/CHF ATM vol spread	20-Nov-23	1.7	1.9	-0.3	vol pts	USD centric world. X-vol underperforms vs USD vol
New	Buy USD/MXN 1Y1Y FVA	20-Nov-23	13.5	13.2	-0.3	vol pts	play a steeper vol curve in USD/MXN
	Buy XAU/USD 1Y 2150 Call, Sell 3M XAU/USD 2050 Call	02-Nov-23	274.0	265.9	-8.1	bps	XAU curve too inverted and directional bias
	Buy 1Y 155 USD/JPY digi call, sell 3M 155 digi call	27-Oct-23	2.50	5.97	3.47	%	Efficient way of buying long-term USD/JPY higher
	Buy AUD/USD 3M Vol Swap	12-Oct-23	10.4	10.2	-0.2	vol pts	Take loss
	Buy 3M 1% OTMS EUR puts/USD calls vs. Sell 3M 1% OTMS EUR puts/CNH calls	08-Sep-23	-7.0	-37.9	-30.9	bps	Take loss
	Buy 3M USD/SEK vs. EUR/SEK ATM straddle spread	08-Sep-23	4.2	4.7	0.6	vol pts	Take profit
	Buy USD/BRL 3M3M FVA	08-Sep-23	14.5	12.8	-1.6	vol pts	Take loss

For delta-hedged straddles and vol products, P/L is in vol points; for directional trades, bp of notional; negative entry price indicates a net credit at inception

Source: J.P. Morgan.

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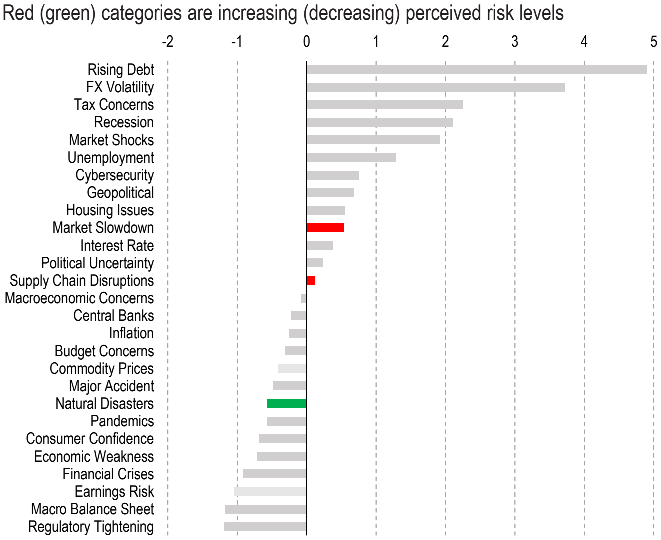
Special Section: Mariner VXY - NLP-based FX vol sentiment framework

Mariner VXY is an NLP-based news flow sentiment monitor tailored to FX vol (see, e.g., here). We monitor 28 SmartTag categories of macro risk across global news reports and capture their changes in volume and anxiety (inverted tone) to identify what investors seem to be most sensitive to. With dwindling VXY, its betas to news flows declined notably. Consequently, **Figure 90** is depicting mixed signals from economic and financial categories. **Figure 89** offers the full list of the categories and while the bulk is below our beta threshold to VXY, it is still notable to find very elevated news flow in relation to fiscal backdrop, market choppines and unemployment. The analysis confirms that markets have been fairly unprepared for the last Tue inflation surprise.

Figure 89: Current volume as a Z-score (6 months)

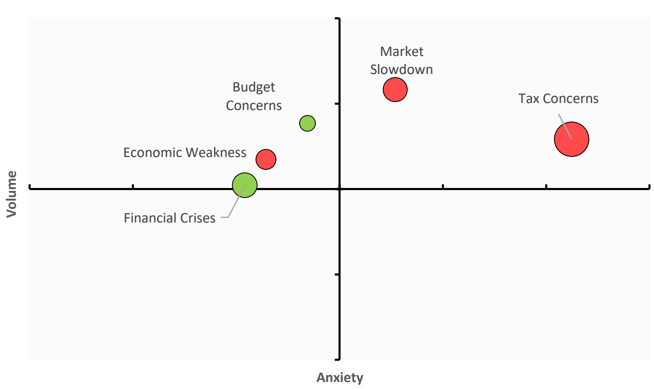
Red (green) categories are increasing (decreasing) perceived risk levels



Source: JPM Big Data & AI Strategies, GDELT, Bloomberg Finance L.P.

Figure 90: Current most notable contributions to VXY

Current volume vs. anxiety of our CoC (six-month Z-score)



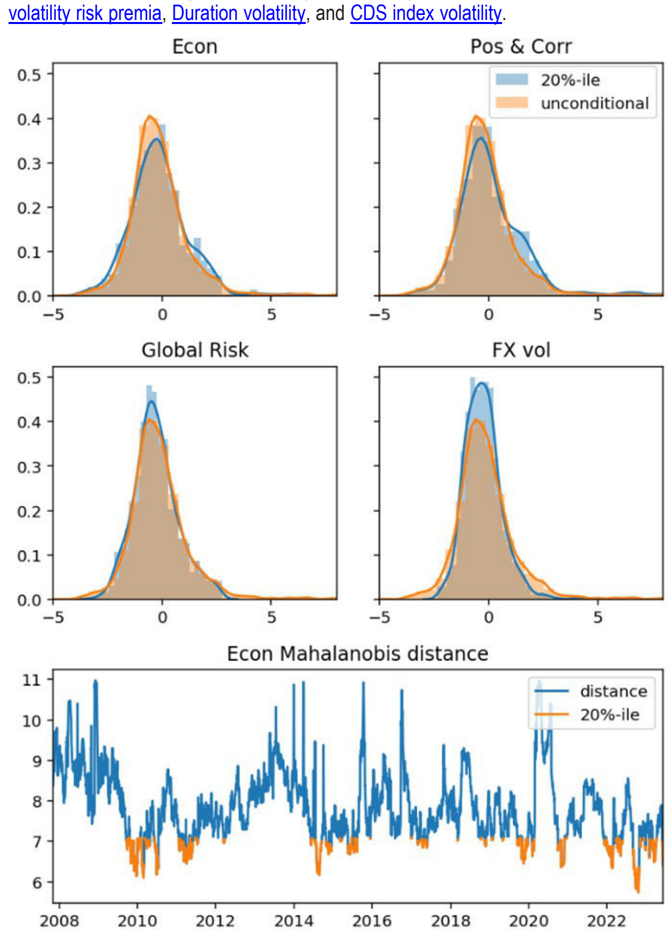
Source: JPM Big Data & AI Strategies, GDELT, Bloomberg Finance L.P.

Special Section: Mahalanobis shows modest defensive FX vol lean

Mahalanobis framework (details here) is currently leaning defensively only on margin, mostly so from the point of positioning and correl (**Figure 91**). The framework utilizes a wide range of market, economic and vol variables and uses them within the so-called Mahalanobis distance framework to stratify historicals based on how similar past periods are to the current backdrop. In the past, we have found that historical FX vol performance selected in such way is forward-looking.

Figure 91: Mahalanobis FX vol framework shows a modest defensive lean

Returns from delta-hedged 3M straddles (VXY weighted). Baskets: 1) global risk basket; 2) positioning basket which comprises major IMMs (in form of z-scores) as well as FX correlations; 3) economics/broad market backdrop basket, which contains global PMI (level and 3-mochange), three economic sentiment indicators, CPI, major EASIs and FRIs (1-yr z-score of 3-mo change) and adds a component of FX by including IMMs, 4) Three FX vol baskets: granular market characteristics such as currency level vols, RR, RR/ATM ratio, BF and BF/ATM ratios combined into FX vol below. Global risk category is including JPMaQS signals for FX tail risk premia, FX volatility risk premia, Duration volatility, and CDS index volatility.



Source: J.P. Morgan., JPMaQS

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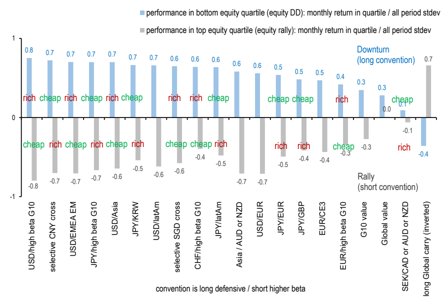
FX Macro Quant

The big trades are in G10 valuation gaps

- **2023 will be remembered as the year of FX carry** (+20% in H1 on global ptf), even if the strategy has been challenged in the second part of the year.
- In G10, carry also performed but trends in prices and underlying rates markets mattered as well. Value printed a large drawdown (-10%) as the opposite side of carry.
- Important lessons of 2023 are: (1) yield dispersion should be respected, even if investors ultimately shy away from carry; (2) in a strong hiking cycle, the best strategy could be simply buying/selling G10 currencies with the CB hiking the most/less; (3) USD can strengthen in the absence of growth synchronisation.
- The post covid era has also been characterised by higher levels of macro volatility and CB activity, leading to structural changes: weaker growth, equity signals and a resurgence of price/rates induced trends.
- Going into 2024, we are now facing a very stretched currency market on valuations and reaching the end of CBs' hiking cycles, which opens a wide range of possibilities.
- The attractiveness of FX carry is significantly lower as the yield dispersion is forecast to compress by year-end. Scenarios of market downturn or higher inflation in the US have negative implications for the strategy. Only a rally of high beta assets in an immaculate easing cycle can push the factor further.
- We are more constructive on value reversions. One can find rich (USD, EUR, MXN, SGD) and distressed (Nordics, JPY; CNY to a smaller extent) currencies both in high betas and defensives.
- Logical (payout X carry X valuation) trades in extreme market scenarios involve longs in: high beta G10 (especially Nordics) vs. USD for a recovery and long JPY or CNY vs. low yield higher beta DM (EUR, AUD, KRW) for a recession.

Figure 92: Short USD & long JPY vs G10 high beta offer a lot of upside on opposite sides of the spectrum (downturn & soft rally)

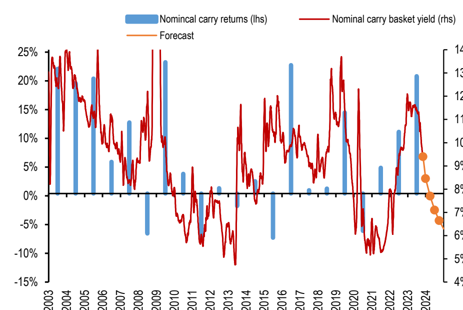
Currency pair, strategy or basket return in top and bottom equity returns quartiles divided by all period stdev (monthly). Sampling is monthly. For baskets, filter is applied to the largest upside trades. Period is 2003-2023.



Source: J.P. Morgan

Figure 93: The attractiveness of FX carry is significantly lower as the yield dispersion is forecast to drop by year-end

Yield, forecasted yield and annual returns of top 5/bottom carry basket (global portfolio)



Source: J.P. Morgan

Drivers of FX returns in 2023

Heading into 2023, our view was that (i) the landscape would be fertile for currency trading as the dispersion in signals was high, (ii) the conditions for carry will be more challenging despite wide yield dispersion as central banks come to a pause and recession probabilities rise and (iii) value trades in G10 could potentially mean revert as dispersion had reached multi-decades highs. In hindsight, we were premature in anticipating a more challenging time for carry and the resurgence of value as the first half of 2023 saw the largest returns of FX carry for a six-month period since at least 2003. Despite a longer-than-expected shelf-life, the strong performance of FX carry eventually came to an end in the second semester of 2023. Investors partially shied away from the trade on the back of higher US yields, rate cuts in emerging markets and positioning concerns. This opened the door for slight reversions of distressed strategies on certain portfolios (value in EM or growth strategies globally). Signals which

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benefitted the trends in rates markets alongside carry also became more challenged (momentum on rates in G10 or trend-following). In detail:

- **In H1, currency returns have been informed by one single driver - rates differentials**. If we wanted to over-simplify, we could say that rates were the main driver (via carry-level or trends/ rates changes), followed by commodities, which partly explained currency returns. On the other hand, growth RV, local equity performance, valuations, external balances were almost irrelevant.
- Contrary to H1, **July-October saw the partial resurgence of other factors such as growth or valuations without completely condemning carry as most implementations were still flat to positive from July to October**. Other strategies benefitting from the rates backdrop were also challenged after months of strong performance, notably G10 rates momentum or long-term trend following (but not the combination of both).
- **In more details, the performance of FX carry (of any form, nominal, risk-adjusted, hedged / on a global, or EM portfolio) in the first six months of 2023 has been impressive.** From the beginning of January to the end of June, a nominal carry basket of 27 currencies returned +20%, the best half-year performance since 2003. The strategy was driven by the yield and growth resilience of LatAm currencies and HUF. From July to October, the same nominal basket delivered 0.4% in total with the spot component only at -2.8%. LatAm especially suffered a significant deleveraging due to higher US yields and rate cuts in the region, which weakened the strategy despite relatively strong fundamentals for BRL and MXN and further weakening of funders such as JPY, CNY or Nordics. However, we must keep in mind that the lower performance of diversified FX carry strategies in H2 was far from being a drawdown as most implementation (various portfolios X signal types) still delivered between 0% to 4%.
- **For G10, the strongest signal was real carry (other forms of carry also delivered but lower returns)**. The short component of the strategy legitimately captured the weakness of inflation-struggling currencies such as SEK, but also the weaknesses in JPY, NOK and AUD vs. USD. The mix of strategies in positive territory for G10 is more diversified with +6% for rates momentum (despite the weaker performance in H2), +3% for commodity ToT and +3% for growth. G10 value remains the largest year to date drawdown driven by the increasing divergences between the Fed and BoJ. In G10, the progressive switch from carry to value in July-October did not materialise, as G10 CBs are forecasted to cut after EMs.

Figure 94: Despite more challenges in H2, 2023 remains the year of FX carry for any portfolio: Global, EM or G10

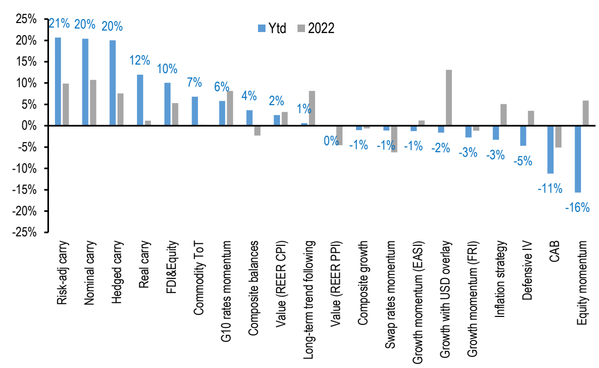
Ytd returns of single-signal X-sectional strategies for global, EM and G10 FX portfolios (trading top/bot 5/3/2 for global/EM/G10 ptfs).

Portfolio	Global		G10		EM	
Period	Ytd	2022	Ytd	2022	Ytd	2022
Risk-adj carry	21%	10%	6%	-7%	22%	17%
Nominal carry	20%	11%	6%	-6%	25%	14%
Hedged carry	20%	8%	10%	-1%	19%	18%
Real carry	12%	1%	13%	-8%	5%	2%
FDI&Equity	10%	5%	12%	-5%	14%	6%
Commodity ToT	7%	0%	4%	13%	1%	-6%
G10 rates momentum	-	-	6%	8%	-	-
Composite balances	4%	-2%	6%	-8%	1%	-4%
Value (REER CPI)	2%	3%	-13%	-7%	9%	12%
Long-term trend following	1%	8%	-	-	-	-
Value (REER PPI)	0%	-5%	-8%	-3%	7%	-6%
Composite growth	-1%	-1%	3%	4%	-7%	-9%
Swap rates momentum	-1%	-6%	-	-	-	-
Growth momentum (EASI)	-1%	1%	3%	6%	-11%	-7%
Growth with USD overlay	-2%	13%	-	-	-	-
Growth momentum (FRI)	-3%	-1%	-2%	8%	-8%	-8%
Inflation strategy	-3%	5%	-	-	-	-
Defensive IV	-5%	3%	-3%	-10%	-4%	6%
CAB	-11%	-5%	-6%	-8%	-19%	-1%
Equity momentum	-16%	6%	-3%	-5%	-24%	5%

Source: J.P. Morgan

Figure 95: Signals remained fragmented between beneficiaries of high & volatile yield (carry, G10 rates momentum) and negatively impacted features (CAB; equity momentum, growth)

Returns of FX single-signal cross-sectional strategies with trading costs on global FX portfolio (top 5/bottom 5; 2022 & 3/1/2023-31/10/2023).



Source: J.P. Morgan

- We have now two sample years in the post Covid era (2022-2023) and can make the following observations regarding certain structural changes:
  - Rates have become the market with the highest relative volatility (vs. its historical levels), which has significantly impacted all the factors, signals and features in the FX space.
  - The net beneficiaries of such a regime are: carry and trend-based strategies. The most negatively impacted signals and features are: G10 value, growth RV and sentiment via local equity returns.
  - The idea of having a large diversified mix of signals at all times becomes limited in this context. The rapid hiking cycle of central banks pushes certain strategies to very high returns (carry, momentum in rates, certain forms of trend following) and others to collapse (value

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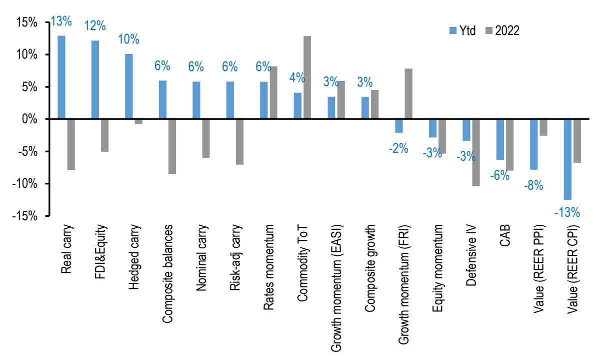
in G10, features such current account balances, momentum in local equity). For instance, it becomes harder to run carry and G10 value at the same time (which was possible in 2010-2020, but similar to pre GFC when value weakened for years). Despite the still negative correlation, the loss on G10 value becomes unbearable. The macro backdrop forces more decision making and selection of signals and features (discretionary or quantitative). This aspect can last (in a reversed way) if we move from volatile and quick rates hikes to volatile and quick rates cuts.

- Our growth USD overlay strategy (which trades growth momentum cross-sectionally but allows for large positions in USD if the momentum is one-sided) **delivered flat returns this year.** In 2022, the returns were close to +15%. The flat returns in 2023 reflect the fact that USD was range-trading for a large part of the year followed by an RV-driven performance in H2 (rates and relative growth momentum pushed USD rather than a defensive move in a deteriorating growth environment).

Figure 96: For G10, carry strategies were also the strongest performers (but investors were valuing real yields more than nominal). On the opposite side, value logically collapsed as many cheap G10s were further used as funders through the year (JPY & Nordics)

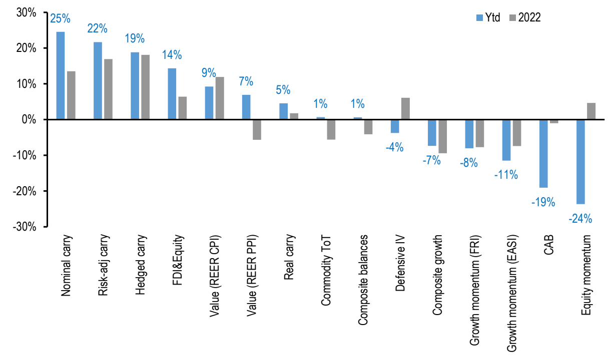
Returns of FX single-signal cross-sectional strategies with trading costs on G10 FX portfolio (top 2/bottom 2; 2022 & 3/1/2023-31/10/2023).



Source: J.P. Morgan

Figure 97: For EM, carry strategies were also the strongest performers (investors were chasing the absolute level of yields); value also delivered decent returns. Buying surplus/ selling deficits logically suffered, as well as strategies based on local equity performance or growth

Returns of FX single-signal cross-sectional strategies with trading costs on EM FX portfolio (top 3/bottom 3; 2022 & 3/1/2023-31/10/2023).



Source: J.P. Morgan

Figure 98: Currency return attribution for single signals

This table breaks down the returns vs. USD of currency positions in single signal cross-sectional strategies. Returns for G10s/EMs are computed for top 2-bottom 2/top 3-bottom 3 strategies with a currency weight of 50%/33%. A blank mean no position was taken by the strategy. Period is 3/1/2023 - 31/10/2023.

CCY	Nominal carry	Real carry	Hedged carry	Value REER PPI	Long-term trend following*	Growth FRI	Growth EASI	CAB	FDI & Equity inflows	Momentum in local equity	Momentum in commodities (daily ToT)	Momentum in swap rates**	Momentum in sovereign rate (G10)	Defensive IV
weight of +/-50% for G10 in X-section														
EUR		-0.8%	1.9%	1.9%	0.3%	0.5%	0.8%			1.2%	-0.5%	-0.1%	0.5%	-1.5%
GBP			-1.9%		-0.9%	-0.3%	1.5%		-0.7%	-0.8%	0.8%	-0.4%	-1.1%	-0.5%
JPY	8.6%	2.9%	7.3%	-7.9%	-0.1%	-1.4%	0.1%		5.6%	-0.2%	-3.2%	-0.8%	-1.6%	-4.1%
CHF	0.6%	0.2%	0.2%	0.5%	-0.1%		0.2%	-0.6%		0.0%	1.1%	1.1%	0.6%	0.2%
CAD	-0.1%	-1.4%			0.1%	-0.1%	0.1%			0.1%	0.0%	-0.4%	-3.0%	1.7%
AUD		4.5%	3.7%			4.0%	0.6%			-0.6%	3.9%	0.7%	5.5%	-0.7%
NZD	-2.3%	-0.6%				-0.7%	-0.1%	3.4%	-3.3%	-1.6%	-1.5%	1.3%	0.6%	-0.1%
NOK		3.5%	0.0%		1.8%	-4.8%	-1.2%	-6.7%	7.2%	-2.6%	0.9%	-1.3%	3.9%	0.2%
SEK		4.8%		-4.3%	2.8%	1.2%	-0.4%		3.2%	1.9%		-0.3%	0.0%	-1.0%
weight of +/-33% for EM in X-section													-	
BRL	0.6%	2.9%	1.4%	-2.8%	-3.2%	-0.3%	0.3%		0.0%	-1.1%	0.0%	1.1%	-	-0.2%
CLP				0.5%	-	1.6%	-1.6%	0.9%		-5.4%	0.7%	-	-	1.4%
COP	7.0%	3.6%	3.9%	7.3%	-	-0.9%	-1.6%	-6.5%		-5.6%	-6.2%	-	-	3.4%
MXN	1.7%	2.5%	0.0%	0.5%	2.7%	-1.1%	1.2%			0.9%	2.2%	-4.0%	-	-2.8%
CZK		0.9%	-0.1%	0.3%	-	0.9%	-2.7%	0.1%		0.4%	0.3%	-	-	-0.8%
HUF	3.8%	-0.3%	3.8%		-	-0.1%	-0.8%	-3.6%	3.8%	-3.6%	4.4%	-	-	-3.1%
PLN	0.0%	-1.4%	0.7%	2.0%	-1.4%	-2.4%	-3.3%		1.4%	-1.6%		-0.8%	-	-0.9%
ZAR		-3.1%		0.9%	-0.5%	-1.1%	-0.7%		3.7%	-2.7%	3.7%	2.7%	-	-0.7%
ILS			1.4%	0.0%	-	-1.5%	-1.1%	-4.3%	0.0%	-0.3%	0.0%	-	-	0.0%
CNY	2.7%		0.5%	-0.9%	0.1%	-1.3%	-1.5%			0.3%	0.0%	-0.1%	-	1.1%
IDR		-1.5%		0.9%	-	0.2%	-0.1%			-1.2%	-0.1%	-	-	-1.1%
INR					-0.4%	0.0%				0.3%	0.1%	-0.3%	-	0.0%
KRW	-0.3%	-0.5%	1.7%			-0.2%	-1.0%	0.0%	2.6%	-1.7%	-0.8%	1.1%	-	0.5%
PHP		1.8%		-0.7%	-	-0.3%				-1.3%	0.0%	-	-	-1.6%
SGD					-0.1%		1.1%	-0.9%	-0.9%	-0.3%			-	0.0%
THB	2.8%	-1.5%	2.8%		-1.0%	0.4%	0.9%			-1.1%	0.9%	-0.9%	-	0.0%
TWD	1.5%	0.5%	-0.1%		0.7%	0.0%	-0.5%	-2.3%	2.4%	0.0%	-1.9%	-0.3%	-	0.7%
currently non systematically tradable														
MYR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RUB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRY	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: J.P. Morgan
*Long-term trend following: trades top 3/bottom 3 standardised moving average cross-overs (no G10/EM sub strategy)
**Momentum in swap rates: trades top 5/bottom 5 a multi-window swap rates momentum signal (no G10/EM sub strategy)

Main take-aways and future drivers

Below, we outline the main lessons from 2023 and the key elements going into 2024.

Summary

We have learnt that (1) high dispersion in FX yields should be respected, particularly when there are opportunities to neutralise beta; but once we can predict the reduction in yields and carry has been over-subscribed, investors are likely to shy away; (2) central banks are the ultimate driver that can push cheap valuations further and dictate the performance through rates hikes pace; (3) the 2022-2023 regime is characterised by a significantly higher macro volatility, which makes a lot of pre-covid calibrated features/signals inefficient.

Looking ahead, (1) we are now facing a very stretched currency market and reaching the end of CBs' hiking cycles, which opens up a wide range of possibilities; (2) the attractiveness of FX carry is significantly lower and the strategy should be challenged in most macro scenarios with the exception of an immaculate soft landing; (3) we are more constructive on value reversions; (4) we screen for the best, asymmetric trades for a recession or a soft landing to address the wide dispersion of macro views; (5) there is a window for relative growth trades to emerge as DM central banks enter a brief pause but as soon as cutting cycles are engaged (emergency or progressive), the beta or the price and rates trends will drive the direction again.

Details

The main lessons of 2023 are:

- One of the primary drivers of carry is yield dispersion. Beyond the spot yield offered by the basket, the forward view on what this dispersion will be six months ahead matters even more (using CBs' rates forecasts).
- A strong carry rally leads to positioning concerns and investors reach a point where any economic release, news, or narrative is a reason to exit even if the fundamentals of the trade are still in place. We view this as a partial lesson considering most carry strategies are still flat to positive in 2H23 and systematically timing the unwind is impossible.
- If G10 central banks are not done yet, G10 valuation dispersion is not done yet.
- In a strong hiking cycle, the best strategy could be as simple as buying/selling currencies with the CB hiking the most/the less (G10).
- When central banks push in one direction and rates volatility is structurally higher, more selection, balancing and timing of signals is necessary (discretionary or quantitative). The returns of single signals strategies become more fragmented and running certain strategies side by side can no longer be possible (despite the eventual negative correlation, the loss on one of the strategies will be too large; G10 value for instance).
- Our mantra *synchronised growth trends never betray the dollar* is valid, but the opposite does not hold. The dollar can betray a lack of synchronised growth trends with a strong rates + US exceptionalism RV trade in a relatively benign growth backdrop. For example in 2H, USD strengthening was driven by US-specific attributes of carry, growth and equity/ rates momentum rather than global growth sliding.
- Growth RV is less relevant in periods of high macro volatility and central bank activity (except for USD).

Going into 2024, we think:

- We are now (1) **facing a very stretched currency market as valuation dispersion in G10 is now approaching two decades high** and (2) **reaching the end of the central bank hiking cycle which opens a wide range of possibilities** from a recession to a lower rates soft landing.
- In any case, **the attractiveness of FX carry is significantly lower** as the yield dispersion already decreased and is forecasted to bottom by end-2024 (Figure 99). Scenarios of market downturn or higher inflation in the US have negative implications for the strategy. Only a rally of high beta assets in an immaculate easing cycle can push the factor further but in such case, it would be a high beta trade like many others rather than the diversifying factor we had in 2022-2023.
- **We are more constructive on G10 value reversions**. In both extreme scenarios (strong rally or sharpe downturn), the trades which screen with the largest upside are involving rich or distressed G10 currencies.
- Notably, if we characterise the optimal FX trades in extreme scenarios (baskets, pairs, crosses and strategies) in terms of the following three variables: (1) payout when risk assets are in the top/bottom quartile of performance; (2) current valuation and (3) carry offered, we find the best opportunities for the two sides of the spectrum to be:
  - Best trades for soft landing: long G10 high beta vs USD with larger potential for NOK; long ZAR or COP vs USD providing the idiosyncratic backdrop is decent; long carry avoiding hedged implementations; long AUD vs expensive Asia cross such as AUD/SGD; long Nordics vs EUR. *Keep in mind that shorting further JPY is very expensive (as very distressed) and that short CHF is historically a skewed trade with lower performance than other defensive currency shorts in rallies.*
  - Best trades for recession: long JPY vs. EUR, AUD or KRW; long SEK vs high beta G10 preferably NZD; long CNY vs. EUR, AUD; long value on global port-

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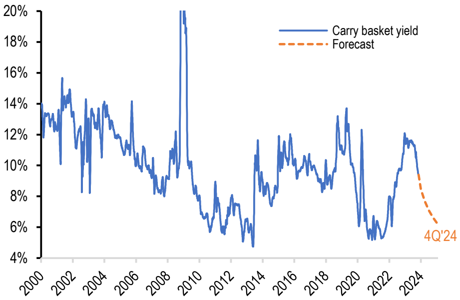
folio. *Keep in mind that USD longs vs high beta G10 is high payout and positive carry but very expensive.*

- There is a window for relative growth trades to emerge as DM central banks enter a brief pause but as soon as cutting cycles are engaged (emergency or progressive), the beta (emergency) or the price and rates trend will drive the direction (progressive).

Figure 99: Yield on carry baskets has already dropped by 2% and is forecasted to fall to sub-average levels by 4Q24

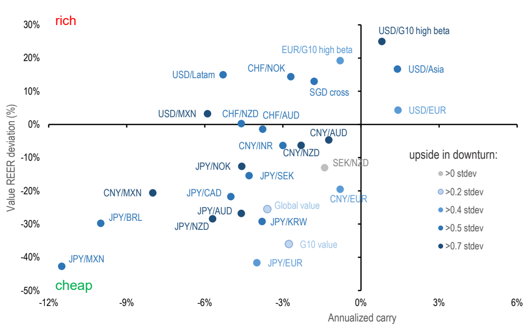
Yield offered on top 5/bottom 5 nominal carry basket (global portfolio). Projection until 4Q24 is computed with policy rates forecasts from J.P. Morgan economists.



Source: J.P. Morgan

Figure 100: Market downturn: Long JPY vs. EUR, AUD or KRW; Long SEK vs high beta G10 preferably NZD; Long CNY vs. EUR, AUD; Long value on global portfolio

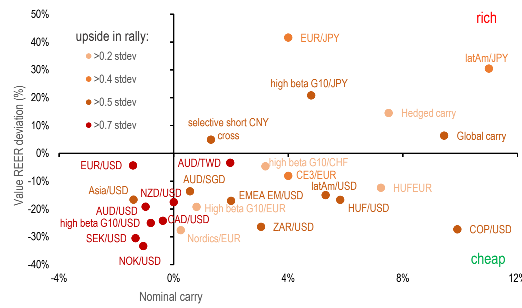
Scatter plot: value (measured by avg of REER PPI and CPI 15y deviations) vs. carry of trades with large upside during markets downturns (based on performance in bottom equity returns quartile vs. historical standard deviation; 2003-2023).



Source: J.P. Morgan

Figure 101: Best candidate for immaculate disinflation with rally of risk assets: Long G10 high betas vs. USD, long selective cheap EM (ZAR, COP) vs USD, global carry, long AUD/SGD, long Nordics/EUR

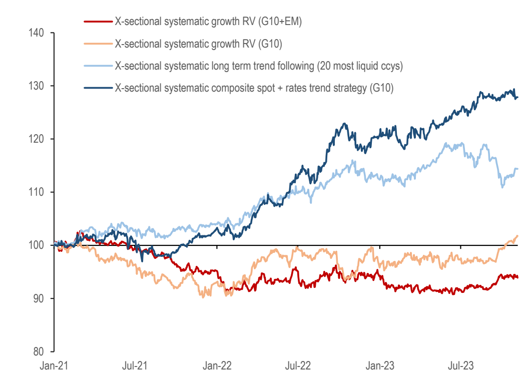
scatter plot: value (measured by avg of REER PPI and CPI 15y deviations) vs. carry of trades with large upside during risk markets rallies (based on performance in top equity returns quartile vs. historical standard deviation; 2003-2023).



Source: J.P. Morgan

Figure 102: Further central bank activity (even on the cutting side) could continue to favour price and rates trend instead of growth RV; a relative pause of DM CBs could favour the latter

Total return index of X-sectional strategies with tc. Growth is based on a composite EASI + FRI signals, trend following on standardised crossovers & composite spot + rates trend on both price and underlying rate crossovers (see growth and trend sections).



Source: J.P. Morgan

The carry/value tandem

During the year, we highlighted the performance of FX carry and the weakness of G10 FX value (around +20% vs. -10%). These strategies are usually the two sides of a single coin as investors fund high yielders in EM with low yielders in G10 when rates gaps are attractive and macro conditions decent (and even more when beta neutral plays are available). **The significant divergence of the two strategies in 2023 has raised a lot of questions among investors such as: how to position for a reversal? when to rotate from carry to val-**

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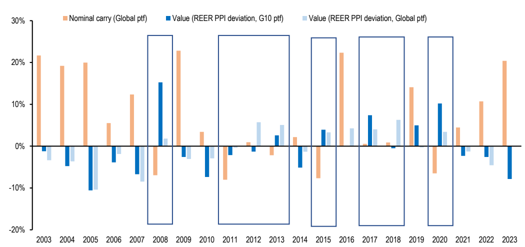
ue? We give elements of the answer and discuss the prospects of the carry/value tandem in this section.

First, a simple carry strategy delivers larger returns across time than a simple value factor. FX value remains a hedge with larger performances during the GFC, the sovereign crisis and Covid outbreak. In our view, a distinction must be made between G10 value and value on a global portfolio (G10+EM). The G10 implementation (most common) is more defensive with large upsides during volatility shocks while the global portfolio has historically benefitted from EMs idiosyncratic valuation reversals giving more steady returns but less upside during shocks. (Figure 103).

