



An FX framework for H2 2023

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Chief International Strategist

Passion to Perform

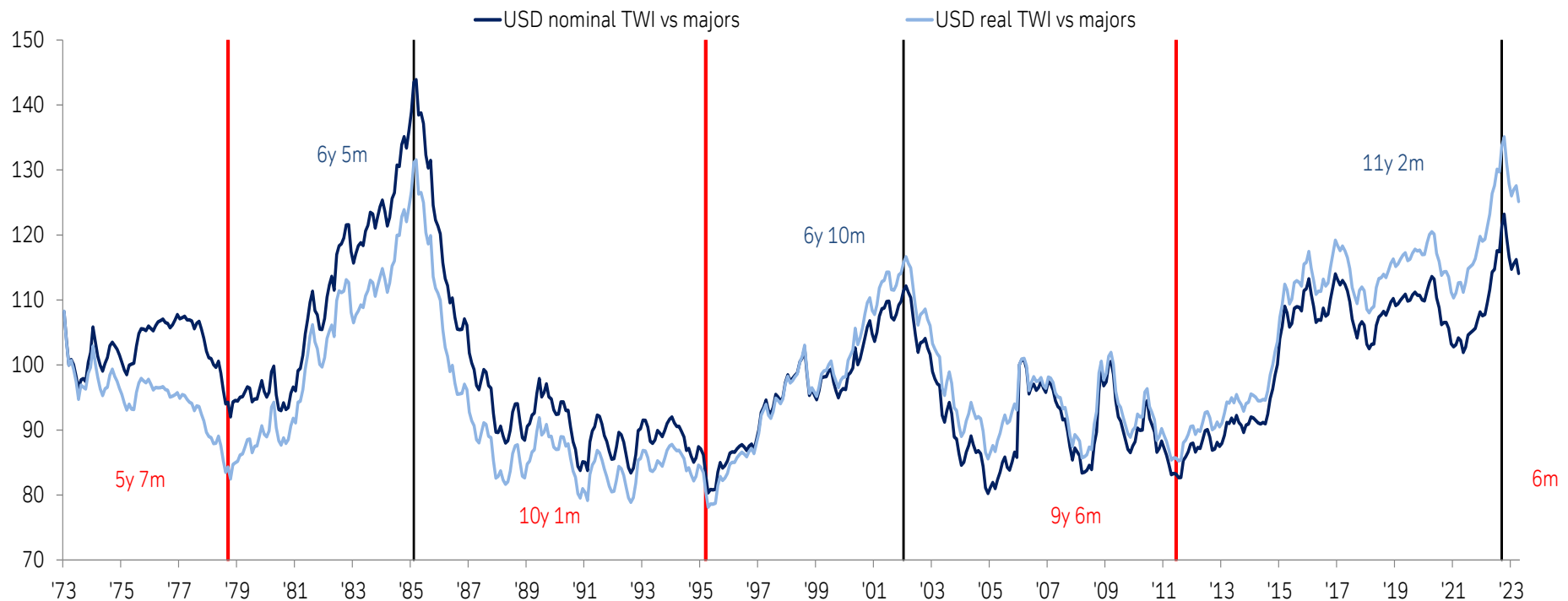
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Forecasting – The long and the short



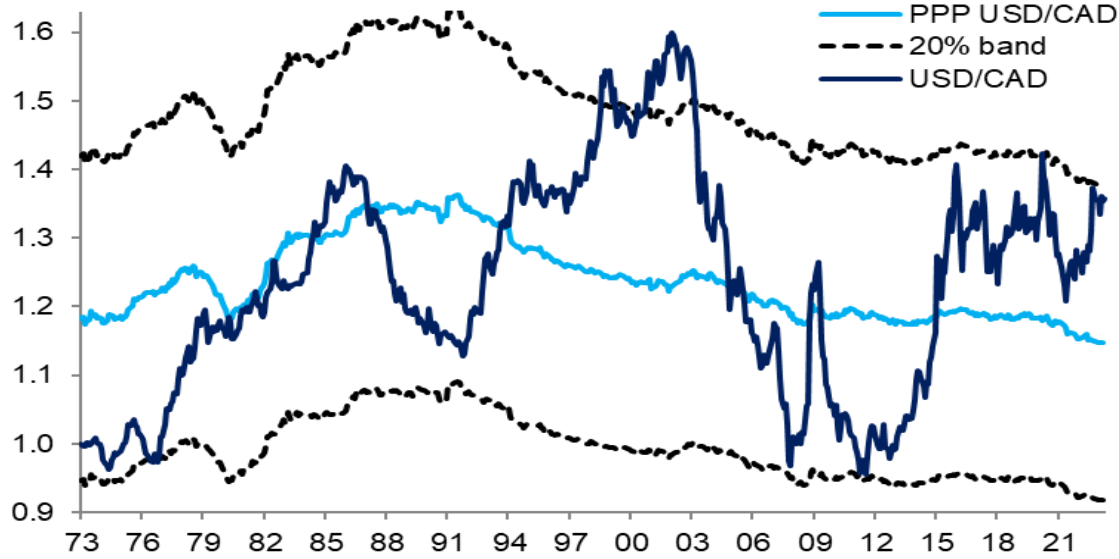
DB Forecasts (vs Market)	2023		2024		2025	
USD/CAD	1.32	(1.31)	1.26	(1.27)	1.24	(1.28)
EUR/USD	1.15	(1.12)	1.25	(1.15)	1.30	(1.09)
USD/JPY	120	(126)	115	(120)	110	(116)
AUD/USD	0.75	(0.71)	0.78	(0.74)	0.8	(0.75)

