

# FX Market Update

## USD/CAD belongs sub-parity despite a less hawkish BoC

### What stands out

Looking at the signals from our short-term financial models, we currently observe several misalignments between spot levels and model estimates. Most misalignments are related to the JPY sell-off and the recent EUR rally. The euro has been the best performing currency within the G10 so far this year and the common currency has especially gained support from the move higher in EONIA rates. While misalignments in most EUR crosses are currently high, we also notice that relative rates have been the main driver behind the moves higher in our short financial model estimates. Hence, if the euro money market rates continue to increase or at least stabilise, most model estimates would probably move even higher, all things being equal.

The biggest misalignment is currently seen in EUR/GBP, which trades 2.7 standard deviations above the model estimate. GBP/USD also trades with significant misalignment (currently 2.3 below estimate) and according to our short-term models there is a clear indication that the recent GBP sell-off currently looks overdone. The oversold signals from our short-term models are also evident in some technical indicators, such as the RSI index, which underlines that the risk of a temporary correction is high. However, from a fundamental perspective, there are some factors which we think justify the GBP sell-off. First of all, UK macro data has recently been weak and the risk of a new recession is high. Moreover, there is a real possibility that the new Bank of England governor, Mark Carney, might change the inflation target or even introduce a nominal GDP targeting policy. Hence, if the UK slips into recession once again, the possibility of significant monetary easing from the BoE and thus a weaker GBP is clearly present and we think that a long GBP position is a relatively risky bet at this stage.

The sell-off in the Norwegian krone also looks overdone as both EUR/NOK and NOK/SEK are currently trading with considerable misalignments relative to our short model estimates. However, from a technical point of view, neither of the currency pairs are in oversold/overbought territory, according to the RSI index and we prefer to look for more attractive levels to enter a long NOK position.

### Trade idea: enter 1M USD/CAD 1.01/0.9995 risk reversal at zero cost

CAD has been under pressure since the less hawkish statement from the Bank of Canada last week and according to both our short-term model estimate and the RSI index, USD/CAD currently looks overbought. While we have to acknowledge that the increasing euro optimism among investors is weighing on some of the previously-favoured triple As such as CAD, we still look for CAD to profit from decent risk appetite in H1 and for the Canadian economy to benefit from the US recovery that we see underway. In our view, USD/CAD belongs below parity. Hence, we expect the USD/CAD upside potential to be limited from here and we suggest utilising the positive skew and entering a one-month risk reversal to position for a possible correction lower in USD/CAD. 1M USD/CAD risk reversal can be entered at zero costs by selling 1M 1.01 call option and buying 1M 0.9995 put (indicative, spot ref.: 1.0042).

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*FX Market Update provides a quantitative overview of the currency market.*

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# Spot overview

## Spot overview

	Spot	1M change	Trend	Bollinger-bands	20-day MA	50-day MA	1M Low-High	RSI
			Direction	Strength	Sup./Res.	-/+ 2 std dev		
EUR/USD	1,3444	1,7%	↑	1,3237		1,3277	1,3157	1.2998 / 1.3479
EUR/JPY	121,69	7,1%	↑	118,21		118,04	112,76	113,2 / 122,91
EUR/GBP	0,8545	4,5%	↑	0,8431		0,8313	0,8196	0,8082 / 0,8587
EUR/CHF	1,2425	2,9%	↑	1,2273		1,2287	1,2160	1,2064 / 1,2569
EUR/SEK	8,62	0,0%	➡		8,5290 / 8,7204	8,6255	8,6363	8,5062 / 8,7189
EUR/NOK	7,42	0,5%	➡		7,2876 / 7,4693	7,3825	7,3685	7,2795 / 7,4773
EUR/AUD	1,2874	1,0%	➡		1,2406 / 1,2908	1,2635	1,2562	1,2358 / 1,2959
EUR/CAD	1,3529	2,7%	↑	1,3263		1,3164	1,3042	1,2847 / 1,3603
EUR/NZD	1,6086	-0,2%	➡		1,5596 / 1,6233	1,5861	1,5824	1,5508 / 1,6239
EUR/PLN	4,21	3,3%	↑	4,139		4,1338	4,1111	4,058 / 4,212
EUR/RUB	40,51	0,9%	➡		39,58 / 40,87	40,14	40,21	39,4 / 40,65
EUR/TRY	2,38	0,8%	➡		2,323 / 2,389	2,3514	2,3440	2,3164 / 2,3895
EUR/CZK	25,66	2,2%	↑	25,4185		25,5508	25,3511	25,05 / 25,76
USD/JPY	90,52	5,3%	↑	88,5717		88,90	85,67	85,67 / 91,26
GBP/USD	1,5734	-2,6%	➡		1,571 / 1,637	1,5972	1,6055	1,5675 / 1,6381
USD/CHF	0,9243	1,2%	➡		0,907 / 0,936	0,9255	0,9243	0,9079 / 0,9389
USD/SEK	6,41	-1,6%	➡		6,434 / 6,581	6,4971	6,5650	6,403 / 6,594
USD/NOK	5,52	-1,2%	➡		5,510 / 5,624	5,5610	5,6010	5,499 / 5,624
AUD/USD	1,0442	0,7%	➡		1,033 / 1,061	1,0508	1,0474	1,0362 / 1,0599
USD/CAD	1,0063	0,9%	↑	0,9943		0,9914	0,9912	0,9816 / 1,01
NZD/USD	0,8358	1,9%	➡		0,818 / 0,848	0,8371	0,8315	0,8193 / 0,8461
USD/RUB	30,13	-0,7%	⬇	30,32		30,24	30,57	29,95 / 30,65
NOK/SEK	1,1616	-0,5%	➡		1,1608 / 1,1771	1,1683	1,1721	1,1583 / 1,178
AUD/NZD	1,2495	-1,2%	➡		1,2464 / 1,2681	1,2552	1,2597	1,2429 / 1,2681

## Top 10 overbought range-trading currency pairs

	Currency pair	RSI
1	EUR/AUD	65,8
2	NZD/CAD	64,9
3	EUR/TRY	64,5
4	AUD/CAD	62,8
5	EUR/NZD	59,5
6	EUR/NOK	54,6
7	USD/PLN	53,5
8	NZD/USD	51,0
9	NZD/CHF	49,6
10	USD/CHF	48,0

## Top 10 oversold range-trading currency pairs

	Currency pair	RSI
1	GBP/CHF	30,4
2	GBP/NZD	31,0
3	GBP/USD	31,4
4	AUD/SEK	34,1
5	USD/SEK	34,5
6	CAD/CHF	36,0
7	GBP/AUD	36,3
8	USD/NOK	39,8
9	NOK/SEK	41,7
10	AUD/NZD	43,0

Note: Trend direction and strength computed using 'DMI' analysis [range-trade defined as ADX line <25], trend support/resistance computed using 'Trendster' algorithm, Bollinger bands computed on 30-period window, RSI computed on 14-period window [oversold defined as <30, overbought defined as >70]

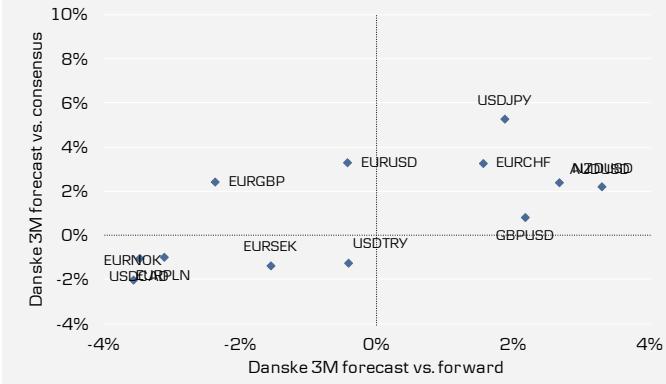
Source: Bloomberg

# Forecasts and market pricing

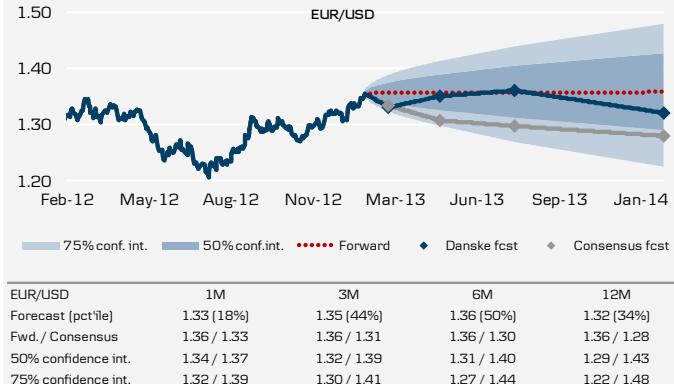
## Danske Bank Markets FX forecasts

	Spot	+1m	Forecast +3m	Forecast +6m	+12m	Forecast vs forward +1m	Forecast vs forward +3m	Forecast vs forward +6m	Forecast vs forward +12m
<b>Exchange rates vs EUR</b>									
USD	1.351	1.33	1.35	1.36	1.32	-1.6	-0.1	0.6	-2.5
JPY	123.2	112	114	118	116	-9.1	-7.4	-4.1	-5.6
GBP	0.859	0.82	0.84	0.85	0.82	-4.6	-2.3	-1.2	-4.8
CHF	1.245	1.23	1.26	1.26	1.23	-1.2	1.3	1.4	-0.8
DKK	7.46	7.46	7.46	7.46	7.46	0.0	0.0	0.1	0.1
NOK	7.43	7.30	7.20	7.15	7.10	-1.9	-3.5	-4.6	-6.1
SEK	8.60	8.60	8.50	8.40	8.40	-0.1	-1.4	-2.8	-3.3
<b>Exchange rates vs USD</b>									
CAD	1.00	0.98	0.97	0.96	0.98	-2.3	-3.4	-4.6	-3.1
AUD	1.04	1.06	1.07	1.08	1.04	1.7	3.1	4.7	2.1
NZD	0.83	0.85	0.85	0.86	0.84	2.0	2.4	4.2	3.1