Figure 103: Carry remains a stronger factor across time; value restricted to G10 is the most defensive

Yearly returns of nominal carry strategy on global portfolio, value (REER PPI 15Y deviation) strategy on G10 portfolio and value (REER PPI 15Y deviation) strategy on global portfolio.

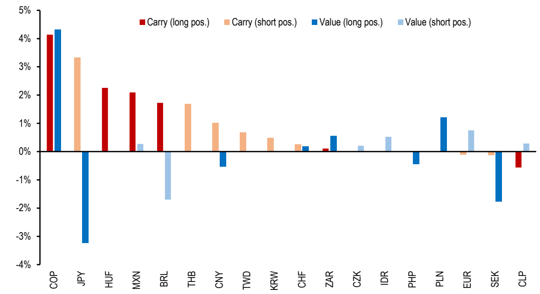


Source: J.P. Morgan

The large carry upside in 1H'23 has been driven by longs in LatAm (MXN, BRL, COP) and HUF against shorts of low yielding Asian currencies such as JPY, CNY or THB for instance. Figure 104 details the contributors to the nominal carry strategy. However, a lot of high beta G10s were also used as shorts in more beta neutral implementations: NOK, SEK or AUD (and weakened accordingly during certain periods). G10s shorts have been the longs of the value factor and led to significant losses, despite already cheap valuations in JPY and Nordic currencies.

Figure 104: Long LatAm, short JPY and SEK are among the largest profits/losses for carry/value strategies

Ytd component currency returns vs. USD of global carry and value strategies (split between long and short positions for both strategies).

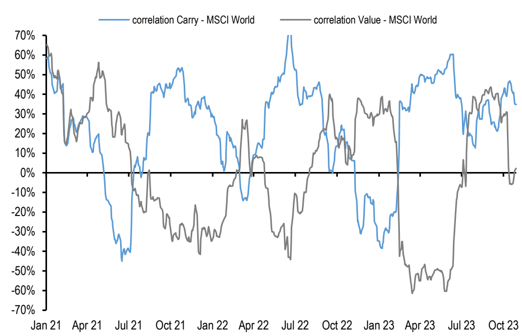


Source: J.P. Morgan

As a last observation, we see that the traditional positive/negative correlation of carry/value to risk-assets has flipped many times this year (Figure 105). Indeed, the performances of the two strategies were more driven by rates trajectories (especially US) than a broad risk sentiment captured via equities.

Figure 105: The traditional negative/positive correlation of value/carry to equities has flipped many times since Covid: rates are driving the moves, not broad risk

Rolling correlation of FX carry and FX value to MSCI World. Correlation is calculated over a 3M window on weekly returns



Source: J.P. Morgan

A stretched currency market

Taking a step back, we realise that the various reactions of central banks to contain the post Covid inflation shock have led to a very stretched currency market with long-term one-sided rallies (carry: +35%, G10 value: -10%, USD/JPY: +40%, USD/MXN: -22%, EUR/basket of Nordics: +11% total return since January 2022). The divergence of CBs' policies (from very hawkish Mexico to very dovish Japan) has pushed multiple metrics to extremes:

- **The yield dispersion offered on a carry basket was at par with highest historical levels at the beginning of**

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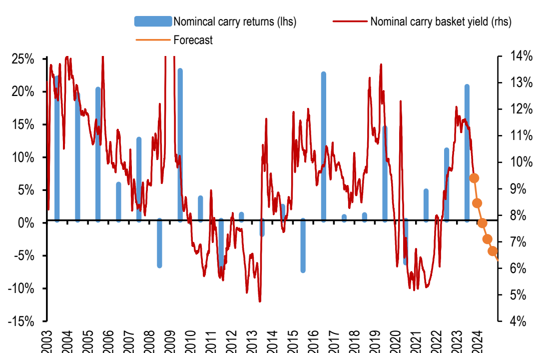
the year. This yield remains in attractive territory but has already reduced by 2% from its peak and is projected to fall to historically low levels by the end of 2024. Historically, yield compression has been logically associated with lower returns (Figure 106).

- Harvesting carry now means running a significant current account deficit strategy as: (i) deficit levels of high yielders are historically large (despite an improvement in past months), and (ii) shorts involve high surplus currencies in Asia or potentially CHF and NOK depending on the implementation (Figure 107).
- The valuation dispersion in G10 currencies is still at historically high levels and has further increased in 2023 despite being at a decade-high level already at the beginning of the year (Figure 108). **Notably, the long USD (richest currency overall) - short JPY (cheapest currency overall) gap is the largest in the entire FX market and at a 40-year maximum.**

Figure 106: The attractiveness of FX carry is significantly lower as the yield dispersion is forecasted to drop by year end

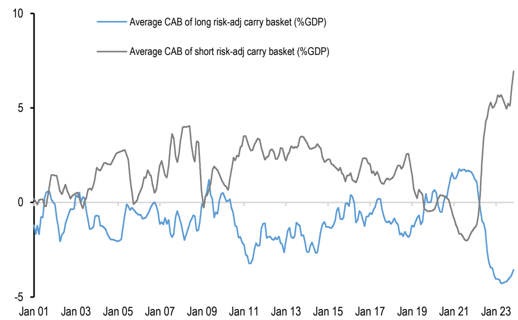
Yield, forecasted yield and annual returns of top 5/bottom carry basket (global portfolio)



Source: J.P. Morgan

Figure 107: Quality of carry has deteriorated, the strategy is now equivalent to be short a significant surplus (in Asia notably) and long historically large deficits

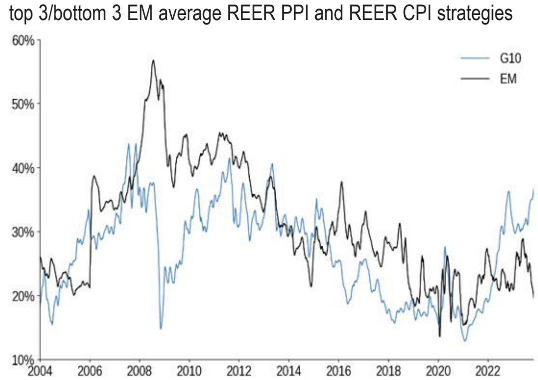
Average current account balance (%GDP) of risk-adjusted carry long and short baskets (top 5/bottom 5)



Source: J.P. Morgan

Figure 108: G10 valuation dispersion has again reached new multi-year highs

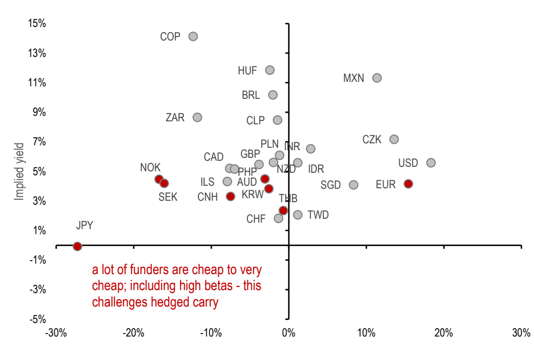
Valuation gap between longs and shorts in top 2/bottom 2 G10 and top 3/bottom 3 EM average REER PPI and REER CPI strategies



Source: J.P. Morgan

Figure 109: Finding rich high-beta funders is now difficult

Scatter plot: implied yield on 1M USD forward vs. valuation metric (average REER PPI and CPI 15y deviation).



Source: J.P. Morgan

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Positioning for carry or value: macro scenarios

In this context of a stretched currency market, **we decided to analyse three scenarios** to position for either further carry strength or value reversions in FX markets. More generally, we use these scenarios to screen for the best opportunities in FX markets across dollar pairs, crosses, baskets and common strategies. Our three (non exhaustive and laid out by our economists) basic scenarios for 2024 are:

- *Recession 1H'24*: The current level of US rates triggers a recession. The Fed has to react with quicker and larger rates cuts than expected.
- *Soft landing*: The Fed stays at 5.50% during 1H24 and then progressively cuts 75 to 100bps mid year/2H24 with a potential equity rally on the back of lower rates and inflation.
- *Fed resumes hikes*: The Fed has to hike two to three times again to reduce inflation and fed fund rates reach 6% or above. The main consequences include the BoJ exiting NIRP in 1H24 and a late equity sell-off on higher rates and inflation.

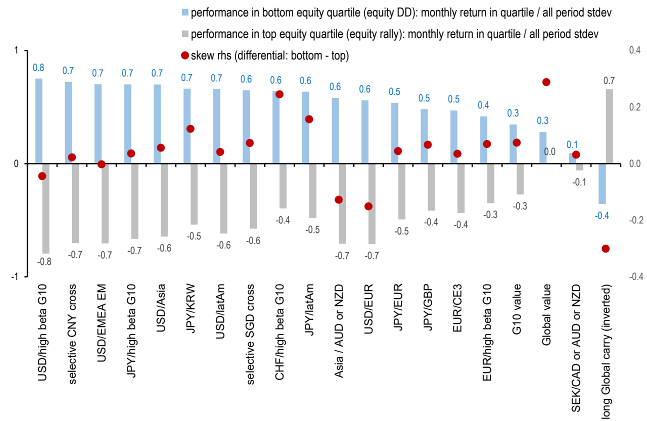
For the scenarios of *recession* and *soft landing*, we actually base our reasoning on historical returns in top and bottom equity quartiles; the top quartile being associated with a soft landing and a risk markets rally and the bottom with a recession and a risk markets market downturn. In each case, we screen for trades that offer the best trade-off across the following four variables:

- Payout: Does the trade offer large upside vs. its standard deviation in a recession or in a soft landing?
- Skew: Is the long trade better in a recession than the short trade in a sort landing (or opposite)?
- Carry
- Valuation

We insist this analysis is not accounting for macro, political and idiosyncratic developments in general linked to each currency. Therefore, the results should be put in perspective with the bottom-up fundamental view of our G10 and EM macro strategy.

Figure 110: USD vs. G10 high beta move the most in response to markets downturns/ rallies

Currency pair, strategy or basket returns in top and bottom equity returns quartiles divided by all period standard deviation (monthly). Sampling used for quartiles is monthly. MSCI world as a equity benchmark index. For baskets, filter is applied to the largest upside trades. Period is 2003-2023.



Source: J.P. Morgan

First scenario: Recession 1H'24

Recession 1H'24: *The current level of US rates triggers a recession. Fed has to react with quicker and larger rates cuts than expected.*

- **In a recession scenario with a large risk assets drawdown, the highest payout trade has been long USD vs short high beta G10s historically** (the most defensive being long USD/NOK). The trade is also currently a positive carry hedge as USD yields more than most DM high betas. However, the valuation of such a position is currently unattractive, to the point that it could question the dollar upside despite a recession.
- **It seems more reasonable to us to position for the largest value upside in JPY crosses with the caveat that all the trades are negative carry.** The logic would advocate for a reverse trade of the last two years: the carry rally; via long JPY/short LatAm. However, this would imply a perfect market downturn timing as the carry cost is around 10% per year. Certain crosses such as **long JPY vs. EUR, AUD or KRW screen more attractive**.
- It is also worth noticing that (i) **long CHF trades are also quite expensive**; (ii) **SEK offers interesting cheap crosses and relatively defensive options such as long SEK vs NZD but the payout is lower**; (iii) **CNY remains cheap and lower beta, which allows for the construction of defensive crosses**; (iv) **value strategies always screen as good options with the caveat that the dollar is currently shorted in both global and G10s portfolios as the most expensive currency in the cross-section.**

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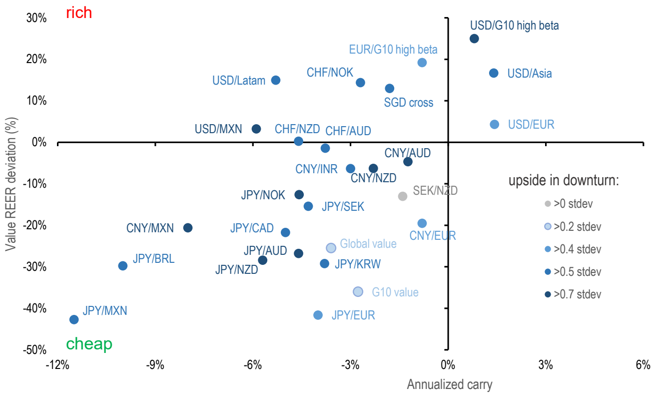
Figure 111: In a recession scenario with rate cuts, JPY/ higher beta crosses offer the largest upside but no implementation offers positive carry

Scatter plot: value (measured by avg of REER PPI and CPI 15y deviations) vs. carry of trades with large upside during markets downturns (based on performance in bottom equity returns quartile vs. historical standard deviation).



Source: J.P. Morgan

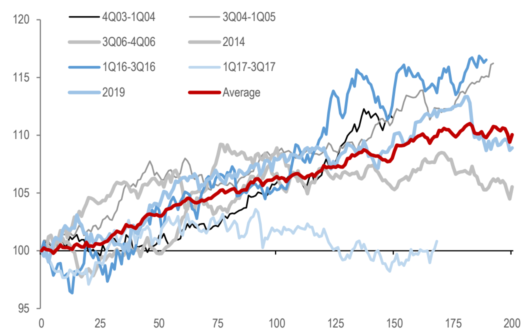
Second scenario: Soft landing

Soft landing: *Fed stays at 5.50% during 1H24 and then progressively cuts 75 to 100bps in 2H24 with a potential equity rally on the back of lower rates and inflation.*

This scenario is potentially contradictory for FX carry. On one side, a clean disinflation path with rates cuts would signal lower yields globally but this scenario is also favourable to a rally in risk assets (easing cycle). In such configuration of lower US yields and positive returns of equities, FX carry has historically benefitted from the correlation with risk markets and delivered strong returns (Figure 112). However, keep in mind that in such a scenario, FX carry would just be a high beta trade (like other risk assets). From a multi-asset standpoint, FX carry will not be offering the same diversification/ attractiveness as it did in 2022-2023 in the context of high inflation. From a valuation and upside standpoint, we think a basket of high beta G10s vs. USD screens more attractive than FX carry.

Figure 112: In past occurrences of lower US yields and positive equity returns, FX carry rallied globally

Total returns index of FX carry during periods longer than 6 months with both lower trajectory of 10 years US yields and positive returns of equities,



Source: J.P. Morgan

- **In a scenario of immaculate disinflation with a rally of risk assets (easing cycle), G10 high betas vs. USD historically offer the largest payout and currently screen cheap**. In particular, long Nordics/USD has the potential for large upside for a moderate negative carry cost.
- **Short JPY or short CHF are not the best options** as (i) the yen is already very cheap and can benefit from less pressure from the Fed and (ii) CHF is a very asymmetrical currency which weakens less in rally than it performs in downturns (Figure 110).
- Among other possibilities: (i) certain EM currencies screen as cheap and high carry vs. USD such as ZAR or COP (providing our EM strategy is positive on the currency); (ii) global nominal carry screens as a good option (but avoid a hedged carry basket with short high betas G10s as it is more expensive and not optimal in a rally); (iii) long AUD vs expensive Asia crosses; long AUD/ SGD for instance; (iv) long Nordics/EUR.

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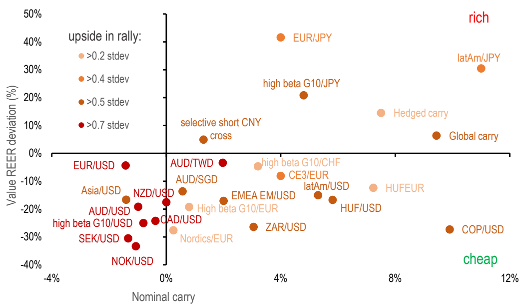
Figure 113: In a scenario of immaculate disinflation with a rally of risk assets, G10 high betas vs. USD historically offers the largest payout and currently screen cheap

scatter plot: value (measured by avg of REER PPI and CPI 15y deviations) vs. carry of trades with large upside during risk markets rallies (based on performance in top equity returns quartile vs. historical standard deviation).



Source: J.P. Morgan

Third scenario: higher inflation

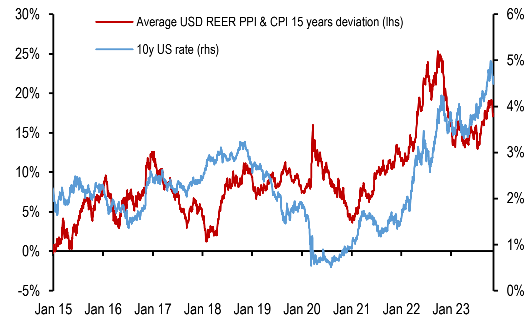
Higher inflation: *Fed hike two to three times again to reduce inflation and fed fund rates reach 6% or above. Main consequences include BoJ exiting NIRP in 1H24 and a late equity sell-off on higher rates and inflation.*

A higher inflation scenario would paradoxically challenge FX carry in several ways. Historically, FX carry returns are positively correlated with US yields but the recent rates-driven dollar strength (July-September 2023) has led to significant losses on the high yielders leg (especially LatAm). Notably, the correlation of carry with 10y US yields has dropped to negative levels (Figure 115). Higher inflation in the US should not necessarily be seen as carry positive because: (i) inflation-struggling G10 currencies are already very distressed against USD, which makes the impact on high yielders vs. USD proportionally larger; (ii) EM high yielders either have a large buffer above the level of US yields or are on an easing trajectory, meaning few currencies will be at par with Fed hawkishness; (iii) a loss on JPY shorts due to a reaction of the BoJ (end of NIRP for instance) or risk assets collapsing become more likely in this scenario.

Such a scenario would lead to an extension of the Q3 dollar strength. Further USD strength against most currencies would be the trade in the first part of year (RV trades with longs in currencies with a CB likely to follow the Fed could be a possibility as well). In the second part of 2024, the probability of a market downturn would increase, leading to the same analysis we made in the recession scenario (Figure 113).

Figure 114: Peak level of dollar strength in Oct 22 would suggest room for further USD strength in higher inflation scenario

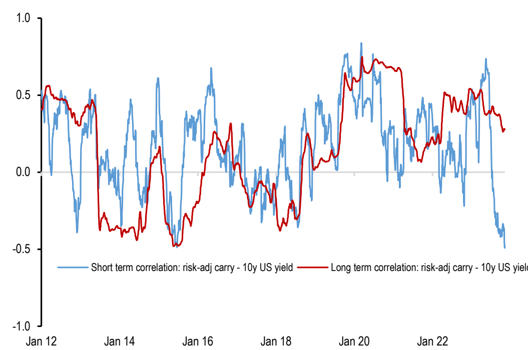
Average USD REER PPI & CPI 15 years deviation vs. 10 years US rate.



Source: J.P. Morgan

Figure 115: Short-term correlation of risk-adjusted carry with 10 years US yield has recently dropped to very negative levels*

Rolling correlations of top 5/bottom risk-adjusted carry strategy with 10 years US yields. Long term is 1Y correlation of monthly returns and short term is 3M correlation of weekly returns.



Source: J.P. Morgan

*The same chart with the 2y US rate does not lead to the same level of negative correlation (closer to zero). This raises the question of the term premium impact. A larger move in the short-term part of the curve could be seen as more USD positive and lead to more dollar strength; driving a larger downward repricing of EM high yielders. Empirically, this is not what happened recently as FX carry has been more negatively impacted by the 10y rate.

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Technical Strategy

The long wait for nonlinearity

Overview

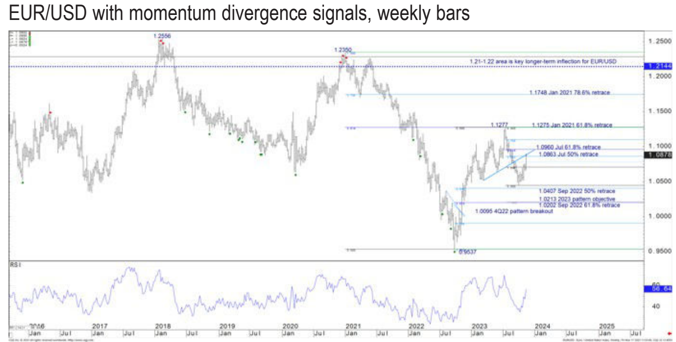
From a chart watcher's vantage point, the foreign exchange price action of the pairs we cover in our research can be broken in two primary categories. EUR/USD and GBP/USD both rallied into mid-summer and have since retraced 50% and 38.2% of those trends, respectively. In those cases, we suspect the Jul-Nov trends have more room to extend into the first half of 2024, with a continuation of the US dollar rally in line with a developing risk-off trend and markets that price to some higher probability for recession as data decelerates into midyear. We suspect EUR/USD and cable will find solid footing in the first half at lower prices and set the pairs up for rebounds in the second half of the year. The other pairs covered in this outlook have been mostly a one-way street through 2023. We believe USD/JPY and EUR/JPY have the potential to reverse into the early months of next year and as global interest rates start to rally in a more aggressive manner. Lastly, AUD/USD, although trying to form a base in the lower end of its multi-quarter trading range, is unlikely to see a durable reversal to higher prices until risky markets trough in the first half. That said, and as we suspect most of the decline from the early 2023 peak has already unfolded, we would respect a breakout above base pattern resistance ahead of that timing and not fade the move until a clear bearish short-term pattern sets up at higher prices.

EUR/USD

The two primary chart developments we are posting up against for **EUR/USD** into the first half of 2024 are the rejection of the **1.1275** Jan 2021 61.8% retrace and the distribution pattern that formed as the market trended into that resistance (Figure 116). After retracing 50% of the Oct 2022-Jul 2023 advance, the EUR/USD rebound from that **1.0407** support is approaching the **1.0863** Jul 50% retrace and **1.0960** Jul 61.8% retrace. The internal trend line that defined the distribution pattern traverses that area in the first quarter. A short-term rally failure in that zone would keep our conviction for an eventual resumption of the move to lower prices on solid ground. We will watch for a bearish reversal pattern to set up in the weeks ahead. On the downside, bears would regain trend momentum with a move below **1.065**. We are looking for an eventual break below the **1.0407** Sep 2022 50% retrace and drop to our base-case target zone that includes the **1.0213** 2023 pattern objective, **1.0202** Sep 2022 61.8% retrace, and **1.0095** 4Q22 pattern breakout. We believe the pair can stabilize in that area and potentially rally in the second half of the year. On the upside, an unexpected continuation of the current rally through**1.0960** would seek the **1.11** Jul 78.6% retrace and then a retest of the **1.1277** summertime peak. Next resistance rests at the **1.1526** Sep 2022-Oct 2023 .618 swing objective and **1.1748** 2021 78.6% retrace.

Figure 116: Despite the sharp retracement of just over 50% of Jul-Oct rally leg, we think EUR/USD can extend the downtrend that started at the 1.1277 mid-summer peak. That view stays firmly intact while below 1.0960 resistance. We view chart levels at 1.0095-1.0213 as an ideal target zone and suspect the pair can bullish reverse from that support by mid year and rally through the second half of the year.

EUR/USD with momentum divergence signals, weekly bars



Source: J.P. Morgan, CQG

GBP/USD

Cable has a more exaggerated 2023 chart construction than EUR/USD, but many of the same technical characteristics. The decline into the **1.0347** Sep 2022 trough was more accelerated than EUR weakness, and the subsequent rebound to the **1.3143** Jul peak retraced more of the bear trend. Still, we think the pair has unfinished business to the downside into early 2024, having only retraced to the **1.2075** Sep 2022 38.2% retrace before the fall 2023 rebound (Figure 117). We are expecting the oversold rally to fade near the **1.2590** Jul 50% retrace, **1.262** summertime pattern breakdown, and **1.2721** Jul 61.8% retrace. From there, we expect early-2024 weakness to break through the **1.2037** Oct low to the **1.1803** Mar 2023 low and **1.1745** Sep 2022 50% retrace. We view that area as a minimum downside objective. Other support rests at the **1.1415** Sep 2022 61.8% retrace. On the upside, the summer high rejected the **1.3101**Sep 2022-Mar 2023 .618 swing objective. We do not think the market will test that level in the first half. If we are incorrect and global risk-on drives cable to rally over the period, an upside breakout would seek the **1.3403** May 2021 78.6% retrace, with longer-term levels at **1.3903** and then in the low **1.40s**.

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Figure 117: Cable formed a distribution pattern through the summer of 2023. We expect the fall rebound from the 1.2075 Sep 2022 38.2% retrace to fade near that 1.262 late-summer pattern breakdown, and the broader decline to extend to 1.1745-1.1803 in the first half of 2024.

GBP/USD with momentum divergence signals, weekly bars

Source: J.P. Morgan, CQG

USD/JPY

Since Sep, **USD/JPY** has looked like a mature bull market and rally that was tiring, but one that never seems to end. That trend deceleration, both the association with the Jul-Nov advance, and longer-term as it has developed in reference to the retest of the **151.945** Oct 2022 peak has triggered momentum divergence sell signals on the daily, weekly and now potentially the monthly time frames (see red arrow in Figure 118). We've suspect that the persistent yield rises across DM bonds were to blame for the residual JPY selling pressure and the pair has seen signs of life on the days bond yields fell sharply, the currency pair has yet to confirm a short-, medium-, or longer-term trend reversal. We believe that turn could unfold in the first half of 2024 and as DM yields start to accelerate lower. Well-defined bullish reversal patterns are now present across many of the DM bond charts already, and those markets are pressuring pattern resistance. Furthermore, the **USD/JPY** proximity to longer-term support that includes the **151.48** Oct 2011-Mar 2020 equal swings objective, **153.01** Nov 1982 38.2% retrace, and Oct 2022 channel trend line bolster the view for a downside reversal. That channel rests at **151.177** in Dec and rises to **151.922** by the end of Mar. On a near-term basis, sustained closes below the **148.805** Oct 30 low would start to give bears some staying power. That break before the end of 2024 would start to turn high-frequency trend-following models from positive to negative for the first time since mid-summer. Subsequent support rests at the **147.319** Oct 3 low and **144.075** Jun 30 high. Initial targets for a downside reversal rest at the **142.50** Jan 2023 50% retrace and then 1.37915 Mar high, **137.775** May 2 high, and **137.245** Jul throwback low that successfully tested the mid-May pattern breakout. Major longer-term support surrounds the **125.00** area, levels we do not think come into play in the first half of next year. On the upside, a continuation of the grind higher and break-through levels noted above would leave the **160.33** Apr 1990 high as the next major chart level.

Figure 118: The USD/JPY rally has decelerated all summer and looks mature on a medium- and longer-term basis. However, it has stubbornly stayed in gear. We expect a bearish reversal from the 151.48-153.01 resistance zone and meaningful retracement of the 2023 advance next year.

USD/JPY with momentum divergence signals, monthly bars

Source: J.P. Morgan, CQG

EUR/JPY

As we write this publication, **EUR/JPY** steams toward the next cluster of longer-term resistance levels near **165.00** after staging an unexpected breakout through the **159.82-159.94** late-summer/fall range highs. The trend deceleration and associated cluster of momentum divergence sell signals on the daily and weekly time frames left us looking a bearish short- and medium-term trend reversal (Figure 119). While the pair did pull back from that resistance into the fall, it held key support levels and led to the breakout we are digesting now. Overhead resistance includes the **165.10** Mar 2022 channel (rises to **165.91** by end of Dec and **169.38** by end of Mar), **164.54** Apr-Oct pattern objective, and **165.22** Jul 2012-Jun 2016 equal swings objective. We are looking for the pair to reject that zone of resistance over the near term. Bigger picture, the rally from the **114.38** May 2020 and **124.40** Mar 2022 lows still looks mature, and we are expecting a material retracement of at least the leg from the **137.39** Jan 2023 low in 2024. A sustained break back below the **159.82-159.94** breakout area would put that view back on solid ground. An upside break through resistance levels noted above would leave the **169.97** Jul 2008 peak as the next notable long-term chart level. On the downside, bearish medium-term momentum would likely pick up if the market breaks below the **155.34** Oct 3 low. A move below there would also have turned short- to medium-term trend following signals from positive to negative. The **151.37** Jul trough held the first major zone of medium-term support, which is effectively where the market broke out from and accelerated in the early-summer. We have viewed that as an initial and base-case target for **EUR/JPY** over the medium-term. While the recent leg higher puts that view well back on its heels, we still see that as a potential outcome in 2024.

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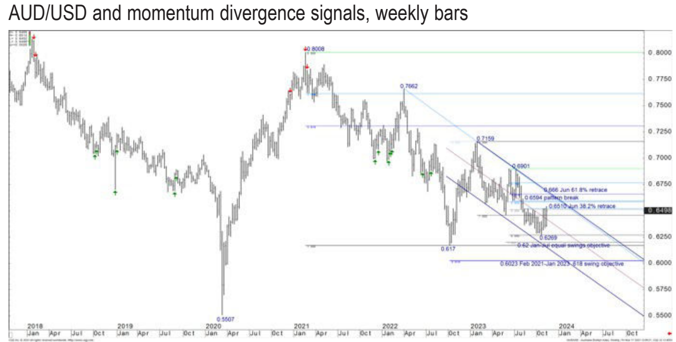
Figure 119: The EUR/JPY rally unexpectedly reaccelerated after the Nov US CPI release and broke through the 159.82-159.94 resistance area. Despite that move, we still the longer-term trend is maturing, as it nears 2022-2023 channel resistance. Look for the market to reject that and other chart-based levels in the 164.54-165.22 area. A sustained break back into the summer-fall range would confirm the downside reversal.

EUR/JPY with momentum divergence signals, weekly bars

Source: J.P. Morgan, CQG

Figure 120: AUD/USD has spent the summer and fall months trying to base in the lower end of the 2022-2023 trading range. While we would not look for the high-beta and commodity sensitive pair to rally as global risky markets come under pressure in 1H24 as we expect, we do see the prospect for AUD/USD to continue to carve out a bottom pattern near support levels surrounding 0.62. Relative outperformance versus lower-beta dollar pairs into the late-spring would increase our conviction in a more optimistic 2H24 outlook.

AUD/USD and momentum divergence signals, weekly bars



Source: J.P. Morgan, CQG

AUD/USD

Along with Chinese equities and industrial commodities, **AUD/USD** has been under pressure through most of 2023. That said, the pair has spent summer and fall trying to form a base pattern in the lower end of the 2022-2023 range and above support that includes the **0.62** Jan-Jul equal swings objective and **0.617** Oct 2022 trough (Figure 120). The **0.6510** Jun 38.2% retrace roughly defines the neckline of that base pattern. We do not think the pair will be able to sustain a rally above that resistance over the near term and into the early months of 2024. We suspect the market and others correlated to it have front-loaded most of the weakness well ahead of growing fears for recession in developed economies, but we still expect bearish pressures to keep the pair pinned down as other and more vulnerable markets reprice. We expect subsequent weakness to find support near the 2022 trough and 2023 channel trend line. That line rests at **0.6095** in late-Dec and falls to **0.5935** by late-Mar. The **0.6023** Feb 2021-Jan 2023 .618 swing objective lies right in between those two levels. We will not only watch for a bottom pattern to further develop in the first half of next year, but AUD outperformance versus lower-beta dollar pairs would help build our confidence that risky markets are setting a cycle low ahead of a second half 2024 recovery. On the upside, while we would be suspicious of a premature break above pattern resistance in the **0.65** area, we would also respect that move and not try to fade it initially. A rally would seek next resistance at the **0.6594** Jun low and **0.666** Jun 61.8% retrace. The latter sits near the 2022-2023 down trend line and Jan 2023 channel line in the fourth quarter of 2023.

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EUR: Patiently downbeat, pushing back recovery

- **Prospects for a convincing rebound in the euro still appear dim as the region is flirting with recession amid restrictive rates.**
- **A recovery in the euro requires not just the Fed easing, but also improved prospects of regional growth.**
- **EUR/USD targets are between parity and 1.05 for 1H. Parity will require ongoing EMU growth underperformance vs. the US, or the Fed to hike further.**
- **At some point in 2024, US-EU growth momentum should rotate and hence we envision EUR/USD strengthening towards 1.10-1.15. Conviction level on timing of this turn is low given the range of possible outcomes; so be tactical.**

A look in the "low vol" rear-view mirror

The past year can be neatly split into two distinct parts for EUR/USD: Nov'23-Jun'23 representing a partial recovery as the terms of trade shock receded and China abruptly reopened. And 2H23 during which the Eurozone's growth underperformance came into play yet again, first in conjunction with a slowdown in China and then more idiosyncratically (Figure 121). 2023 is best classed as a low-vol year for EUR/USD, with its 10c intra-year range 1 sigma below average.

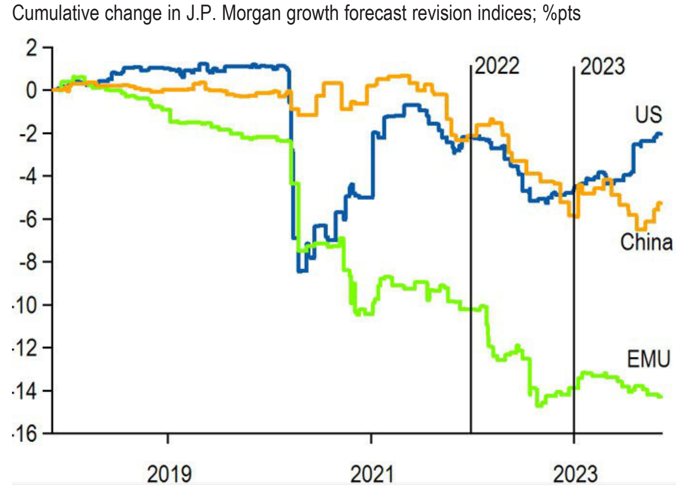
So what drove EUR/USD in 2023? An analysis of EUR/USD returns vs. the usual suspects shows that (Figure 122): (a) **relative EU-US growth** was very relevant, as correlations went up the most compared to 2022 and was among the highest across factors in 2023; (b) **yield differentials** mattered as well as already-high correlation with rates increased, more so with nominal rates (**real rates became less significant as inflation receded**); and (c) relative **term of trades and peripheral spreads** remained important like last year; correlations with relative equities weakened however vs. 2022.

Keeping the bearish view...

The 1H24 outlook envisions that euro-bearish forces will remain intact which will make relief rallies in response to the US moderation fragile and keep downward pressure on the pair. EUR/USD targets are put between parity and 1.05 for 1H (Figure 123). The upfront caveat is that parity will require ongoing EMU growth underperformance vs. the US, or the Fed to hike further. The downside forces we emphasize are: ongoing cyclical weakness which is yet to be fully incorporated into ECB's outlook and may well be part structural; real rates which are already restrictive in the Eurozone vs. the US and result in further interest rate compression; and our view that the currency should carry some discount for regional geopolitical risks. **However, at some point in 2024, US-EU growth momentum should rotate and hence EUR/USDshould eventually strengthen towards 1.10-1.15.** Conviction level on timing of this turn is low given the range of outcomes possible, but we maintain that the recovery in euro requires not just the Fed to be easing, but also improved prospects of regional growth.