USD nominal TWI (index vs majors) cycles

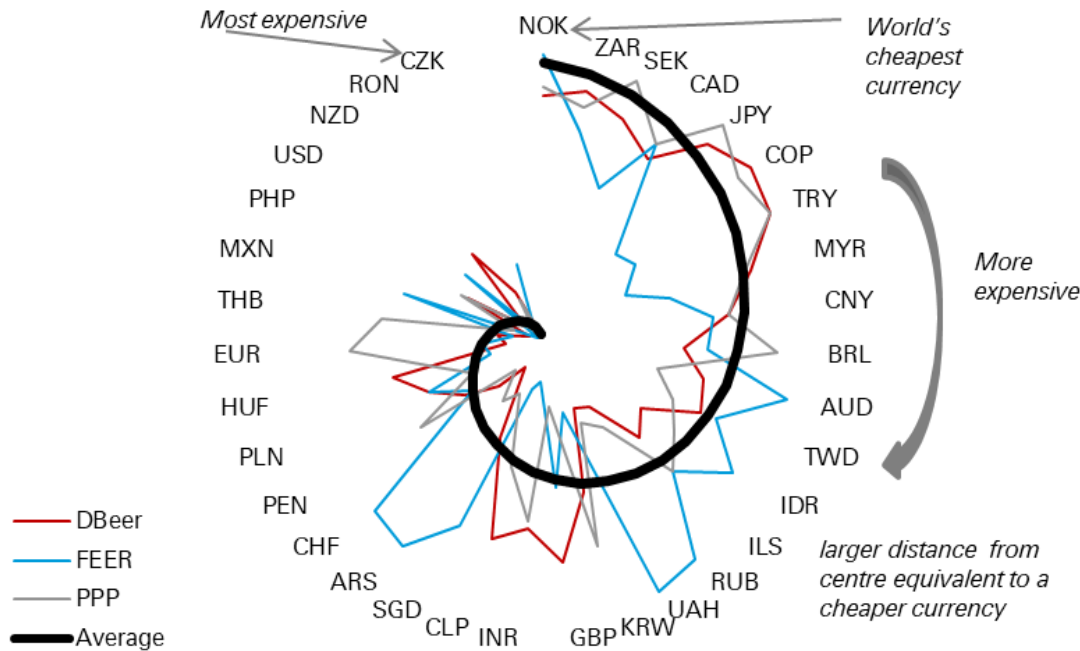


Source: Deutsche Bank, Refinitiv Datastream

Long-term Valuations ranked.



Valuation metrics	PPP	DBEER	FEER	average
USD/CAD	1.15	1.16	1.28	1.2
EUR/USD	1.29	1.13	1.07	1.16
USD/JPY	73	94	133	100
AUD/USD	0.74	0.83	0.77	0.78



Source: Deutsche Bank, Haver Analytics, Refinitiv Datastream

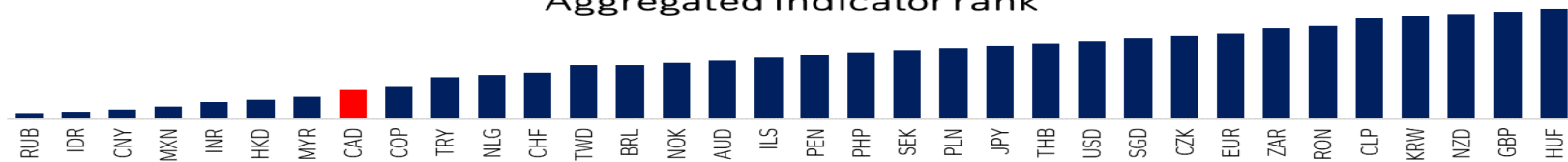
M/T outlook: What Heatmaps flag

When will twin deficits matter?



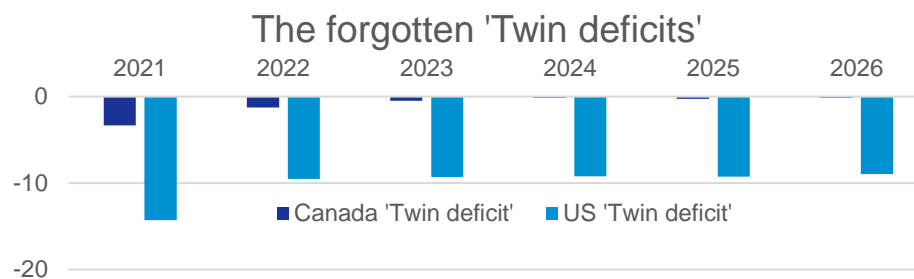
	Value	Balance of Payments										Monetary Policy						Fiscal			Growth				Inflation vs Targ		Betas											
	Real FX % dev. from 10Yr avg	Real FX % dev. from 10Yr avg	Real FX % dev. from 10Yr avg	Terms of Trade (YoY%)	FEER - misalignment (%)	Dbeer - misalignment (%)	PPP - misalignment (%)	CA+FDI (% GDP - last 12m)	CA (% GDP - last 12m)	12m change in CA (% of GDP - 4Q rolling)	Exports YoY of 3M MA	Imports YoY of 3M MA	Exports - Imports (YoY% of 3M MA)	Reserve 6M % change	3M Nominal interest rates	Real Policy rates	Policy rates - Core CPI (YoY%)	3M rates / fx 3Y his vol annu	M1 YoY %	12M change in M1 YoY%	M2 6M% change	Fiscal Impulse	General Gross Gov Debt (% GDP)	Gov Deficit (% GDP) IMF forecast	Gov Structural Deficit (% GDP) IMF forecast	Twin deficit	Industrial production (3m avg of YoY % change)	Industrial production (3m avg of YoY % change) less 20Y avg	Real GDP YoY%	PMI	PMI minus 3m average	Unemployment Gap	Equities 6M% growth	Housing prices YoY % change	Inflation vs 'target/goal'	12m change in CPI YoY	10 year Beta vs 10 yr yield	
USD	6.2	11.2	4.6	4.2	-1.2	5.4	13.6	13.8	-4.0	-3.7	-0.1	8.7	-1.6	10.4	7.3	5.5	0.0	-0.5	0.9	-8.3	-19.2	-6.4	-4.6	125.8	-6.9	-6.3	-10.4	1.0	0.2	1.6	47.1	0.1	-1.7	4.5	10.6	3.5	-3.3	0.014
JPY	-16.0	-18.2	-6.8	-9.5	4.7	4.9	-14.8	-35.2	-0.9	2.1	-1.8	4.8	9.3	-4.5	5.9	-0.1	-2.9	-3.4	0.0	4.4	-1.6	2.6	1.8	256	-3.9	-2.1	-0.5	-2.1	0.4	0.4	49.5	0.7	-0.1	3.9	6.3	1.7	2.0	0.056
EUR	0.0	0.1	5.9	-5.0	1.8	7.3	10.3	-7.0	-1.9	-1.0	-3.3	13.1	13.5	-0.5	11.3	3.6	-3.5	-2.1	0.4	-3.9	-12.7	-3.3	-0.5	89.0	-3.4	-0.9	-0.6	NA	NA	1.3	45.8	-1.4	-2.6	10.9	NA	3.6	-0.5	0.018
CAD	-2.9	-5.1	-5.8	0.8	-9.6	-4.4	-8.2	-9.7	-1.6	-0.4	-0.1	5.9	9.8	-3.9	6.7	4.8	0.1	0.0	0.7	-6.3	-19.3	4.4	-2.8	102.2	-2.2	-0.8	-2.0	1.7	0.9	2.1	50.2	-0.2	-1.8	2.7	8.8	1.5	-2.3	-0.001
GBP	1.8	-0.5	2.2	-2.7	-2.3	0.6	-9.0	5.4	-7.6	-3.9	-2.4	15.6	-0.4	16.0	8.4	4.9	-5.8	-1.9	0.5	-2.8	-11.4	-4.2	-1.8	109.7	-5.6	-1.4	-9.0	-2.6	-3.0	0.2	47.8	-0.5	0.5	5.3	4.0	4.2	3.0	0.012
FRF	-2.7	-3.4	NA	NA	NA	7.3	10.3	-7.0	-1.6	-2.2	-2.4	7.2	3.7	3.6	2.2	3.6	-2.5	-2.8	0.4	-5.7	-13.8	0.5	-1.4	112.4	-4.7	-2.5	-6.1	0.4	0.7	0.8	45.6	-1.2	-2.1	11.4	3.4	4.3	1.1	0.013
DEM	0.3	0.6	4.7	-3.3	6.3	7.3	10.3	-7.0	1.0	4.3	-3.5	7.8	2.1	5.7	14.3	3.6	-3.6	-2.3	0.4	-4.3	-10.5	-2.1	-0.3	66.5	-1.8	1.0	5.2	0.5	-0.6	-0.1	44.5	-0.7	-0.2	11.7	6.8	3.8	0.7	0.013
CHF	0.5	0.0	6.3	-4.7	1.3	-6.3	8.5	8.5	12.5	10.1	1.3	4.2	3.6	0.6	0.2	1.6	-1.1	-0.7	0.2	-9.8	-13.9	-12.9	-0.4	36.1	-0.3	0.4	7.2	8.6	5.6	0.8	45.3	-1.8	-0.9	4.7	6.0	0.2	0.0	0.035
AUD	2.3	-1.3	-44.6	24.4	2.1	-8.5	-2.7	5.5	-2.1	1.2	-1.9	9.7	4.7	5.0	5.2	4.2	-3.4	-3.9	0.4	-2.4	-19.5	7.2	-2.7	62.4	-5.8	-0.4	4.5	1.7	-0.4	2.7	-20.2	-8.5	-1.9	1.7	19.4	4.3	1.9	0.012
NZD	2.2	0.0	-2.6	-1.4	-4.2	16.9	2.9	14.1	-6.0	-8.9	-2.9	2.5	11.5	-8.9	29.2	5.7	-1.9	-0.8	0.5	-12.2	-29.6	-7.5	0.8	45.5	-5.9	-0.1	-8.5	-4.2	-4.9	2.5	49.1	-0.5	-0.9	6.7	18.9	2.6	-0.3	0.022