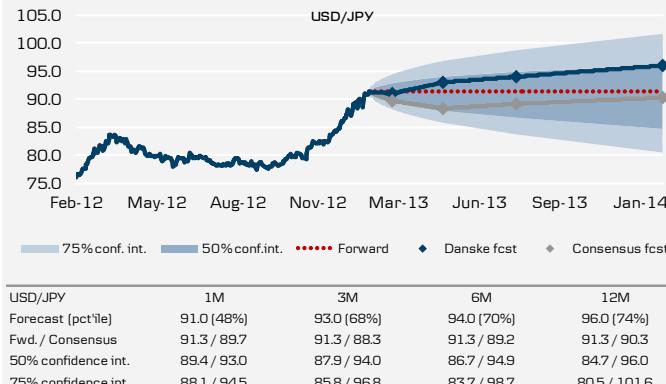
## Danske Bank forecasts vs forwards and consensus



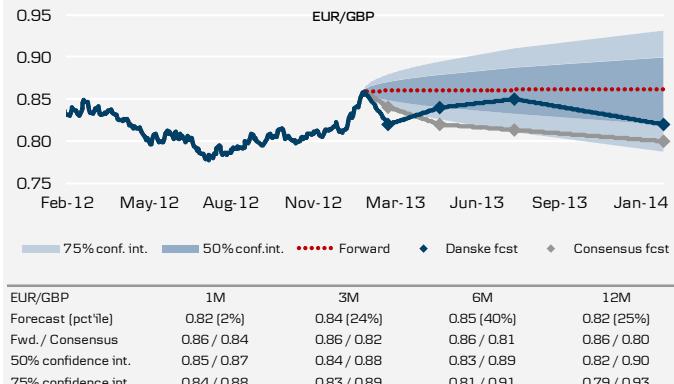
## EUR/USD



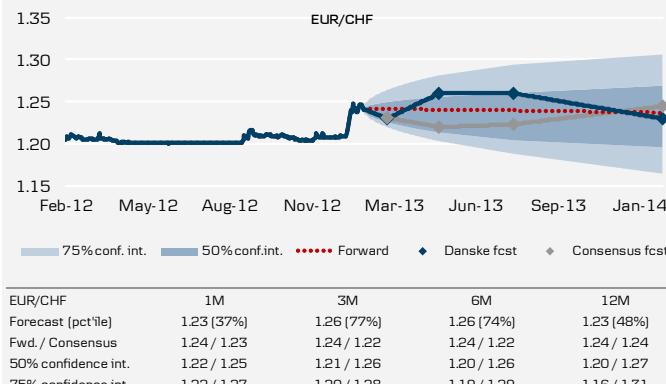
## USD/JPY



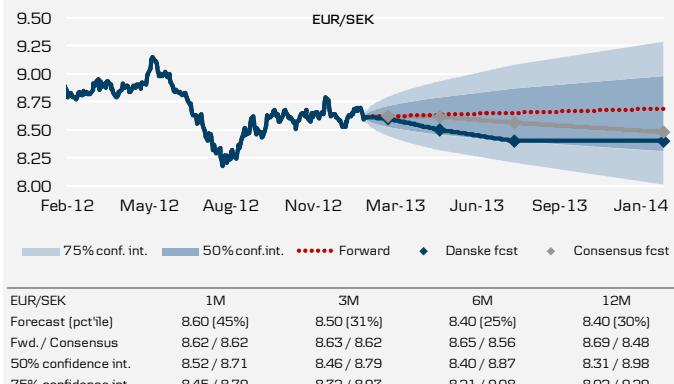
## EUR/GBP



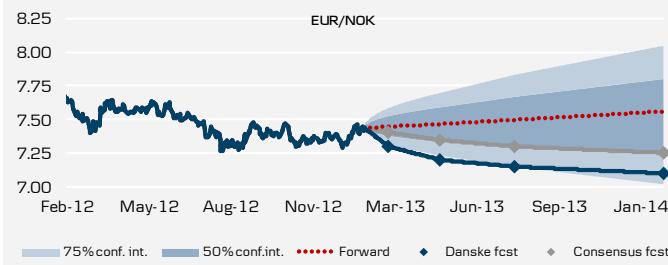
## EUR/CHF



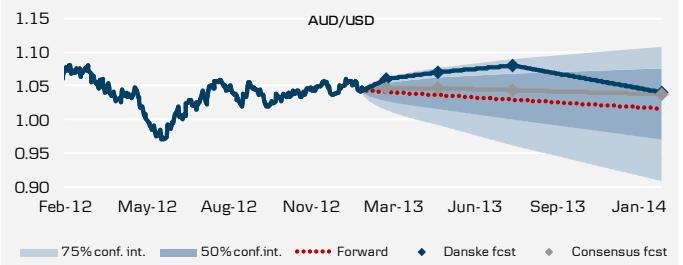
## EUR/SEK



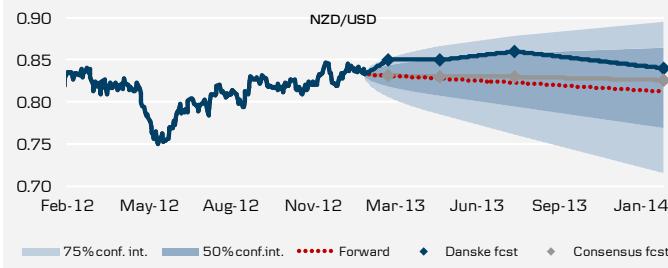
Note: The cone charts show confidence regions derived from option market prices. Source: Bloomberg and Danske Bank Markets calculations

**EUR/NOK**

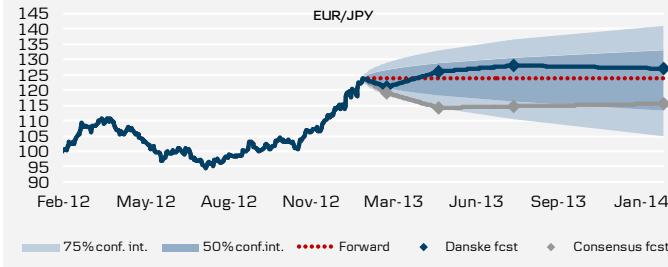
EUR/NOK	1M	3M	6M	12M
Forecast [pct'il]	7.30 (10%)	7.20 (9%)	7.15 (12%)	7.10 (15%)
Fwd. / Consensus	7.45 / 7.40	7.47 / 7.35	7.50 / 7.30	7.56 / 7.25
50% confidence int.	7.37 / 7.52	7.33 / 7.59	7.29 / 7.67	7.24 / 7.80
75% confidence int.	7.31 / 7.58	7.23 / 7.70	7.15 / 7.83	7.02 / 8.05

**AUD/USD**

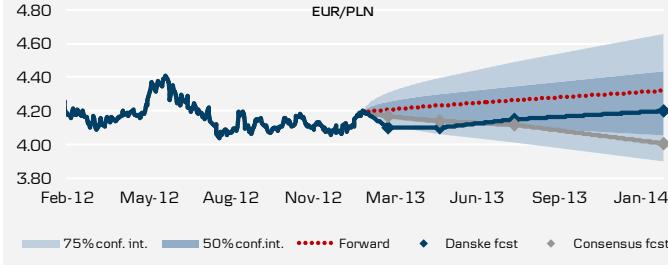
AUD/USD	1M	3M	6M	12M
Forecast [pct'il]	1.06 (83%)	1.07 (82%)	1.08 (82%)	1.04 (55%)
Fwd. / Consensus	1.04 / 1.05	1.04 / 1.05	1.03 / 1.04	1.02 / 1.04
50% confidence int.	1.03 / 1.05	1.02 / 1.06	1.00 / 1.07	0.97 / 1.08
75% confidence int.	1.02 / 1.06	0.99 / 1.08	0.96 / 1.09	0.91 / 1.11

**NZD/USD**

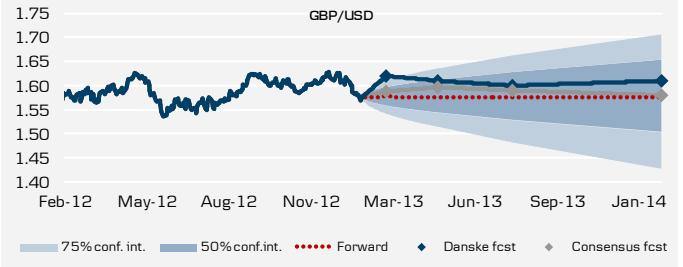
NZD/USD	1M	3M	6M	12M
Forecast [pct'il]	0.85 (83%)	0.85 (72%)	0.86 (75%)	0.84 (60%)
Fwd. / Consensus	0.83 / 0.83	0.83 / 0.83	0.82 / 0.83	0.81 / 0.83
50% confidence int.	0.82 / 0.84	0.81 / 0.85	0.79 / 0.86	0.77 / 0.86
75% confidence int.	0.81 / 0.85	0.79 / 0.87	0.76 / 0.88	0.72 / 0.90