Figure 121: From a synchronized slowdown in 2022 to Eurozone underperformance in 2023; China growth outlook also weakened but decoupled from the Eurozone since August

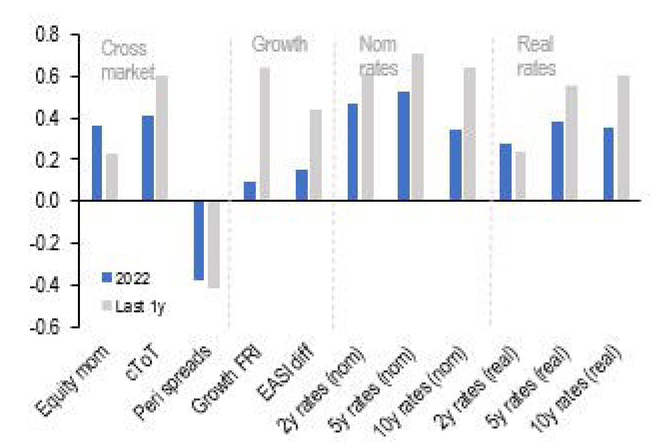
Cumulative change in J.P. Morgan growth forecast revision indices; %pts



Source: J.P. Morgan

Figure 122: What drove EUR/USD in 2023: relative growth, terms of trade, rate differentials (nominals more than real) and peripheral spreads

Correlations of EUR/USD to select drivers; 2022 vs. 2023*



Source: J.P. Morgan * All based on 1m changes except commodity terms of trade (based on levels) and growth FRIs (3m changes).

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Figure 123: Bearish near-term targets for EUR/USD of 1.00-1.05 on US exceptionalism lingering; recovery in 2H on eventual US slowdown

J.P. Morgan EUR/USD forecasts

	4Q23	1Q24	2Q24	3Q24	4Q24	Recovery
New		1.00-1.05	1.05	1.10	1.13	1.10-15 in 2H
Prior	1.00	1.03	1.05	1.10		Test of 1.10 in 2H

Source: J.P. Morgan

...with risks and scenarios in mind

Discussing the outlook without risks would be foolhardy given the dispersion in macro outcomes. **The biggest near-term risk to our outlook is the same one this time last year- a positive shift in regional growth**. The key lesson learnt this year is that we should respect a cyclical upturn,particularly if it comes amid rising rate differentials. Hence a prudent trading strategy would be tactical with PMIs/ incoming regional data key (it doesn't help that the next set of PMIs are to be released 2 days after this report goes to print!).

EUR/USD targets in various scenarios are laid out in Figure 124. The most euro-bearish scenarios would be either additional Fed hikes which the ECB wouldn't match, or an EMU recession without one in the US; in either case EUR/USD would test parity. The most euro-bullish outcome would be an improvement in EMU/ China data with increased odds of US soft landing. Two other risks are worth mentioning: US elections which could see tariffs become a possibility for the EMU if current polling shares persist (bearish) and energy prices which could decline on gas supply glut (euro-bullish) or rise in the event geopolitical risks escalate (euro-bearish).

Figure 124: EUR/USD in macro scenarios outlined by our economists

Scenarios	FX implications
1. Big squeeze	**EUR/USD** 1.00-1.03 in the lead up to the slowdown
2. Round 2 KO/ Fed at 5.5% is not enough	**EUR/USD** tests parity
3. Goldilocks/ soft landing	EUR/USD 1.15+
4. Damage done/ Recession in 1Q24	EUR/USD first weaker, eventually 1.15+

Source: J.P. Morgan

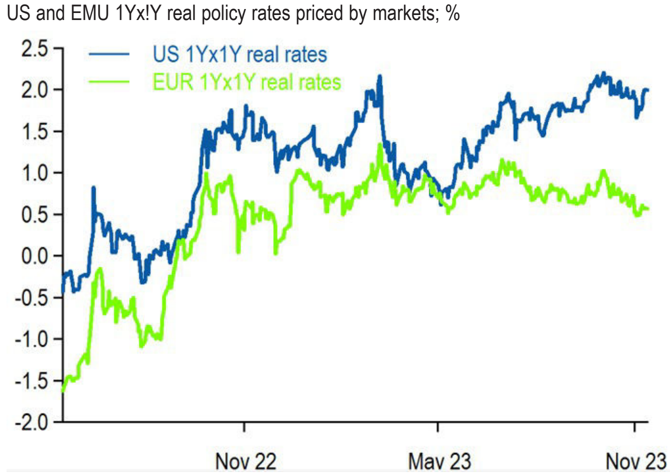
Key issues in 2024

1. Rates are restrictive in the Eurozone

Recently, the rates market for the first time this cycle briefly priced in more cuts for the ECB than for the Fed in 2024. Such an outcome would challenge what was the base case for most till a few months ago-that ECB policy will lag the Fed. Eurozone flirting with recession while the US continues to grow above trend has challenged this notion. But even with this shift in nominal rates, rates in the Eurozone are more restrictive vs. US. For instance, 1Yx1Y real rates in EMU are currently at 55bp, well above the growth rates implied by EU PMIs of -0.3% and our economist's 2H23 growth forecast of flat (Figure 125). Our economists baseline is for EMU growth to improve to 0.5-0.8%ar in 2024, but till the evidence accumulates that this is occuring, risks to the currency remain skewed to the downside. By contrast, the equivalent real policy rate priced for the US is 175bp, well below the 3.5%ar 2H23 growth US is expected to realize (although higher than the 1.3%ar they expect in 1Q).

Figure 125: Forward policy rates priced by markets are not restrictive relative to growth realized in the US, but are restrictive relative to stagnating growth in the Eurozone

US and EMU 1Yx!Y real policy rates priced by markets; %



Source: J. P. Morgan

2. Ingredients for EUR/USD rebound = rate convergence + growth; the latter is lacking

Last year, our central thesis was that a Fed pause by itself is not a sufficient condition for a rebound in the EUR/USD, and that positive growth momentum in the region would be required; we maintain this stance. The evolution of EUR/USD around prior pauses in Fed hiking cycles informs this view and suggests that (a) historically, rate spreads typically improve sharply in favour of the euro after the Fed pauses and ECB lags, (b) even though EUR/USD is ultimately correlated with EU-US rate differentials and *eventually* strengthens after the Fed pause (Figure 126), (c) the FX convergence to widening rate differentials takes its cue from relative growth (Figure 127). Figure 126 shows eventually, more rate cuts from the Fed vs. the ECB will strengthen the euro. But in the near-term, we are emphasizing relative EMU cylical underperformance and its bearish implications. Fur-

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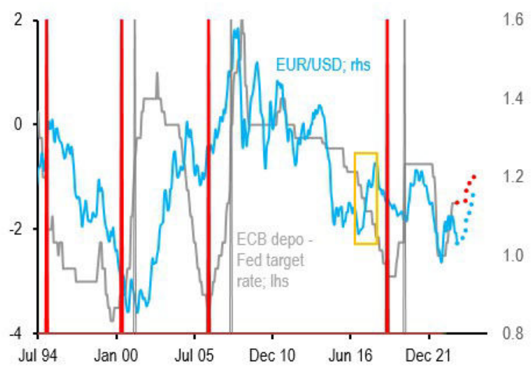
thermore, the risk scenario of the ECB having to deliver more cuts than the Fed is a nontrivial probability outcome that would challenge whether these rate differentials should be rising in favour of euro in 2024 in the first place.

Figure 126: Historically, rate spreads typically improve sharply in favour of the euro after the Fed pauses

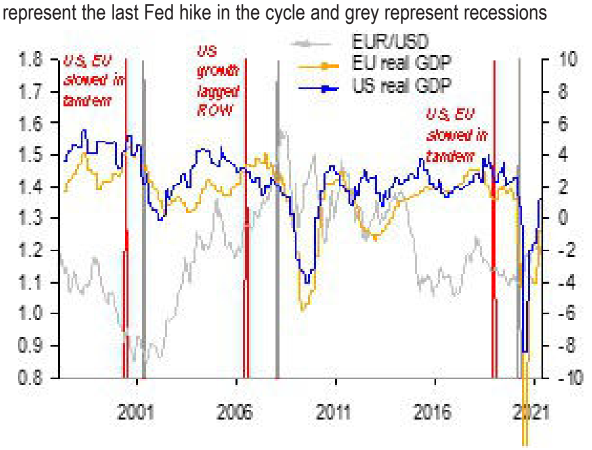
EUR/USD vs. Euro area minus Fed policy rates(%); red lines represent the last Fed hike in the cycle



Source: J.P. Morgan

Figure 127: A Fed pause wasn't enough to turn EUR/USD in 2000 and 2019, but was in 2006; growth divergences were key to differentiating performance

EUR/USD vs. Euro area and US real GDP growth (% oya); red vertical lines represent the last Fed hike in the cycle and grey represent recessions

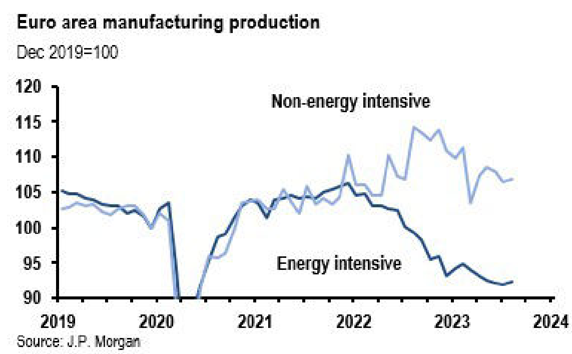


Source: J.P. Morgan

3. Euro underperformance vs. USD may be a longer term phenomenon

Figure 121 shows that EMU growth undeperformance is not a recent phenomenon; in fact, the region has been a serial underperformer on growth since 2018. The output gap for the Euro area never closed after the pandemic, unlike that for the US. Moroever our economists note that IP for energy intensive industries is still running 8% below pre-invasion levels (Figure 128) and that consumers are saving more, which has also been inhibiting growth. Finally, supply-side improvements in the US vs. Europe are also in play as relative productivity has gone up in the US aided by R&D and intellectual property, but instead has declined in Europe. The relationship of relative productivity with EUR/USD is noisy over short periods, but generally EUR/USD has been unable to deliver outsized positive returns in extended periods of declining productivity. All these factors underscore important divergences in the macro backdrop that the Fed and the ECB have to contend with as they come to a pause in their hiking cycles; and some of these factors could have a longer shelf-life associated with it which is likely to make the euro less appealing to market participants.

Figure 128: Energy-intensive production has still not recovered in the aftermath of the Russian invasion



4. We aren't at peak euro bearishness yet

One often-cited pushback to our bearish view is that currency is already priced to peak bearish sentiment. We disagree. For instance, **growth downgrades** have been sizeable thus far, at -0.7 sigma over the past 6m and among the largest downgrades outside of a recession. While our surprise indices are neutralizing, the recovery isn't complete as PMIs are still consistent with negative growth. So unless we see further improvement, connotations for the currency will stay bearish. **EUR/USD valuations** show little discount for such downsides as it is fair to modestly overshooting on our cyclical models (Figure 129; Figure 130). On **interest rates**, the level of 1Yx1Y policy rates is still overshooting realized growth so not pessimistic enough; relatedly, longer-tenor EU-US rate spreads are admittedly 2 sigma narrower than average so stretched, but this isn't the case in shorter tenors related to ECB pricing. **Positioning** is also flat to slightly long so not ass pessimistic as one would think. The notable exception is that **European equities** screen very cheap relative to the US, but our equity strategists note that this is for good reason: 82% of US equities have beat EPS estimates this earnings season while the number is substantially smaller for Stoxx600 (Figure 131).

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Figure 129: Aside from equities and to a smaller extent in growth revisions, we don't find much evidence of peak euro-bearishness

Z-score of select metrics to illustrate how bearish sentiment on the euro is; As of November 7, 2023

Factor	Z-score
Growth: Largest downgrade outside recession; surprises neutralizing	
Forecast revisions*	-0.7
Economic surprises	0.3
EUR mispricing (cyclical): Fair to modestly overshooting	
EUR mispricing vs. growth	0.9
EUR mispricing vs. rates	0.7
Rates: Rates restrictive, spreads compressed in longer tenors but not shorter	
Chg in 1Yx1Y real rates	-0.4
10y Bund real rates : level	2.2
Changes	0.9
10y Bund-US real rates : level	-1.2
Changes	-1.4
2y Bund-US nom rates : changes	-0.7
10y Bund-US nom rates : changes	-1.9
Equities: Valuations cheap, but earnings missing expectations more in EU	
Valuations of EU vs. US markets	-2.4
EU-US % EPS beats	-1.2
EUR positioning: modestly net long to flat	
IMM	0.8
Options implied	0.1

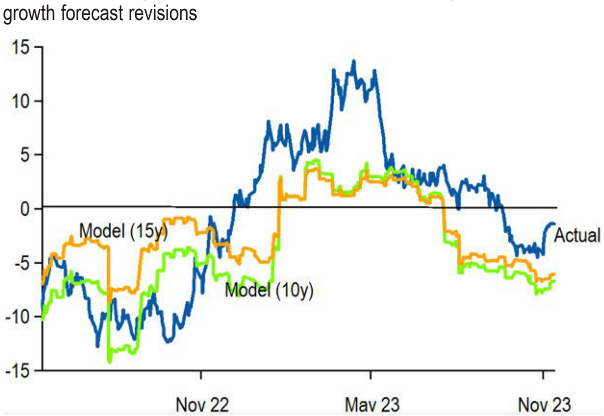
* Average of -0.3 and -1.0 (pre-COVID)

Negative number means lots of pessimimsm

Source: J.P. Morgan

Figure 130: Unlike this time last year, EUR/USD is overshooting the growth downgrades that have been delivered thus far

Actual 6m% change in EUR/USD vs. model implied change based on growth forecast revisions



Source: J.P. Morgan

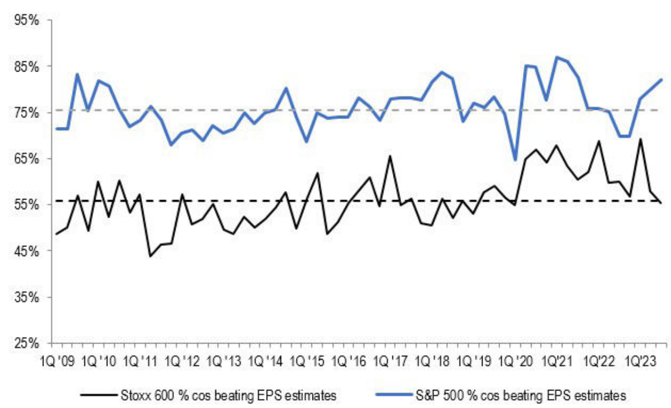
5. EUR/USD weakens in a recession, particularly when EMU growth lags the US

On average, EUR/USD has weakened by 6% in recessions (see *Oulook*), but there is substantial dispersion in outcomes depending on how US-centric the recession was vs. the Eurozone and what EU-US interest rate differentials did . The largest weakening in EUR/USD of 30% came in the **1981** when growth drawdowns were substantially larger in Europe and Fed Chair Volcker intensified efforts to crush inflation. In **2008**, EUR/USD responded to the GFC by weakening by 20%, not as the recession starts but only as the crisis unfolded as former benefits of widening EU-US rate differentials and the China growth trade unwound. Magnitudes of euro weakness were smaller in other recessions, in the single digits for both **2001** (-8%) and **2020** (-1 to -4%). The contrast came in 1980 and 1990: EUR/USD strengthened by 4% in **1980** and 18% in **1990** as European growth was resilient vs. the US.

Where does this leave us for 2023 if we end up in a recession? EUR/USD should first weaken given Eurozone's weaker starting point vs. the US but strengthen quickly in anticipation of a recovery and since the Fed has more room to cut. It is worth noting however, that EUR/USD wouldn't be the top recession pick from a top-down perspective since it weakens with lower consistency vs. high beta FX (see *Outlook*).

Figure 131: The earnings season has more favourable to US companies than to Europe

EPS earnings beats; %



Source: J.P. Morgan Equity Research

6. Central bank balance sheets: euro-positive in 2023 but not in 2024

ECB balance sheet (b/s) size has shrunk by 20%pts from its peak of 70% of GDP in 1Q22, whereas the Fed b/s shrank by a smaller 7%pts from 35% (Figure 132). The decline in ECB's b/s was driven by T/LTROs , which overshadowed the APP by more than 10x in 2023. In the case of Fed, the decline was entirely related to the securities sales of $932bn in the past year. This divergence in b/s size is possibly what kept the euro more resilient this year (every 10%pt of GDP isworth 3-4% on EUR/USD; Figure 133). **In 2024, this source of support for EUR should dissipate**, as T/LTROs have largely been rundown. Our economists expect ECB b/s to decline but by a smaller 6% of GDP. Fed QT is expected to continue till year-end, resulting in 4%pt decline in Fed's b/s size. For

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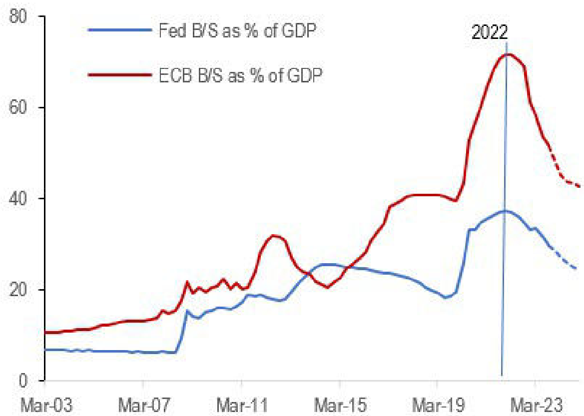
ECB, the largest decline in b/s size will come in 1Q (EUR 385bn) due to TLTRO expiry but this will decline to EUR105bn quarterly pace in 2H.

Figure 132: ECB balance sheet shrank by 20%pts of GDP in the past year, substantially larger declines than that of the Fed; look for the pace of b/s reduction to converge in 2024

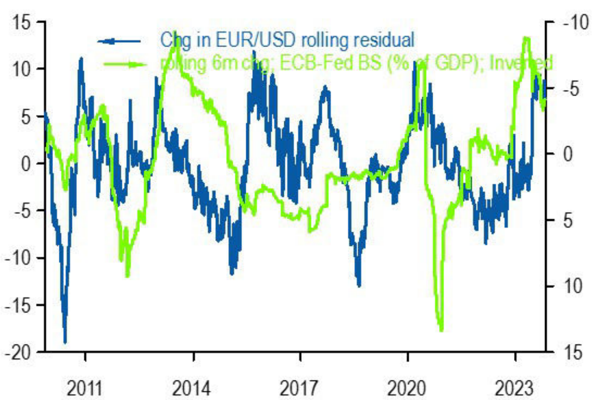
% of nominal GDP



Source: J.P. Morgan

Figure 133: Central bank balance sheet size makes a difference: Every 10%pt of GDP was worth 3-4% on EUR/USD

6m change in EUR/USD adjusted for 5y rate differentials vs. ECB-Fed b/s size; excludes onset of COVID given volatility



Source: J.P. Morgan

7. External balances: an incomplete recovery

External balances have improved, but [fuel is holding back a complete recovery](#). The c/a has been in surplus since January and is still rising, approaching 0.5% of GDP on a 1y rolling basis (2.1% of GDP in the past quarter), but still below the peak 3.2% two years ago. The services balance is strong at 0.9% of GDP, just shy of its record 1.1%, The undershoot is thus from goods, specifically fuel where the annual deficit is still 3.5% of GDP vs the pre-invasion range of 1.5-2% ([figure 38](#)). Consensus expects the c/a balance to recovery further in 2024 but to 1.7% which would still leave it nearly 1.5%pts below its peak. By contrast, **US net energy trade balance remains near a record surplus of 0.3% of GDP**.

Financial flows are not encouraging. Debt finally saw inflows, unwinding the exodus that started in 2014 when Draghi first signalled QE. The region enjoyed equity inflows of 2.7% of GDP in 2022, but this slid into outflows in 2023 at -0.4% of GDP (vs. the US with inflows of 1%pt). Finally, **outflows continue via FDI**, even if no longer at a record, but remains below net FDI into the US.

8. Politics: Not a variable domestically

There aren't any FX-relevant national elections on the calendar. The **European Parliament election** is scheduled for 6th-9th June. Current opinion polls show that a rightward swing is anticipated, with EPP (centre-right) in the lead with 168 seats (out of 270), a decline compared to 2019 elections. EPP is followed by S&D (centre-left) with 145 seats and Renew (centre; pro-European liberals) at 93 seats. The right-wing ECR has surged (soft eurosceptic/ Meloni ; 82)at the expense of Greens which are expected to lose around 18 seats vs. 2019. Our rates strategists note that the traditional coalition of the EPP, S&D and Renew, spanning from centre-left to centre-right, should be able to maintain its majority. A potential risk might come from the emergence of a new right-wing alliance formed by EPP, ECR and Renew. Recently, the EPP has shown some willingness to partner with the ECR, with discussions likely to start with Brothers of Italy (currently member of ECR). However, this options seems quite unlikely to gather sufficient numerical strength to materialize. Our baseline scenario points towards a coalition similar to the one currently in power, with relatively limited market impact expected in such scenario.

9. Wildcards: US elections, geopolitics

The primary risk to the bearish view is an evolution towards a soft landing. Beyond that, watch the US elections where polls are indicating that Trump is in the running to be the Republican Presidential candidate. This could have potential ramifications for the Eurozone via (a) the 10% universal tariffs on imports by the US that have been discussed and (b) potentially the spillover ramifications to the Russia-Ukraine conflict. Tariffs on European imports, if realized, would be highly euro-negative but the situation is very fluid.

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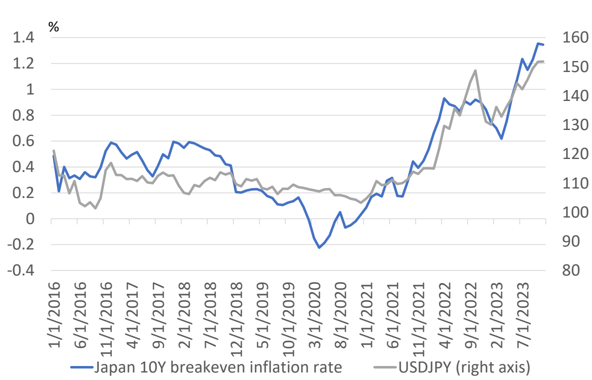
JPY: Trend interrupted

- **USDJPY forecasts: 2023 Dec 152, 2024 Mar 153, 2024 June 151, 2024 Sep 148, and 2024 Dec 146.**
- **JPY should gradually weaken until around the middle of 2024 reflecting a long-run underlying trend of higher Japanese inflation expectations and limited labor productivity growth. Expected FX related flows in 2024 warrant this view.**
- **We forecast JPY appreciation in 2H 2024 driven by shorter term factors, namely relative policy rate changes. However, JPY appreciation may be shallow because of the underlying long-run downtrend.**
- **The risk to the Yen view is for greater USDJPY downside if global risk sentiment worsens in 2024. Even in that scenario, the global interest rate environment and BOP flows should limit the impact.**

Long-run inflation expectations have been a key driver of JPY dynamics in 2023. Since late 2022, the JPY trend has displayed high correlation with the long-run inflation expectation in Japan represented by Japan's 10-year breakeven inflation rate (Figure 134). Interest rate differentials theoretically backed by uncovered interest rate parity only inform expected changes in exchange rates over the tenor of the interest rate, not the long-run level of the exchange rate. It is long-run inflation expectations in Japan that anchor the equilibrium level of the Yen. This is why the actual JPY trend has been indicating a similar trend to Japan's long-run inflation expectation in our view. US long-run inflation expectations are stable at ~2%, but have been continuously increasing in Japan in recent years. Even when interest rate differentials might suggest JPY appreciation, the rise in inflation expectation has generated underlying JPY weakening momentum.

Figure 134: Japan long-term inflation expectation and USDJPY



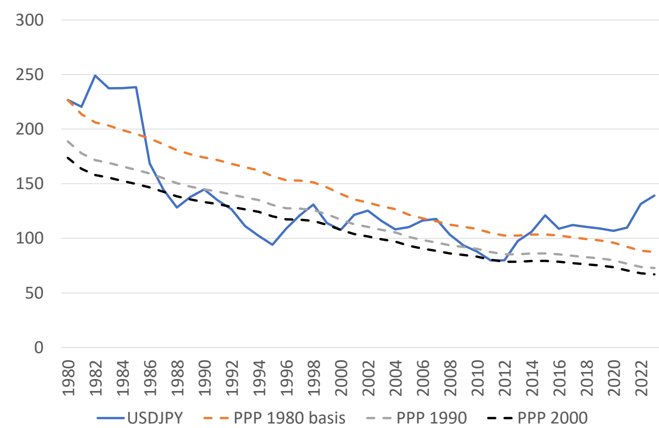
Source: J.P.Morgan, Bloomberg Finance L.P.

Structural pressures to keep weighing on the Yen

Our JPY forecasting strategy in terms of equilibrium value is to consider a combination of 1) long-run factors, with 2) an overlay of short-run factors.

First, what would be the long-run equilibrium direction in 2024? PPP values suggest JPY strengthening (Figure 135), but we do not think that JPY will strengthen to the PPP level as the long-run equilibrium. This is because PPP discussions do not incorporate considerations of the real exchange rate. When we look at past developments, the discrepancy between actual USDJPY and PPP is quite large. This discrepancy is the real exchange rate. Though PPP fair value is much lower than current market, we believe that USDJPY will not mean-revert to PPP implied levels anytime soon because of the dynamics of the real exchange rate.

Figure 135: PPP and actual USDJPY



Source: J.P.Morgan, IMF

The long-run factor driving the Yen can be divided into real exchange rate and relative inflation. Real exchange rate weakening has been one of the drivers of JPY weakening in recent years. The real exchange rate is likely related to relative labor productivity as theoretically implied by the Balassa-Samuelson effect.

Figure 136 shows the relationship between the real exchange and relative labor productivity between the US and Japan. Labor productivity is defined here as GDP / total labor hours. Data in the chart suggests labor productivity is loosely related to the real exchange rate. In the chart, labor productivity is moved forward by 24 months. The chart implies that the long-run trend of the real exchange rate can be loosely predicted by relative labor productivity.

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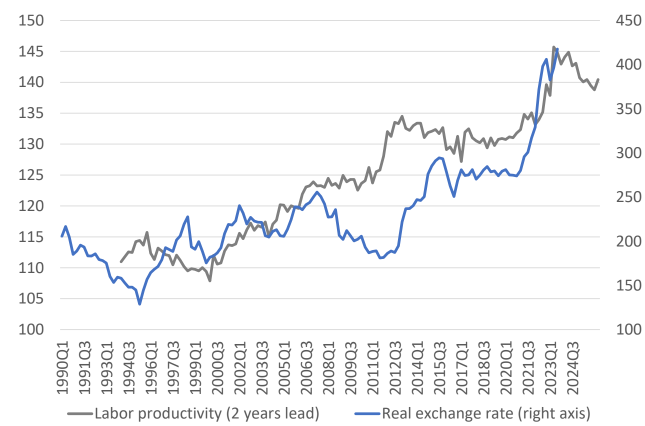
The long-run trend of relative labor productivity would be upward (lower productivity growth in Japan vs US), while its mid-run movements in 2024 on the chart suggest a flat path. This mid-run flat or slightly decreasing path beyond 2024 makes sense because the Japanese economy is likely generating a virtuous cycle. Based on the long-run and mid-run paths, the lead/lag structure of the REER and productivity suggests a flat path for the REER during 2024.

Figure 136: Yen weakness is explained by Japan's low productivity growth relative to the U.S.

Real USDJPY rate and US/Japan relative labor productivity (24 months lead)



Source: J.P.Morgan, Haver Analytics

To come up with the long-run trend of nominal USDJPY, inflation dynamics are necessary in addition to the real exchange rate discussed above. As for the inflation difference, our Japan CPI forecasts are 1-1.5% higher than those for the U.S. in 2024. Regarding inflation expectations, we expect they will be marginally higher, though the pace of the increasing trend could be pushed downward by a higher probability of BOJ's active policy in 2024. Overall, we estimate that the long-run inflation effect would be around 1-2% depreciation of JPY. **In sum, we consider the long-run factor of USDJPY in 2024 would be 1-2% depreciation based on the flat real exchange rate impact discussed above and the inflation impact. We believe the long-run equilibrium level would be 153 at the end of 2024.**

The bullish Yen offset from a turn in relative monetary cycles

Next, short-run equilibrium factors should be overlaid on the long-run trend value. This short-run factor mainly corresponds to interest rate differential developments including policy rates. Based on forecasts by JPM economists, short-term rate differential is likely to move in favor of JPY and against the USD by 110bps at YE24 (Fed policy rate cut of 50bps in 3Q 2024 and another -50bps in 4Q 2024. BOJ policy rate raise of 10bps in 3Q 2024).

Our estimate of USDJPY's sensitivity to a 1% decrease in short-term rate differential is a drop of 7-9 Yen. 110 bps translate to minus 8 to 10 Yen. Since the market-implied rate path of the US policy rate already incorporates our rate cut views, we set the short-term factor at around - 6 to 8 Yen with discount. **Therefore, the long-run level of 153 as of Dec 2024 with the short-term factor of -6 to 8 yen results in our 146 forecast at 2024 year end.** Even though our forecast of rate cuts starts in 3Q 2024, the FX market anticipates policy movements. These impacts are reflected in the 2Q 2024 short-term factor. Empirically, JPY has tended to appreciate before actual US rate cuts started.

Is there significant room for revaluation in USDJPY in terms of the long-term UST interest rate? We do not necessarily think that there is a clear over/undervaluation of JPY in terms of long-term UST rate. The estimation of the reaction of USDJPY to the term premium component in the UST rate is smaller than that to the risk-neutral yield (expectation of policy rate path). The increase in UST yields in September and October this year and the recent decrease in November have been mainly driven by changes in term premiums. Because of this characteristic of USDJPY's smaller reactions to term premium than to the risk-neutral yield, USDJPY level stayed below levels implied by UST-JGB differentials in October, and the opposite has been observed recently. In our estimate, the USDJPY reaction to term premium increase is 50-60% of the reaction to risk-neutral yield. Therefore we do not consider the discrepancy between long-term US rate level and USDJPY observed recently as a puzzle, and do not expect a strong revaluation of USDJPY in the near term.

BOP to keep depreciation pressures

BOP leakage. Japan's trade deficit has narrowed in 2023 compared to 2022, mainly driven by lower energy prices. The services balance recovered driven by the travel balance, while the deficit in "Other services"continued to widen, led in particular by insurance and consulting (Behind the expanding Japanese service deficit, *Tohru Sasaki*). Furthermore, since end-2022, Japan has seen a sharp acceleration in private sector transfers abroad, i.e., secondary income transfers, which are now tracking around three times higher than their long-run average (Cash isn't king, *Benjamin Shatil*). We estimate FX-related outflows from the current account will be about ¥18 trillion next year, and FX-related outflow from financial account around ¥10 trillion. The FX-relevant part in BOP is in deficit next year, which will likely be almost same as 2023, and we envisage that JPY selling pressure from flow will continue in 2024 (Table 2).

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Table 2: FX flow estimate in current account

¥ trillion

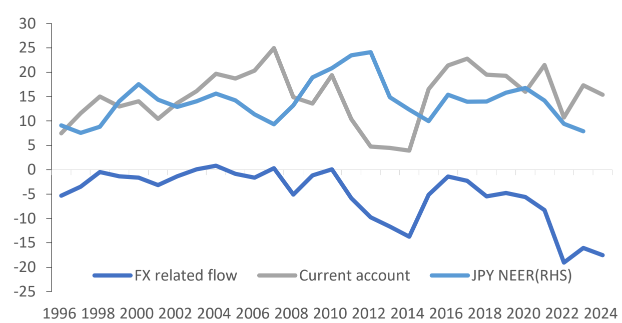
	Current account (a+b+c+d)	(a) Goods	Exports	Imports	(b) Services	(c) Primary income	(d) Secondary income	FX flow from primary income	FX related flow
2018	19.5	1.1	81.2	80.1	-1.0	21.4	-2.0	**13.0**	**-5.5**
2019	19.3	0.2	75.8	75.6	-1.1	21.6	-1.4	**12.7**	**-4.8**
2020	16.0	2.8	67.3	64.5	-3.7	19.4	-2.6	**12.1**	**-5.6**
2021	21.5	1.8	82.4	80.6	-4.2	26.3	-2.4	**13.5**	**-8.3**
2022	10.7	-15.7	98.8	114.5	-5.5	34.5	-2.5	**19.7**	**-19.0**
2023 JPMe	17.3	-11.2	107.0	118.2	-6.0	37.0	-2.5	**22.2**	**-16.1**
2024 JPMe	15.4	-15.5	106.5	122.0	-6.0	39.4	-2.5	**23.6**	**-17.5**

Source: BoJ, J.P. Morgan estimates.
Note: Greys are actual numbers, oranges are JPM economist estimates, and greens are JPM FX strategy estimate. "FX flow from primary income" = "Primary income" - "Reinvested earnings" - ("Dividends and withdrawals from income of quasi-corporations" + "Interest")*0.2. Estimated "FX flow from primary income" in 2023 and 2024 are 60% of primary income. "FX related flow" = ("Exports"*0.5 - "Imports"*0.7) + "FX flow from primary income" + "Services" + "Secondary income"

Less to the current account surplus than meets the eye. Although Japan's current account has been in surplus, the FX relevant flow is in deficit. The main reasons are 1) imbalance in share of currency in trade — USD has 50% of share in exports and 70% share in imports. As a result, actual FX impact from the trade balance tends to put more pressure on the JPY than is apparent from the nominal trade balance 2) Large amount of "reinvested earnings" within primary income (Table 2). As a result, **actual FX-related current account flow is net outflow although Japan has a current account surplus** (Figure 137).