Aggregated Indicator rank



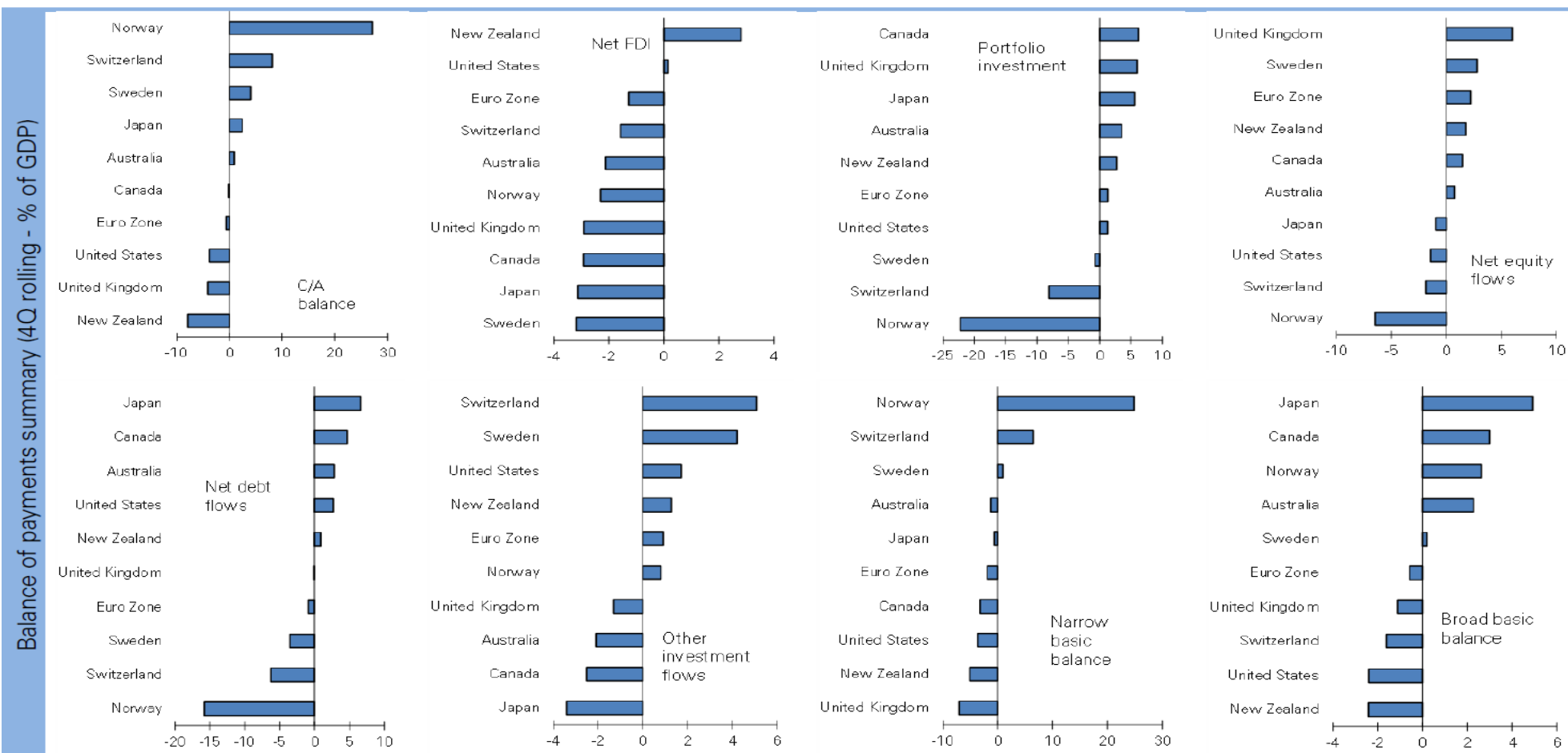
Source: Deutsche Bank, Refinitiv Datastream, Haver Analytics, S&P Global, Bloomberg Finance LP, IMF

Balance of Payments more narrative more than prediction



Global Capital Flows Monitor - 6 Feb 23

G10 summary items



Source: Deutsche Bank, Refinitiv Datastream, IMF

Macro Thematics:

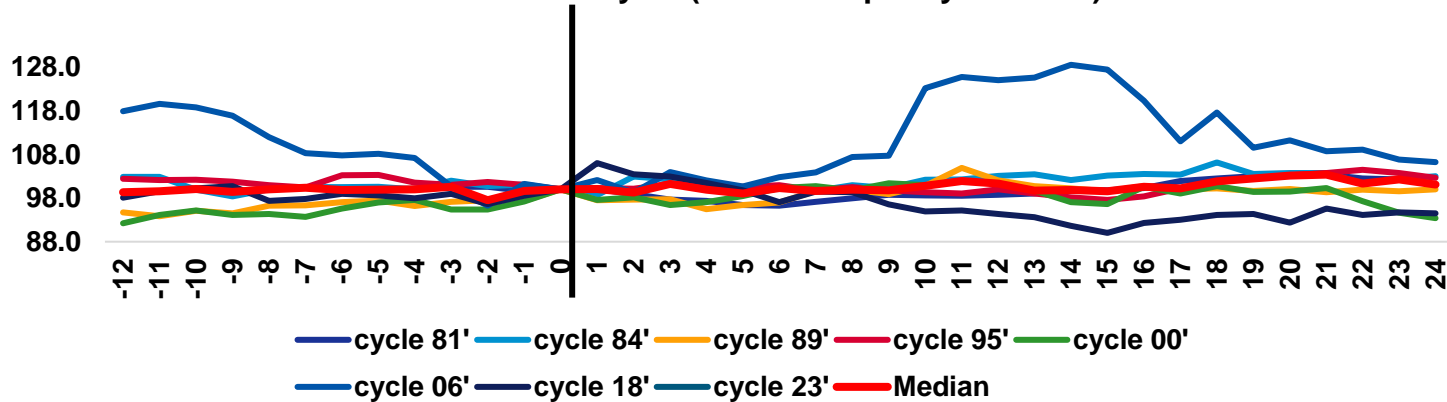
1. US regional banking credit crunch > Canadian bank housing stress?

2. Trading a US recession. Medians for how FX trading from the start of a US recession. US recession buy gold, swissie and yen. CAD lags



Median	1m	2m	3m	6m	12m	24m
USD/EUR (*)	-0.5%	0.9%	-1.4%	-3.4%	5.8%	0.3%
USD/JPY	-1.4%	-2.9%	-0.5%	-4.8%	-1.2%	-4.5%
USD/GBP	-0.1%	1.1%	0.4%	-3.2%	3.0%	8.4%
USD/AUD	-1.0%	-1.5%	-0.7%	-1.1%	1.8%	1.5%
USD/CAD	0.1%	-0.8%	1.2%	0.3%	1.3%	1.1%
USD/ZAR	0.0%	0.0%	0.2%	2.0%	11.0%	7.3%
USD/MXN	0.1%	0.4%	0.4%	-1.3%	-5.8%	-9.9%
EUR/JPY	-0.8%	-4.2%	-3.9%	-1.4%	-7.1%	-11.2%
EUR/CHF	0.0%	-1.3%	-0.4%	-1.9%	-1.1%	-6.9%
EUR/GBP	0.0%	1.0%	2.2%	1.0%	-0.7%	1.5%
EUR/SEK	0.4%	0.0%	0.2%	1.0%	-1.5%	0.8%
EUR/NOK	0.9%	-0.4%	0.9%	0.5%	0.3%	-0.7%
AUD/NZD	-0.8%	2.1%	2.5%	2.8%	2.0%	2.6%
Carry Index	-0.6%	0.1%	0.4%	0.9%	0.3%	5.1%
GOLD	3.6%	7.4%	5.4%	10.3%	3.1%	20.0%
SILVER	2.2%	1.0%	3.1%	2.1%	-19.7%	9.1%

USDCAD performance before and after the last Fed rate hike by each business cycle (Min. value per cycle = 100)



Source: Deutsche Bank, Bloomberg Finance LP, Refinitiv Datastream


CB expectations. How to trade Fed pivot dovish, but more hawkish next few months?




G10 Central Bank Meetings Snapshot

Monday, 15 May 2023


Δ is change from 12-May-23




USD	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	5.08				
14-Jun-23	5.10	2	2	7%	0.7
26-Jul-23	5.00	-10	-8	-31%	0.5
20-Sep-23	4.85	-15	-23	-91%	0.4
01-Nov-23	4.62	-24	-46	-186%	0.7
13-Dec-23	4.37	-24	-71	-282%	0.9
end-23	4.37	-71	-71		0.9
end-24	2.84	-153	-224		2.9
end-25	2.67	-17	-241		4.3




EUR	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	3.14				
15-Jun-23	3.36	23	23	91%	-0.3
27-Jul-23	3.54	18	40	161%	0.0
14-Sep-23	3.63	9	49	195%	0.3
26-Oct-23	3.61	-1	48	191%	-0.2
14-Dec-23	3.56	-6	42	167%	0.9
end-23	3.56	42	42		0.9
end-24	2.59	-97	-55		3.5
end-25	2.35	-24	-78		2.9




GBP	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	4.42				
22-Jun-23	4.62	20	20	80%	-0.2
03-Aug-23	4.77	15	35	141%	-0.7
21-Sep-23	4.85	8	43	173%	-1.2
02-Nov-23	4.85	0	43	171%	-1.4
14-Dec-23	4.80	-5	38	152%	-1.0
end-23	4.80	38	38		-1.0
end-24	3.92	-87	-49		2.7
end-25	3.64	-28	-78		2.2




AUD	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	3.82				
06-Jun-23	3.86	4	4	17%	1.8
04-Jul-23	3.91	4	9	35%	2.1
01-Aug-23	3.95	4	13	52%	1.1
05-Sep-23	3.93	-2	11	44%	2.8
03-Oct-23	3.88	-5	6	23%	5.3
end-23	3.75	-7	-7		5.7
end-24	3.10	-64	-72		7.6
end-25	2.94	-17	-88		2.3




NZD	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	5.25				
24-May-23	5.43	18	18	74%	0.1
12-Jul-23	5.51	8	26	104%	0.1
16-Aug-23	5.48	-3	23	93%	0.1
04-Oct-23	5.38	-10	13	53%	0.1
29-Nov-23	5.22	-17	-3	-13%	0.1
end-23	5.22	-3	-3		0.1
end-24	3.79	-142	-146		10.4
end-25	3.48	-31	-177		-3.7




CAD	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	4.50				
07-Jun-23	4.51	1	1	4%	0.2
12-Jul-23	4.53	2	3	12%	-0.0
06-Sep-23	4.44	-9	-6	-23%	-0.1
25-Oct-23	4.42	-3	-8	-33%	2.3
06-Dec-23	4.38	-3	-12	-46%	2.7
end-23	4.32	-18	-18		2.7
end-24	3.22	-109	-128		4.2
end-25	2.49	-73	-201		3.9




JPY	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	-0.02				
16-Jun-23	-0.02	0	0	0%	-0.0
28-Jul-23	-0.04	-2	-2	-9%	-0.1
22-Sep-23	0.02	6	4	16%	-0.1
31-Oct-23	0.02	0	4	17%	-0.2
end-23	0.04	6	6		0.7
end-24	0.18	13	20		1.7
end-25	0.30	12	32		1.6