**EUR/JPY**

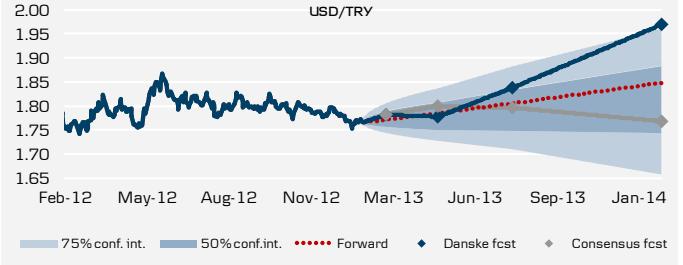
EUR/JPY	1M	3M	6M	12M
Forecast [pct'il]	121 (28%)	126 (62%)	128 (66%)	127 (60%)
Fwd. / Consensus	124 / 119	124 / 114	124 / 115	124 / 116
50% confidence int.	121 / 127	118 / 129	116 / 131	113 / 133
75% confidence int.	118 / 129	114 / 133	111 / 137	105 / 141

**EUR/PLN**

EUR/PLN	1M	3M	6M	12M
Forecast [pct'il]	4.10 (10%)	4.10 (19%)	4.15 (35%)	4.20 (45%)
Fwd. / Consensus	4.21 / 4.17	4.23 / 4.14	4.26 / 4.12	4.32 / 4.01
50% confidence int.	4.15 / 4.25	4.12 / 4.30	4.10 / 4.34	4.05 / 4.43
75% confidence int.	4.11 / 4.30	4.06 / 4.40	4.01 / 4.49	3.90 / 4.66

**GBP/USD**

GBP/USD	1M	3M	6M	12M
Forecast [pct'il]	1.62 (92%)	1.61 (74%)	1.60 (60%)	1.61 (60%)
Fwd. / Consensus	1.58 / 1.59	1.58 / 1.60	1.58 / 1.59	1.57 / 1.58
50% confidence int.	1.56 / 1.60	1.54 / 1.61	1.53 / 1.63	1.50 / 1.65
75% confidence int.	1.54 / 1.61	1.51 / 1.63	1.48 / 1.66	1.43 / 1.71

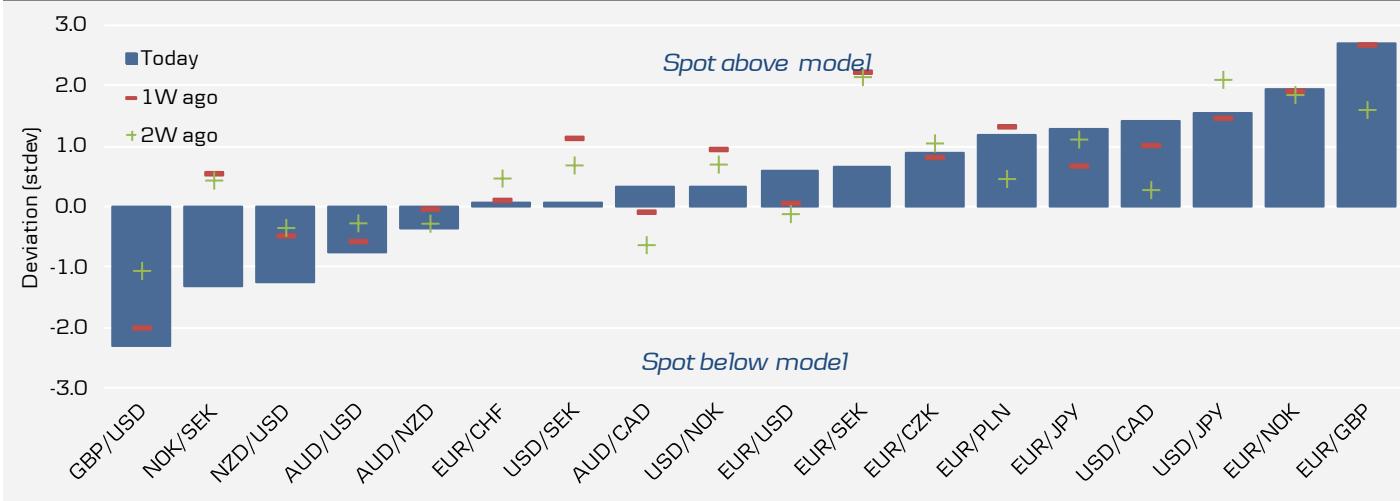
**USD/TRY**

USD/TRY	1M	3M	6M	12M
Forecast [pct'il]	1.78 (71%)	1.78 (50%)	1.84 (76%)	1.97 (88%)
Fwd. / Consensus	1.77 / 1.78	1.79 / 1.80	1.81 / 1.80	1.85 / 1.77
50% confidence int.	1.76 / 1.78	1.75 / 1.81	1.75 / 1.83	1.74 / 1.88
75% confidence int.	1.74 / 1.80	1.73 / 1.84	1.71 / 1.88	1.66 / 1.96

Note: The cone charts show confidence regions derived from option market prices. Source: Bloomberg, Danske Bank Markets calculations

## Short-term financial models

Spot deviations from model estimate

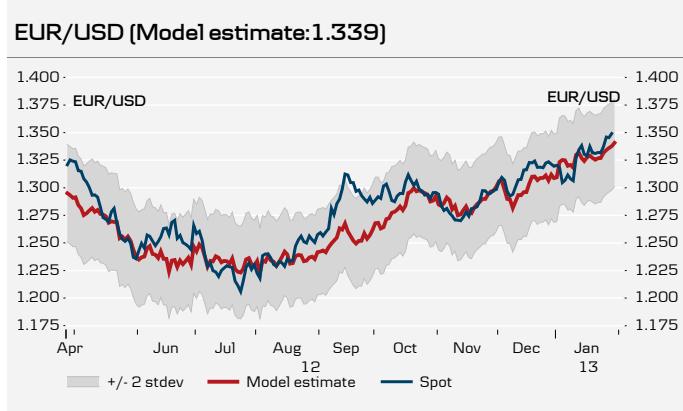
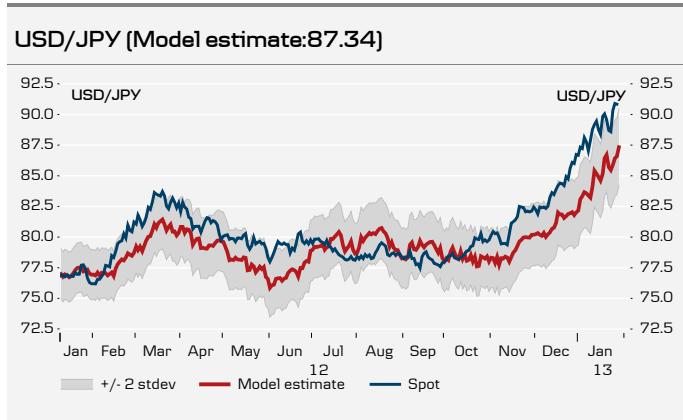
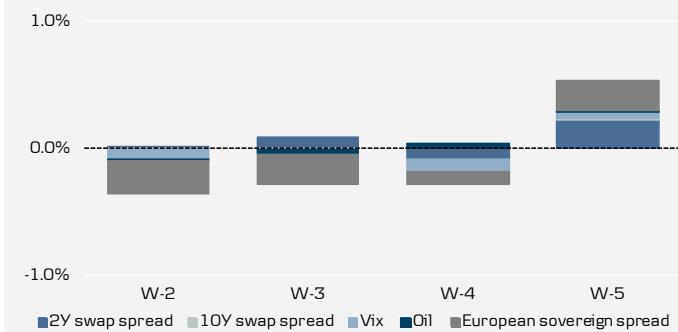
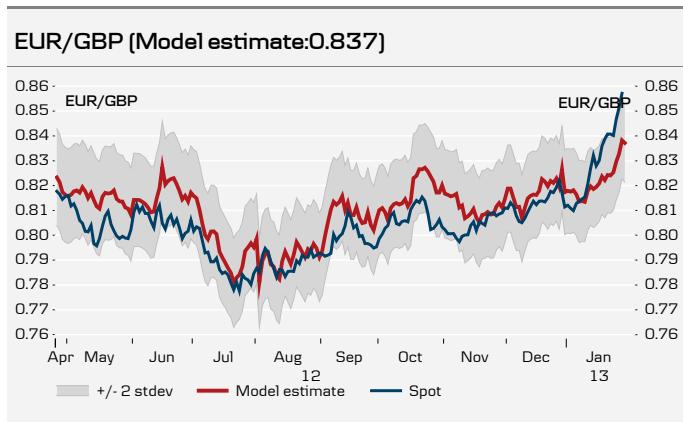
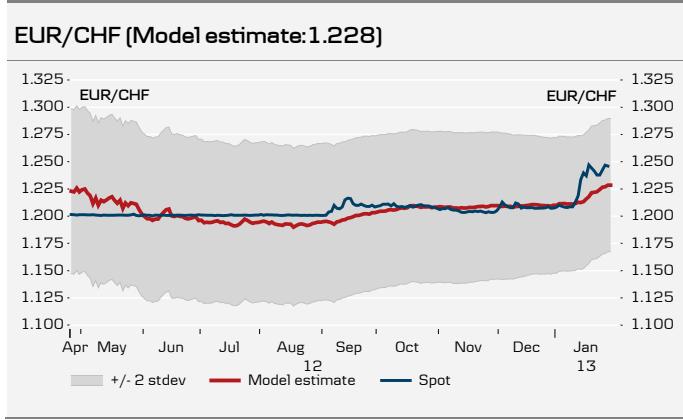
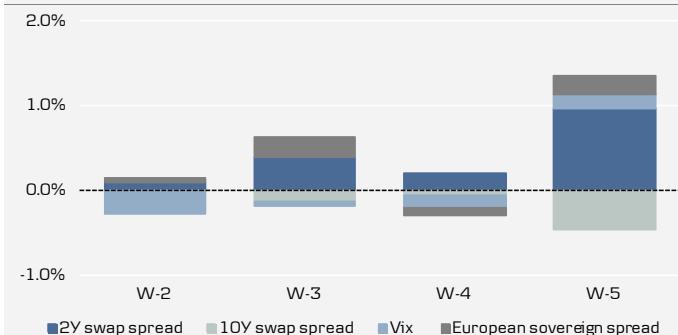
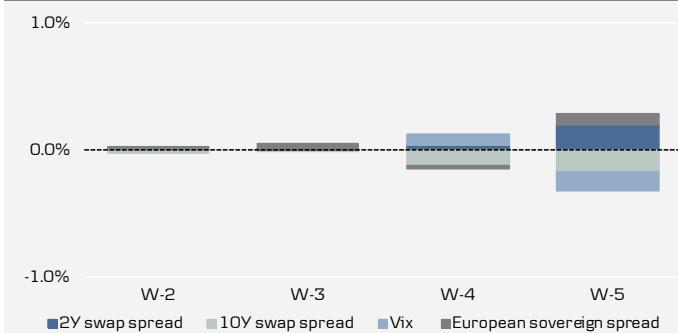