Figure 137: Actual FX-related flow is net outflow although Japan has current account surplus

¥trillion, "FX-related flow" and numbers for 2023 and 2024 are J.P. Morgan estimates



Source: J.P. Morgan estimates, MoF, BoJ

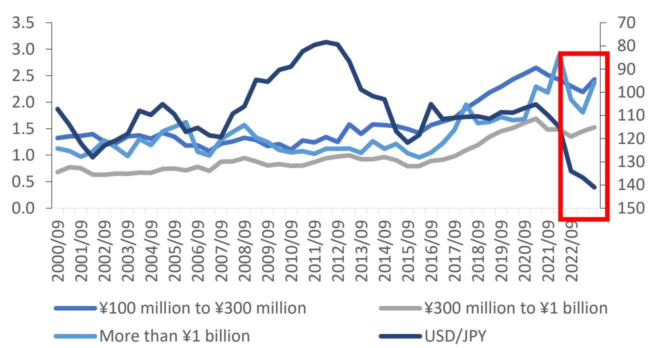
On the financial account, we estimate portfolio outflows will be about the same as in 2023. The main difference compared with 2023 in our estimates is **an increase in equity outflow**, which is mainly driven by the new **NISA** program. As noted in an earlier report, we estimate that the new NISA scheme should bring about a net ¥1.0~1.8 trillion in FX-related flow a year, mostly concentrated in USD. ¥1.0~1.8 trillion amounts to i) 0.2% of Japan's GDP; ii) 10% of Japan's current account; and iii) 50% of average annual equity portfolio outflows, so the number is material.

As for **foreign bond flows from Japanese investors**, we assume lifers' foreign bond buying will be flat from this year. Given the continuing high hedge cost and JPY depreciation, it is unlikely that lifers will aggressively increase foreign bond holdings. Rather, if 30yr JGB yield reaches 2% in 1H24 as our rates team forecasts, lifers are likely to increase JGB buying. The key announcement to watch would be FY2024 investment plans, which usually come out in April.

Reallocation of JPY cash by Japanese households will continue in 2024 through foreign investment-linked insurance products (Cash isn't king, *Benjamin Shatil*), the new NISA scheme (FX impact from new NISA scheme, *Ikue Saito*) and foreign cash deposits. Household deposit data as of September 2023 shows that household foreign cash deposits have increased especially among middle-high income classes following accelerated JPY depreciation (Figure 138). This evolving risk will be worth monitoring even if magnitudes have been small thus far; the ¥0.06 trillion increase in the past year is only 0.01% of GDP, or 0.4% of the current account balance. Currently, 0.5% of ¥1,100 trillion cash & deposits held by households is foreign deposits. In fact, many Japanese banks have increased their foreign currency deposit rates a lot this year. **The huge glacier of ¥1,100 trillion cash held by households is starting to melt**.

Figure 138: Foreign cash deposits in middle-high income accounts are increasing

Household foreign currency deposit (LHS, billion USD), USD/JPY(RHS, inverted)



Source: BoJ, J.P. Morgan.

As for a major local player, GPIF will have some impact on the FX market. GPIF's potential rebalancing would increase FX position by 2-3 trillion JPY in the near term based on their recent financial report as of September 2023. Since the domestic bond position as of September 2023 is above the 25% target, it implies the necessity to rebalance from domestic bonds to foreign bonds or equities. Though the timing of the rebalance is uncertain, this would be negative

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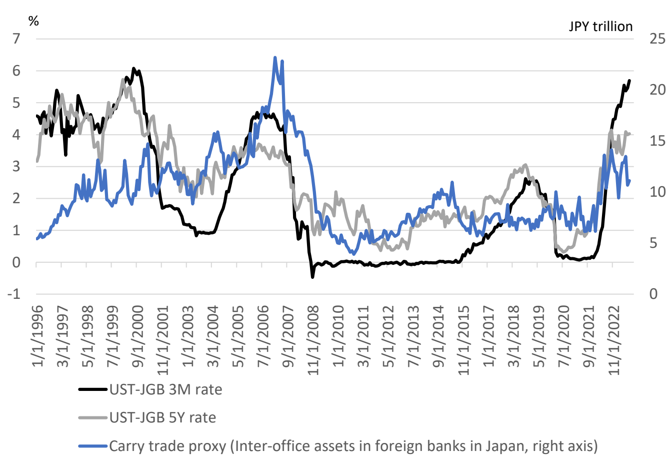
for JPY toward 2024.

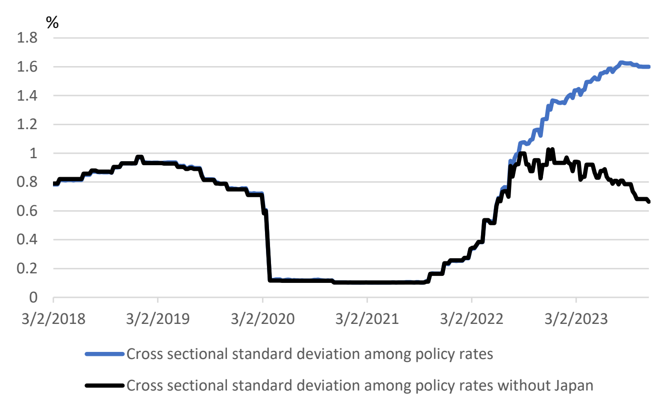
In terms of global investors, the strength of the carry trade will be an important driver to evaluate JPY weakening trend in 2024. Carry trade leveraging JPY has been active when short-term rate differences were large historically (Figure 139). Short-term rate differences in 2024 should be smaller than in 2023 if relative Fed vs. BOJ policy projections evolve as expected, but carry flows are unlikely to dwindle to zero given the still wide yield US - Japan gap that should exist even after Fed cuts are delivered.

Figure 139: Carry trade and interest rate differentials



Source: J.P.Morgan, Bank of Japan, Bloomberg Finance L.P.

Figure 140: The degree of cross sectional divergence among policy rates in major DM countries (with and without Japan)



Source: J.P.Morgan

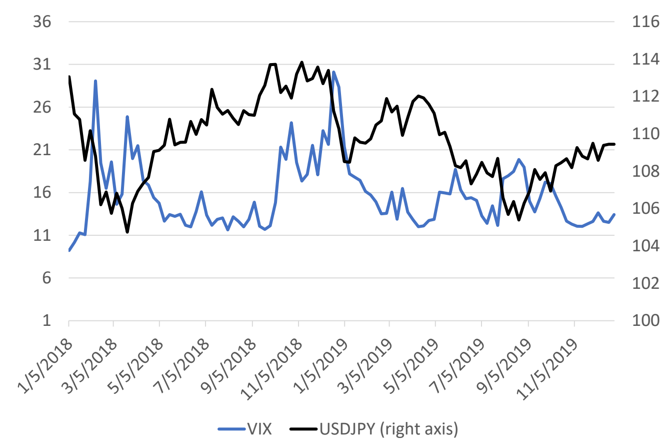
In addition, even though policy rate cuts are expected in 2024 in DM countries, **resulting smaller policy rate divergences among other DMs excluding Japan would enhance the importance of JPY as funding currency (Figure 140).** The cross-sectional standard deviation of major countries excluding Japan is decreasing while that with Japan is widely kept.

Playing devil's advocate: could the Yen strengthen materially in 2024?

How should we evaluate JPY appreciation risk? To evaluate this risk, it would help to study the late 2018-2019 case, which is similar to the current situation. The final hike in the US policy rate cycle was in December 2018 and the subsequent initial cut was in July 2019. USDJPY did trend lower along with interest rate differentials on that occasion. During this period, however, VIX spikes likely affected the short-run movements of USDJPY to the downside.

We consider that implications for the current situation would be the following. JPY will appreciate if risk market sentiment worsens this time, too. However, appreciation pressure on the JPY should be smaller than in 2019. First, the absolute level of US - Japan interest rate differentials in 2024 is much larger than in 2019, and places a soft floor under USD/JPY. Second, cross-sectional divergence among policy rates in major DMs discussed above should raise JPY depreciation pressure. Third, BOP flows as well as financial flows including household asset reallocations mentioned above will lessen JPY appreciation risk. However, we acknowledge that short Yen speculative positions are much larger today than back then, hence there is admittedly room for de-leveraging. But on the whole, we judge that the net effect of these factors is to cushion the effect of risk-aversion of the Yen to a degree.

Figure 141: VIX and USDJPY in 2019



Source: J.P.Morgan, Bloomberg Finance L.P.

In summary, USDJPY should continue to climb following underlying long-term factors through 1Q24, supported by BOP flows. In 2Q24 and beyond, the turn in relative Fed vs. BoJ monetary cycles should cause USD/JPY to turn lower.

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GBP: Recession incoming

- **Sterling to underperform as UK recession and BoE rate cuts occur in 2024.**
- **Stay tactical as the market oscillates between sticky inflation and weaker growth.**
- **Political constraints limit the impact on GBP from the UK election.**

2023 - a year of two halves for Sterling

We came in to 2023 with a bearish view on GBP emanating from domestic growth concerns, supply side issues, the lingering impact from the UK fiscal shock and exposure to late cycle global conditions. The potential return of a stagflationary reaction function for the currency was a possibility, as was seen at times in 2022 when Sterling depreciated as Gilt yields climbed. UK growth and Sterling more noticeably succumbed to the pressure of BoE policy tightening only in the second half of this year. Prior to that **there was an air of UK growth resiliency for GBP** as the labour market, the housing sector and growth surveys held up better than expected in the face of tighter financial conditions.

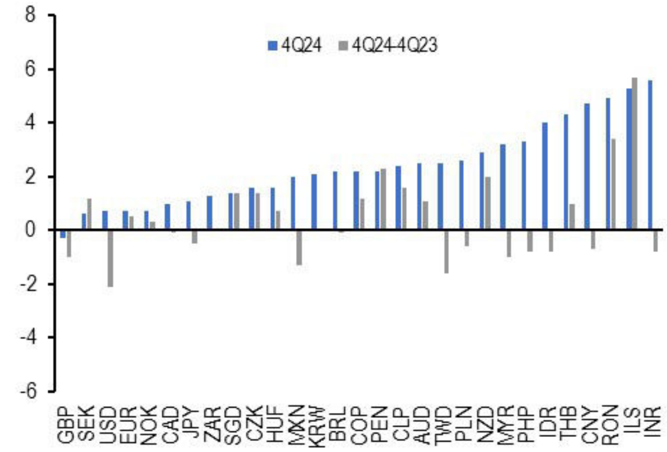
The 2023 UK growth consensus was upgraded from -0.9% in January to +0.2% by May. The Bank of England removed their forecast for a recession at the May meeting. The central bank stepped up the pace of hikes again at the June meeting to a 50bps increment. At that time, GBP had rate spreads and growth expectations working in its favour, which played squarely against our bearish view on the currency. Then, in July, the UK became the first G10 economy to trigger the Sahm rule, as labour market loosening began to accelerate. This marked **a distinct change in tone for GBP as Gilts began to outperform other rates markets and growth expectations were downgraded**. The 2024 consensus forecast for UK growth fell from 0.9% in July to 0.4% today. GBP/USD currently trades rich to 1.19-1.20 fair value on our domestic and global oriented models, respectively. EUR/GBP is tracking rate spreads implied fair value just above 0.87.

Policy sequencing, risks and short term valuations

The decisive issue for Sterling in 2024 is largely about **how far this year's policy tightening can slow growth and the labour market such that the BoE is comfortable enough with the inflation outlook to cut the Bank Rate**. There are various risks around that, including how resilient the economy is to higher interest rates and therefore how sticky inflation is. That is of course the main question for many economies and so Sterling's performance will depend on how the variables evolve from a relative perspective.

Figure 142: UK is set to have the weakest growth among all DM and EM economies by the end of 2024

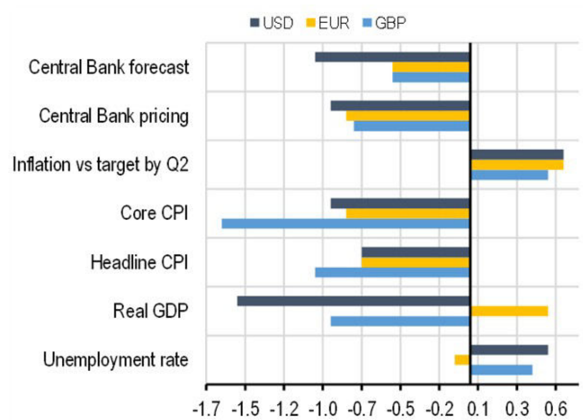
Global growth; %oya. end of 4Q'24 & 4Q'24 versus 4Q'23.



Source: J.P. Morgan, Bloomberg Financial L.P

Figure 143: The UK has the largest fall in inflation among peers during 2024 and is the closest to target by Q2

Change in JP Morgan forecasts from Q1-24 to Q4-24 (%). Central Bank pricing is Dec23-24 contract spread. Inflation vs target is by Q2 not Q4.



Source: J.P. Morgan, Bloomberg Financial L.P

Comparing the UK with the Eurozone and US, it has the largest fall in inflation during 2024 and is the closest to the central bank's inflation target by Q2 according to J.P. Morgan forecasts. In isolation, that contrasts with the market where pricing currently shows the least amount of cuts in 2024 from the BoE compared to the ECB and Fed. At the November meeting, the BoE added guidance around policy likely needing to be "restrictive for an extended period of time". That reinforces guidance already in place aimed at a higher-for-longer strategy. At the press conference Bailey said its too early to discuss rate cuts, but the week after chief economist Huw Pill said that mid-year would be a reasonable

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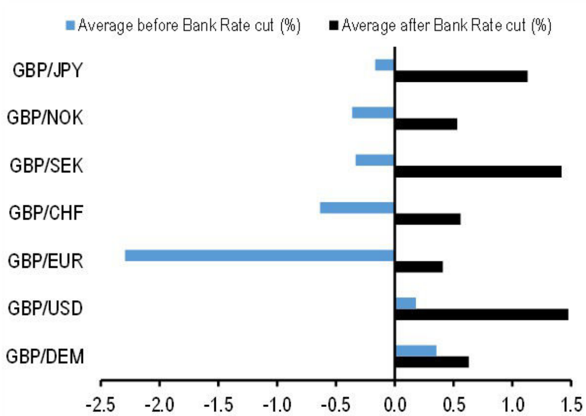
time to discuss easing, which the market saw as dovish. The BoE have headline inflation at 3.7% in Q2-24, which is notably above our forecasts so there is room for the central bank to be surprised on the dovish side.

We take a bearish stance on Sterling going in to 2024, but we are mindful that the economy is more resilient to policy tightening than we thought coming into this year and that supply side issues mean the unemployment rate is unlikely to rise as much as in previous recessions (since 1980, 1.8% average peak-to-trough UR move in the one year before recession to the end of the recession vs 1.2% in JPM forecasts). This means market sentiment may oscillate between pricing a softer landing scenario (GBP positive) where BoE would have to do more tightening and a harder landing recession outcome. Therefore we're taking a more tactical approach and are willing to trade the shifts in sentiment both ways even though our bias is on the bearish side.

Figure 144: EUR/GBP rallies on average over 2% in the three months before a Bank Rate cut (when BoE lead the ECB)

3m average returns before and after a Bank Rate cut, conditional on BoE leading the ECB. Returns from 1970 onwards. DEM = Deutschemark



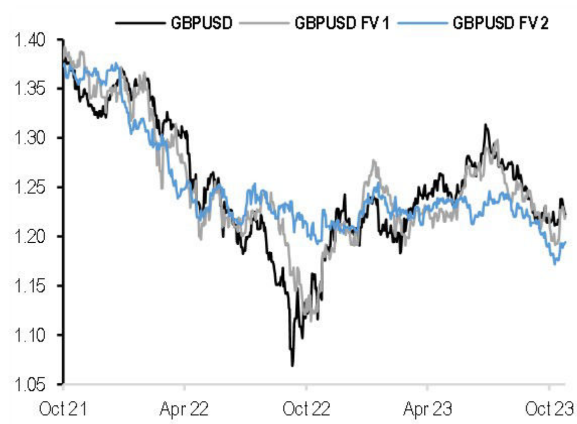
Source: J.P. Morgan, Bloomberg Financial L.P

Policy sequencing will be important next year as FX markets grapple with which G10 central banks could be the first to cut rates. The consensus thinking is that the Fed leads G10 central banks into cutting cycles, but this cycle could be different due to US exceptionalism on the growth front. In the 2001 cutting cycle, the BoE cut after the Fed and the ECB followed that. In 2007/8, the same order played out. In 2019/20 the BoE cut after the Fed and the ECB. Clearly, this cycle is different since inflation dynamics are the polar opposite to the pre-pandemic world. There have been seven instances since 1970 where the BoE have cut before the ECB. EUR/GBP historically rallies on average over 2% in the three months before a Bank Rate cut (conditional on BoE leading the ECB), since 1970, and so is likely the best way to monetise the event. Among the other European crosses, GBP/CHF depreciates the most, likely because BoE rate cuts come at a time where safe haven flows support CHF.

Our UK economist views recession as a realistic scenario for 2024. Looking at GBP/USD returns since 1971, the pair has sold off on average 2.1% over the course of the three quarters around which a technical recession has occurred. The equivalent statistic for EUR/GBP is 2.5% since 1999. If we expand to the NBER definition of a recession (link) then the average GBP/USD return is worse, at -7% during recession. With GBP/USD trading rich to short term fair value (1.19-1.20) and lead indicators for UK PMI data (our rates indicator, RICS survey, future output components) suggesting further downside, cyclical pressure should push GBP weaker.

Figure 145: GBP/USD is rich on our short term fair value model

GBP/USD FV1:US cyclical/defensives, 2s5s UK curve, 5y rate spread, EM equities
GBP/USD FV2: JPM housing equity basket, 5y rate spread, US cyclical/defensives



Source: J.P. Morgan, Bloomberg Financial L.P

How much can the tightening bite?

We can consider hypothetical risk scenarios around the JPM baseline when thinking about the impact of policy tightening on growth. For example, **using the change in nominal yields as a simple model for the UK composite PMI implies that by March headline output can fall to 45 from 48.7 currently**. The PMI currently equates to around 0.8% q/q GDP growth and a fall in the composite to 45 would suggest -0.2% q/q in Q1. The BoE has growth at 0.1% by Q1-24, so any undershoot there would clearly be a negative for Sterling. We see clear upside risks to this though from the better outlook for real incomes as inflation falls, but wage growth remains sticky. Indeed, our UK economist forecasts 0.6% q/q for Q1 growth which is partly based on the stronger real incomes story. There is another question though of course as to whether consumers spend that real income buffer. The rise in the household savings rate to 9.1% in Q2 suggests less of a willingness to spend, and October saw the largest fall in consum-

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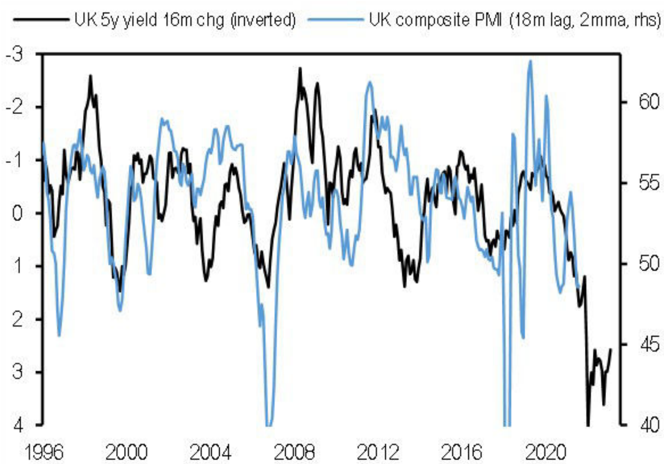
er confidence since the pandemic. Furthermore, our UK economist has published on the topic of excess savings to say that in real terms the savings accumulated after the pandemic are now gone (link). We run a composite measure of economic and financial conditions (5y real rates, budget balance and consumer confidence) showing the UK at tighter levels than the US and Eurozone.

Figure 146: Tighter financial conditions are still feeding through to UK PMI data

UK composite PMI (18m lag, 2mma) vs UK 5 year nominal yield (16m chg, inverted axis)



Source: J.P. Morgan, Bloomberg Financial L.P

Addressing UK economic resiliency

The housing market has a been a key pillar of the UK and Sterling resiliency story at times this year. While house price growth has fallen considerably, the outright level of prices remains steady and still close to all-time highs, with the national average asking price around £370k according to Rightmove data. There are a number of reasons for housing market resiliency: (i) low supply of housing; (ii) households dipping into savings to service their mortgages; (iii) a larger share of all-cash purchases (almost 35% from below 30% in 2020 according to Hamptons data); (iv) the lag with which the stock of mortgages resets relative to movements in Bank Rate; and (v) shorter mortgage tenors on average (5y and less in the UK vs 30y in the US).

Since the BoE started hiking in Q4-21, the UK non-financial corporate debt service ratio (DSR) has declined by 1.4% through Q1-23. During that time the UK household and private sector DSRs are flat. The transmission of policy tightening appears to be taking longer than expected. Moving through 2024/25 will see more of the debt stock refinanced and this will slow the economy and weigh on Sterling. This dynamic is not unique to the UK and so as other G10 economies experience the same, Sterling has exposure via its global high beta cyclical status. At the corporate level, UK corporate refinancing needs are below 10% of total debt in 2023, rising to above 20% by end-2025.

A team of JPM housing market specialists and economists put together a deep dive note on global housing markets (link). They see the UK housing market as one of the most vulnerable due to the shorter-term mortgage structure and resets. JPM European Bank analyst, Raul Sinha, estimates that ~0.8mn mortgages will be refinanced in 2H23 and a further ~1.6mn mortgages in 2024 (or ~28% of total owner-occupied mortgages). From an affordability perspective, our Credit analysts estimate that refinancing from a 2% mortgage into a 4.5% mortgage (which is below current levels, please see figure 59 in their note showing the volume of mortgages shifting to a variable rate) means that **an additional 8-10% of household disposable income will be used towards higher mortgage payments**, taking the mortgage affordability ratio (mortgage payments as a percentage of take-home pay) up to 40% or more, when considering the drop in real income. Increasing this refinancing stress up to a 6% mortgage rate (as seen in 23Q3) implies that 13-16% of additional disposable income needs to be utilized to service mortgage debt, which pushes the affordability ratio up to a pre-GFC level of 45% – a burden that could very well be unsustainable for a prolonged period, according to their view.

The labour market is key for Sterling

The UK was the first G10 economy to trigger the Sahm rule this year, which is a recession indicator looking at the unemployment rate relative to its longer run average. In September we backtested historical Sterling returns during previous episodes when the Sahm rule had been triggered (link). Average returns are negative over one, three, sixth and nine month horizons (-0.8%, -2%, -4% and -5.6%, respectively). The success rate is over 50% for all four horizons (60%, 61%, 65% and 71% respectively) in terms of how many instances GBP/USD has negative returns as a share of the total (151 months where the Sahm rule was triggered since 1970). There may however be reasons why the Sahm rule is less relevant this cycle, since part of the reason for unemployment rising is changes in labour supply, where workers are coming back to the labour force.

We can also look at **historical episodes where UK unemployment has risen, but also risen quicker than unemployment in the US and Europe**. Since 1990 there have been four such instances (Dec-90 to Mar-93, Sep-05 to Sep-06, Dec-09 to Dec-11 and Dec-22 to present). GBP/USD returns averaged -4.6 over those periods, but EUR/GBP averaged 3.1%. In the current cycle its probably just as important to consider vacancies when thinking about how FX can react to labour market developments. Unfilled vacancies in the UK

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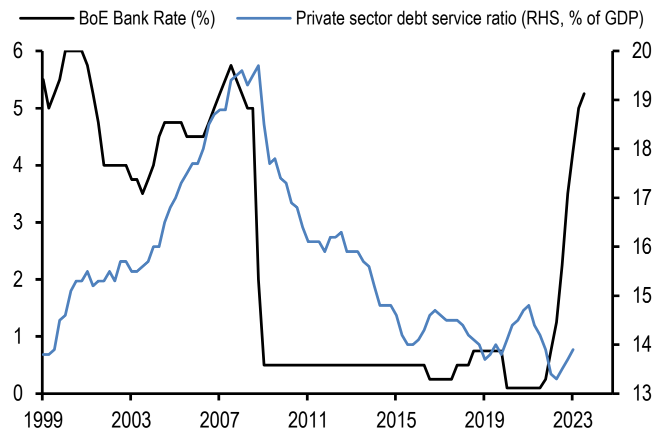
have come down from a peak of 1.3m to below 1m. Vacancies coming down is a key part of bringing supply/demand back into balance in the labour market and therefore normalising inflation. All else equal that allows Sterling to think about a more dovish BoE profile.

Figure 147: Debt Service Ratios have materially lagged BoE policy tightening

Average of UK household and non-financial corporate Debt Service Ratios (debt service as a share of income) vs BoE Bank Rate



Source: J.P. Morgan, Bloomberg Financial L.P , Haver, BIS

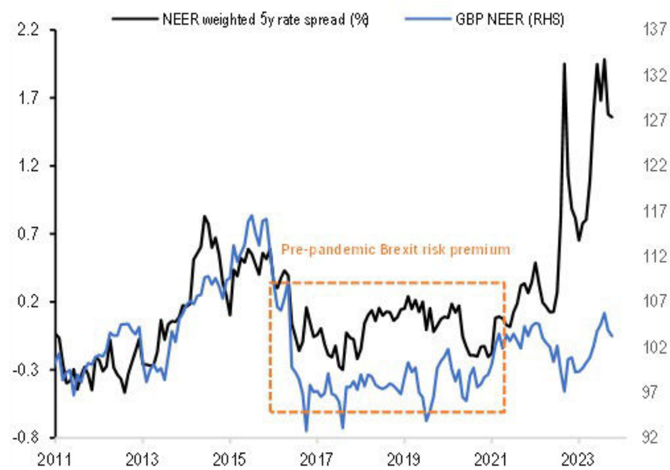
UK election 2024 – political constraints limit GBP impact

Our UK election view in summary is that constraints associated with the UK fiscal position and the ability to ease the relationship with the EU will limit the impact that the election is able to have on Sterling. Timing wise an election date has not been confirmed but news reports suggest either May to take advantage of any easing in the Spring budget or November to give the economy time to recover. Labour have a clear lead in the polls of 20 points on average over the last ten polls. A Bloomberg poll of 227 investors showed Labour is viewed as the market friendly outcome, partly due to perceived improvement in management of UK finances following the budget crisis last year.

Labour have said they would look to foster a closer relationship with the EU. Figure 148 below highlights the pre-pandemic Brexit related risk premium in trade weighted Sterling which went from 12% in Q4-2016 to 7% in Q1-2019. Purely by this measure GBP screens cheap, but we run a more comprehensive model in Figure 145 with more cyclical variables which suggests GBP is rich. It's not clear to us that the market can assign a lower risk premium in the post-election world given that Labour would not be reversing any of the core outcomes from Brexit and any change in the relationship will be at a glacial pace with reduced motivations.

Figure 148: Sterling's pre-pandemic Brexit risk premium unlikely to be reduced on a Labour election victory

GBP NEER vs trade weighted 5y rate spread



Source: J.P. Morgan, Bloomberg Financial L.P

Specific Labour and Conservative election policies are currently in the form of soundbites from the October party conferences, with no quantitative detail behind them, as is normally the case at this early stage. Labour have ambitions for NHS reform, housing investment and abolishing the non-dom tax regime. While the Tories have plans for Education reform and immigration, among other things. The government might cut taxes as a boost for the election, which our UK economist thinks could be worth 0.25% in GDP growth. Historically GBP/USD has rallied 0.47% for every 0.25% improvement in % y/y GDP, so the impact appears relatively small and may ultimately be overridden by broader shifts in central bank expectations if the economy is slowing. Both parties have committed to fiscal responsibility given last years budget crisis. The OBR is running excessively optimistic growth forecasts in the view of our UK economist (link), which also constrains what the government can implement after the election. Ultimately this means the election impact on Sterling is likely to be limited.

Conclusion – Sterling underperformance

In conclusion, **Sterling is set to underperform on UK recession and BoE rate cuts in 2024**. Stay tactical as the market oscillates between sticky inflation and weaker growth, but ultimately both combine to deliver a stagflationary outlook. The UK is set to have the weakest growth globally by 4Q24, after having been the first G10 to trigger the Sahm rule amid a loosening labour market. The GBP NEER trading 1% above its ten year average doesn't seem consistent with material UK productivity underperformance versus peers (see outlook section).

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CHF: Stay Safe

- **CHF safe haven appeal remains, with European regional growth weak, fixed income less of a portfolio hedge, strong BoP, SNB refraining from selling CHF and long-term PPP supports.**
- **The Franc's recent geopolitical risk premium has reduced, but the myriad of geopolitical risk ahead combined with positive yield is bullish CHF. The level of inflation typically associated with SNB selling CHF is below both SNB and market consensus forecasts.**
- **We push out the trough in our EUR/CHF forecast to 0.94 in Q2, but stress downside risks as labour markets across DM start to loosen more noticeably.**

What drove CHF returns this year?

We maintained a bullish CHF stance for most of this year as deteriorating European regional growth prospects have had strong explanatory power for the downward trend in EUR/CHF (Figure 150), showcasing the franc's anti-cyclical properties. That was interrupted only by the period of China reopening exuberance and relative European growth outperformance in 1Q. **Auxiliary tailwinds** have been the **hawkish SNB** which transmitted to the currency through its heavy CHF-buying intervention policy (rather than rate differentials), and **periodic safe haven rushes,** as well as background flows from its **large current account surplus**. Rate differentials have not been informative for EUR/CHF for most of the year, often because wider rate spreads came as fixed income lost its portfolio hedging properties, which itself supports CHF as one of the last remaining valid safe haven assets. Geopolitical risk also bolstered the Franc as tensions broke out in the Middle East. EUR/CHF diverged from EUR/USD meaningfully in 2023, as the latter was perhaps a cleaner expression for poor European growth and the SNB's intervention policy stood out.

European and global growth: supportive until a rebound comes

The balance of risks around growth next year is skewed in favour of the franc. Our global economists' most likely 'boiling the frog' scenario should eventually engender a CHF-bullish outcome given its long-time sensitivity to global growth outturns (Figure 149). On the other hand, if a global soft landing materialises, this can weigh on the franc cyclically at least for the period of lift. In that scenario though, the franc should be relatively more sheltered than the dollar from a fall in yield support given its low sensitivity to domestic yields (Figure 152). The Euro area outlook has been a particular focus, and we see more runway for deterioration here. Europe imported tightening from the rise in US yields over the summer, and given the transmission seen so far, it would stand to reason that tightening should continue to impact growth. An eventual European rebound in 2024 is likely to erase some of the premium in CHF, but risks of something 'breaking' or overtightening by central banks globally remain key risks that warrant long CHF exposure.

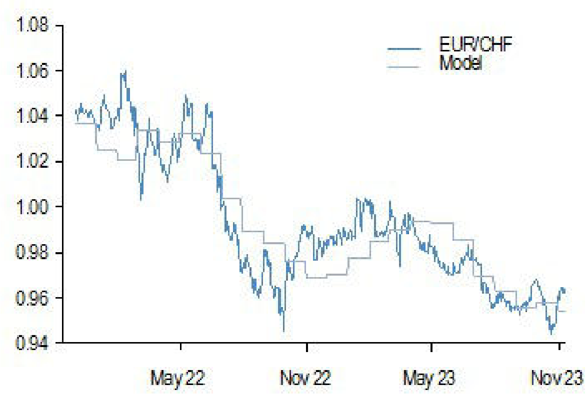
Figure 149: The broad franc has consistently appreciated around 3% for every 1%-pt cumulative downgrade in global GDP forecasts over the past two decades. The model suggests an overshoot this year, but …

CHF TWI =76-3.15*(Cumulative change in JPM Economics global growth forecast revision index); Rsq 0.93. 2003-2023.

Source: J.P Morgan

Figure 150: … this can be reconciled with deteriorating Euro area growth driving EUR/CHF down

EUR/CHF = 0.63 + 0.0070*(average of Euro area manufacturing and services PMIs); Rsq 0.78.



Source: SNB, Haver, L.P., J.P. Morgan

While there is room for a squeeze higher in EUR/CHF if European data stabilises at least temporarily, we are sceptical that a sustainable rebound is on the cards already. A pick-up in consumer spending is thought to be one of the catalysts that can help the economy avoid recession, but the market will look for evidence of consumers beginning to use up their

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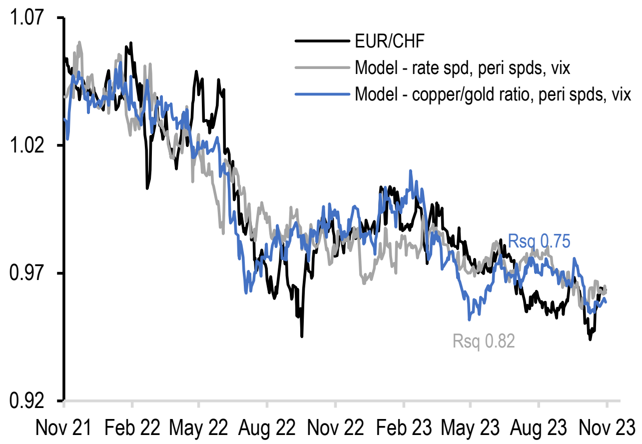
savings, and a cooling labour market further endangers that possibility. With the stock of household mortgages resetting at a pace which lags the policy rate, there is a risk of consumers choosing to save their income for the rainy day ahead, to the benefit of CHF via the growth channel. Please see our global economists who review consumption and savings trends for Europe here.

Figure 151: EUR/CHF has often overshot fair value this year as rate spreads and periphery spreads didn't reflect the same safe haven drivers

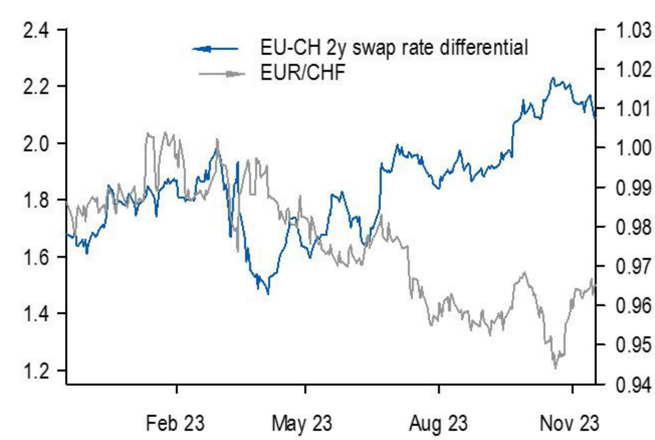
EUR/CHF fair value models using (1) rate spread, avg peripheral spreads and VIX, and (2) copper/gold ratio, avg peripheral spreads and VIX as inputs.