SEK	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	3.38				
29-Jun-23	3.56	18	18	72%	-3.0
21-Sep-23	3.69	13	31	124%	-5.0
23-Nov-23	3.65	-4	27	108%	-5.0
08-Feb-24	3.51	-15	12	50%	-0.5
end-23	3.65	27	27		-5.0
end-24	2.72	-93	-66		-1.0
end-25	2.38	-34	-100		-1.0



NOK	Rate	bp px	% prob of		
			Total	25bp hike	bp Δ
Current	3.25				
22-Jun-23	3.53	28	28	110%	0.0
17-Aug-23	3.68	15	43	170%	0.0
21-Sep-23	3.75	7	50	198%	2.0
02-Nov-23	3.75	0	50	198%	2.0
end-23	3.71	47	47		3.0
end-24	2.85	-87	-40		2.9
end-25	2.65	-20	-60		3.0



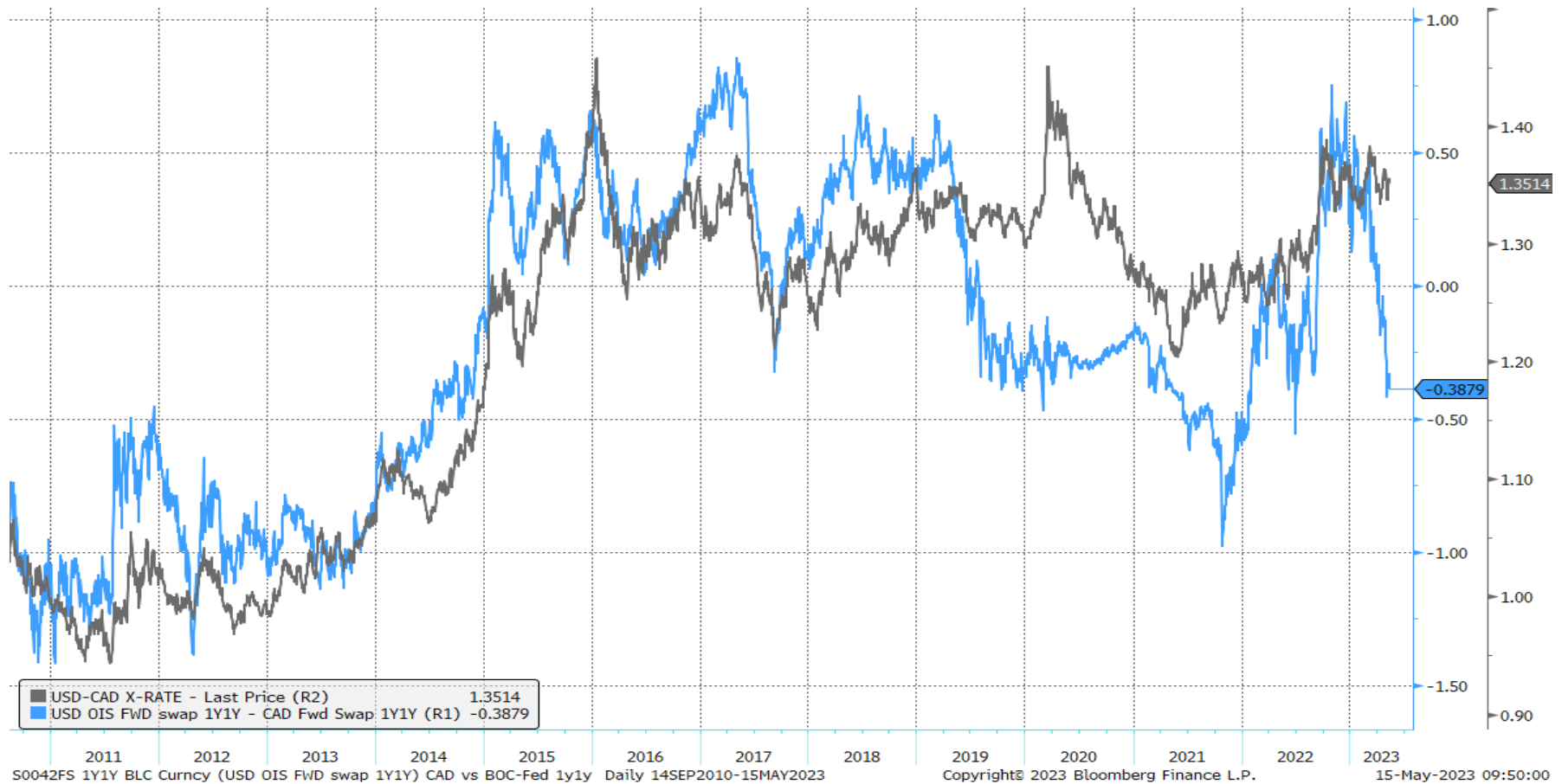
CHF	Rate	bp px	Total	% prob of	
				25bp hike	bp Δ
Current	1.41				
22-Jun-23	1.66	25	25	102%	-0.4
21-Sep-23	1.81	15	40	162%	-1.7
14-Dec-23	1.82	2	42	168%	-1.3
21-Mar-24	1.81	-1	41	162%	-0.7
end-23	1.82	42	42		-1.3
end-24	1.60	-22	20		1.5
end-25	1.65	5	25		0.8



DKK	Rate	bp px	Total	% prob of		Total hike vs ECB
				25bp hike	bp Δ	
Current	2.78					
15-Jun-23	2.98	20	20	79%	-0.3	-3
27-Jul-23	3.17	19	39	155%	-0.0	-1
14-Sep-23	3.27	10	49	195%	0.4	0
26-Oct-23	3.26	-1	48	192%	-0.3	0
end-23	3.22	44	44		0.9	3
end-24	2.34	-88	-44		3.1	11
end-25	2.14	-21	-64		2.8	14

Source: Deutsche Bank, Bloomberg Finance LP

Spreads (1y1y fwd) & correlations



Exogenous variables:	rates	rate+VIX	rates+VIX+oil	rates +VIX+oil +EUR/USD
USD/CAD Fair value'	1.298	1.338	1.339	1.334

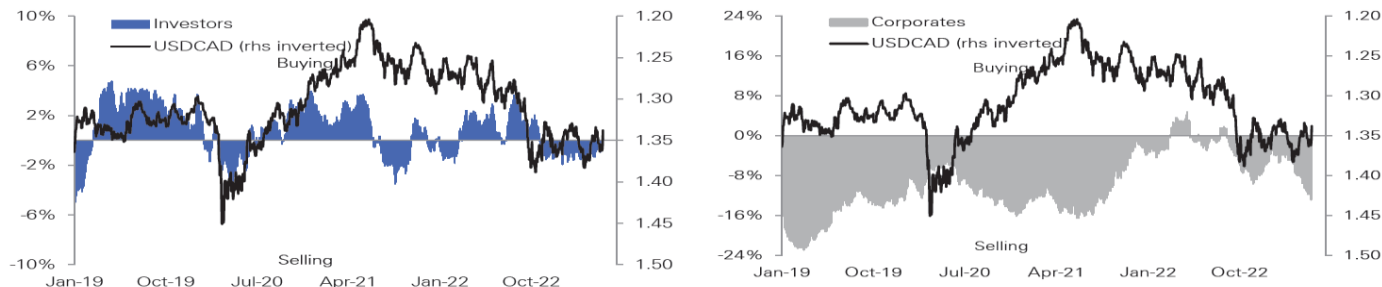
Source: Deutsche Bank, Bloomberg Finance LP