Spot deviations from model estimate

	Spot	Model	Signal	Deviation (%)	Deviation (stddev)
EUR/USD	1.354	1.339		1.1%	0.6
EUR/JPY	123.72	117.68	Oversold	5.1%	1.3
USD/JPY	91.36	87.34	Oversold	4.6%	1.6
EUR/GBP	0.860	0.837	Very Oversold	2.7%	2.7
EUR/CHF	1.244	1.228		1.3%	0.1
EUR/SEK	8.612	8.628		-0.2%	0.6
EUR/NOK	7.437	7.341	Oversold	1.3%	1.9
AUD/USD	1.044	1.053		-0.8%	-0.7
USD/CAD	1.003	0.989	Oversold	1.4%	1.4
NZD/USD	0.834	0.847	Oversold	-1.6%	-1.3
NOK/SEK	1.158	1.173	Oversold	-1.3%	-1.3
EUR/PLN	4.187	4.114	Oversold	1.8%	1.2
EUR/CZK	25.62	25.37		1.0%	0.9
AUD/NZD	1.252	1.249		0.2%	-0.3
USD/SEK	6.359	6.432		-1.1%	0.1
USD/NOK	5.491	5.520		-0.5%	0.3
GBP/USD	1.576	1.621	Very oversold	-2.8%	-2.3
AUD/CAD	1.047	1.037		1.0%	0.3

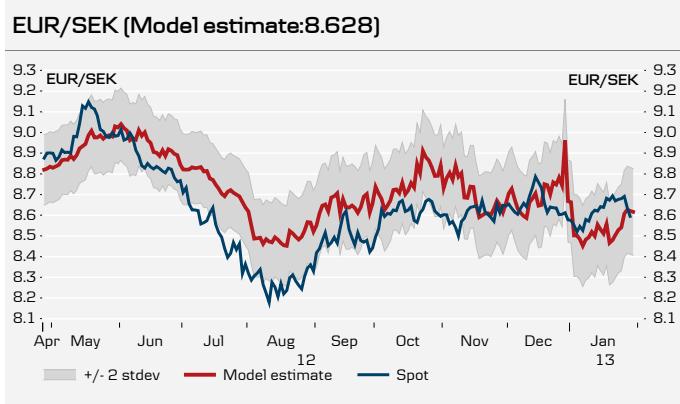
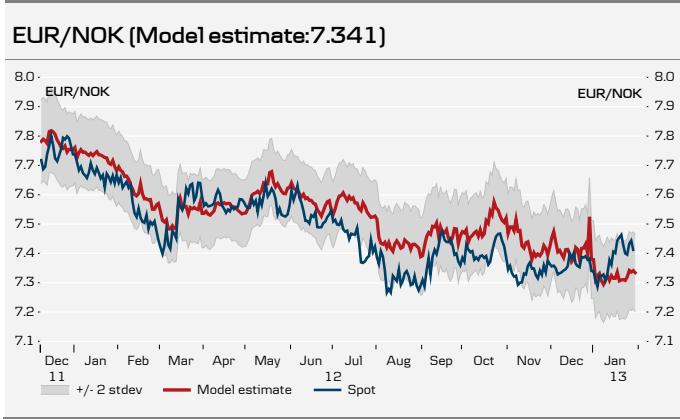
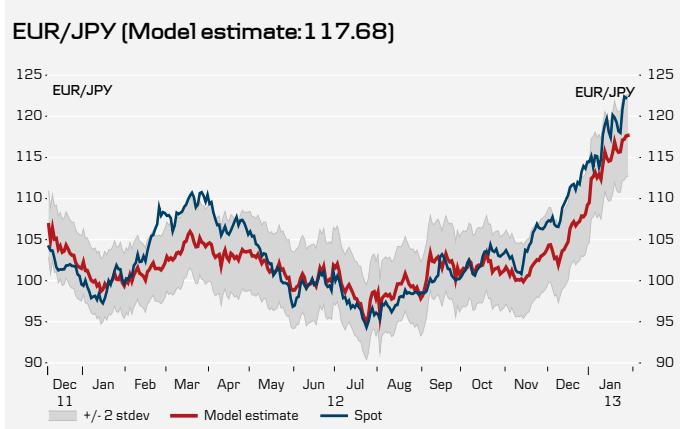
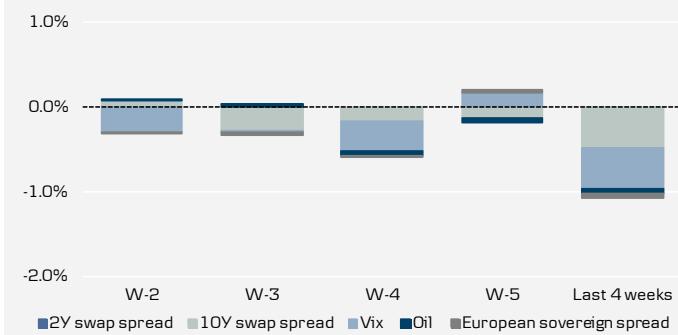
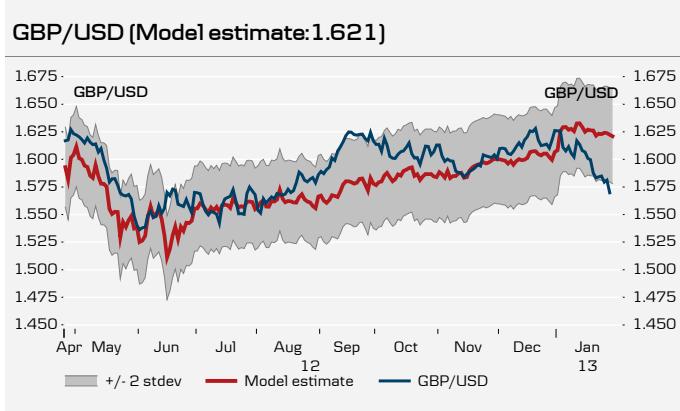
Note: Linear regression models using a 200-day rolling estimation window. 2Y swap spread is included only when spot beta is positive. Short-term financial models are partial models, implying that there is no built-in consistency between, e.g., EUR/NOK, EUR/SEK and NOK/SEK models

Source: Bloomberg, Danske Bank Markets calculations

**EUR/USD model contributions****USD/JPY model contributions****EUR/GBP model contributions****EUR/CHF model contributions**