Source: J.P. Morgan

Figure 152: EUR/CHF traded counter to rate spreads for most of the year

EUR/CHF (rhs) vs EU-CH 2y swap rate differential (lhs)



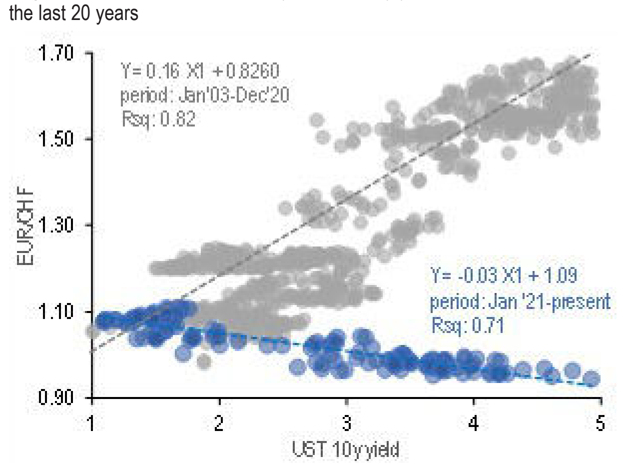
Source: J.P. Morgan

Safe haven demand: TINA

Having **diverged from its long-term inverse relationship with US yields two years ago as global inflation began to rise**, the franc now offers more attractive safe haven properties for the cross-asset investor in an environment of more positive stock-bond correlations (Figure 153). The now-positive correlation with US yields reflects the growth-adverse nature of the global rise in yields driven by inflation. Indeed the reason why EUR/CHF has disconnected from widening rate spreads (Figure 152) is because they themselves are a reflection of fixed income losing its portfolio hedging properties. Safe haven demand for the franc was particularly apparent during the banking crisis, the US debt ceiling showdown (where USD/CHF made new highs), the conflict in the Middle East, and is also reflected in its strong relationship with the copper/gold ratio. If other factors (eg term premium or sticky inflation) prevent US yields from satisfactorily responding to growth concerns, CHF can provide the needed hedge (along with gold and USD). On the other hand, if yields fall because of *growth* concerns (e.g. a recession materialises and the Fed has to cut), the franc's positive correlation with yields in the past year should not be a headwind. The risk scenario is goldilocks; a fall in yields amid resilient global growth with softer inflation.

Figure 153: EUR/CHF has been inversely correlated to US yields the past two years after a strong and statistically significant positive relationship in the two decades prior

Regression plot of EUR/CHF vs 10y US Treasury yield in two sample periods over the last 20 years



Source: J.P. Morgan

Safe haven demand: Geopolitics

The recent break out in tensions around the Middle East led to heightened demand for the Swiss Franc. **EUR/CHF traded as much as 2.5% cheap to fair value during October when geopolitical risk premium was elevated**. Looking at implied volatility in the oil market helps to get a sense of the 'war premium' in markets. Figure 154 shows outright implied vol has largely normalised to pre-October levels in both oil and EUR/CHF, though from a risk reversal perspective we note that EUR/CHF still reflects some risk premium relative to oil. As far as macro narrative, the market has in some sense moved

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on from focusing on the conflict in the Middle East, in our view. However **geopolitical risk remains a key durable bullish theme for CHF as our Chief Strategist Marko Kolanovic has outlined the brewing shift from a unipolar to multipolar geopolitical world** (link). **In a year of intense election risk ahead of us in 2024, not only in DM but also in EM, this should keep a buffer of geopolitical risk premium embedded in CHF**. That's partly the reason, in our view, why EUR/CHF risk reversals have lagged the normalisation process seen in other vol markets since the October geopolitical escalation. Other risks include longer-term US fiscal concerns. The fact CHF is no longer negative yielding and that empirically it's been one of the most convex longs in a recession (see *FX Macro Quant* section), emboldens our view.

Figure 154: Implied oil volatility and EUR/CHF outright vol have largely normalised following the October stress

EUR/CHF 3m 25-delta put vol (rhs) vs Brent 3m 25d call vol (lhs)

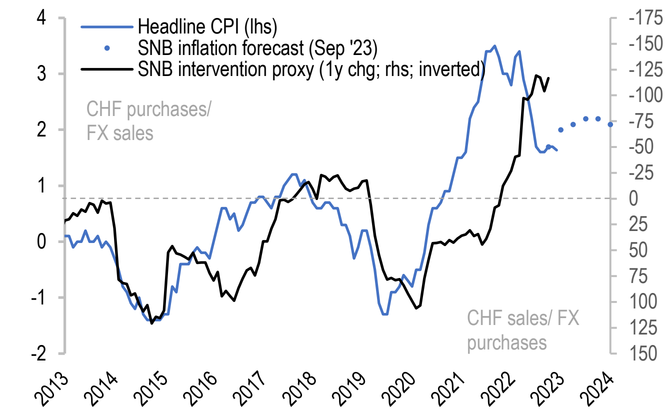
Source: Bloomberg L.P., J.P. Morgan

SNB reaction function and policy: less supportive but still not a headwind

After its longtime policy of foreign currency accumulation and balance sheet expansion attempting to stimulate inflation, **the SNB flipped to selling FX in 3Q'22 in order to tackle price pressures**. After Swiss CPI fell to within the SNB's target band (1.7%oya with core at 1.3%) this summer, the SNB paused rate hikes and shifted to more dovish rhetoric. **The lagged effects of both hikes and franc appreciation were cited as a reason to pause and watch developments.** The board also noted that remaining inflationary pressures are almost exclusively domestically generated (and should be abated by tightening to date). The SNB generally appeared less concerned about inflationary pressures from abroad than previously: it noted that these remain elevated for the time being but are expected to return to more moderate levels over the medium term. This suggests less need for FX intervention to tackle external forces, although our intervention proxy has been sending mixed signals — lower intervention levels in 3Q than in 1H, but another pick-up in September (Figure 155).

Figure 155: The relationship between SNB intervention and inflation would still suggest (more moderate) CHF-buying over the forecast horizon

Headline CPI with SNB forecast (% oya; lhs) vs y/y change in monthly SNB intervention proxy (rhs; inverted)



Source: Bloomberg L.P., SNB, J.P. Morgan

Figure 156: Past SNB rhetoric around franc valuation would judge the franc as 'highly valued' now, but the inflation picture is very different

SNB's judgement of franc valuation vs REER-based valuation (deviation from 20y and 30y REER CPI average), headline inflation (%), our monthly intervention proxy

Term	Period	REER 20y deviation	REER 30y deviation	Headline CPI (%)	Avg monthly intervention over period (CHF bn)
massively overvalued	Aug-11	20-25%	22-28%	0.2	78
overvalued	Dec-11 to Feb-13	7-12%	8-12%	-0.6	11
significantly overvalued	Feb-15 to Jul-17	8-14%	10-16%	-0.5	6
highly valued	Sep-17 to Jun-18	1.5-5%	2.8-8%	0.8	2
highly valued	Nov-18 to Sep-20	2.8-8%	4.2-10%	0.0	3
highly valued	Apr-21 to Oct-21	3-4%	4.8-5.9%	0.7	4
no comment	current	6.7%	8.4%	1.7	-8

Source: Source: Bloomberg L.P., SNB, J.P. Morgan

If the SNB has indeed toned down or even paused their franc-buying operations, **one may wonder what would incentivise them to revert to outright franc selling?** The central bank has reiterated that their FX intervention is a function of monetary policy conditions only — domestic and foreign inflation. Additional considerations, though, can include currency valuation and the size of the balance sheet – although speakers have repeatedly denied that they are targeting shrinking the balance sheet for the sake of it. Concerns should emerge,

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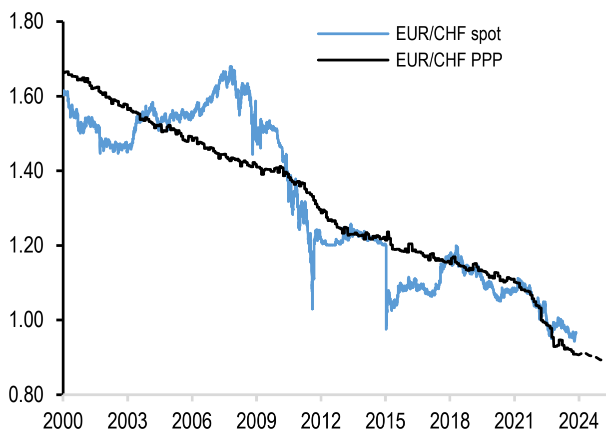
however, from the inherent riskiness of a balance sheet made up almost entirely of foreign assets (as opposed to other central banks that hold domestic assets for which they are to some extent price setters) as well as the political unpopularity of skipping payouts to Swiss cantons in 2022 and 2023. The ultimate driver behind SNB FX intervention regimes has been inflation. The relationship between our intervention proxy and inflation over the past decade would suggest CHF-selling below ~0.75% headline inflation or 0.5% in core. Those inflation levels are below both the SNB forecast and market consensus throughout the policy horizon. In any case, we believe the SNB would resort to rate cuts before selling CHF if their choice was to ease policy. The monetarist leanings of the governing board suggest they would look for alternatives to growing the central bank's balance sheet.

Figure 157: Purchasing Power Parity drives the long run trend in EUR/CHF given structurally lower inflation in Switzerland and the lack of SNB easing to offset it

EUR/CHF FX (lhs) vs relative CPI indices since 2000 (rhs). Dotted line is PPP based on consensus CPI forecast for each ccy.



Source: Bloomberg L.P., J.P. Morgan

In an historical context (Figure 156), the current CHF REER-based valuation would fall into the 'highly valued' bucket (albeit at the upper range thereof and not far from '*significantly* overvalued') defined by the SNB. The inflation backdrop is dramatically different, though: the SNB was often dealing with deflation in a world where DM central banks worldwide were also expanding their balance sheets and attempting to stimulate inflation. CPI is now at 1.7% and today's regime is one of higher global inflation uncertainty, with a more pronounced overhang of supply shocks in labour and commodities. The bar to start engaging in outright liquidity-creation against such a backdrop is thus higher.

Another implication of high global inflation is that purchasing power parity implies a stronger franc over time. Switzerland has had structurally lower inflation than the rest of G10 for a variety of reasons including a high share of administered prices (link), more contained wage growth, use of alternative energy, different electricity contracts and a lower transport index weight in CPI among other things. The force of PPP on CHF is further encouraged by the fact that the SNB are not cutting rates. The inflation differential is expected to persist over the consensus forecast horizon and should provide an anchor for the coming years, making a large and sustainable rebound in EUR/CHF less compelling.

Current account surplus: continues to provide background flow support

The **large current account surplus** (10% of GDP) **naturally exerts upward pressure on the currency if not entirely recycled through either private capital outflows or SNB franc-selling intervention**. Over the past decade, the SNB recycled the entire current account surplus by selling the franc.There were also no capital outflows that would otherwise offset this. Last year, the SNB pivoted towards buying CHF, which reinforced these franc-positive flows. Foreigners' deposits in Switzerland have posted a sharp drop over the past year, amounting to 20% of GDP and erasing the deposits accumulated since 2019 – although the currency breakdown of these deposits is not known. This has coincided with the sharp increase in the EUR-CHF rate differential last autumn but also with mounting concerns about the local banking system. The drop has been offset by other components of the financial account, however, as FDI and equity inflows have been more benign, resulting in a financial account surplus and a positive basic balance which suggest that flow pressure from the current account surplus has not abated. We have previously argued that the following factors were needed to motivate capital outflows: (1) a significant rise in the expected rate of return on foreign relative to domestic assets (2) sufficient appreciation of CHF or expectation of depreciation and hence capital gains to owning foreign assets. We note that **Eurozone cyclical/defensives trades well above PMI implied levels** (link), which suggests that the expected rate of return for European equities should be capped. Even if both of these boxes were ticked, the home-market bias of Swiss investors is likely to persist as long as European regional growth remains weak.

Where does this leave us? **CHF safe haven appeal remains, with European regional growth weak, fixed income less of a portfolio hedge, strong BoP, SNB refraining from selling CHF and long term PPP supports**. The Franc's recent geopolitical risk premium has reduced, but the transition from a unipolar to multipolar world is bullish CHF. The level of inflation typically associated with SNB selling CHF is below both SNB and market consensus forecasts. We push out the trough in our EUR/CHF forecast to 0.94 in Q2, but stress downside risks as labour markets across DM loosen.

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NOK: Difficulties Linger

- **NOK to underperform as domestic growth catches down to regional peers, terms of trade is expected to be weak and Norges Bank is the most tolerant central bank towards sticky inflation.**
- **Norges Bank FX purchases should fall by at least 43%. Rate cuts push our market rate spread forecasts against NOK. The fiscal and housing outlooks become less growth friendly.**
- **Cheap valuations support a NOK recovery in H2-24, but only if recession is avoided. Carry strategies rotating into value and global central bank cuts boosting high beta assets could both aid the Krone.**

2023 - a perfect storm for NOK weakness

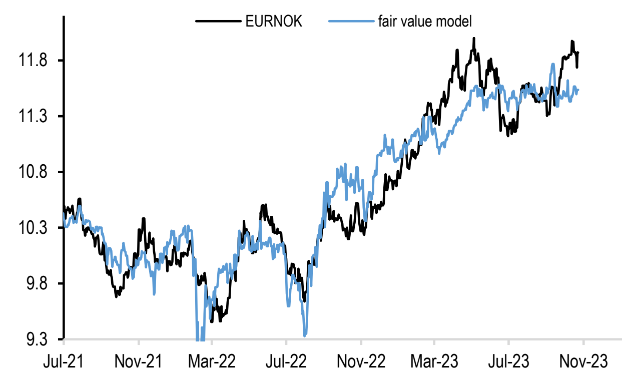
In the first half of 2023 **we kept a bearish NOK bias, informed by the perfect storm hitting the currency as terms of trade fell, central bank divergence became apparent, and domestic growth softened**. The regional network survey had just made a post-GFC low in 4Q22 and was implying a further slide in PMI data. We expected at the time that a bottoming of growth data and an easing of financial conditions would ultimately lift NOK around mid-year. What we had not anticipated was the outsized psychological impact of daily Norges Bank FX purchases, given that their size in terms of daily trading volume should have been negligible. Even as the domestic and global outlook became more balanced for NOK, investor focus on continued Norges Bank (NB) FX purchases, carry flows (NOK used as a funder given its high beta, low carry status) and CTA flows drove an overshoot of fair value (Figure 158). **Norges Bank tied their reaction function more closely to the currency at the August policy meeting by presenting more asymmetric guidance on FX**. In change terms, rate spreads and oil prices explained 35% and 43% of the variation in NOK vs SEK and EUR this year, respectively. As also outlined in our last year-ahead outlook, we think **NOK should increasingly be less able to reap the benefits of oil rallies** (1) if they were supply, rather than demand-driven, (2) due to global greenification which should weigh on capital flows into fossil fuel economies as well as hold back domestic fossil fuel investment and 3) given the asset heavy balance sheet of the Norwegian oil fund increasing the Krone's sensitivity to global financial conditions.

2024 - difficulties linger

The inflationary nature of the post pandemic world has revealed a **Norges Bank which is the most tolerant towards high and sticky price pressures of any central bank in G10**. Figure 159 shows Norges Bank has the highest headline inflation forecast relative to target both at the policy horizon and by Q4-25. For the more limited set of central banks within G10 that publish core inflation, Norges Bank also has the highest core inflation forecast by Q4-25. Here in some sense Norges Bank is telling the market that they are willing to accept above target inflation and still not tighten policy aggressively. This message suggests that in forward space, PPP (Purchasing Power Parity) is working against NOK as the central bank is not acting to offset the increase in inflation relative to other central banks (Figure 160). One of the underlying drivers here is Norges Bank tightening being more constrained by the governing board's concerns around domestic financial stability risks and indebtedness, despite above-target inflation.

Figure 158: EUR/NOK spent significant periods trading rich to fair value

EUR/NOK vs fair value model using 50:50 gas/oil basket, 2y swap rate spread and financial conditions proxy (spread between 10y US real yields and 10y US breakevens)



Source: J.P. Morgan, Bloomberg Financial L.P

Interest rate sensitive households create a structurally more dovish Norges Bank which has also contributed to the discount in NOK this year, in our view. EUR/NOK has tracked the trend implied by PPP fairly well historically. In 2024 we don't expect this bias from Norges Bank to go away, especially if inflation stays more sticky than markets expect. Indeed, **PPP projections using relative central bank forecasts suggest EUR/NOK PPP will make new highs through the year** (Figure 160). High wage growth can enable more sticky inflation. Figure 159 shows Norges Bank has the highest wage growth forecast at the policy horizon of those G10 central banks which publish wage forecasts. Our economists expect Norges Bank to begin cutting in June and our rates strategists forecasts for the EUR vs NOK rate spread reflect a 25bps move against NOK from Q1-24 to Q4-24.

The terms-of-trade outlook does not lean in NOK's favour next year. The Krone's relationship with oil is non-linear in price, and also differs depending on whether it is demand or supply driven. In the post-GFC period, **a 30% rally in oil has**

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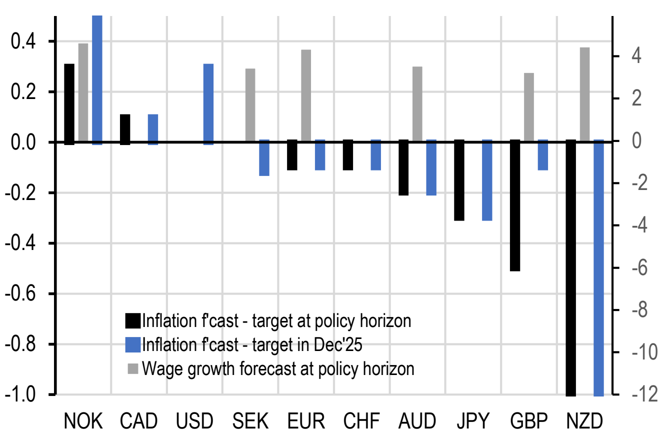
been associated with a 3% appreciation in NOK vs EUR, but a 30% sell-off in oil has been met by a 5.5% fall in NOK vs EUR. The asymmetry there comes from the Krone's cyclicality being hampered by the second round impacts on domestic growth from a supply led oil rally, which acts as more of a tax on consumers, creating cost-push inflation rather than demand-pull. The Federal Reserve oil decomposition model (link) suggests that over two-thirds of the oil rally during the summer was supply driven (Figure 161), limiting the Krone's participation. Regressing EUR/NOK on rate spreads and the demand, supply and residual components of the oil decomposition model over the last year shows that the co-efficient is positive for supply and the residual, while it's negative for demand. In a working paper by Norges Bank, (link) the residual is defined as "oil price changes associated with uncertainty regarding the availability of oil due to supply or demand surprises, originating from e.g. weather, an overall increase in uncertainty or specifically from geopolitical events". This suggests the residual likely captures some of the growth negative impact from supply events. The Krone's sensitivity to the residual factor therefore implies that supply related rallies may be describing (limiting) the currency's returns during oil rallies.

Figure 159: Norges Bank, the most tolerant G10 central bank towards above target inflation

%-pt deviation from inflation target or upper band of target (lhs) vs wage growth forecast (rhs) by the 4Q'25 and the end of each central bank's forecast horizon. Wage growth forecasts for CAD, USD, CHF and JPY are not available.

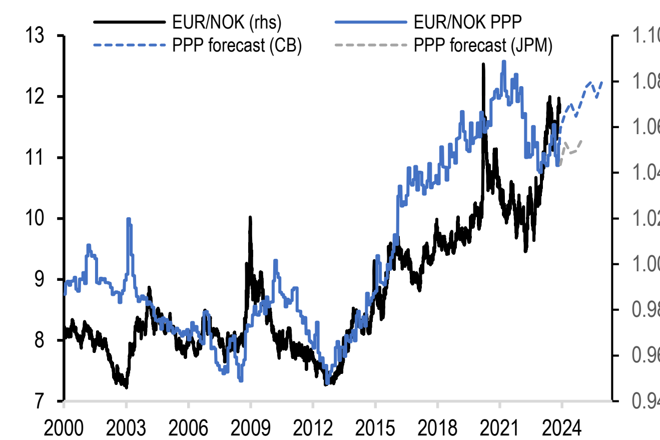


Source: J.P. Morgan, individual central banks.

Our oil strategists expect the Brent price to linger at $83 next year with risks skewed to the downside as the base case scenario assumes no recession but a global growth forecast of 2.2%oya. Risks to demand are therefore to the downside while supply risks are two-sided. The OPEC meeting this week will be key. **One risk scenario would be normalisation of OPEC supply at some point over the coming year** given that they are now in a difficult position, having cut unprecedented levels of supply, while soft domestic growth requires more supply to generate revenues. **Such a normalisation would allow oil to reconnect with demand implied levels, lower**. Our oil strategists see a 1mbpd increase or decrease in supply on an annualized basis worth about $10-14 to the oil price. Cuts to production are also a possibility, but this shouldn't provide much encouragement for NOK given its asymmetric relationship with oil. The outlook for gas isn't constructive either; our **Commodities team is more bearish gas** due to the intensity of the supply build that came in response to last year's energy shock. An unknown, and crucial in the short-term, variable is this winter's weather. They forecast TTF prices to fall from 45 EUR/mwh in Q1-24 to 30 EUR/mwh by Q3-24.

Figure 160: The long-run trend in EUR/NOK has been consistent with what would be implied by purchasing power parity

EUR/NOK (rhs) vs EUR/NOK trajectory implied by relative prices (through purchasing power parity). Dotted lines are JPM and ECB & Norges Bank forecasts.



Source: J.P. Morgan, Bloomberg L.P.

We have longer term concerns around NOK's beta to oil relating to greenification and financialisation. The krone's residual in a 20y fair value model of Brent prices and 5-year rate spreads began to widen significantly around the same time as the energy investment share peaked (Figure 163). **Oil investment as a share of total investment rose slightly this year but remains in a downtrend since the shale collapse of 2014**. According to the latest Regional Network Survey, much of this growth can be attributed to delayed pass-through from the 2020 temporary petroleum tax relief. The RNS also reported that major investments are said to be underway in manufacturing (the only sector with plans for increased investment in 2024) related to both energy transition and carbon footprint reduction. Both Norges Bank's latest monetary policy report and Norsk Petroleum expect oil and gas production to peak in 2025 and then decline gradually. While energy investment may increase over the short term, the long-term greenification trend is gaining traction, with Norway reaching Green Deals with other countries (link) and for example renaming its 'Petroleum and Energy' ministry to the 'Energy'

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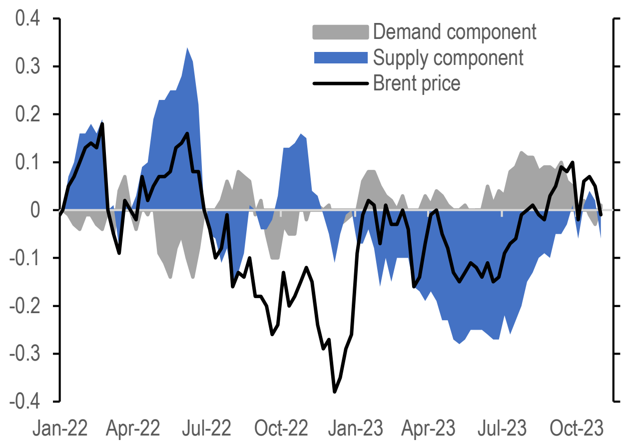
ministry.

Figure 161: The oil price has been driven by changes in supply more than demand, undermining NOK's ability to benefit from rallies

Federal Reserve weekly decomposition of oil price changes into supply and demand; cumulative log daily changes since 2019.



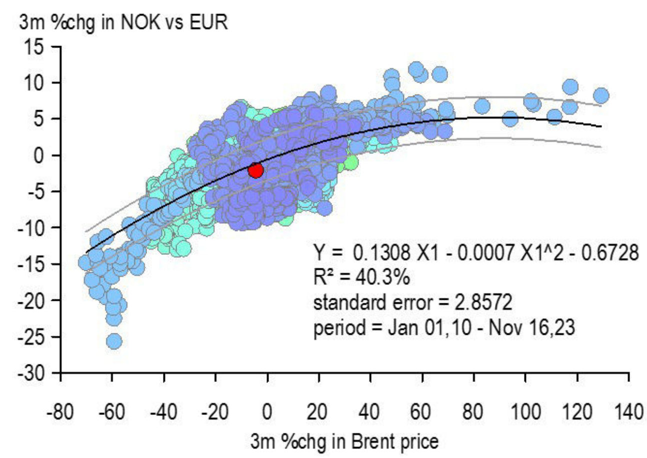
Source: J.P. Morgan, Bloomberg L.P.

Central Banks of other oil producing countries have also written about the shift in energy investment away from fossil fuel economies (see BoC deputy governor Gravelle here). Furthermore, Norway's oil fund has encouraged investments in net-zero emissions companies. The asset side of Norway's net international investment position is over 500% of GDP, relative to its liabilities side which is below 250%. This reflects the increasing size of the Norwegian oil fund and **the financialisation of Norway's IIP, which must at the margin allocate some of NOK's beta towards financial assets rather than the oil price**, again contributing to the theme of lower oil beta.

Signs of investor frustration with the level of Norges Bank's NOK selling were especially clear in H1 on days where the amount to be purchased for the following month was announced. The current level of FX purchases only makes up less than 1% of daily spot EUR/NOK volume (at their peak in October '22, this was ~2.5%). They have been blunting pressure from NOK's sizeable current account surplus (which stands at 26% of GDP) however, offsetting about half of inflows when aggregated. **A slower pace of FX purchases (estimated by our economists at 0.7-0.8bn a day) should provide some relief, but that would still be the third largest year of FX purchases on record.** The fact that this is due to lower oil revenues (reflecting some softening in global demand) limits how much NOK can benefit from a slowing in NB's selling. Oil exports in the CAB are down since their peak in 3Q22. **The basic balance has also come down significantly to 6.4% of GDP due to large equity outflows**. Both debt and equity outflows have been driven by domestic economic actors investing abroad. While debt flows are more likely to be FX-hedged, the large equity outflows are less hedged and running at -18% of GDP. Recycling of oil revenues into assets abroad by the Norwegian oil fund may have played a part in dragging the basic balance surplus lower.

Figure 162: NOK's relationship with oil is non-linear — it is hurt by large sell-off more than it benefits from large rallies

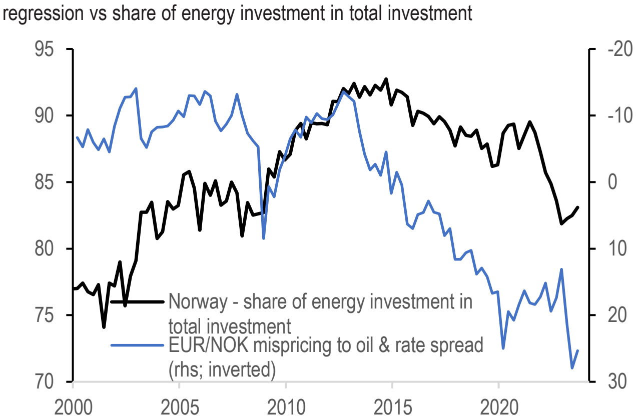
3m % changes in NOK/EUR regressed against 3m % changes in Brent oil price in post-GFC period.



Source: J.P. Morgan

Figure 163: NOK discount to fair value peaked around the same time as the domestic energy share of investment, which suggests greenification may be reducing the Krone's beta to oil

EUR/NOK mispricing to Brent and 5y rate spread (rhs; inverted) in 20 year regression vs share of energy investment in total investment



Source: Haver, J.P. Morgan

We also identified carry as a factor contributing to NOK weakness this year. Together with SEK, NOK has featured in our systematic real carry basket since February, while our investor conversations suggested demand for beta-neutral carry trades, using NOK and MXN for instance which have a similar beta to risk but a large carry differential. We would also note that 1) the fit of the fair value model is improved by

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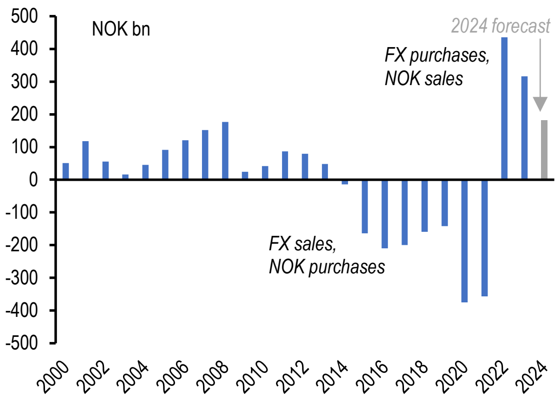
adding carry strategy spot returns (r-sq 0.52 to 0.7), and 2) the increased USD/NOK correlation to favoured carry trades such as MXN/JPY, which has occurred during previous periods of carry investing. Using JPM economics policy rate forecasts we project the yield on a global carry basket to fall from 9.4% in Q3-23 to 6.8% by Q4-24, which is closer to the low in 2020 of 5.2%. **In the second half of the year, as investors rotate from carry to value, NOK can benefit due to cheap valuations and the unwinding of carry trades**.

Figure 164: Our economists expect a decline in daily Norges Bank FX purchases to 0.7-0.8bn a day.

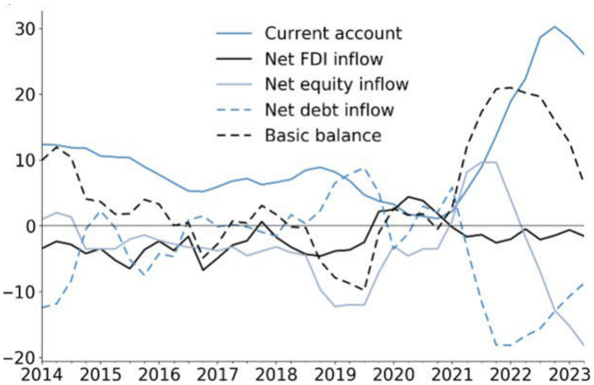
Annual aggregate of daily NB FX purchases.



Source: Bloomberg L.P., J.P. Morgan

Figure 165: BoP support is substantial but past its peak

Balance of payments items as % of GDP , rolling 4Q.

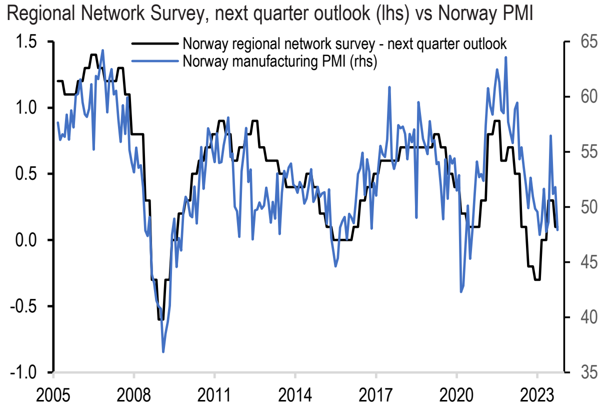


Source: Haver, J.P. Morgan

Growth in Norway is set to catch down European regional peers as suggested by the forward looking components of the regional network survey and JPM economist forecasts. Norwegian growth has been held up by the energy industry and fiscal policy which allowed it to differentiate itself in the region. This has masked weak household confidence and consumption as a result of the high indebtedness of households (246% of NDI) and share of floating rate mortgages (94%; both are higher than Sweden's). These have accelerated pass-through compared to other countries — the outstanding stock of mortgages have incorporated about 3/4 of the hikes so far; debt service ratios are at the top of their 20-year range and the second-highest in DM. That Norway's housing market has held up better than Sweden's is to a large extent due to an easing of mortgage lending rules and stronger overall growth including employment. Norwegian house prices have taken another leg lower since the summer though, falling below Norges Bank's forecast. We have shown previously that NOK mispricing to fair value has been somewhat correlated to house price growth in previous cycles.

Figure 166: Growth in Norway looks set to catch down to European regional peers

Regional Network Survey, next quarter outlook (lhs) vs Norway PMI



Source: Bloomberg Financial L.P., J.P. Morgan

Figure 167: Norway's housing market screens as more vulnerable than Sweden on various key metrics

Select metrics of household vulnerability to higher rates in Norway and Sweden

	NOK	SEK
Household debt as % of GDI	247	196
% of variable rate mortgages	94	52
% of households owning home with mortgage	59	51
Cumulative policy rate changes (%-pt)	4.25	4.00
Cumulative increase in int rate on outstanding share of mortgages (%-pt)	3.25	2.19
Household debt service ratio (% of income)	16	13
House price fall from peak (%)	-5	-14

Source: OECD, J.P. Morgan Economics, Haver, SBAB

In conclusion, NOK should underperform as domestic growth catches down to regional peers, terms of trade is expected to be weak and Norges Bank are the most tolerant central bank towards sticky inflation. Norges Bank FX purchases should normalise. Rate cuts push our market rate spread forecasts against NOK. The fiscal and housing outlooks become less growth friendly. Cheap valuations support a NOK recovery later in the year as carry strategies rotate into value and global central bank easing bolsters high beta assets.

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SEK: Cheap versus growth

- **Recession sequencing favours SEK RV as economies catch down to Sweden. Recession in Sweden is in the price.**
- **Labour market loosening in Sweden means SEK strength vs EUR and USD will be harder.**
- **Market perception of Swedish housing risks could improve as Riksbank easing gets closer.**
- **SEK valuations have undershot growth. Funding currencies like the Krona could receive support from the carry-to-value rotation.**

2023: SEK was the prime short candidate

SEK was the cleanest recession trade candidate in G10 for 2023, and that delivered in terms of EUR/SEK returns as spot climbed 7.5% to the year-to-date high. In many ways **Sweden is the poster child of the impact that policy tightening is having on economies with sizeable private sector leverage**. In terms of consensus for real growth in 2023, Sweden is projected to be the weakest in G10 at -0.5% y/y and our economists believe the economy is likely in a recession right now. At the same time, **the Krona offered the worst real carry globally among liquid currencies**. A bearish feedback loop developed this year whereby **sticky inflation kept Riksbank tightening and that weakened SEK via the growth channel, which in turn created further currency driven inflation**. Zooming out, we can see Sweden is at the epicenter of the leverage issue, with private non-financial corporate debt among the highest among many DM and EM economies (Figure 173).