Short-term DB's CORAX positioning – Corporates selling USD/CAD



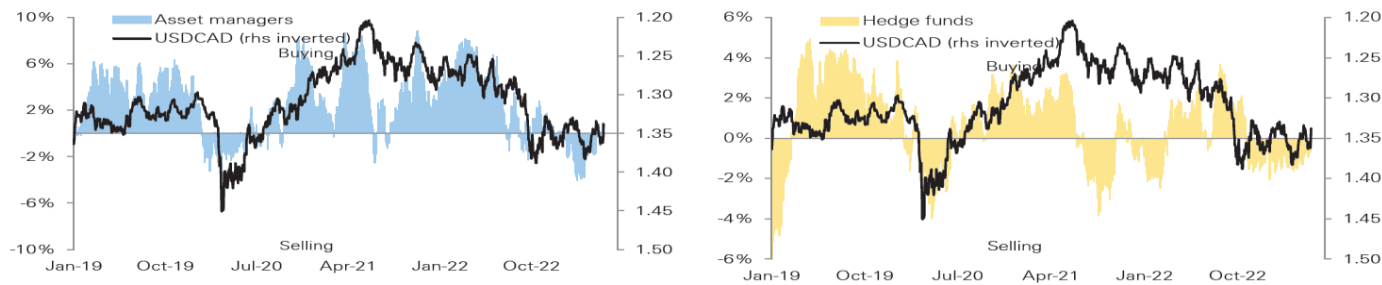
A value of +10% for CAD in the chart suggests 55% were net buyers of CAD and 45% were net sellers by transacted volume over the last three months

Figure 28: CAD



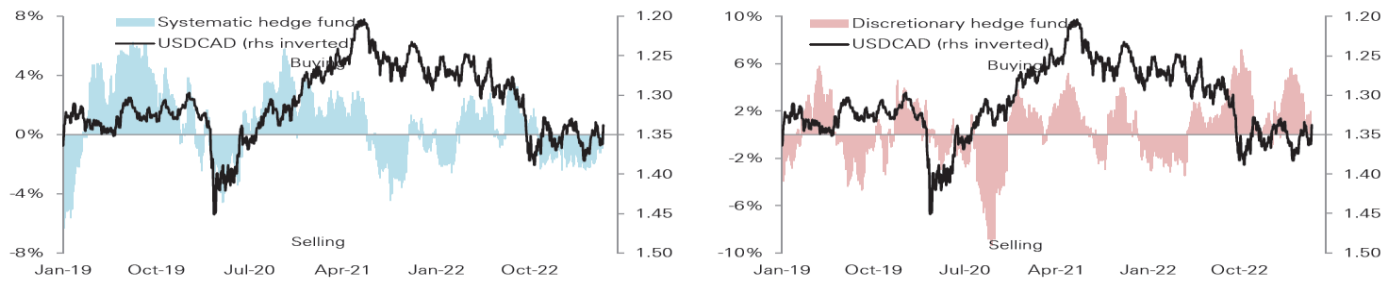
Source : Deutsche Bank, Bloomberg Finance LP

Figure 29: Breakdown by investor type (CAD)



Source : Deutsche Bank, Bloomberg Finance LP

Figure 30: Breakdown by hedge fund type (CAD)



Source : Deutsche Bank, Bloomberg Finance LP

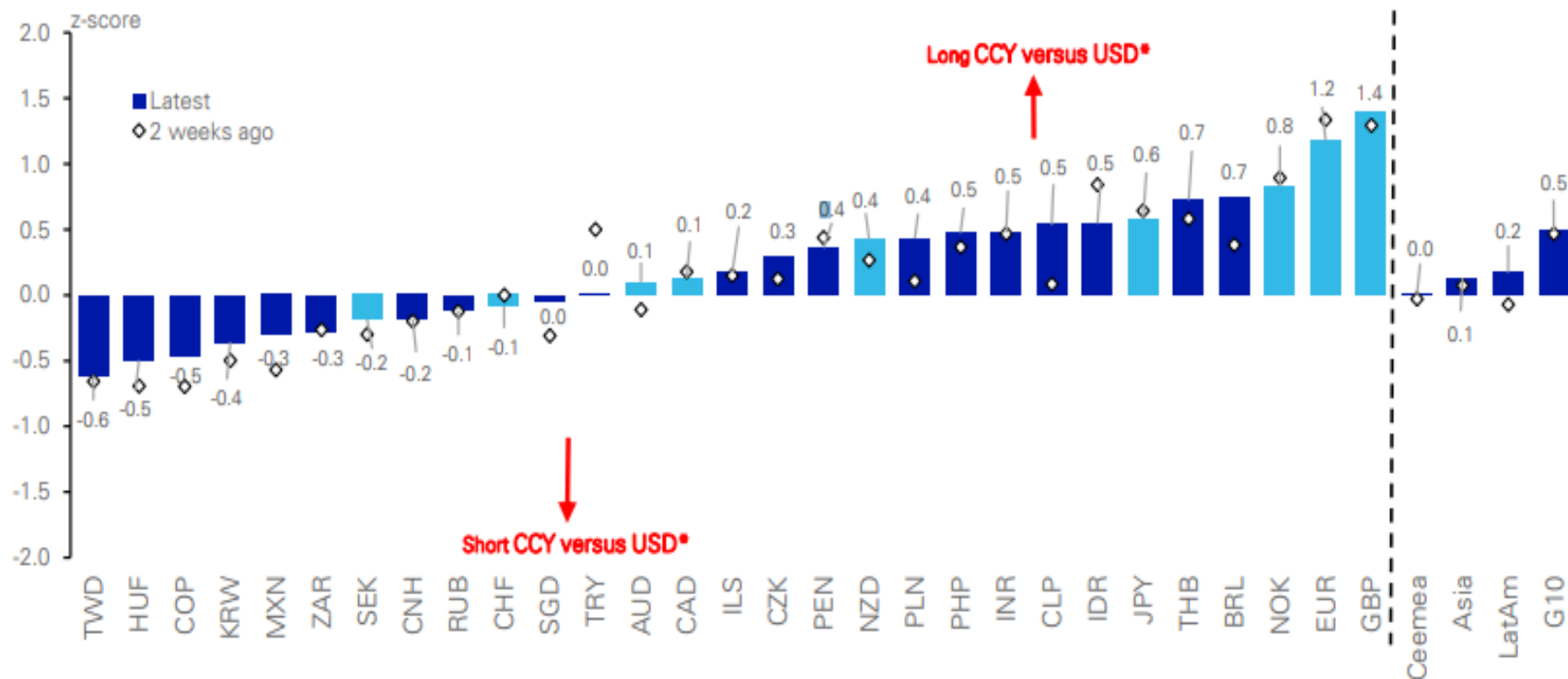
Source: Deutsche Bank, Bloomberg Finance LP