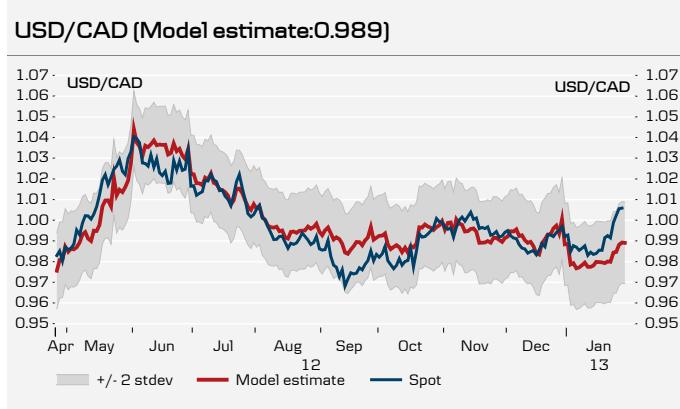
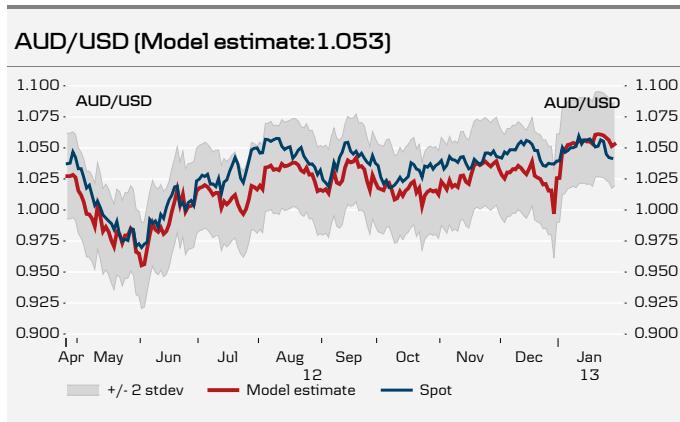
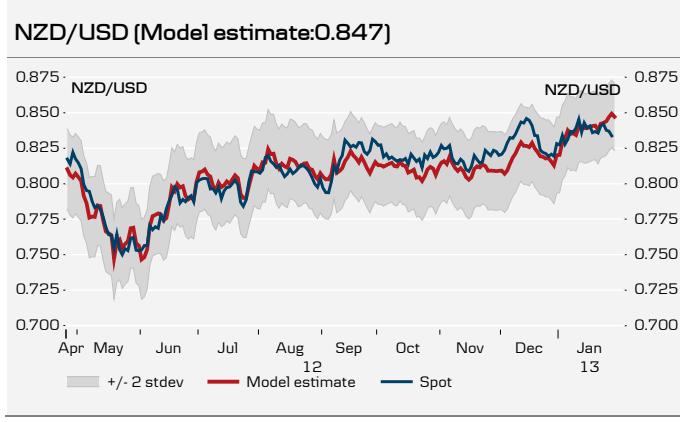
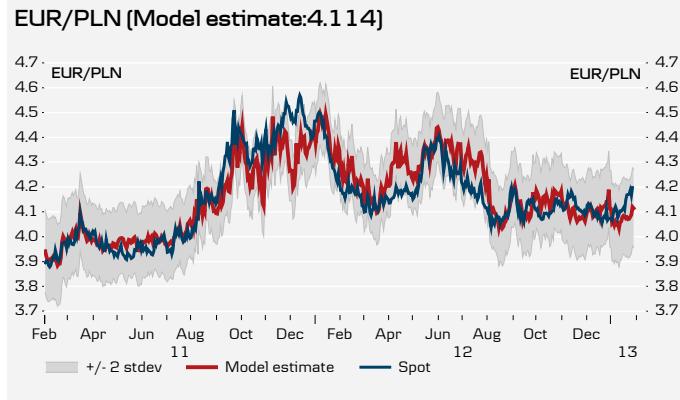
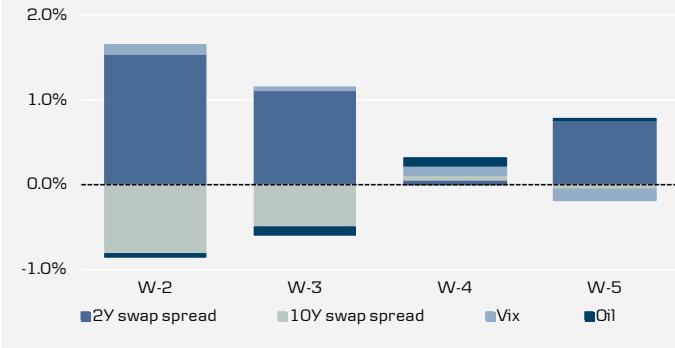
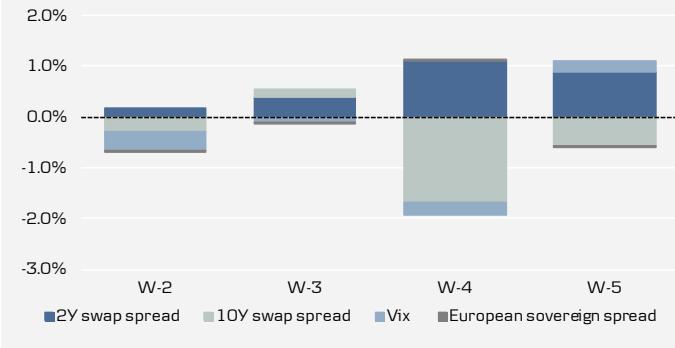
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Source: Bloomberg, Danske Bank Markets calculations

**EUR/SEK model contributions****EUR/NOK model contributions****EUR/JPY model contributions****GBP/USD model contributions**

Note: Linear regression models using a 200-day rolling estimation window. 2Y swap spread is included only when spot beta is positive. Short-term financial models are partial models, implying that there is no built-in consistency between, e.g., EUR/NOK, EUR/SEK and NOK/SEK models

Source: Bloomberg, Danske Bank Markets calculations

**USD/CAD model contributions****AUD/USD model contributions****NZD/USD model contributions****EUR/PLN model contributions**

Note: Linear regression models using a 200-day rolling estimation window. 2Y swap spread is included only when spot beta is positive. Short term financial models are partial models, implying that there is no built-in consistency between, e.g. EUR/NOK, EUR/SEK and NOK/SEK models

Source: Bloomberg, Danske Bank Markets calculations





# Carry monitor

## Carry overview (against EUR)

	Carry in forward market (annualized)				Carry-to-risk (carry / ATM volatility)			
	1W	1M	3M	1Y	1W	1M	3M	1Y
USD	0,2%	0,2%	0,2%	0,2%	0,0	0,0	0,0	0,0
JPY	0,0%	0,0%	0,0%	0,0%	0,0	0,0	0,0	0,0
GBP	0,5%	0,4%	0,4%	0,3%	0,1	0,1	0,1	0,0
CHF	-0,1%	-0,1%	-0,2%	-0,3%	0,0	0,0	0,0	-0,1
SEK	1,1%	1,0%	1,0%	0,9%	0,2	0,2	0,2	0,1
NOK	1,6%	1,5%	1,6%	1,7%	0,3	0,3	0,3	0,3
AUD	3,0%	2,8%	2,9%	2,8%	0,3	0,3	0,3	0,3
NZD	2,7%	2,5%	2,6%	2,7%	0,2	0,3	0,3	0,3
CAD	1,1%	1,0%	1,0%	1,0%	0,1	0,1	0,1	0,1
DKK	-0,2%	-0,2%	-0,1%	-0,1%	n/a	n/a	n/a	n/a
PLN	4,1%	3,7%	3,6%	3,0%	0,5	0,5	0,5	0,3
TRY	5,0%	4,5%	4,7%	4,9%	0,7	0,7	0,7	0,6
MXN	3,9%	3,7%	3,8%	3,8%	0,5	0,4	0,4	0,4
ZAR	5,1%	4,8%	5,1%	5,2%	0,0	0,0	0,0	0,0

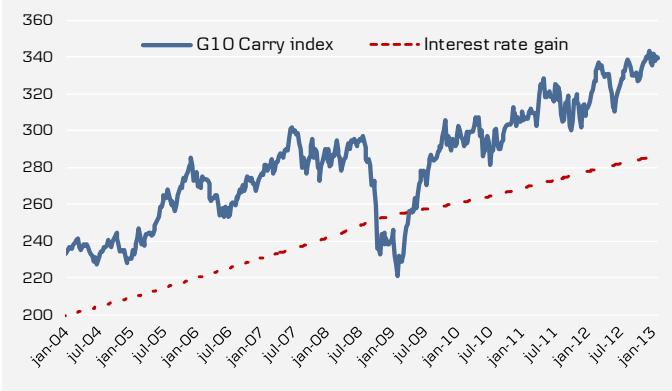
## Top 10 carry currency pairs (1M)

	Currency pair	Carry-to-risk	Carry
1	TRY/USD	0,83	4,3%
2	TRY/EUR	0,67	4,5%
3	PLN/EUR	0,49	3,7%
4	AUD/USD	0,37	2,6%
5	AUD/CHF	0,35	2,9%
6	AUD/GBP	0,33	2,4%
7	AUD/EUR	0,33	2,8%
8	AUD/CAD	0,31	1,8%
9	PLN/USD	0,30	3,4%
10	NZD/CHF	0,27	2,6%

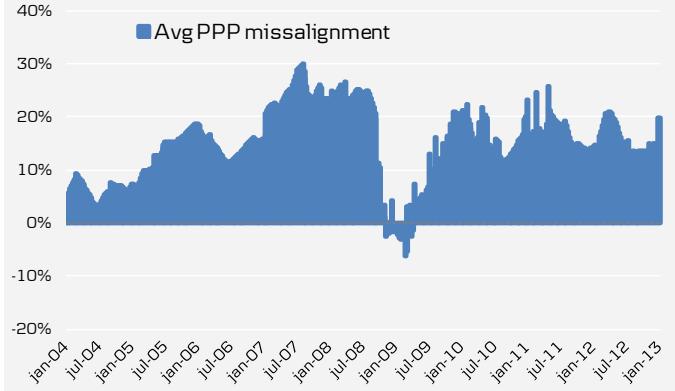
## Top 10 carry currency pairs (3M)

	Currency pair	Carry-to-risk	Carry
1	TRY/USD	0,75	4,4%
2	TRY/EUR	0,68	4,6%
3	PLN/EUR	0,46	3,6%
4	AUD/CHF	0,36	3,1%
5	AUD/USD	0,35	2,7%
6	AUD/EUR	0,34	2,9%
7	AUD/GBP	0,34	2,5%
8	AUD/CAD	0,31	1,9%
9	NZD/CHF	0,29	2,8%
10	NOK/EUR	0,29	1,6%