2024: SEK outperforms other high beta

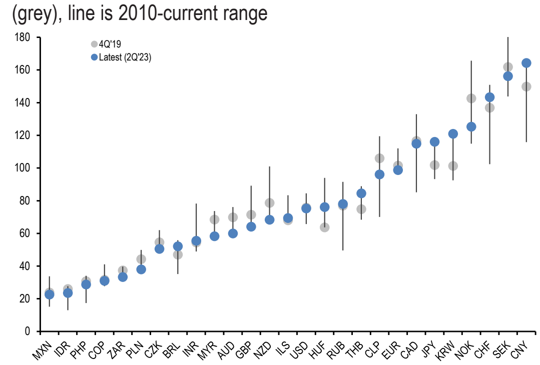
We continue to hold a bearish view on the Swedish economy, with our Scandi economist showing that growth conditions are still recession-like (link). But **SEK looks to have undershot growth on several different models**. With respect to domestic growth revisions and global cyclical proxies, the trade-weighted Krona looks 4.9% cheap in % y/y terms (Figure 169). From the perspective of relative growth versus the Eurozone, and 2y rate spreads, SEK is also 4.9% cheap versus EUR in % y/y terms (Figure 170).

Recession sequencing

There is a recession sequencing angle for SEK in 2024. Sweden is likely in recession and growth remains weak domestically according to our Scandi economist, but the **growth differentials between Sweden versus global, G7 and DM economies all narrow over the course of 2024** according to JPM Economics forecasts. From Q4-23 to Q4-24 the gap shrinks to 1% from 3.3% at the global level, 2.5% to -0.3% for G7 and 2.2% to -0.2% for DM. In other words, growth-wise, the world is set to catch down towards where Sweden already is. Therefore, while we are still bearish on the Swedish economy and in some respects SEK itself, in our view the Krona can outperform versus the currencies of those economies whose growth is only now catching down and/or cyclical currencies with weak growth which have so far outperformed SEK. We are thinking particularly of New Zealand, Canada, the UK and Norway. Historically, there have been periods where a Swedish recession happened without a Eurozone recession (1976 and 1991) and vice-versa (1980) (Figure 176). **Over six recessions since 1976, the SEK trade-weighted index on average bottomed out 2.5 years after recessions began, weakening on average 16% from the start** (Figure 172).

Figure 168: Sweden is the posterchild of the leverage issue across DM and EM economies

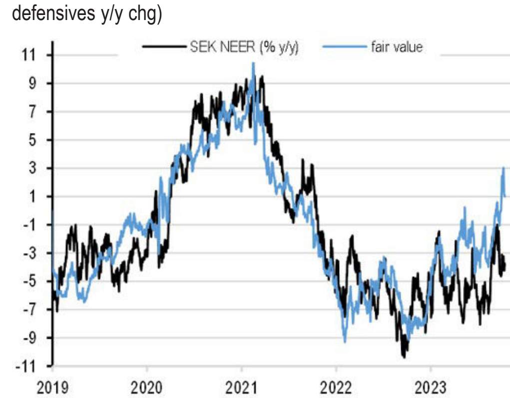
Non-financial corporate debt as % of GDP. Latest (blue), 4Q'19 (grey), line is 2010-current range



Source: J.P. Morgan, IIF, Haver

Figure 169: SEK undershot domestic growth and global cyclicals

SEK NEER (% y/y) vs fair value model (SEK forecast revision index y/y chg, trade weighted 5y rate spread, MSCI world cyclical/ defensives y/y chg)



Source: JP Morgan, Bloomberg Financial L.P

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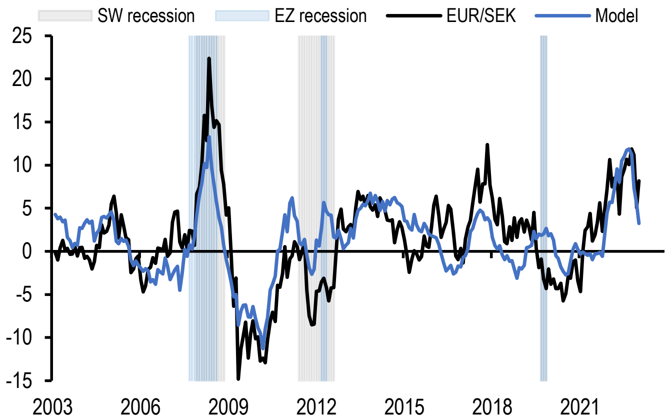
Figure 170: SEK has undershot relative growth and rate spreads

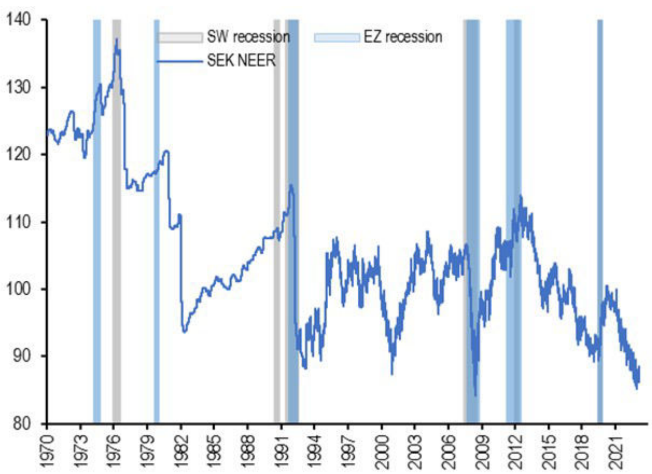
EUR/SEK (% y/y) vs model (relative manufacturing PMI for Eurozone vs Sweden, 2y rate spread y/y chg). Rsq 0.53.



Source: JP Morgan, Bloomberg Financial L.P, Haver

Figure 171: Recessions in Sweden and the Eurozone haven't always overlapped

SEK NEER vs recession markers in Sweden and the Eurozone

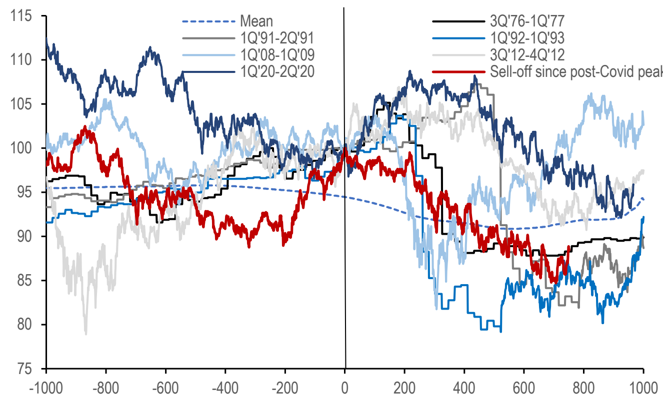


Source: J.P. Morgan

The average masks considerable dispersion of recession severity though: one of these was the GFC, and two ('91 and '92) were part of the Swedish property and financial crisis during which speculative attacks broke the krona's peg to the ECU. SEK weakened 12% and 9% from the start of the 1976 and 2012 recessions, respectively. In the lead-up to and during US recessions, SEK has tended to weaken 10% on average vs USD (EUR/USD weakened 6%). **In this cycle, SEK has already lost 15% in trade-weighted terms** from its post-COVID high to its trough in September, and 11% to current levels (red line on Figure 172). EUR/SEK meanwhile is up 20% from trough to peak, and 16% to current levels. Our Scandi economists' forecasts reflect a *borderline* technical recession having started in Q2-23 (-3.3% in Q2, 0.0 in Q3 and -0.8 in Q4, q/q saar). If that was realised, we are about half a year into it now, which is far shorter than the average time SEK has taken to bottom out during a recession. However, there were often exogenous shocks dragging out the time it took for SEK to base out after a recession, such as the European debt crisis in 2012, where SEK subsequently took 2.8 years to bottom out.

Figure 172: Recession is priced in. SEK typically weakens 16% in recession vs 15% since the post pandemic high.

y-axis: SEK NEER; x-axis: number of business days. Zero marks start of Swedish recession., defined as the first day of the quarter in which the recession started. Red line t=0 is post-Covid peak.



Source: J.P. Morgan

Can leverage work in the Krona's favour?

One of the key transmission mechanisms between policy tightening and SEK weakness this year has been the housing market. Household debt to income moved from a peak of 160% of GDP during the GFC to 202% today (link). The share of variable rate mortgages in Sweden is 52%. Household debt service ratios are close to their long run extremes, but the rate on the outstanding stock of mortgages is 3.67%, which has lagged the policy rate as it takes time for the mortgage stock to reset. Many of these housing statistics are worse in Norway, yet the Norwegian housing market has held up much better than Sweden. There are several reasons for that. Firstly, the labour market has been more resilient in Norway. Secondly, the easing in mortgage lending rules both this year and last year. Thirdly, more interest-only loans.

There are major landlords in Sweden which have been the focus of much attention from investors as the housing market has slowed. Share prices of specific entities still trading close to cycle lows suggest that negotiations with bondholders haven't reached conclusions that the market feels particularly satisfied with. At the aggregate level though, the performance of Swedish housing equities appears to have formed a base, with the MSCI Sweden real estate index having outperformed the headline index since July. Swedish

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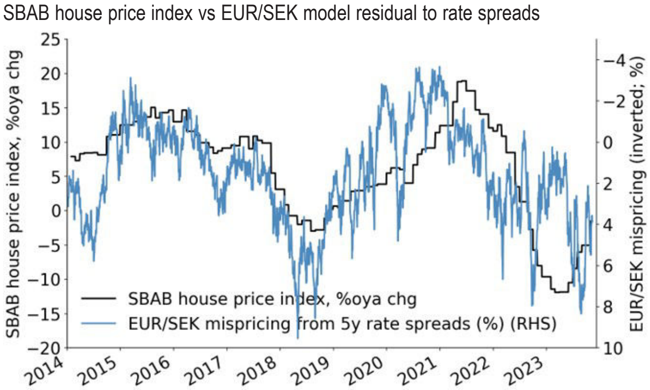
equity market earnings growth has bottomed out along with forward-looking indicators of growth, suggesting the domestic equity market is no longer ringing alarm bells. The Oslo stock market outperformed its Stockholm counterpart by only 2% this year, suggesting relative equity market performance has been particularly benign.

Figure 173: SEK model residual to rate spreads has historically tracked house price growth

SBAB house price index vs EUR/SEK model residual to rate spreads



Source: J.P. Morgan, SBAB

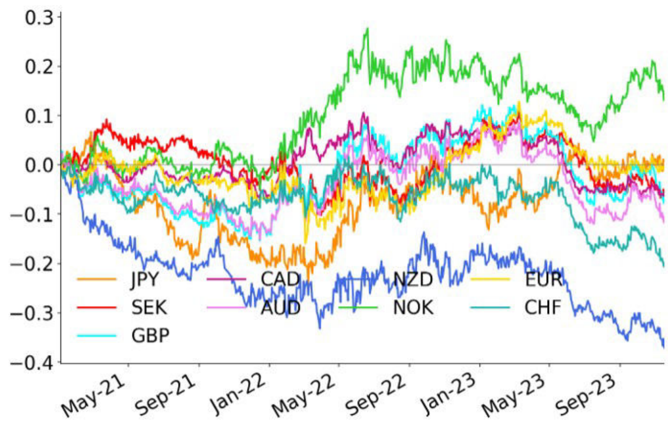
Our Scandi economist is forecasting seven rate cuts over 2024/25 from the Riksbank. Markets are pricing around 75bps of cuts for 2024. There is room for investors to price more Riksbank easing into 2024, in our view. EUR/SEK has had an interesting relationship with rate spreads this year, often an inverse to the usual intuition. This follows from the idea that Riksbank tightening hurts Swedish growth, which weakens SEK as a cyclical high beta currency. The housing market and Sweden's levered economy are the key transmission mechanisms there. The correlation of EUR/SEK fair value mispricing tends to co-move with house price cycles, suggesting that investors use SEK as a hedge during housing downturns. **The EUR/SEK model residual to rate spreads had overshot what house price growth would imply** (Figure 173). **As the market becomes more comfortable with Riksbank cuts next year, SEK may be able to benefit, partly via the housing channel.**

The labour market is the tail risk

Globally speaking, the last piece in the puzzle for the economic slowdown is employment. Some economies are further along the road. Sweden stands out in G10 as the labour market has been weakening more notably. Our Scandi economist had a great early call on labour market loosening (link). **He explored the pronounced employment weakness suggested by leading indicators including company margin proxies** (Figure 8), profitability surveys, NIER survey employment subcomponents and vacancy-layoff differentials and sees the labour market weakening further in 2024, with risks to the downside as the lagged impact of Riksbank tightening has not fully fed through as yet.

Figure 174: On a relative basis, Swedish equity market performance has been middle of the pack

G10 equity markets all relative to the US (ratio of the cumulative sum of indexed log daily returns for the US equity market relative to all G10 equity markets individually)



Source: Bloomberg Financial L.P. , J.P. Morgan

The Sahm Rule has been triggered in Sweden, which is a recession indicator looking at unemployment relative to its longer run average. There may however be reasons why the Sahm rule is less relevant this cycle, since part of the reason for unemployment rising is changes in labour supply, where workers are returning to the labour force and therefore propping up unemployment rates. Regardless, **the labour market loosening forecasted by our Scandi economist does involve further layoffs and this is a key risk for SEK, in our view**.

Stretched valuations are in favour of SEK

SEK is trading cheap relative to long-run REER and NEER averages, deviating 10-12% from 15y averages. Its cheapness reflects the fact that SEK has priced recession to a greater extent than other high beta currencies, and is thus less vulnerable to a downturn but also more likely to benefit from the market gravitating towards soft landing. It thus also stands to benefit from an eventual carry-to-value rotation next year. A key theme outlined by JPM FX Strategy has been the outperformance of the carry trade this year (link). SEK offered the lowest real carry globally among liquid currencies for much of the year, and has a high beta vs low nominal carry profile. This has made it an ideal carry trade funder. As carry basket yields compress later in the year, this should increasingly become a source of support for funders with the unwind of carry trades.

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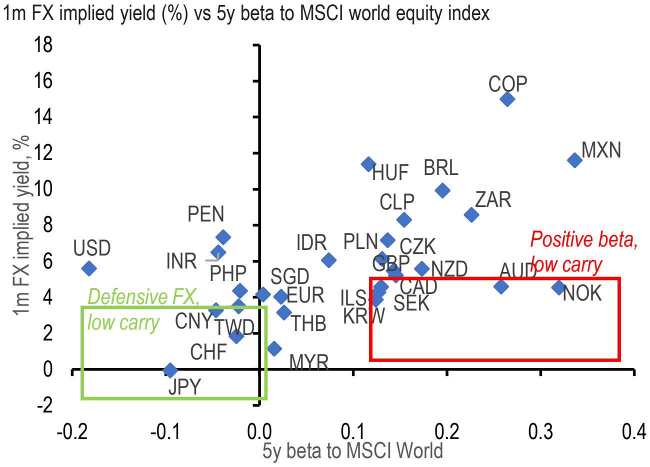
Riksbank reserves hedging ends in 2024

The Riksbank initiated a reserves hedging program in late September this year, designed to hedge a quarter of FX reserves. In the first week of the program SEK strengthened sharply, despite the amount of Krone bought by Riksbank not exceeding expectations. That speaks to sentiment effect in our view, and subsequent data releases showing the amount of hedging being carried out relative to the size of the moves in SEK tended to show a fading efficacy of the program in terms of its ability to strengthen the Krona (Figure 176) That was when our positioning and flows publication series by Patrick Locke (link) showed that long SEK positioning had begun to be squeezed. The reserves hedging program is set to end in early January based on the current pace, compared to late January to late March according to Riksbank guidance (4-6 months). Ultimately, we see the volumes here as a small share of daily trading volume (0.53% based on BIS volumes data). So **in our view, the hedging should matter less for SEK relative to cyclical considerations**. Should Riksbank choose to frontload the program or extend it, that would likely generate a similar sentiment effect once again, which would likely fade over the subsequent weeks, we think.

Figure 175: SEK has low carry relative to its high beta

1m FX implied yield (%) vs 5y beta to MSCI world equity index



Source: JP Morgan, Bloomberg Financial L.P,

BoP needs cyclical support

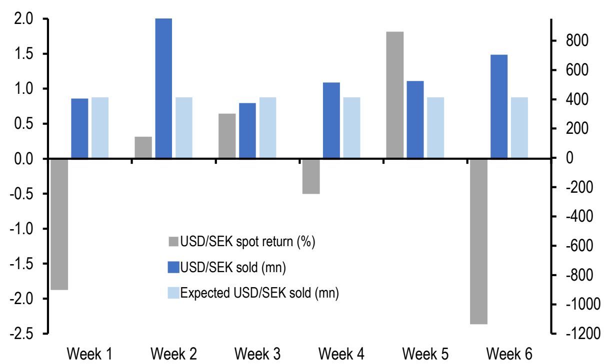
Sweden's basic balance has been volatile. A structurally solid current account surplus around 5% of GDP is being offset by equity and FDI outflows. The latter running at -3.8% of GDP has been driven by investment from abroad running positive, but lagging investment abroad by domestic economic actors. The Riksbank commented on equity flows in their latest financial stability report (link). They note that Sweden has long had a surplus on its financial savings, a significant part of which is channelled abroad through investment funds and insurance and pension companies. This is reflected in their view, among other things, in the fact that equity funds investing abroad have for several years had larger net inflows than corresponding funds investing in Sweden. **In order for equity and FDI outflows to moderate, investors need to see more attractive return opportunities in Sweden at the margin** compared to propositions abroad. The relative growth differential is a key input to this, where, as discussed above, JPM Economics forecasts reflect a narrowing growth differential over the course of 2024 in Sweden's favour.

Conclusion: SEK outperforms high beta

Given the weakening labour market, SEK strength vs USD and EUR may be slower. Versus high beta currencies, SEK can benefit from recession sequencing, valuations undershooting growth, market perception of Swedish housing risks easing as rates fall and the carry-to-value rotation.

Figure 176: Riksbank reserves hedging data has reflected the declining efficacy of the program to strengthen SEK

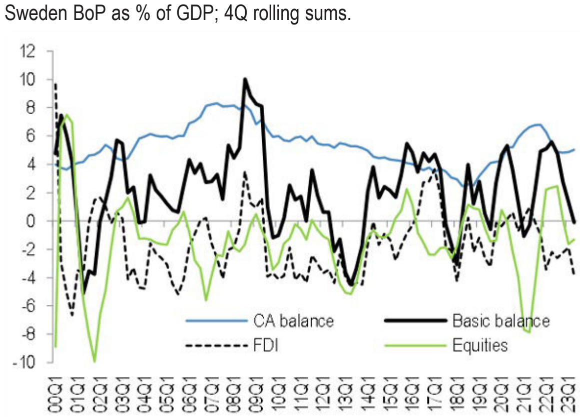
USD/SEK sold each week vs expectation based on a 5 month duration (USD mn; rhs), and USD/SEK spot return that week (%; lhs)



Source: JP Morgan, Riksbank, Bloomberg Financial L.P

Figure 177: Sweden's basic balance suffered from equity and FDI outflows

Sweden BoP as % of GDP; 4Q rolling sums.



Source: J.P. Morgan, Haver

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AUD: Reawakening commodity beta allows some recovery

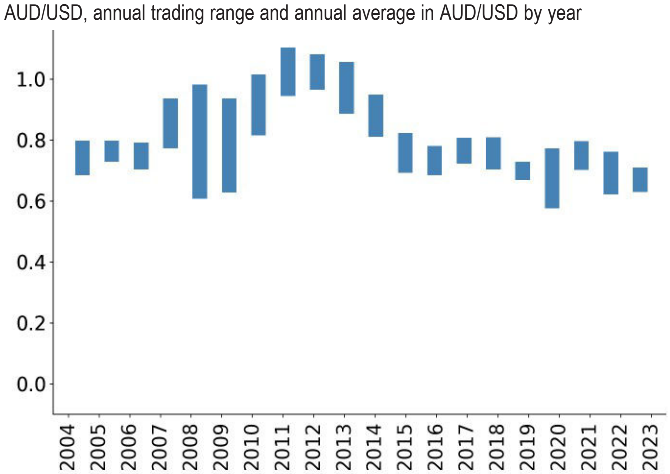
- **Our Outlook for AUD in 2023 had balanced valuation support from commodity prices, and strong supply-side performance, against global business cycle concerns that capped the upside for high beta FX. Those boundary constraints remain in play for 2024.**
- **The standard transmission from high commodity prices to the broader economy – which we have long described as dormant – is starting to awaken via the rude health of the Commonwealth Budget and prospects for fiscal easing. Personal tax cuts are due in 2024, alongside expansion of government spending programs, which raises the debt servicing capacity of the household sector.**
- **The RBA is therefore likely to maintain its hiking bias into 1H24 and should be later to cut than others in DM. Forward rate differentials are similarly widening in AUD's favour. Unlike a year ago, AUD-USD rate convergence is now plausible with some contribution from further RBA hikes, rather than being based solely on Fed cuts. This combination is a little more bankable for AUD FX, since the trigger for Fed cuts has significant bearing on the dollar (growth/hard-landing, or inflation/soft-landing, with our US forecast tilting more to the latter).**
- **Still, our global colleagues emphasize the ongoing cyclical risk of lagged traction from earlier tightening ("Boil the Frog"). While policy lags may not compromise resilience immediately, we do expect this global business cycle to be shorter than usual. That background threat argues for a relatively bounded ex-ante range in AUD/USD and a watchful response to cyclical news.**
- **We hold a year-ahead forecast for AUD/USD of 0.68, 5% above spot. This is, for the first time in several years, a forecast close to our model fair value estimates, as the commodity channel reawakens and rate convergence is more plausible. From a valuation perspective, short AUD/JPY has, comparatively, much greater scope to perform in a sudden downside scenario on global growth.**

2023: China and global inflation give and take

AUD/USD has maintained a reasonably tight range this year of 8c, around half the historical norm of 14c (Figure 178). The exchange rate averaged 0.67, compared to the forecast average of 0.69 we held through this year. This relative stability, in the context of still-elevated economic uncertainty and interest rate volatility, reflects significant competing forces.

Figure 178: AUD/USD held one of its tighter ranges of the last 20 years in 2023

AUD/USD, annual trading range and annual average in AUD/USD by year

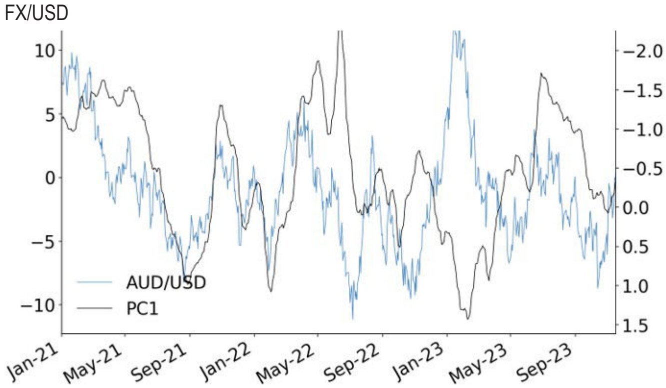


Source: J.P. Morgan.

Falling global inflation and China tailwinds were clearly dominant in 1H, triggering significant outperformance of AUD/USD relative to its usual correlation with other G10 FX/USD pairs (Figure 179).

Figure 179: AUD/USD mostly outperformed its correlation factor to other G10 FX/USD pairs in 1H23, then experienced payback through 3Q

LHS: AUD/USD, 3m return (%); RHS: First principal component of 3m returns in G10 FX/USD



Source: J.P. Morgan.

Expectations of positive spillovers from China reopening were a prominent consensus theme early in the year, but this rapidly gave way to the reality of an underwhelming recovery in China's domestic demand and tourism, followed by financial concerns in the real estate sector.

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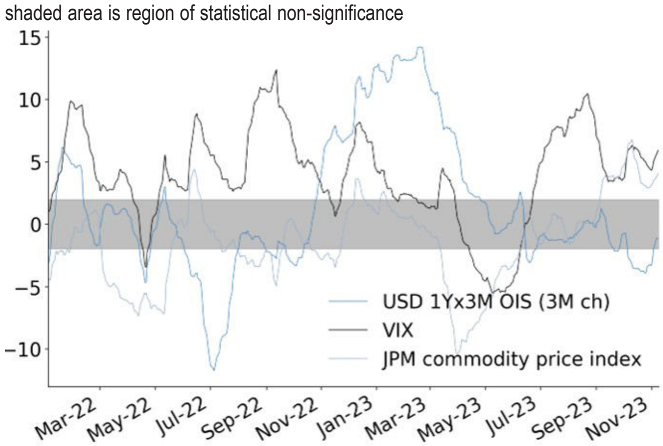
Though the impact of China data releases on AUD FX has been measurable through the year (see the AUD section here), on both the positive and negative side the economic implications for Australia have been overstated, in our view. The empirics have long-shown a weak short-term relationship from real activity in China, to Australian GDP, because Australian commodity exports are usually somewhat supply-constrained. Most of the transmission instead works through commodity prices. Since commodity markets remain tight, Australia has registered record trade surpluses in 2021-23 despite China's malaise, and imposition of import restrictions on Australian commodities. The upside from China's stabilization and relaxation of AUD trade restrictions is then potentially limited too, at least outside of services. As such, our colleagues' string of growth forecast upgrades for China provide some sentiment support, but without lifting our expectations for Australian GDP growth materially. The potentially more important detail for AUD is the relative outperformance of China IP vs domestic consumption, which has supported upgrades to the iron ore outlook.

Figure 180: During the US bear steepening of 3Q, returns from shorting AUD/USD were better explained by rising equity volatility than rate differentials per se, which was reminiscent of 2022's broad asset deleveraging

T-Stats from rolling 3m regression of short AUD/USD returns on listed X variables, shaded area is region of statistical non-significance



Source: J.P. Morgan. Rolling regressions of 3m returns from short AUD/USD FX; T Stats for each variable displayed.

Escalating concerns around China real estate were a clear drag on AUD in 3Q, but the US rate shock was arguably more fundamental, in that it was reflected in standard drivers of AUD FX valuation. **The perception that US/global inflation may prove sticky, grew from mid-year. Bond-equity correlation turned sharply back toward positive territory, suggesting a rapid resurgence in inflation risk premium.** With Australia having had 4% less inflation than the US since 2020 (now 5%), we argued against the need for any extra inflation risk premium in AUD assets.

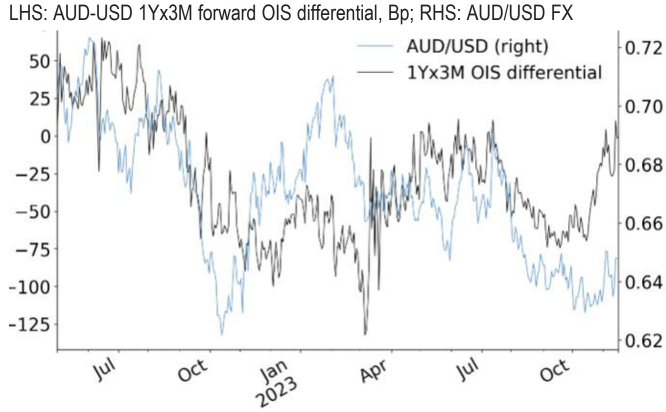
Nevertheless, the US bear-steepening manifested in consistently higher equity volatility, so was damaging for risk assets and AUD/USD, even though short rate differentials per se were not a significant factor (Figure 180). **A key learning from 2023 is therefore that global inflation risk premium is not yet dead, despite the significant normalization in inflation itself.** Cross-market relativities like growth performance, inflation/interest rate differentials, and balance of payments factors can be somewhat subjugated in importance until central banks are closer to their targets.

A domestic cycle with staying power

Throughout the pandemic and recovery the Australian economy has demonstrated strong supply-side performance. Labour force participation had recovered pre-pandemic levels by early 2021, and working age population growth has been running 1%-pt above normal since borders reopened. With a more favourable growth/inflation mix, not to mention faster and more precise policy transmission than elsewhere (the variable rate mortgage structure), **the RBA does not seem at excessive risk of over-tightening. That narrative of resilience remains on track heading into 2024**, where we expect firm growth of 2.1%y/y, compared to the DM-weighted average forecast of 1.1%y/y.

Figure 181: Growth resilience saw the RBA restart the hiking cycle in November, while other CBs are on hold; AUD/USD is cheap to forward rates, pricing convergence toward the Fed

LHS: AUD-USD 1Yx3M forward OIS differential, Bp; RHS: AUD/USD FX



Source: J.P. Morgan.

The compromise in finessing the return to the inflation target is that the target itself is less assured. Growth is holding up, and housing has also bottomed, leading the RBA to resume the hiking cycle this month, while most other DM central banks are on hold. We expect the RBA's hiking bias to extend into 1H24 and do not forecast any cuts next year. **The potential durability of the Australian growth and policy cycle is being priced as convergence to the Fed, and leaves AUD/USD cheap relative to forward rate differentials (Figure 181).** Moreover, compared to the last time rate

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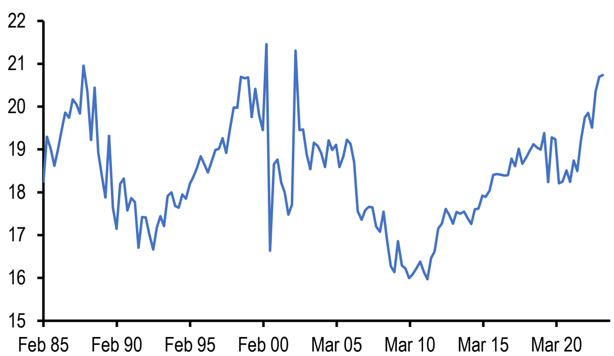
spreads were at these levels in mid-23, the convergence appears less reliant on Fed cuts, so is also less conditional on the trigger for Fed easing (US growth or inflation), which will matter most for the dollar. Our year-ahead (Dec-24) forecast for AUD/USD is 0.68, 5% above spot.

The dominant local thematic change for AUD heading into 2024 is the strengthening transmission from commodity income, to the broader economy. High commodity prices have delivered dual budget and current account surpluses for the first time in decades. So far, the government has exercised restraint by saving this windfall, though fiscal policy is due to be eased in 2024. The legislated Stage 3 **personal tax cuts from July 2024 deliver an increase in household after-tax income equivalent to 0.8% of nominal GDP.** The boost to disposable income will offer timely support to household consumption, partially alleviating a significant drag on disposable income in recent years (Figure 182). Such measures add to households' aggregate household interest-servicing capacity, so should help sustain the economic and policy cycle.

Figure 182: Tax payments are at a record high as a share of household income, reflecting fiscal restraint as national income booms; personal tax cuts due in 2024 would reverse some of this, boosting interest servicing capacity

Household secondary income payable (tax, non-life insurance premia, and transfers), % of gross income

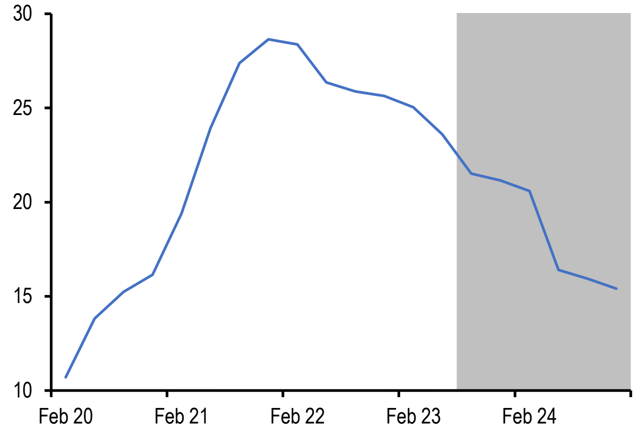


Source: ABS, J.P. Morgan. Includes tax, non-life insurance premia, and transfers.

RBA balance sheet contraction reinforces the thematic of wider rate differentials. **Australia's QT process is fast compared to DM peers**, thanks to the maturity of the RBA's remaining bank funding facility in 1H24, and the significant holdings of shorter bonds relating to the YCC program. The RBA's **balance sheet should be roughly half its peak pandemic size by the end of 2024**. By removing excess reserves quickly, FX forward funding becomes more expensive, so increasing the cost of speculative shorts, all else equal. The faster balance sheet normalization relative to the RBNZ reflects the latter's structural rebuilding of FX reserves, and systematic NZD sell flow (see the NZ section).

Figure 183: The RBA's balance sheet contraction is fast, even though it is not actively selling assets

RBA balance sheet, with projections, % of GDP



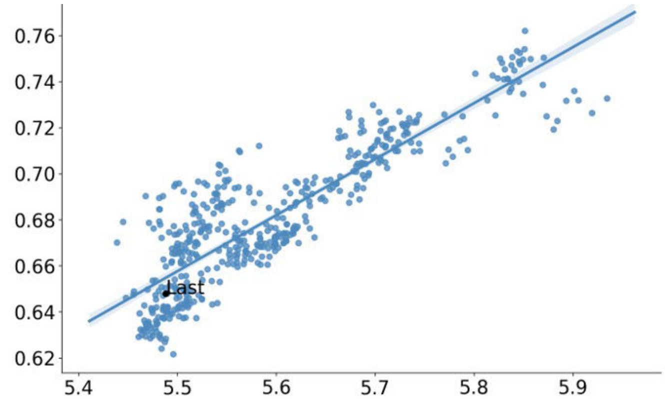
Source: RBA, J.P. Morgan.

The new regime for trade and capital flows

Ongoing tightness of industrial commodity markets have been a boon for Australian trade receipts, compounding the solid +1.3%-pt contribution to GDP from real net trade this year (see the "resilience" link above). Still, the implications for FX are subtle, when supply-side-driven inflation is also a global problem. This argues for taking a shorter-term perspective on some established relationships between trade/capital flows, and AUD. From an FX valuation standpoint, **even limiting our attention to the last couple of years – where the commodity/FX beta has been weakened by negative correlation between commodities and equities – AUD/USD screens a little cheap (Figure 184).**

Figure 184: AUD/USD is slightly cheap relative to industrial metals prices, even on a regression window limited to the 'stagflation' period of 2022 onward

X axis: JPM industrial metals index (log terms); Y axis: AUD/USD



Source: J.P. Morgan. Regression on daily data since Jan 2022.