DB's EPIC+ Indices



- Most comprehensive measure of positioning in FX market (20 EM + 10 G10 FX). Covers data from options (DTCC, put-call, risk-reversals), futures (CFTC), NDF, spot (EBS) and DB (Corax, Autobahn) flow. DTCC four week sum of calls versus puts notional volume. CORAX values are 3 month rolling sums of net buying or selling as a proportion of the total flows.
- DB EPIC+ indices are highly correlated to spot – avg. G10 correlation at 58% and EM at 54%

Figure 3: DB EPIC+ positioning (as of 12-May-2023)



Source : Deutsche Bank, Bloomberg Finance LP, DTCC, EBS, Reuters, IMM, CORAX
 Note: 1) * Long (or short) versus EUR for CZK, HUF, PLN, CHF, NOK and SEK. 2) The black bars on the right-hand side are average positioning levels for G10, Asia, CEEMEA and LatAm. 3) The y-axis shows readings of positioning index in a z-score format, which is an average of rolling two years z-scores for individual sub-indicators. Thus, the long or short of each currency is relative to its two years' average instead of absolute level.

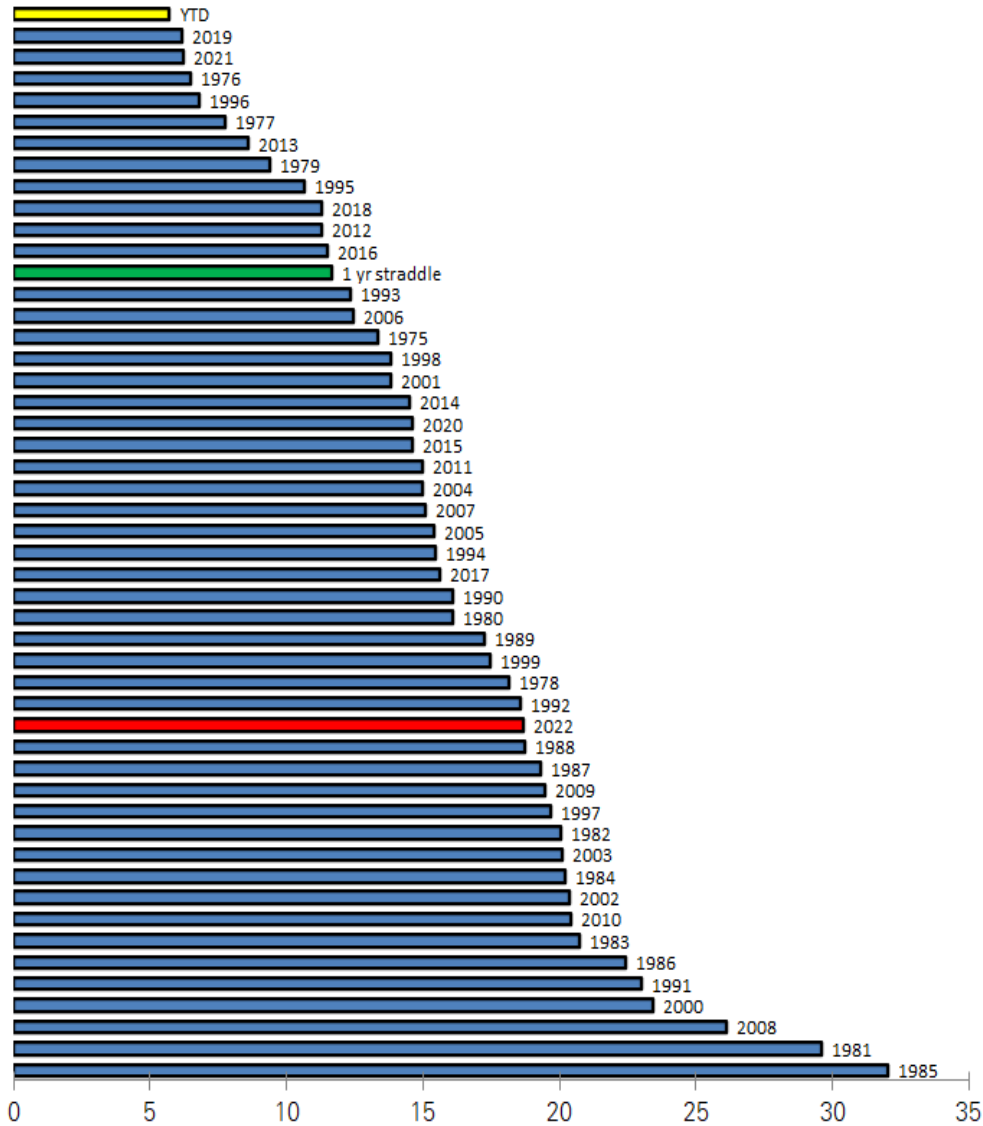
Source: Deutsche Bank, Bloomberg Finance LP, DTCC, EBS, Reuters