## G10 carry index (total return)



## G10 carry index (average deviation from PPP)



Source: Bloomberg, Danske Bank Markets calculations

# Volatility overview

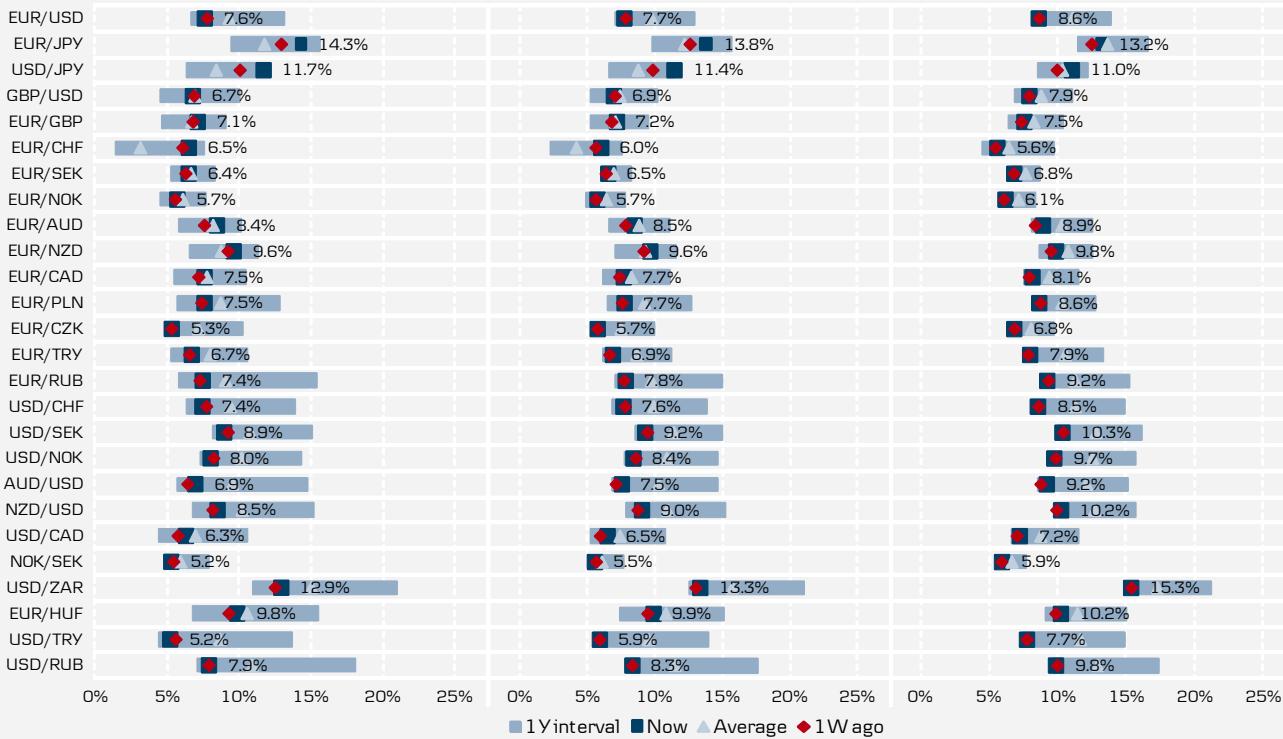
## Current implied volatilities, one-week changes and actual volatilities

	1W imp./chg.	Act. / Spr.	Z-scr.	1M imp./chg.	Act. / Spr.	Z-scr.	3M imp./chg.	Act. / Spr.	Z-scr.	1Y imp./chg.	Act. / Spr.	Z-scr.	1M-1Y slope/Z-scr.
EUR/USD	8.0% <span style="color:green;">▲</span>	7.4%	-0.1	7.6% <span style="color:red;">▼</span>	8.4%	-1.5	7.7% <span style="color:red;">▼</span>	7.4%	0.6	8.6% <span style="color:red;">▼</span>	8.4%	-0.8	1.0 <span style="color:red;">▼</span>
EUR/JPY	14.8% <span style="color:green;">▲</span>	14.6%	0.1	14.3% <span style="color:green;">▲</span>	15.6%	-1.2	13.8% <span style="color:green;">▲</span>	12.8%	0.1	13.2% <span style="color:green;">▲</span>	11.8%	0.4	-1.1 <span style="color:red;">▼</span>
USD/JPY	12.5% <span style="color:green;">▲</span>	10.7%	0.7	11.7% <span style="color:green;">▲</span>	11.8%	-0.8	11.4% <span style="color:green;">▲</span>	9.2%	0.9	11.0% <span style="color:green;">▲</span>	8.1%	2.0 <span style="color:red;">▼</span>	-0.7 <span style="color:red;">▼</span>
GBP/USD	7.1% <span style="color:green;">▲</span>	6.1%	0.6	6.7% <span style="color:red;">▼</span>	6.4%	-0.1	6.9% <span style="color:red;">▼</span>	6.0%	0.3	7.9% <span style="color:green;">▲</span>	6.5%	1.0	1.2 <span style="color:red;">▼</span>
EUR/GBP	7.2% <span style="color:green;">▲</span>	7.0%	0.2	7.1% <span style="color:green;">▲</span>	6.5%	0.5	7.2% <span style="color:green;">▲</span>	7.1%	-0.3	7.5% <span style="color:green;">▲</span>	6.7%	0.7	0.5 <span style="color:red;">▼</span>
EUR/CHF	7.4% <span style="color:green;">▲</span>	7.7%	-0.3	6.5% <span style="color:green;">▲</span>	7.6%	-1.2	6.0% <span style="color:green;">▲</span>	5.2%	-0.4	5.6% <span style="color:green;">▲</span>	3.4%	1.2 <span style="color:red;">▼</span>	-0.9 <span style="color:red;">▼</span>
EUR/SEK	6.9% <span style="color:green;">▲</span>	6.6%	0.5	6.4% <span style="color:green;">▲</span>	6.7%	0.1	6.5% <span style="color:green;">▲</span>	7.2%	-0.9	6.8% <span style="color:green;">▲</span>	7.0%	-0.4	0.3 <span style="color:red;">▼</span>
EUR/NOK	6.1% <span style="color:green;">▲</span>	5.7%	0.5	5.7% <span style="color:green;">▲</span>	6.1%	0.0	5.7% <span style="color:green;">▲</span>	6.9%	-1.4	6.1% <span style="color:green;">▲</span>	6.5%	-0.3	0.5 <span style="color:red;">▼</span>
EUR/AUD	9.0% <span style="color:green;">▲</span>	8.8%	0.1	8.4% <span style="color:green;">▲</span>	8.9%	-0.9	8.5% <span style="color:green;">▲</span>	8.1%	-0.8	8.9% <span style="color:green;">▲</span>	7.9%	0.0	0.5 <span style="color:red;">▼</span>
EUR/NZD	10.8% <span style="color:green;">▲</span>	9.8%	1.0	9.6% <span style="color:green;">▲</span>	10.4%	-0.8	9.6% <span style="color:green;">▲</span>	9.3%	-0.2	9.8% <span style="color:green;">▲</span>	8.9%	1.8 <span style="color:red;">▼</span>	0.3 <span style="color:red;">▼</span>
EUR/CAD	8.0% <span style="color:green;">▲</span>	8.9%	-0.7	7.5% <span style="color:green;">▲</span>	8.1%	-0.9	7.7% <span style="color:green;">▲</span>	7.4%	-0.5	8.1% <span style="color:green;">▲</span>	7.6%	0.4	0.6 <span style="color:red;">▼</span>
EUR/PLN	7.8% <span style="color:green;">▲</span>	7.1%	0.6	7.5% <span style="color:green;">▲</span>	7.7%	-0.1	7.7% <span style="color:green;">▲</span>	7.7%	-0.2	8.6% <span style="color:red;">▼</span>	8.8%	-0.1	1.1 <span style="color:red;">▼</span>
EUR/CZK	4.9% <span style="color:red;">▼</span>	4.9%	0.6	5.3% <span style="color:orange;">▷</span>	6.8%	-1.1	5.7% <span style="color:orange;">▷</span>	6.2%	0.4	6.8% <span style="color:red;">▼</span>	7.9%	-0.6	1.5 <span style="color:red;">▼</span>
EUR/TRY	7.0% <span style="color:green;">▲</span>	6.8%	0.0	6.7% <span style="color:green;">▲</span>	7.6%	-1.6	6.9% <span style="color:green;">▲</span>	6.6%	-0.4	7.9% <span style="color:green;">▲</span>	7.4%	0.9 <span style="color:red;">▼</span>	1.3 <span style="color:red;">▼</span>
EUR/RUB	7.4% <span style="color:green;">▲</span>	5.4%	0.7	7.4% <span style="color:green;">▲</span>	6.7%	-0.6	7.8% <span style="color:green;">▲</span>	6.6%	-0.5	9.2% <span style="color:red;">▼</span>	7.7%	-0.3	1.8 <span style="color:red;">▼</span>
USD/CHF	7.6% <span style="color:red;">▼</span>	6.2%	0.5	7.4% <span style="color:red;">▼</span>	8.8%	-1.7	7.6% <span style="color:red;">▼</span>	7.6%	-0.8	8.5% <span style="color:red;">▼</span>	8.4%	1.1 <span style="color:red;">▼</span>	1.1 <span style="color:red;">▼</span>
USD/SEK	8.9% <span style="color:red;">▼</span>	8.8%	0.3	8.9% <span style="color:red;">▼</span>	9.3%	-0.5	9.2% <span style="color:red;">▼</span>	9.1%	-0.2	10.3% <span style="color:red;">▼</span>	10.5%	0.8 <span style="color:red;">▼</span>	1.4 <span style="color:red;">▼</span>
USD/NOK	8.1% <span style="color:red;">▼</span>	8.5%	-0.1	8.0% <span style="color:red;">▼</span>	9.2%	-1.1	8.4% <span style="color:red;">▼</span>	8.7%	0.6	9.7% <span style="color:red;">▼</span>	10.0%	0.2 <span style="color:red;">▼</span>	1.7 <span style="color:red;">▼</span>
AUD/USD	7.1% <span style="color:green;">▲</span>	6.5%	0.3	6.9% <span style="color:green;">▲</span>	6.8%	-0.4	7.5% <span style="color:green;">▲</span>	6.5%	0.4	9.2% <span style="color:green;">▲</span>	9.0%	1.0 <span style="color:red;">▼</span>	2.3 <span style="color:red;">▼</span>
NZD/USD	9.2% <span style="color:green;">▲</span>	7.9%	1.2	8.5% <span style="color:green;">▲</span>	9.5%	-1.1	9.0% <span style="color:green;">▲</span>	8.4%	0.2	10.2% <span style="color:green;">▲</span>	10.1%	1.2 <span style="color:red;">▼</span>	1.8 <span style="color:red;">▼</span>
USD/CAD	6.6% <span style="color:green;">▲</span>	6.9%	-0.4	6.3% <span style="color:green;">▲</span>	5.7%	0.5	6.5% <span style="color:green;">▲</span>	5.4%	0.8	7.2% <span style="color:green;">▲</span>	6.7%	1.8 <span style="color:red;">▼</span>	0.9 <span style="color:red;">▼</span>
NOK/SEK	5.4% <span style="color:red;">▼</span>	6.3%	-0.1	5.2% <span style="color:red;">▼</span>	6.2%	-0.2	5.5% <span style="color:red;">▼</span>	6.4%	-0.3	5.9% <span style="color:green;">▲</span>	6.8%	-0.1 <span style="color:red;">▼</span>	0.7 <span style="color:red;">▼</span>
USD/ZAR	13.3% <span style="color:green;">▲</span>	14.6%	-1.0	12.9% <span style="color:green;">▲</span>	12.2%	0.0	13.3% <span style="color:green;">▲</span>	11.3%	0.7	15.3% <span style="color:red;">▼</span>	14.4%	1.1 <span style="color:red;">▼</span>	2.4 <span style="color:red;">▼</span>
EUR/HUF	10.2% <span style="color:green;">▲</span>	8.5%	1.1	9.8% <span style="color:green;">▲</span>	9.5%	0.9	9.9% <span style="color:green;">▲</span>	9.3%	1.0	10.2% <span style="color:green;">▲</span>	10.9%	0.7 <span style="color:red;">▼</span>	0.4 <span style="color:red;">▼</span>
USD/TRY	4.9% <span style="color:red;">▼</span>	5.2%	-1.1	5.2% <span style="color:red;">▼</span>	5.8%	-1.9	5.9% <span style="color:green;">▲</span>	5.0%	-0.4	7.7% <span style="color:red;">▼</span>	7.3%	-0.5 <span style="color:red;">▼</span>	2.5 <span style="color:red;">▼</span>
USD/RUB	7.6% <span style="color:green;">▲</span>	5.1%	0.7	7.9% <span style="color:red;">▼</span>	6.7%	-0.2	8.3% <span style="color:red;">▼</span>	7.2%	-0.3	9.8% <span style="color:red;">▼</span>	9.6%	-1.4 <span style="color:red;">▼</span>	2.0 <span style="color:red;">▼</span>