On the capital flow side, the economy's transition to current account surplus status, after a century of persistent deficits,

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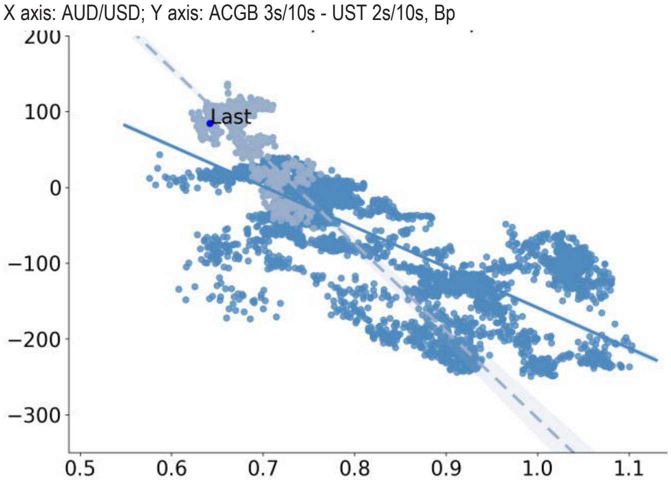
necessitates that there is less inflow than is historically normal. **This is arguably [a symptom of under-investment relative to income,](#)** which has weakened the beta from commodity prices to FX. In the previous linked piece, we also establish that, while current account surpluses boost AUD superannuation funds' foreign assets, the resultant, greater volume of hedge management flows has not been a clear empirical driver of AUD/USD.

Investment may be somewhat sluggish compared to national income growth, but, as discussed above, the linkage from commodity prices to the economy via fiscal policy is at least gathering momentum again. This is mirrored on the capital flow side: net foreign ownership of ACGBs is increasing, to accommodate the RBA's shrinking holdings of bonds.

Figure 185: The ACGB curve has traded steeper at given exchange rate (or AUD/USD lower at given curve spread) during this policy cycle

X axis: AUD/USD; Y axis: ACGB 3s/10s - UST 2s/10s, Bp



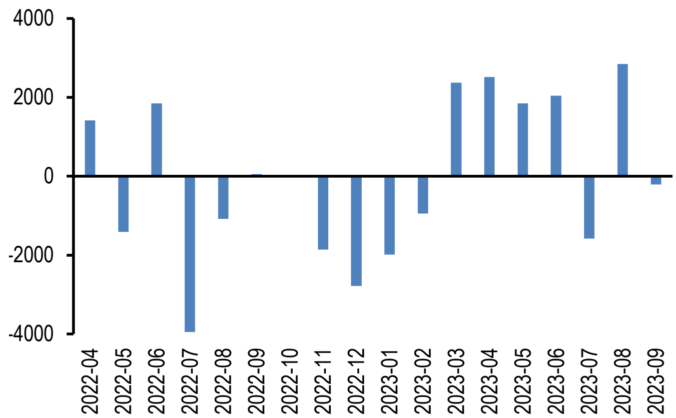
Source: J.P. Morgan. Dark blue is long-term sample, light blue is since the end of RBA YCC (October 2021).

In this cycle, it has taken a combination of a relatively steeper ACGB curve, and more attractive FX valuation level, to draw inflows into the bond market (Figure 185). Japanese investors appear to have been taking advantage of this unusual combination for unhedged investments, given that FX hedged returns to JPY remain very unattractive for the foreign portfolio. This year, **net demand for AUD government paper has recovered significantly, relative to 2022 (Figure 186)**, despite the potential for the BoJ's relaxation of YCC to trigger onshoring back to JGBs. Though we expect the rest of the world will continue to absorb a significant share of QT-shed supply, the Boil the Frog scenario clearly creates risk of reversal in Japanese flows.

Similarly, the Yen's policy idiosyncracies have put the AUD/JPY cross at unusually firm levels in the context of global end-of-cycle concerns. Moreover, AUD/JPY is particularly exposed to the specific "Boil the Frog" scenario outlined by our global colleagues: a lagged, catch-up tightening in financial conditions, reflecting US resilience and the Fed in high-hold mode.

Figure 186: Japanese inflows into the ACGB market have been solid in 2023, in a marked turnaround on last year

Net Japanese purchases of Australian government paper, JPY mn/month

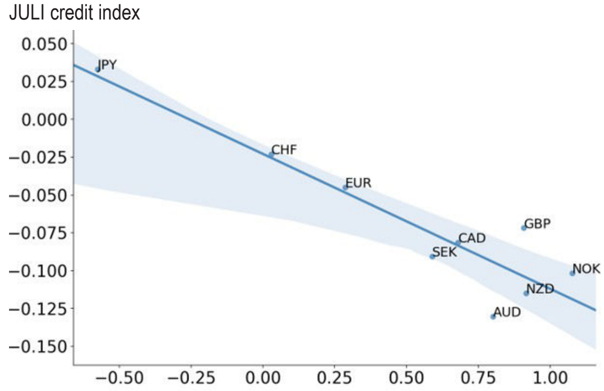


Source: BoJ, J.P. Morgan.

By computing historical G10/USD pairs' sensitivity to the US GDP FRI and JULI bank credit index, we find the FX market appropriately incorporates the trade-off between high beta pairs' positive exposure to US/global GDP growth, and also its vulnerability to resulting tighter financial conditions (the negative slope in Figure 187). AUD and JPY are at extreme opposite ends of the spectrum on these metrics, which makes selling the cross at today's historically high levels particularly attractive were the boil-the-frog scenario to eventuate soon.

Figure 187: Among all G10 FX combinations, AUD/JPY has the most downside leverage to a potential catch-up widening in credit spreads induced by US exceptionalism and Fed tightening (i.e., "Boil the Frog")

X axis: CCY/USD elasticity to US GDP FRI, Y axis: CCY/USD elasticity to JULI credit index



Source: J.P. Morgan.

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NZD: A probable early cutter; bearish near-term bias

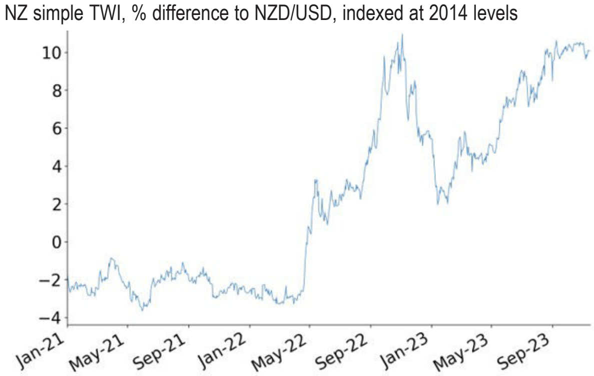
- **The RBNZ was one of the first central banks to tighten policy, and has since observed the highest money market rates in DM. Recent data have consolidated the sense that high household leverage makes the economy vulnerable to an overtightening scenario, with unemployment and mortgage arrears consistently rising.**
- **Nevertheless NZD/USD followed a shallow, grinding path lower through 2023 as expected, more on headwinds to high beta FX than idiosyncratic factors, while outperforming on a TWI basis. This reflects the fact that NZD FX had consistently undershot vs lofty local rates earlier in the cycle, so already embedded some discount vs rates.**
- **We expect NZD/USD to track a narrow range in the low 60s in 2024, finishing the year at 0.60. On the positive side, some valuation factors are supportive, as the exchange rate hasn't yet responded to the improvement in business sentiment, and stagflationary dynamics are fading as very strong immigration inflows support growth and capital returns. Global soft landing prospects are also a tailwind, via the shared correlation to risk assets.**
- **However, population-driven GDP growth doesn't alleviate the hit to individual households. As mortgages originated through 2020/21 roll to much higher rates, payment arrears will breach new cycle highs. 2024 OIS remains underpriced for easing and we expect the RBNZ to be the first DM central bank to cut. Given our forecast that Fed cuts will be backloaded into 2H24, RBNZ easing is the dominant near-term catalyst and suggests a bearish bias for 1H. Valuations are also less supportive than for AUD, and financial stability risks are greater; we forecast upside for AUD/NZD which is expected to reach 1.13 by 2Q24.**
- **Earlier this year the RBNZ disclosed an intention to structurally increase its FX reserves, and the magnitude appears significant. Though the timing will be sporadic and unknowable, the implied outlook for NZD supply should remain a persistent weight on the exchange rate, and will also limit the speed of local QT and CB balance sheet contraction.**

2023: Weakness assumed, weakness delivered, but with some TWI outperformance

NZD/USD has trended modestly weaker through 2023 and is in line with our Dec-2023 forecast (0.60) published in last year's Outlook. The move lower has been relatively orderly with the exchange rate tracking between 0.58-0.64, a narrower range than prior years. New Zealand's TWI has also downshifted, but in relative terms remains almost 10% higher than the NZD/USD (Figure 188) reflecting comparative weakness in CNY and JPY. The sideways path of AUD/NZD through the year also represents an underperformance icompared to our own expectations for the cross.

Figure 188: New Zealand's TWI has materially outperformed the NZD/USD

NZ simple TWI, % difference to NZD/USD, indexed at 2014 levels



Source: Stats NZ, J.P. Morgan. Simple TWI is a trade-weighted index of NZD vs the top four export destinations: USD, AUD, CNY and JPY.

The RBNZ OCR has been on hold since May, 75bp above our earlier estimate of terminal. The US rate cycle of course has also proved more protracted than expected, with the resulting bear-steepening in global yields weighing on high beta FX through 3Q. During the latter sell-off, **NZ rates exhibited stronger than usual correlation to US rates. For example, the correlation of NZD 1Yx3M OIS to the USD equivalent has risen from a 10 year average of 0.34, to 0.76 since mid-23.** This has made rate differentials choppier, and confounded the signal for FX. Still, the US rate shock has been more visible in longer-end yields, with **NZD/USD weakening as the 10Y spread narrowed to US during the global sell-off, then recovering as US rates rallied over the last month (Figure 189).**

Stagflation transforming to disinflation + contagion

Border reopening has led to an easing in NZ's stagflationary dynamics. Rapid population growth has lifted the economy out of technical recession, though slack is opening up as output growth falls short of labour supply growth. As such, the domestic catalysts for NZD are a little more balanced now, relative to earlier in the cycle. Labour is no longer a binding constraint, so provides more GDP growth for given inflation, improving real returns and so prospect for capital inflows into real assets like housing, and equities.

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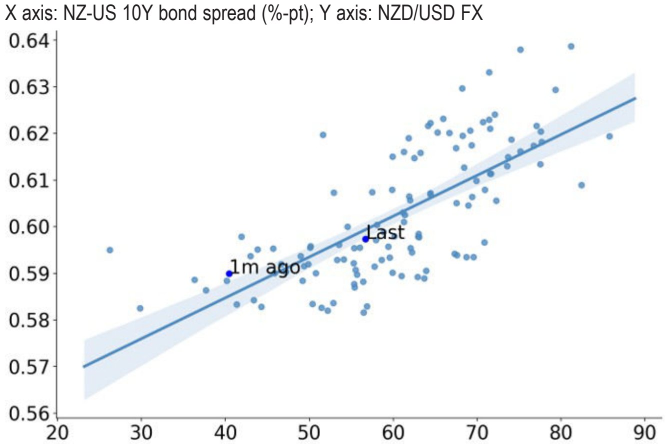
Figure 189: Since mid-23, NZGB-UST 10Y spreads have followed the US bear steepening and unwind, and NZD/USD has traced this relationship probably more on induced risk-off/on dynamics than the yield gap per se

X axis: NZ-US 10Y bond spread (%-pt); Y axis: NZD/USD FX

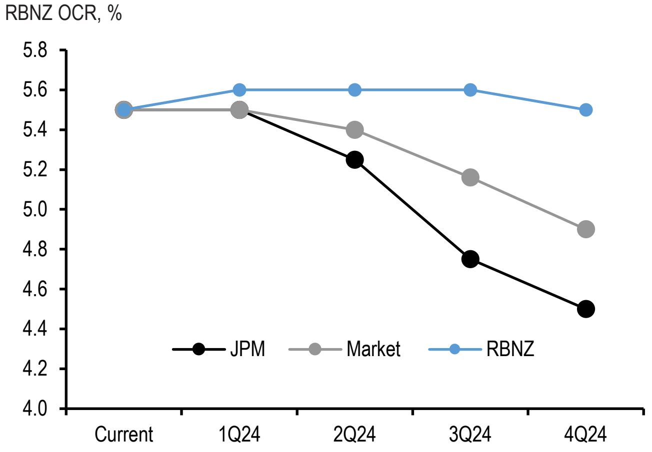


Source: J.P. Morgan. Daily since 1 June 2023.

The change of government and resulting fillip to business confidence (see the NZD section here) should reinforce this dynamic, and has historically been somewhat supportive for NZD. **Nevertheless, with output growth significantly lagging the boom in labour supply, excess capacity is rapidly returning to the labour market, sowing the seeds for earlier RBNZ cuts.**

Figure 190: J.P Morgan forecasts more front-loaded easing relative to the RBNZ's OCR path, and market pricing

RBNZ OCR, %



Source: RBNZ, J.P. Morgan

Population growth doesn't alleviate the risks to the banking system's existing portfolio of loans from rising mortgage arrears of incumbent households. **In the absence of a significant repricing of swap rates, households face another 150bp of proxy hikes in 1H24 due to mortgage refixings, with payment arrears already at cycle highs (see "Here's one I prepared earlier"). We retain the view that the RBNZ to be the first DM central bank to ease policy.** The central bank's own published OCR track flags an easing cycle from 2025, though our baseline is cuts starting in 2Q24, with the OCR to reach 4.5% by end-2024 (Figure 190), which is also more dovish than market pricing.

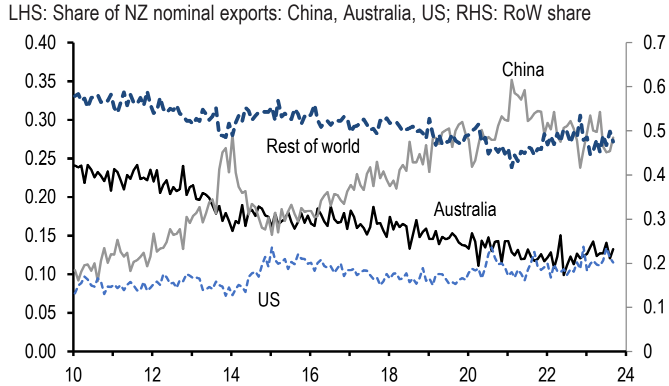
Our US colleagues project the Fed to begin easing policy from 3Q24, and with the RBNZ moving a little sooner, we don't expect large swings in rate differentials. However, the probabilities are skewed negatively, given that Fed cuts would make RBNZ cuts very likely, while the converse is not true. There are therefore more states of the world where the RBNZ is cutting next year, than there are for the Fed. **Our forecast for NZD/USD to hold the low 60s (Dec '24 target: 0.60) therefore embeds this local negative, against global supports from the Fed easing in a not-too-weak US economic backdrop. With the latter dynamic more backloaded in 2H24, we hold a more bearish bias for NZD in 1H.** For AUD/NZD the story is more straightforward, given our forecast for the RBA to remain on hold will result in partial policy rate convergence. This adds to long-standing support for the cross owing to relative trade dynamics, as discussed below.

Current account deficit to be reined in by demand restraint

NZ's current account has deteriorated markedly in recent years, with the deficit close to the largest on record.

Figure 191: China is NZ's largest most significant export partner by some distance, and the commodity mix is particularly exposed to underperformance of the Chinese consumer

LHS: Share of NZ nominal exports: China, Australia, US; RHS: RoW share



Source: Stats NZ, J.P. Morgan.

The widening owes to both the goods and services sectors, though the most underappreciated dynamic has been **weaker demand from China, weighing on dairy and meat exports. China takes the largest share of NZ's exports, by some distance (Figure 191).** Moreover, the details of China's malaise - concentrated in consumption, rather than industry or

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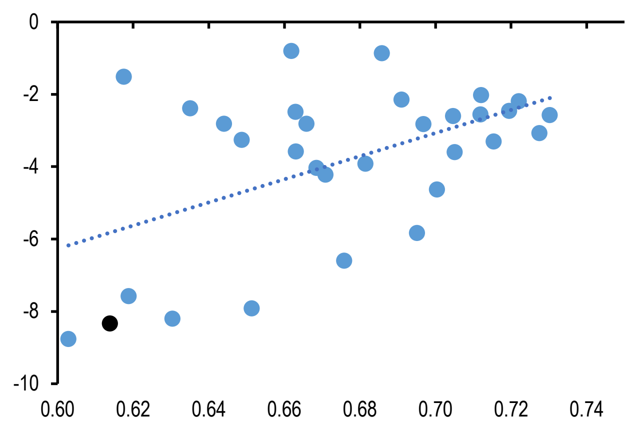
FAI - has been particularly negative for NZ given its position as exporter of higher end agricultural and food products to Chinese middle income households.

We expect NZ goods exports to see some benefit from recent China stimulus/policy support, though this should be less than seen by 'hard' commodity exporters more levered to the industrial cycle. Prospects for narrowing in the NZ current account deficit from these extreme wides (Figure 192) owe more to import normalization. As argued above, domestic demand has slowed significantly from the extremes of 2021 and stagflationary dynamics are easing; **the broad rebalancing of supply relative to demand should mean greater domestic net savings, offering some support to NZD via capital flow channels.**

Figure 192: NZ's current account is tracking at extreme levels; we anticipate modest improvement in the year ahead

X axis: NZD/USD quarterly average; Y axis: rolling 4 quarter current account balance % of GDP. Black dot most recent observation.



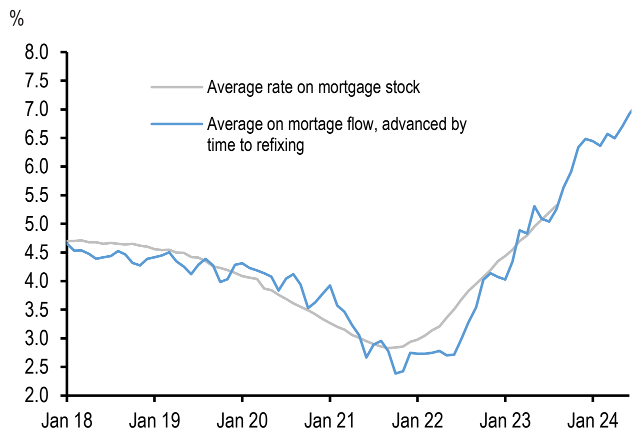
Source: Stats NZ, J.P. Morgan

Tail risks loom in the financial stability channel

We flag two tail risks to watch for NZD in the year ahead:

- Firstly, pressure in the housing sector continues to build, as higher borrowing and debt servicing costs erode disposable income per household. The adjustment has been orderly so far, though **the structure of the NZ mortgage market means domestic conditions will continue to tighten as loans originated through 2020/21 mature and revert to higher mortgage rates in 2024 (Figure 193).** The RBNZ forecasts the share of national household disposable income dedicated to interest payments will reach 18% by mid 2024, roughly double the rate from just three years ago. On this front, the RBNZ's Financial Stability Review flagged that non-performing loans/arrears are already trending higher and will continue to rise as the average rate on the mortgage stock converges to the prevailing rate. **Rising NPLs/arrears increase the probabilities of a prolonged economic downturn, rise in unemployment and deeper RBNZ cuts.**

Figure 193: Average mortgage rates will continue to increase as fixed rate loans mature and are reset at higher rates

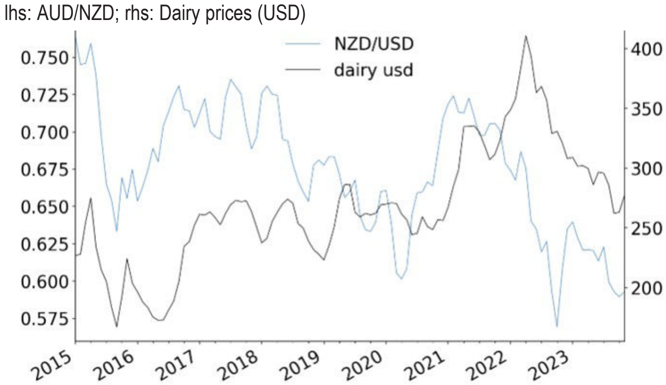


Source: RBNZ, J.P. Morgan

- The second tail risk relates to the dairy/agricultural sector. A more sustained period of depressed export prices and incomes (Figure 194), combined with high borrowing rates, would put given pressure on farm sector balance sheets.

Figure 194: Weaker dairy prices are a headwind for both the external sector and exchange rate

lhs: AUD/NZD; rhs: Dairy prices (USD)



Source: Haver, Bloomberg Finance L.P., J.P. Morgan

- **The RBNZ estimates that a drought lasting 1 year (a non-trivial risk given El Niño weather conditions have already been declared) would see loan default rates in the sector climb from the baseline of 3% to 9%.** Such a development cuts against our forecast for improvement in the current account and would also result in falling land prices, as well as pressure on bank asset quality and credit

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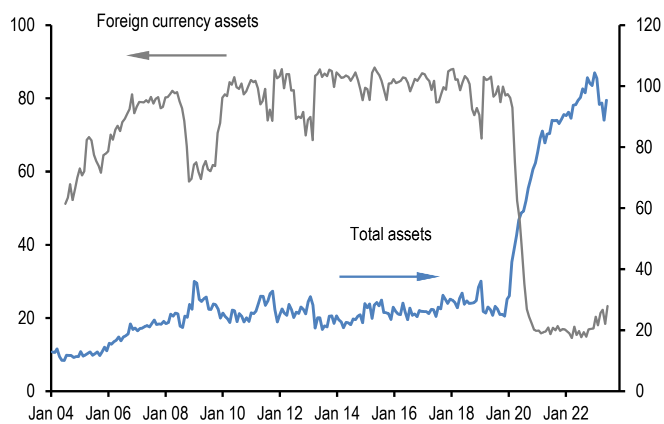
provision.

Building the FX buffers

The outlook for central bank balance sheet normalization in NZ also has some idiosyncracies, relative to others in DM. Earlier this year the RBNZ disclosed an intention to structurally rebuild its FX reserves, which have not been meaningfully increased in 20 years. Details have not been disclosed, but **to even roughly rebalance the foreign asset share, given the change in composition from large scale asset purchases (Figure 195), will involve significant NZD selling.** The timing will likely be sporadic and unknowable but the implied outlook for NZD supply should remain a persistent weight on the exchange rate, and will also limit the speed of local QT and CB balance sheet contraction, compared to others in DM.

Figure 195: The RBNZ's foreign reserve holdings have declined sharply as a share of the balance sheet, but will be rebuilt in coming years

LHS: Share of asset (%); RHS: NZD bn



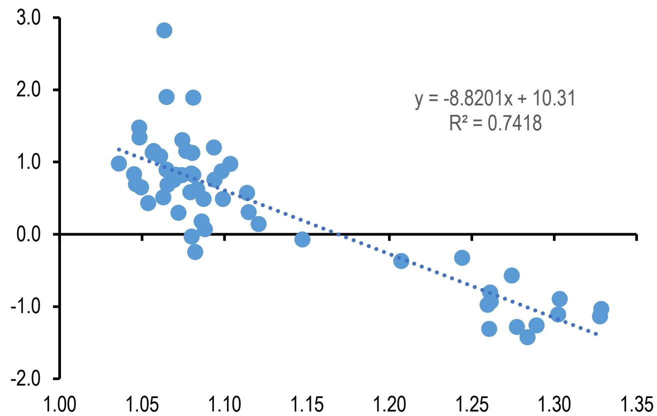
Source: RBNZ, J.P. Morgan

AUD/NZD gathering more cyclical supports

We have held a bullish bias for AUD/NZD for some time, though this view now has a more immediate catalysts via diverging cyclical outlooks and monetary policy trajectories (RBNZ to ease in 1H24, RBA on hold). The >100bp policy rate gap in NZ's favour observed over 2022-23 is historically unusual, and eventuated only as a temporary state driven by the speed of hikes and NZ's one year longer policy lag (see here). The case for policy spread normalization can be summarized by the AUD-NZD unemployment rate differential, which is shifting down, and has displayed a clear negative correlation with AUD/NZD (Figure 196).

Figure 196: A more pronounced deterioration in NZ's labor market is consistent with higher AUD/NZD

X axis: AUD/NZD, Y axis: AUD - NZD unemployment rate differentials (%);

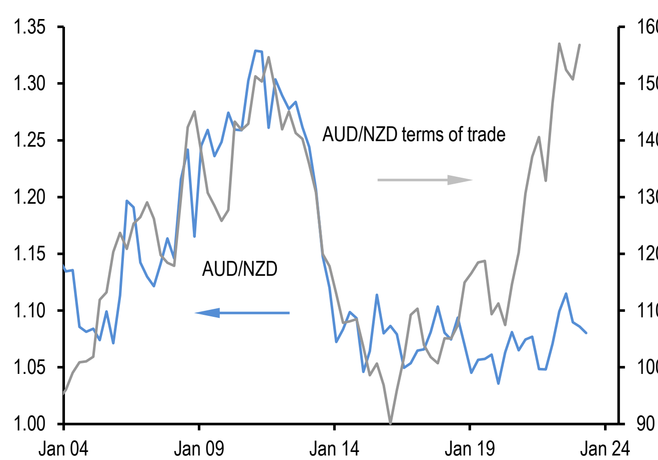


Source: ABS, Bloomberg Finance L.P., Stats NZ, J.P. Morgan.

As cyclical divergence becomes more obvious, it should help reinvigorate long-standing (but to-date, not predictive) structural supports for AUD/NZD. The cross is trading meaningfully below fundamentals implied by slower-moving factors like relative current account balances, and terms of trade. Australian export prices remain historically elevated with iron ore, coal and LNG resilient in the past year, while the agricultural goods basket more relevant to NZD has underperformed (Figure 197).

Figure 197: Terms of trade differentials are highly constructive for AUD/NZD through the balance of payments and fiscal channels

lhs: AUD/NZD; rhs: Relative terms of trade index



Source: Bloomberg Finance L.P., J. P. Morgan.

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CAD: Structural headwinds persist

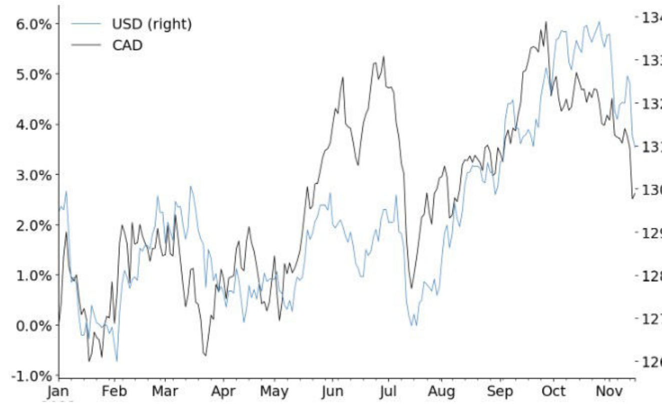
- **CA is diverging cyclically from the US, reflecting structural drags. BoC to ease slightly ahead of the Fed.**
- **Some of that is priced but we see scope for a bit more upside in USD/CAD in 1H back to 1.38.**
- **We see value in selling CAD vs high-beta in goldilocks environments where USD is weaker, or conversely vs USD in more aggressive recessionary scenarios.**
- **Productivity remains another medium-term headwind to CAD vs USD, like its household debt.**

USD/CAD came within striking distance of our year-ago 1.40 2023 forecast, meeting our expectations on some fronts but surprising on others. CAD ends the year mid-pack in the G10 space. We came into this year thinking that CAD should end its two-year streak of outperformance in G10 given concerns over CA's debt load prompting more obvious BoC-Fed divergence, and with an added kicker of a US recession in 2H'23 weighing disproportionately on CAD. The recession certainly hasn't panned out, but there is growing evidence of a local downturn which has helped push USD/CAD higher towards our original forecasts. CAD's performance on crosses meanwhile has been mixed, with pockets of outperformance tending to coincide around periods of USD strength (Figure 198), especially when oil has been bid.

In this higher-for-longer environment, the overarching issue of Canadian debt remains central to our USD/CAD framework. Despite being surprised at the BoC renewing its hiking cycle this year despite debt concerns, we've felt that the issue would eventually be a material differentiantor over time for CAD vs USD in particular. We went further this summer to expand on the role of housing and household debt in the USD/CAD outlook, and came out with two key findings relevant to next year: first that **the most likely channel of impact was not financial stability or wealth but rather debt servicing and purchasing power**, and that **this was a slower-burning issue that would get gradually get more relevant for the currency into 2024.** Second, **relative debt ratios between the US & Canada** (Figure 199) **added explanatory power in modeling USD/CAD and suggests the wide divide should remain a long-term structural support for the cross** (Figure 200) (see *Housing a medium-term structural support for USD/CAD*, Jun '23). We maintain these views, and forecast the ongoing pass-through to the consumer to continue to support USD/CAD up to 1.38 in mid-2024 before easing closer to Fed cuts and a slightly softer USD TWI trajectory (but staying above 1.30).

Figure 198: CAD derived some support from a still-strong USD this year

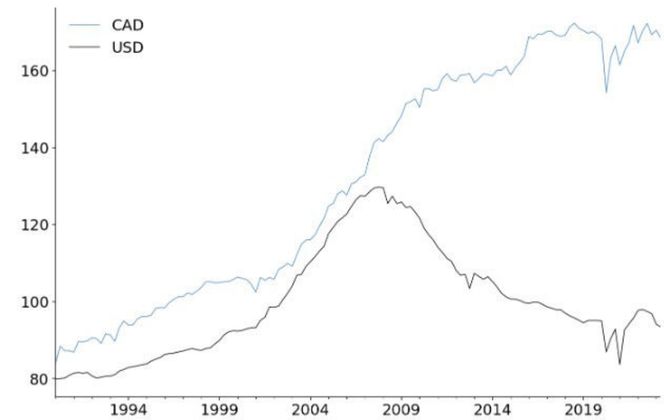
LHS: Index of CAD vs G10 (ex-USD) (indexed to 0 on Jan 1). RHS: USD TWI



Source: J.P. Morgan

Figure 199: US-CA debt ratios remains a fundamental differentiator between the two economies, which is even more germane in a high-for-long environment

HH debt/income ratios



Source: J.P. Morgan, Haver

And now Canada does appear to be losing momentum. Canada slowed unexpectedly through mid-year, following a very-robust 1Q. Part of that is technical (wildfires), but part of it is not - consumption has more clearly deviated from the US, and both ours and the BoC's forecasts now point to more consumer malaise next year than had originally been anticipated. Importantly, **this can be linked to the debt issues we expected would be a medium-term issue for CAD;** BoC Gov. Macklem recently noted that there was some evidence of Canadian households stockpiling savings so as to offset higher housing costs - a phenomenon not mirrored in the US. Relatedly, our economists have recently slashed their 2024 GDP forecasts (from 2% to 1% 4Q/4Q), in part due to highly leveraged consumers having a harder time absorbing higher inflation and rates than had been expected (see GDW). Canadian and US growth prospects/momentum have now diverged to an unprecedented level this cycle (Figure 201).

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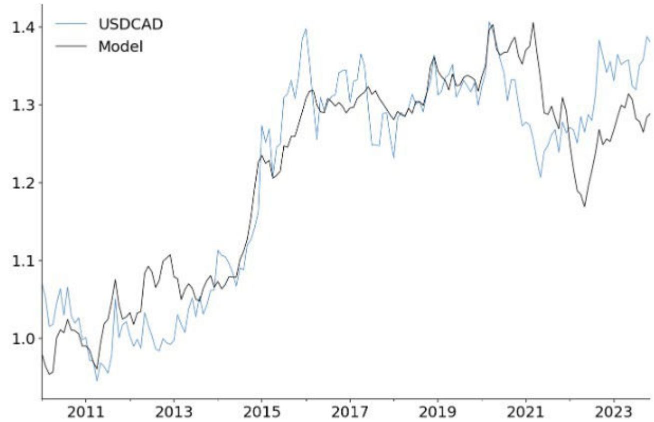
Figure 200: Adjusting USD/CAD for debt/income ratios suggests the pair should remain structurally elevated

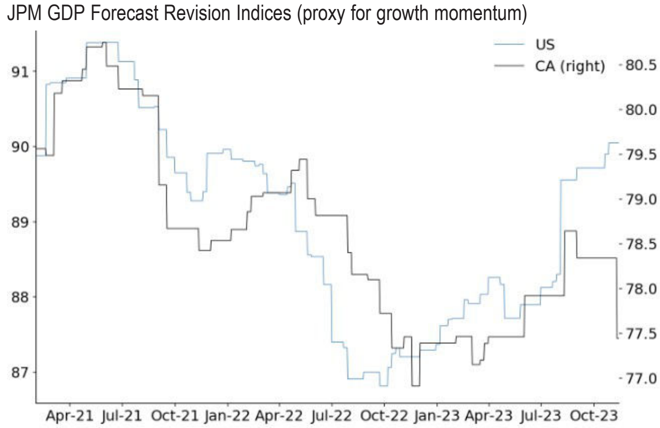
USD/CAD vs model of Oil + US/CA HH debt/income ratios. Rsq 0.85



Source: J.P. Morgan, Haver

Figure 201: US & CA momentum has finally diverged in favor of the US

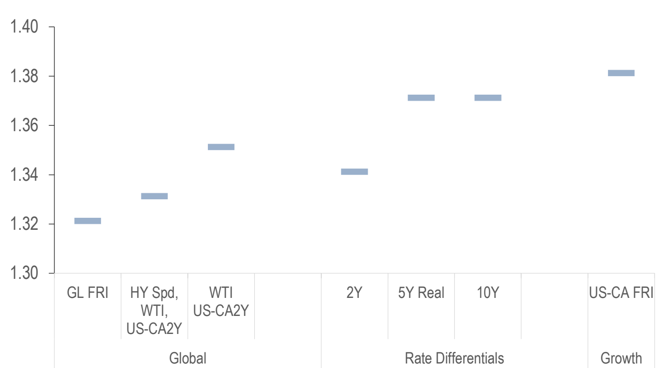
JPM GDP Forecast Revision Indices (proxy for growth momentum)



Source: J.P. Morgan

Figure 202: Short-term fair value models peg USD/CAD fair value between 1.32 (global factors) and 1.38 (relative local growth)

STFV estimates



Source: J.P. Morgan

But we find that USD/CAD screens reasonably well-adjusted to local growth factors already, and sits above some global model fair value estimates. Figure 202 lays out several short-term fair value models for USD/CAD. Organizing them by global, rates and relative growth offer some insight into what has been most relevant for CAD of late. We find that:

- **CAD screens cheap to global factors**: Our global three-factor STFV model points to fair value at 1.33. Notably, this broke down in mid-July, concurrent with the shock repricing in global term premia. CAD is also 3% cheap to global growth momentum vs the dollar.
- **CAD looks fair vs relative growth**: USD/CAD has been well-correlated of late with our JPM economics GDP Forecast Revision Indices, which proxy growth momentum. The one-way move higher in US-CA growth momentum is consistent with USD/CAD closer to 1.38.
- **CAD is mixed to rates**: The read from US-CA rates are split. USD/CAD vs 2Y US-CA rate differentials (a proxy for monetary policy divergence) suggests USD/CAD around 1.34. But longer-end, growth-sensitive yield spreads (10Y, 30Y) are more closely aligned with USD/CAD in the higher 1.30s.