Vol

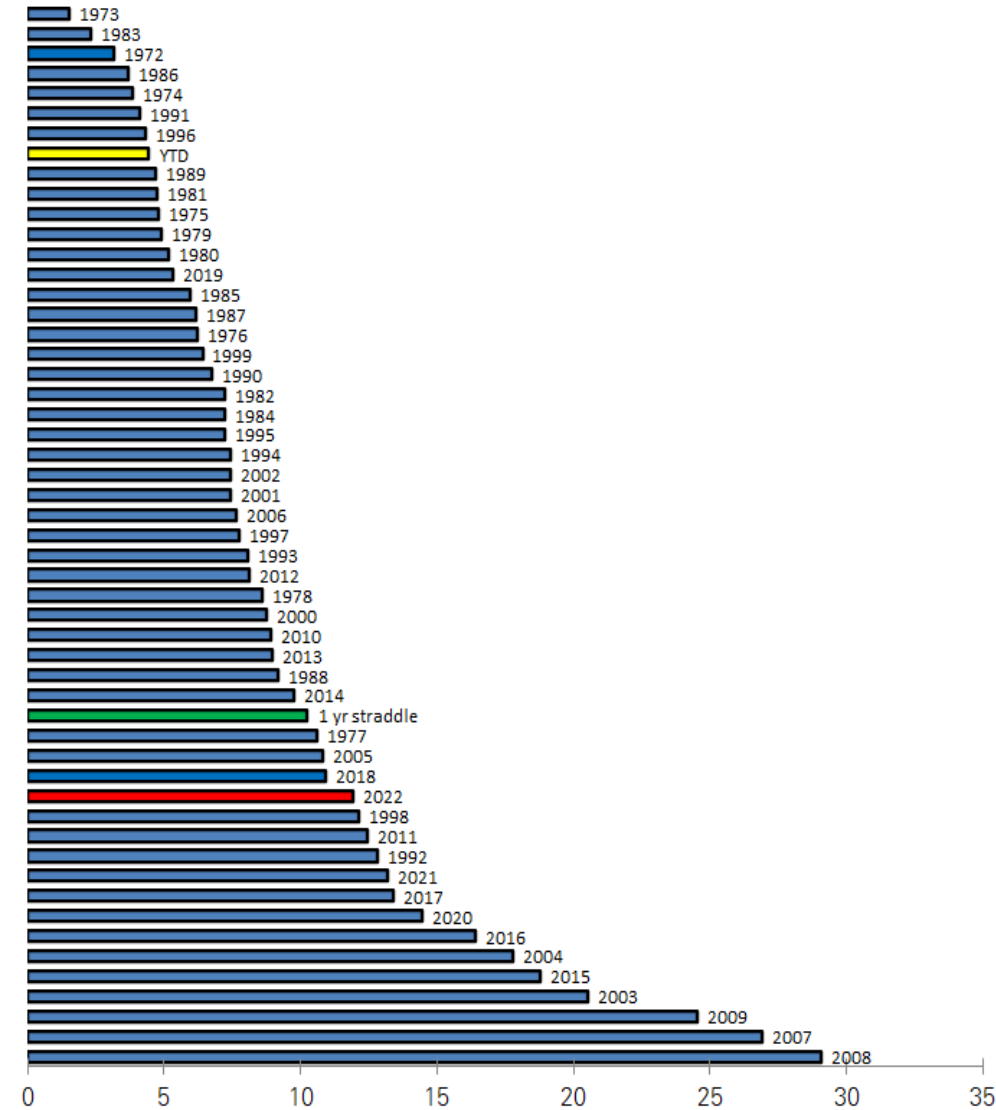
1. Looking for structured trades. 6m 1.34 USD put/CAD call, 2m Window 1.32-1.38 for 65 bps, 40% of vanilla



EUR/USD: high-low spread as a % of mid point

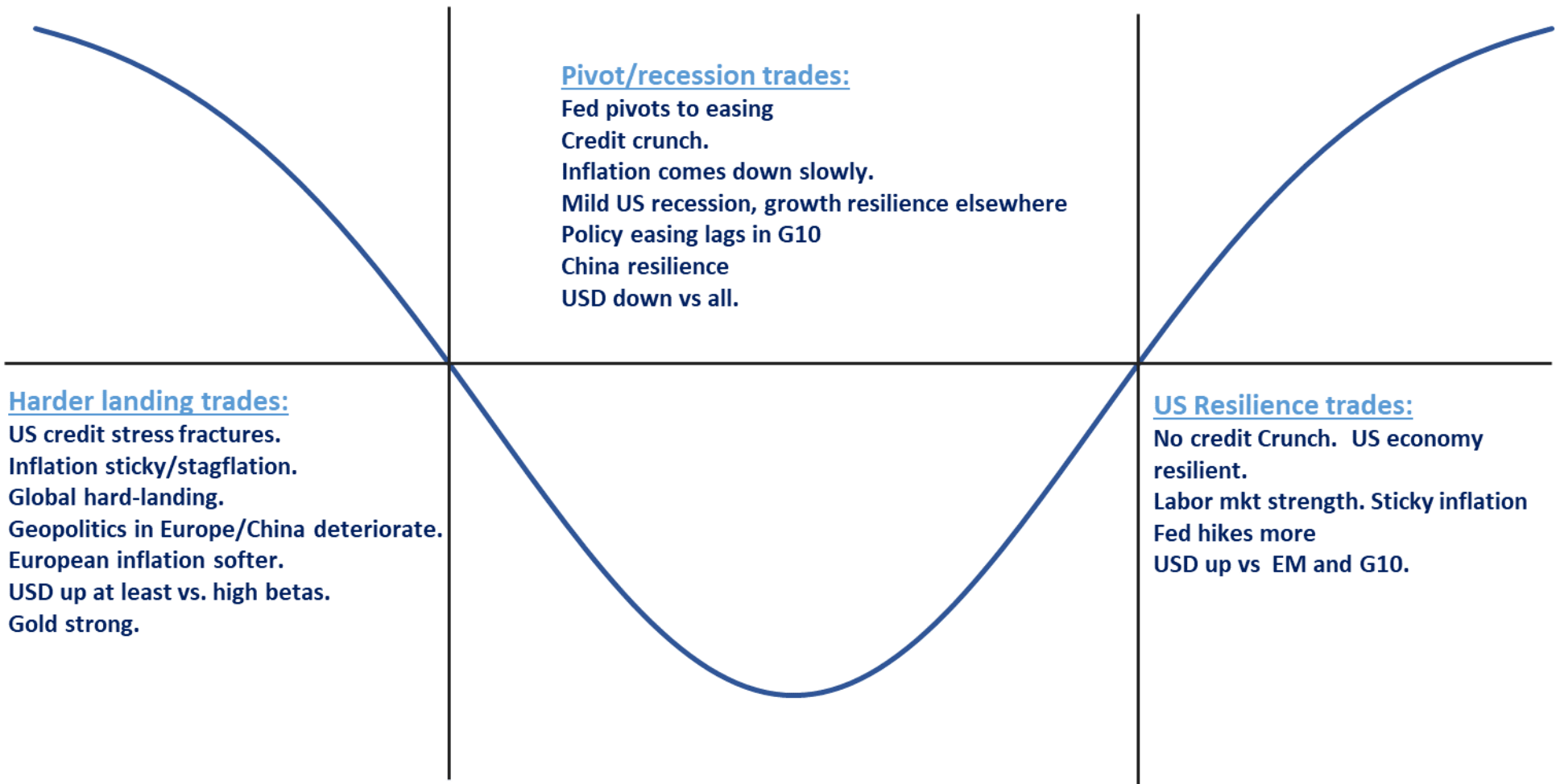


USD/CAD: high-low spread as a % of mid point



Source: Deutsche Bank, Bloomberg Finance LP

What could possibly go wrong? Smile!



Source: Deutsche Bank

Appendix 1

Important Disclosures



*Other information available upon request

Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Other information is sourced from Deutsche Bank, subject companies, and other sources. For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at <https://research.db.com/Research/Disclosures/EquityResearchDisclosures> or <https://research.db.com/Research/Disclosures/FICCDisclosures>. Aside from within this report, important risk and conflict disclosures can also be found at <https://research.db.com/Research/Disclosures/Disclaimer>. Investors are strongly encouraged to review this information before investing.

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