1M volatilities (pctile)

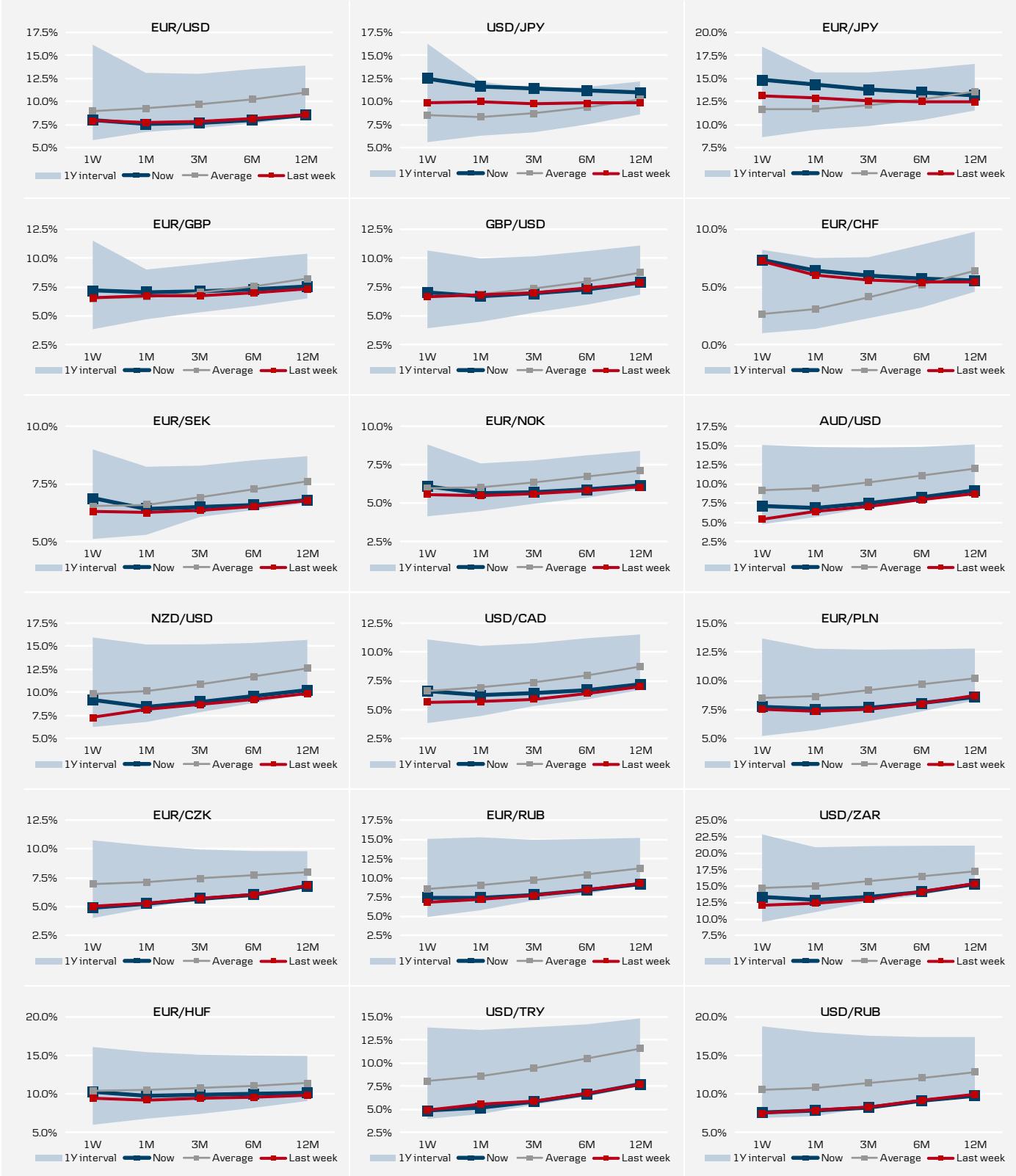
3M volatilities

1Y volatilities



Note: The table shows current levels of ATM implied volatilities, historical volatilities and the Z-score on the spread calculated using one year of observations. The last column shows the slope of the implied volatility term structure and a Z-score calculated using one year of observations. The chart shows current levels of 1M, 3M and 1Y ATM implied volatilities, the level one week ago, the average level of the past year and the 1Y interval.

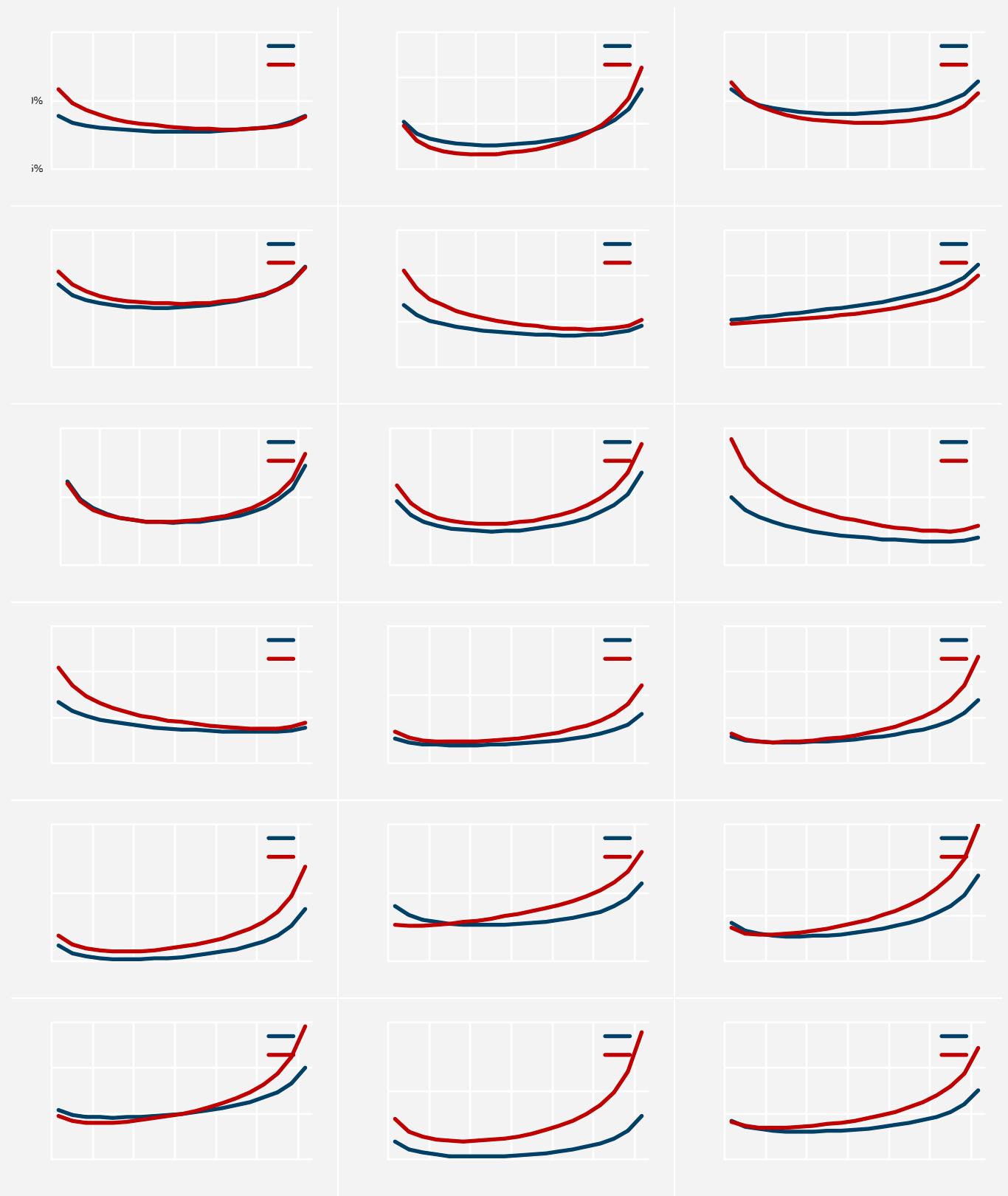
Source: Bloomberg, Danske Bank Markets calculations

**G10 and EM implied volatility cones**

Note: The volatility cones show ATM implied volatilities for G10 and EM currency pairs

Source: Bloomberg, Danske Bank Markets

G10 and EM implied volatility surfaces



Note: The chart shows the implied volatility surface for G10 and EM currency pairs. Data is based on mid-prices and is indicative only. The data is shown for maturities of one and six months for various moneyness. Put deltas are denoted 'xP', while call deltas are denoted 'xC'.