Essentially, we view this as USD/CAD screening fairly well calibrated to a Canadian-led growth slowdown (priced more appropriately in the 10Y differentials than the 2Y). CAD is also discounted relative to global cyclicals, though we think this is reasonable in a persistent high-for-long environment in which more vulnerable highly-levered economies continue to feel pressure from rolling interest rate resets. **This informs our still-elevated USD/CAD forecast through 1H.**

What conditions elicit more pronounced CAD underperformance?

With our forecast for the BoC to buck historical trends and ease modestly ahead of the Fed next year (2Q vs 3Q), it's worth exploring risk scenarios such as the BoC easing much more aggressively. The risk for us is earlier BoC easing vs the Fed and more short-end rates widening, but the USD/CAD read-through is more nuanced. Given the divergence in cyclical prospects at the moment and the lingering debt burden faced by households, it's surprising to see forward-dated Fed & BoC pricing at near-equal levels by 1Q'25 (~4%), once again implying a relatively-faster pace of easing from the Fed (Figure 203). The BoC historically trails the Fed in rate-cutting cycles, but that is at odds with a more concerning growth picture right now in Canada. A further repricing of the BoC can occur if our economists' estimate of 2.1% oya core inflation is met next year, which sits below the BoC's 2.5% projection.

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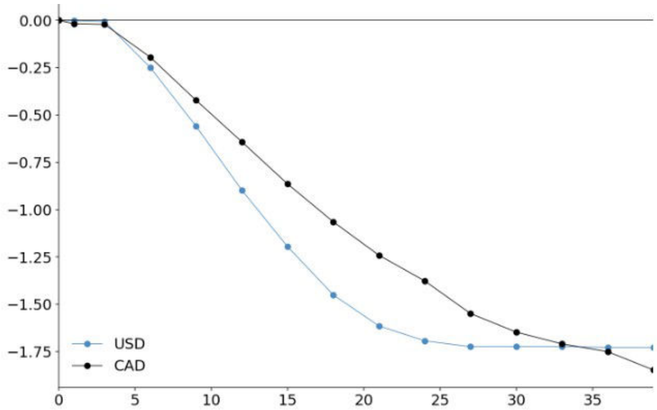
Figure 203: Fed-BoC near-term pricing prices in more Fed easing despite slower CA growth of late and its debt burden

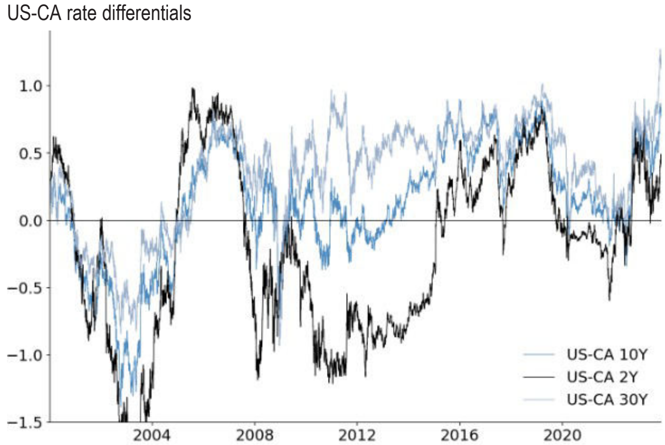
Cumulative cuts priced into OIS forwards



Source: J.P. Morgan

Figure 204: US-CA 2Y differentials are much lower than the long-end

US-CA rate differentials



Source: J.P. Morgan

But USD/CAD already discounts more dovish pricing in the BoC curve for now. A simple 2Y rate spread model for USD/CAD implies a US-CA 2Y spread that is roughly 35bps above current levels. And so if the BoC is in fact repriced more dovishly in the near-term, the risk premium embedded in USD/CAD could absorb some of that. Long-end differentials are more elevated by comparison (perhaps reflecting more risk premium priced into CA short-end rates for the recent stall in disinflation, in addition to more term premium in US rates) (Figure 204). **What this suggests is that a material move higher in USD/CAD (ie to test 1.40 and above) will likely require more than garden-variety BoC repricing on ongoing moderate slowing**. It may instead require a combination of 1) much-slower-than-expected domestic growth, 2) worsening US growth, and/or 3) a recessionary move lower in oil (say $60) that prompts markets to price a much-more aggressive BoC, such that short-end rates plus growth metrics move more in tandem against CAD.

As our global economists note though, that is still a possibility next year, and **on net, the mix of potential domestic and global scenarios produces more short-CAD opportunities than long. There is an asymmetry for CAD** given high-for-long is no longer as positive given debt, while more recessionary scenarios can hit from local, global and oil channels (bearish risks to the latter). Figure 205 walks through the outcomes for CAD in a range of global scenarios. In addition to the hard landing scenarios, **we see good value in selling CAD on crosses against other high-beta in clear goldilocks environments in which the USD is also weaker.**

- **Goldilocks:** USD/CAD falls as a function of broad USD weakness, but less so than other high-beta pairs due in part to 1) perceived USD beta and 2) structural supports to USD/CAD. Selling CAD on crosses during periods of exceptional USD weakness has proven highly effective over the last twelve months (Figure 206) and we expect that can continue vs other high-beta. Long AUD/CAD is viable in this scenario, especially if global growth is lifting together with improved China sentiment.
- **Round 2 Knock-Out:** Assumes sticky inflation, further DM hikes, and an eventual global hard landing. Buy USD/CAD (high conviction) but consider (conditionally) owning CAD vs G10 high-beta FX on CAD's lower beta as lower-volatility USD proxy trades (lower conviction).
- **Damage Done:** With the US & EU already in recession by 1Q, the Fed cuts rates in 1H'24. Sell CAD vs less-impaired (ex-EUR) reserves on poor risk dynamics, narrowing yield differentials, and probably lower oil.
- **High-for-long into later recession.** HFL continues to weigh on CAD via domestic growth channels but elevated policy rates in a slowly-weakening macro environment can support USD and select carry trades, with USD/CAD valuations unappealing. Preference to be neutral.

Figure 205: CAD strategy using top-down, global macro outlook

Scenario		USD/CAD	CAD Strategy
Damage Done		1.38	Short vs Reserves (ex-EUR)
Boil the Frog	Round 2 Knock-Out	1.44	Short vs USD, long (conditional) vs high-beta
	Big Squeeze	1.37	Neutral; lower conviction
Goldilocks		1.31	Long vs USD; Short vs AUD

Source: J.P. Morgan

Risks rest primarily in a continued slow-grinding stagflationary-lite environment in which the US stays resilient, high yields persist, oil remains in the $80-90 range, CA growth softens but stabilizes, and growth outside N.America remains under particular pressure (similar to 2021-22 playbook). Current supports include some growth metrics vs G10 (e.g. mfg order/inventory ratios near 1.0) and still-elevated real yields.

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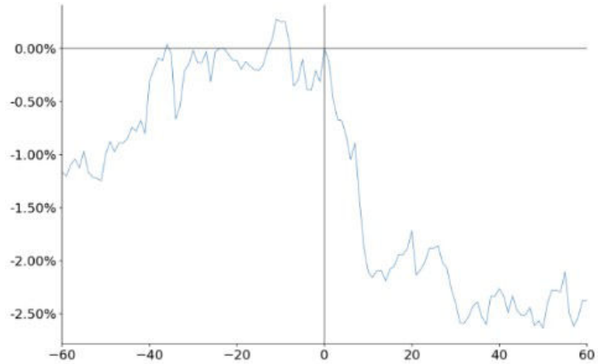
Figure 206: Selling CAD on crosses worked on big moves lower in USD

Avg change in CAD index vs G10 (ex-USD). Covers Nov 2022 (US CPI), Mar 2023 (SVB), July 2023 (US CPI) and Nov 2023 (US NFPs, CPI)



Source: J.P. Morgan

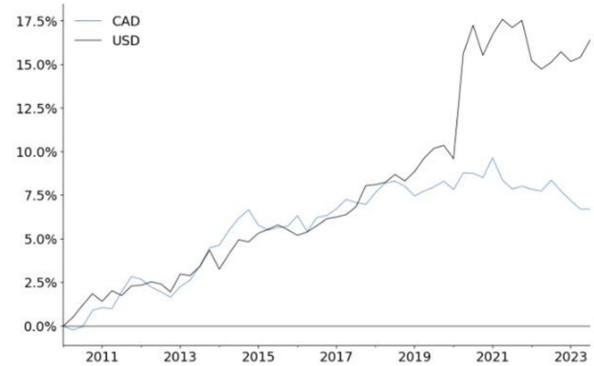
Productivity: structural USD/CAD support

There has been heightened focus on the role of immigration and population growth in CAD's cyclical prospects, but we think this misses the bigger picture of how Canadian productivity remains relatively impaired. The theme of tepid Canadian productivity is not new per se. But it is notable nevertheless that Canadian productivity measures have directionally diverged (lower) from the US despite material migration flows into Canada (Figure 207). A deeper decomposition of productivity to explore labor vs capital inputs suggests dramatic under-investment in Canada is a material headwind to Canada's longer-term cyclical prospects - both in absolute and relative terms (Figure 208). And so **it's not a surprise that the BoC recently downgraded its estimate of potential growth even despite strong population growth**. For productivity to improve vs the US, there will need to be substantial and sustained improvements in investment and/or shifts in other idiosyncratic produtivity drags (tax/regulatory policy, larger share of small businesses, etc).

From a structural perspective for CAD FX, lack of investment and productivity growth should serve as a slow-burning, non-cyclical, medium-term support to the USD/CAD cross - similar to our assessment of relative household leverage. This is more germane to USD/CAD now though given increased evidence of USD/CAD trading in line with proxies of US-CA growth momentum. Intuitively, changes in relative US-CA growth expectations (FRIs) are well correlated with relative productivity differentials (rsq 0.89). With USD/CAD pricing in a sharply-higher US-CA FRI differential of late, relative productivity can be thought of as a complementary, albeit longer-term, support to the USD/CAD cross. In essence, the US can continue widening the actual growth gap with Canada over longer horizons with stronger productivity and investment trends, even if net immigration to Canada helps to put a floor under productivity and delivers some cyclical & inflationary boost near-term. We think this is a positive structural support to USD/CAD, not unlike relative debt.

Figure 207: CA productivity has lagged the US and turned lower

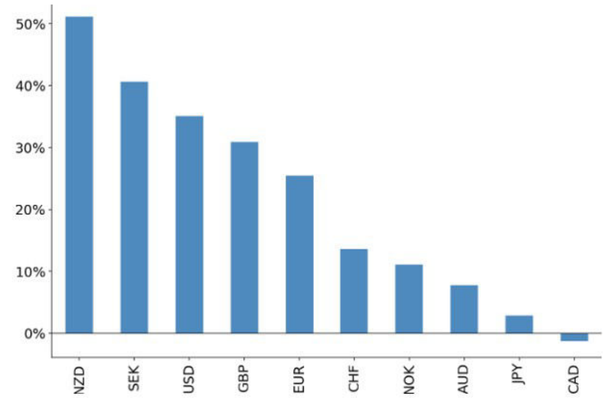
Cumulative change in productivity (output per worker) since 2011.



Source: J.P. Morgan, Haver

Figure 208: Canada's under-investment is stark and exacerbates productivity sluggishness. This is negative for the FX medium-term

Cumulative change in domestic investment (gross fixed capital formation). Last 10Y



Source: J.P. Morgan, Haver

US elections a CAD wildcard

CAD FX traders should watch the US election process closely next year. The key risk in our view from next year's US presidential elections is the possibility of a 10% universal tariff across all trade partners. Given the size of the US-CA trade relationship ($430bn/yr & 20% GDP, both high across US trade partners), there could be a shock to the economy and the currency (competitiveness adjustment + growth hit). There is additional uncertainty for CA given 1) the existence of the USMCA, and 2) how oil exports would be treated. The outcome will not be known until November, but markets can price in risk premium earlier depending on the polls.

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Central bank announcement dates in 2023-2024

	2023	2024→											
	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Australia	5		6	19		7	18		6	24		5	10
Brazil	13												
Canada	6	24		6	10		5	24		4	23		11
Chile	19	31			2	23	18	31		3	17		17
Colombia	17												
Czech Republic	21		8	20		2	27		1	25		7	19
Euro area	14	25		7	11		6	18		12	17		12
Hungary	19	17											
India	8		8										
Indonesia	20												
Israel		1	26		8	27		8	28		7	25	
Japan		23		19	26		14	31		20	31		19
Korea													
Malaysia		24		7		9		11		5		6	
Mexico	14		8	21		9	27		8	26		14	19
New Zealand			28		10	22		10	14		9	27	
Norway	14	25		21		3	20		15	19		7	19
Philippines	14												
Poland	6	9	7	6	4	9	5	3		4	2	6	4
South Africa													
Sweden			1	27		8	27		20	25		7	19
Switzerland	14			21			20			26			12
Thailand			7		10		12		21		16		18
Turkey	21	25	22	21									
United Kingdom	14		1	21		9	20		1	19		7	19
United States	13	31		20		1	12	31		18		7	18

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Event Risk Calendar

Month	Date	Country	Event
Nov '23	21	Hungary	NBH rate announcement
	23	Indonesia	BI rate announcement
	23	South Africa	SARB rate announcement
	23	Turkey	CBRT rate announcement
	27	Israel	BoI rate announcement
	29	New Zealand	RBNZ rate announcement
	29	Thailand	BoT rate announcement
	30	Korea	BoK rate announcement
Dec '23	5	Australia	RBA rate announcement
	6	Canada	BoC rate announcement
	6	Poland	NBP rate announcement
	13	Brazil	BCB rate announcement
	13	United States	FOMC rate announcement
	14	Euro Area	ECB rate announcement
	14	Mexico	Banxico rate announcement
	14	Norway	Norges Bank rate announcement
	14	Philippines	PNB rate announcement
	14	Switzerland	SNB rate announcement
	14	United Kingdom	BoE rate announcement
	15	Colombia	BanRep rate announcement
	19	Chile	BCCh rate announcement
	19	Hungary	NBH rate announcement
	19	Japan	BoJ rate announcement
	21	Indonesia	BI rate announcement
	21	Czech Republic	CNB rate announcement
	21	Turkey	CBRT rate announcement
Jan '24	1	Israel	BoI rate announcement
	23	Japan	BoJ rate announcement
	24	Canada	BoC rate announcement
	24	Malaysia	BNM rate announcement
	25	Euro Area	ECB rate announcement
	25	Norway	Norges Bank rate announcement
	25	Turkey	CBRT rate announcement
	31	Chile	BCCh rate announcement
	31	United States	FOMC rate announcement

Month	Date	Country	Event
Feb '24	1	United Kingdo	BoE rate announcement
	6	Australia	RBA rate announcement
	7	Thailand	BoT rate announcement
	8	India	BoI rate announcement
	8	Mexico	Banxico rate announcement
	22	Turkey	CBRT rate announcement
	26	Israel	BoI rate announcement
	28	New Zealand	RBNZ rate announcement
Mar '24	6	Canada	BoC rate announcement
	7	Euro Area	ECB rate announcement
	7	Malaysia	BNM rate announcement
	19	Japan	BoJ rate announcement
	19	Australia	RBA rate announcement
	20	United States	FOMC rate announcement
	21	United Kingdo	BoE rate announcement
	21	Mexico	Banxico rate announcement
	21	Norway	Norges Bank rate announcement
	21	Turkey	CBRT rate announcement
Apr '24	2	Chile	BCCh rate announcement
	8	Israel	BoI rate announcement
	10	Canada	BoC rate announcement
	10	New Zealand	RBNZ rate announcement
	10	Thailand	BoT rate announcement
	11	Euro Area	ECB rate announcement
	26	Japan	BoJ rate announcement
May '24	1	United States	FOMC rate announcement
	3	Norway	Norges Bank rate announcement
	7	Australia	RBA rate announcement
	9	United Kingdo	BoE rate announcement
	9	Malaysia	BNM rate announcement
	9	Mexico	Banxico rate announcement
	22	New Zealand	RBNZ rate announcement
	23	Chile	BCCh rate announcement
	27	Israel	BoI rate announcement

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Month	Date	Country	Event
June '24	5	Canada	BoC rate announcement
	6	Euro Area	ECB rate announcement
	12	United States	FOMC rate announcement
	12	Thailand	BoT rate announcement
	14	Japan	BoJ rate announcement
	18	Chile	BCCh rate announcement
	18	Australia	RBA rate announcement
	20	United Kingdo	BoE rate announcement
	20	Norway	Norges Bank rate announcement
	27	Mexico	Banxico rate announcement
Jul '24	8	Israel	BoI rate announcement
	10	New Zealand	RBNZ rate announcement
	11	Malaysia	BNM rate announcement
	18	Euro Area	ECB rate announcement
	24	Canada	BoC rate announcement
	31	Japan	BoJ rate announcement
	31	Chile	BCCh rate announcement
	31	United States	FOMC rate announcement
Aug '24	1	United Kingdo	BoE rate announcement
	6	Australia	RBA rate announcement
	8	Mexico	Banxico rate announcement
	14	New Zealand	RBNZ rate announcement
	15	Norway	Norges Bank rate announcement
	21	Thailand	BoT rate announcement
	28	Israel	BoI rate announcement
Sep '24	3	Chile	BCCh rate announcement
	4	Canada	BoC rate announcement
	5	Malaysia	BNM rate announcement
	12	Euro Area	ECB rate announcement
	18	United States	FOMC rate announcement
	19	United Kingdo	BoE rate announcement
	19	Norway	Norges Bank rate announcement
	20	Japan	BoJ rate announcement
	24	Australia	RBA rate announcement
	26	Mexico	Banxico rate announcement

Month	Date	Country	Event
Oct '24	7	Israel	BoI rate announcement
	9	New Zealand	RBNZ rate announcement
	16	Thailand	BoT rate announcement
	17	Chile	BCCh rate announcement
	17	Euro Area	ECB rate announcement
	23	Canada	BoC rate announcement
	31	Japan	BoJ rate announcement
Nov '24	5	Australia	RBA rate announcement
	6	Malaysia	BNM rate announcement
	7	United Kingdo	BoE rate announcement
	7	United States	FOMC rate announcement
	7	Norway	Norges Bank rate announcement
	14	Mexico	Banxico rate announcement
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	18	United States	FOMC rate announcement
	18	Thailand	BoT rate announcement
	19	United Kingdo	BoE rate announcement
	19	Japan	BoJ rate announcement
	19	Mexico	Banxico rate announcement
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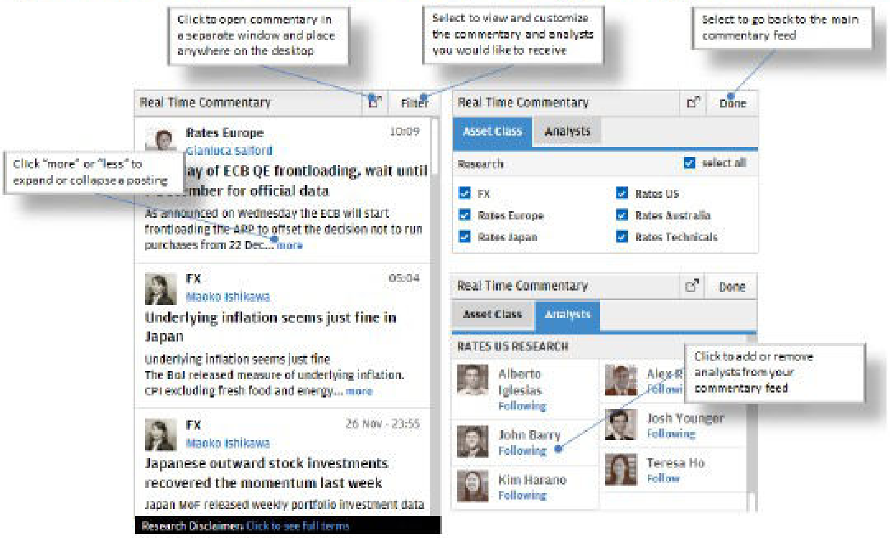

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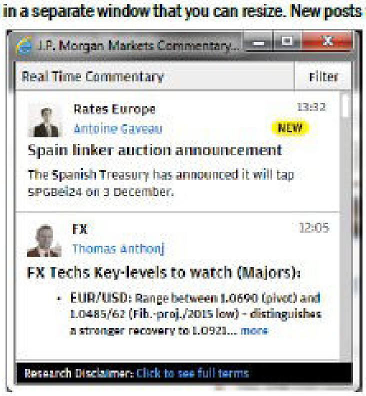

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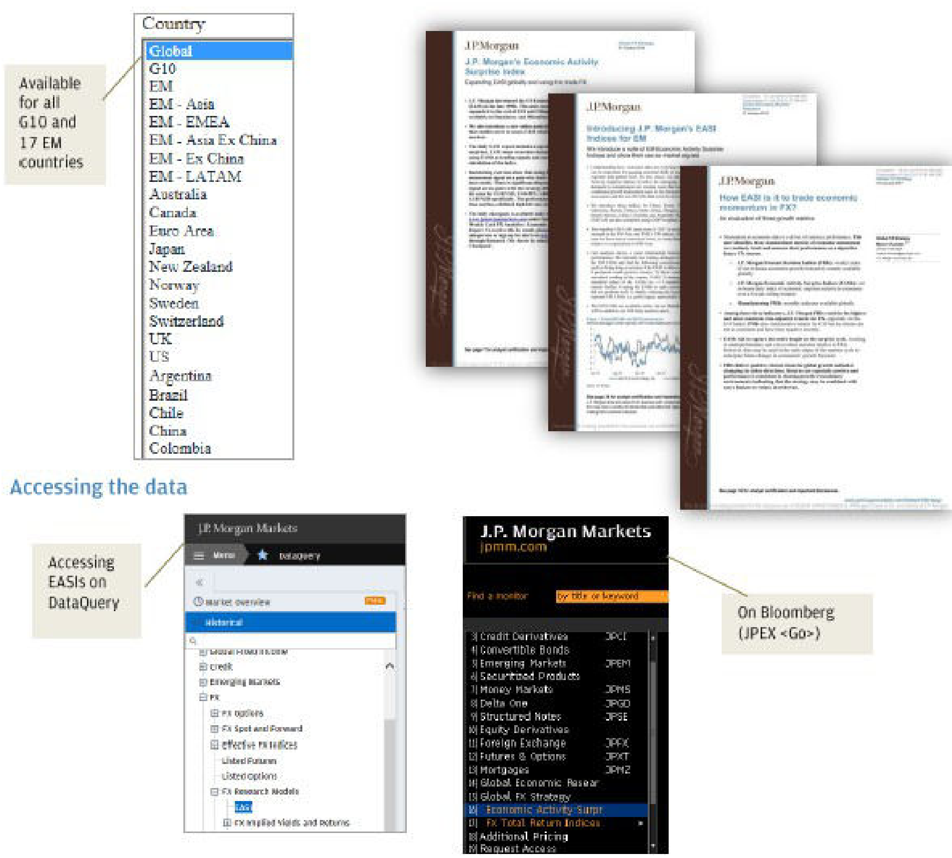
J.P. Morgan introduced the US Economic Activity Surprise Index (EASI) in the late 1990s. This was subsequently expanded to the rest of G10 and China in 2014 and more broadly to emerging markets in 2018. The **construction of EASIs** starts with the selection of activity data for each country after excluding releases that do not unambiguously impact growth expectations (such as inflation). Using this data set, we define surprises as a 0.5 standard deviation of the actual release from Bloomberg consensus for all monthly and quarterly data and a one standard deviation for weekly releases (like US jobless claims). Data over a rolling 6-week window is used with equal weighting applied to each. A "balanced" diffusion index of these surprises over the past six weeks is then calculated by taking the balance of positive surprises over that period (i.e. number of positive surprises minus negative surprises) and dividing it by the total number of data releases. The end result is the index by country which is then weighted by GDP to derive regional aggregates. Note that the EASIs are not weighted to correlate with any particular market and are intended to measure pure growth surprises. **A positive (negative) indicates if activity data is beating (missing) consensus** on average. The data is **available for all G10 and 17 EM countries.**[1]

We have found these indices to be **timely indicators of persistent economic momentum** which in some cases leads currency returns. These **indices maybe accessed** by J.P. Morgan clients either on **DataQuery**, Bloomberg, our **daily analytic reports** on jpmm.com (under **Global FX strategy | Daily/ Weekly Cash FX Analytics** | G10 EASI report or EM EASI vs. FX performance report) or our **EASI app** (on the **Global FX strategy** page on jpmm.com).



[1] For detailed methodology, see JPM EASI: Expanding EASI globally and using it to trade FX (Meera Chandan et al), How EASI is it to trade economic momentum in FX? An evaluation of three growth metrics (Meera Chandan et al) and Introducing J.P. Morgan's EASI Indices for EM (Jonathan Cavenagh, Jonny Goulden, Anezka Christovova et al).

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In 2006 J.P. Morgan introduced VXY and EM-VXY, the FX industry's first benchmarks for implied volatility in G10 and emerging markets. **VXY Global followed in 2011** to track volatility across all currencies. The indices are **liquidity-weighted averages of ATM implied volatility** based on USD-based pairs' options market turnover.

The offering was **expanded in 2020 to contain the full-term structure for all three baskets at 1M, 3M, 6M, 9M and 12M tenor** following the same methodology and using the same weights as for the original 3M VXYs. The VXY curves are available on Bloomberg. Bloomberg format for accessing the VXY basket G7, EM and GL is: for tenors 1M, 6M, 9M and 1Y – JPMV<basket><tenor>, and for 3M tenor – JPMVXY<basket>.

This year we also introduce **OTM strikes in form of 25 delta risk reversals and 25 delta butterflies** [1]. Bloomberg tickers for those are given for 25d risk reversals as JPMVR<basket><tenor>, and similarly for 25d butterflies as JPMVB<basket><tenor>, where basket designation is G for Global, E for EM and 7 for G10, and tenors designations are 1M, 3M, 6M, 9M and 1Y.

Accessing the data on Bloomberg

JPMV<basket><tenor> for ATM vols, where tenor is 1M, 6M, 9M or 1Y and basket G7, EM or GL, and
JPMVXY<basket> for 3M tenor ATM vols
JPMVR<basket><tenor> for 25d risk reversals
JPMVB<basket><tenor> for 25d butterflies, where basket designation is G for Global, E for EM and 7 for G10, and tenors designations are 1M, 3M, 6M, 9M and 1Y

JPMorgan Volatility Indices

Description	Ticker
11) JPMorgan G7 VXY	JPMVXYG7
12) JPMorgan EM VXY	JPMVXYEM
13) JPMorgan JPMVXYGL	JPMVXYGL
14) JPMorgan VXY-EM 1M	JPMVEM1M
15) JPMorgan VXY-EM 6M	JPMVEM6M
16) JPMorgan VXY-EM 9M	JPMVEM9M
17) JPMorgan VXY-EM 1Y	JPMVEM1Y
18) JPMorgan VXY-G10 1M	JPMVG71M
19) JPMorgan VXY-G10 6M	JPMVG76M
20) JPMorgan VXY-G10 9M	JPMVG79M
21) JPMorgan VXY-G10 1Y	JPMVG71Y
22) JPMorgan VXY-GL 1M	JPMVGL1M
23) JPMorgan VXY-GL 6M	JPMVGL6M
24) JPMorgan VXY-GL 9M	JPMVGL9M
25) JPMorgan VXY-GL 1Y	JPMVGL1Y
26) JPMorgan EMVXYBF1M	JPMVBE1M
27) JPMorgan EMVXYBF3M	JPMVBE3M
28) JPMorgan EMVXYBF6M	JPMVBE6M
29) JPMorgan EMVXYBF9M	JPMVBE9M
30) JPMorgan EMVXYBF1Y	JPMVBE1Y
31) JPMorgan G10VXYBF1M	JPMVB71M
32) JPMorgan G10VXYBF3M	JPMVB73M
33) JPMorgan G10VXYBF6M	JPMVB76M

JPMorgan Volatility Indices

Description	Ticker
34) JPMorgan G10VXYBF9M	JPMVB79M
35) JPMorgan G10VXYBF1Y	JPMVB71Y
36) JPMorgan GLVXYBF1M	JPMVBG1M
37) JPMorgan GLVXYBF3M	JPMVBG3M
38) JPMorgan GLVXYBF6M	JPMVBG6M
39) JPMorgan GLVXYBF9M	JPMVBG9M
40) JPMorgan GLVXYBF1Y	JPMVBG1Y
41) JPMorgan EMVXYRR1M	JPMVRE1M
42) JPMorgan EMVXYRR3M	JPMVRE3M
43) JPMorgan EMVXYRR6M	JPMVRE6M
44) JPMorgan EMVXYRR9M	JPMVRE9M
45) JPMorgan EMVXYRR1Y	JPMVRE1Y
46) JPMorgan G10VXYRR1M	JPMVR71M
47) JPMorgan G10VXYRR3M	JPMVR73M
48) JPMorgan G10VXYRR6M	JPMVR76M
49) JPMorgan G10VXYRR9M	JPMVR79M
50) JPMorgan G10VXYRR1Y	JPMVR71Y
51) JPMorgan GLVXYRR1M	JPMVRG1M
52) JPMorgan GLVXYRR3M	JPMVRG3M
53) JPMorgan GLVXYRR6M	JPMVRG6M
54) JPMorgan GLVXYRR9M	JPMVRG9M
55) JPMorgan GLVXYRR1Y	JPMVRG1Y

[1]. For detail methodology see 2023 rebalancing of VXY indices: VXY vol surfaces go live!, April 2023

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J.P. Morgan has made several **single-factor style frameworks** available for client use in recent years. These complement our macro-discretionary approach to FX trade recommendations and inform on market drivers or dislocations on a systematic basis. Last year we introduced a **cross-sectional multi-factor framework** for Global FX that combines select signals and suggests weights for each currency in the universe. This year, we have added a suite of **time series multi-factor frameworks** for G10 crosses to our toolkit.

In detail, **strategies currently covered in FX publications** include:

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- **Interest rate momentum and short term-fair value models** (based on levels of interest rates and commodity prices);
- **Positioning** (IMM reported positions);
- **Growth or economic momentum** (using J.P. Morgan economist growth forecast revision indices, Economic Activity Surprise Indices);
- **External balances** (using current account or variants of basic balances);
- **Equity momentum** (using local market equity returns).
- **Global multi-factor framework** (growth, carry, value, external balances; *T.E.A.M.: Introducing a multi-factor approach to FX*).
- **Time-series multi-factor framework** (equity momentum, defensiveness etc; *T.E.A.M. 2.0* : A time-series multi-factor approach to FX*).

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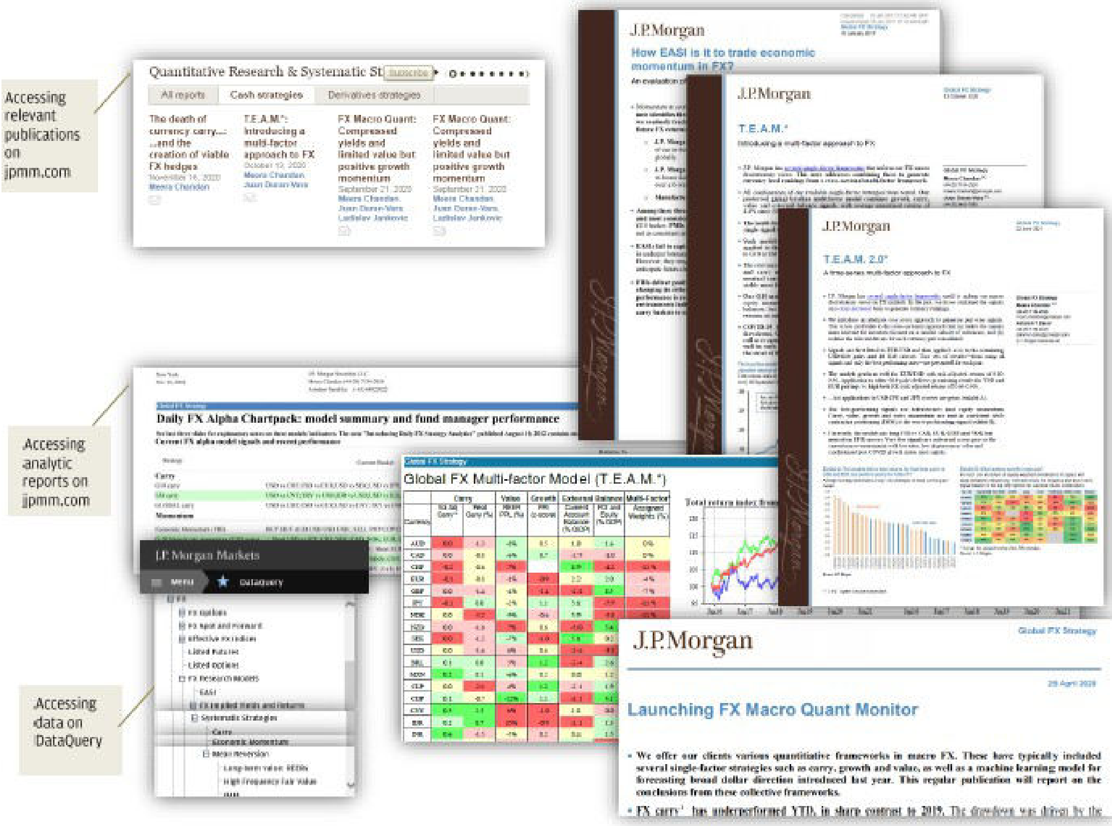

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