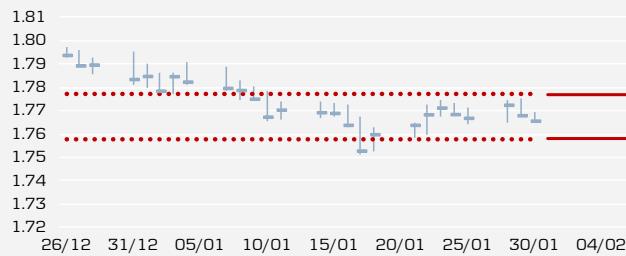
Source: Danske Bank Markets

# Range trading monitor

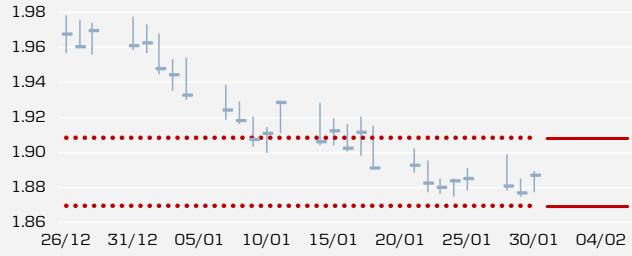
## Ranking of range trade candidates

#	FX	1 week strategies				1 month strategies				3 month strategies							
		Actual range	Delta-neutral straddle	Ratio*	ADX**	Actual range	Delta-neutral straddle	Ratio*	ADX**	Actual range	Delta-neutral straddle	Ratio*	ADX**				
1	USD/TRY	105 pips	95 pips	0.1.1	29.6	1	USD/RUB	7019 pips	5177 pips	0.1.4	27.3	1	AUD/USD	311 pips	313 pips	0.1.0	15.9
2	GBP/NZD	243 pips	195 pips	0.1.3	22.7	2	USD/NOK	1366 pips	971 pips	0.1.4	23.0	2	USD/CAD	284 pips	257 pips	0.1.1	27.2
3	USD/RUB	3195 pips	2516 pips	0.1.3	27.3	3	AUD/NZD	252 pips	174 pips	0.1.5	16.0	3	EUR/RUB	14493 pips	12713 pips	0.1.1	14.6

## 1W range trade no. 1 - USD/TRY



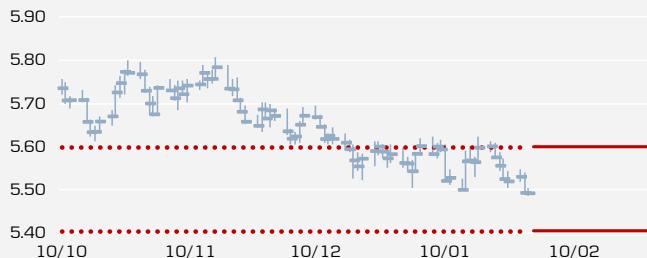
## 1W range trade no. 2 - GBP/NZD



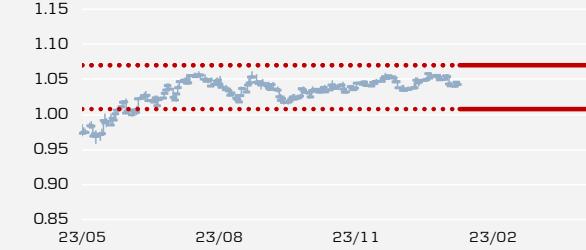
## 1M range trade no. 1 - USD/RUB



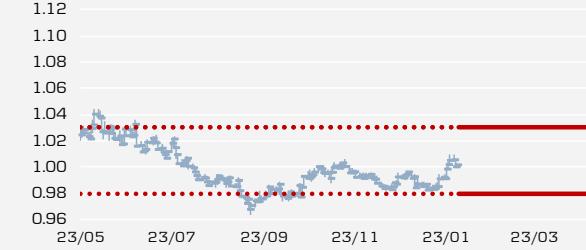
## 1M range trade no. 2 - USD/NOK



## 3M range trade no. 1 - AUD/USD



## 3M range trade no. 2 - USD/CAD

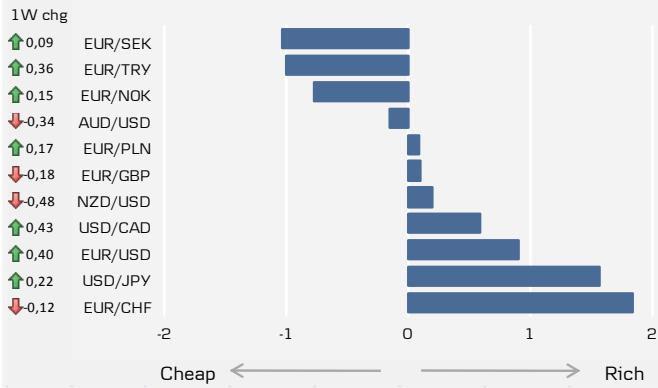


Notes: Range trades are ranked by the realised range relative to the pay-off received by selling a straddle, with the strike set at-the-money (DNS convention).\*A ratio below 1 implies that the historically realised range is smaller than the break-even range.\*\*ADX provides a measure of the strength of the trend in a given currency pair. Generally, a value above 25 characterises a pair that is trending. The bands in the charts show break-even levels. Indicative prices and levels

Source: Bloomberg, Danske Bank Markets calculations

# Option market positioning and skew valuation

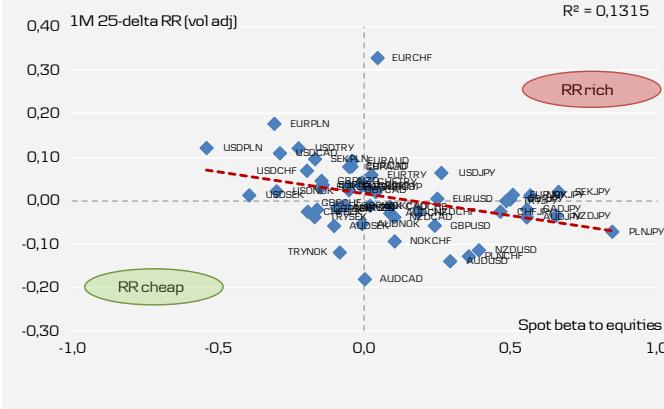
## 1M 25-delta risk reversals [z-scores, vol adjusted]



## 1M 25-delta risk reversals [z-scores, vol adjusted]

Cheap				Rich					
#	Currency	Z-score	RR	1W chg	#	Currency	Z-score	RR	1W chg
1	CHF/TRY	-2,3	0,3	↑	1	TRY/JPY	3,2	0,0	↑
2	GBP/TRY	-1,8	0,2	↑	2	EUR/CAD	2,7	0,6	↑
3	CHF/SEK	-1,7	-0,2	↑	3	EUR/JPY	2,5	0,2	↑
4	USD/TRY	-1,7	0,6	↑	4	SEK/JPY	2,4	0,3	↑
5	AUD/CAD	-1,2	-1,1	↓	5	NOK/JPY	2,2	0,2	↑
6	EUR/SEK	-1,0	0,2	↑	6	GBP/JPY	2,1	0,1	↑
7	EUR/NZD	-1,0	0,4	↑	7	AUD/JPY	2,1	-0,4	↑
8	EUR/TRY	-1,0	0,4	↑	8	EUR/CHF	1,8	2,1	↓
9	USD/SEK	-0,9	0,1	↓	9	NZD/JPY	1,8	-0,4	↓
10	GBP/NZD	-0,8	0,4	↓	10	GBP/CHF	1,7	0,2	↓

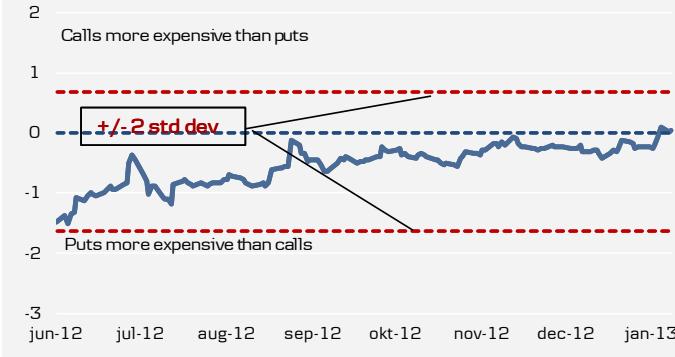
## Risk reversals explained by currency spot betas to equities



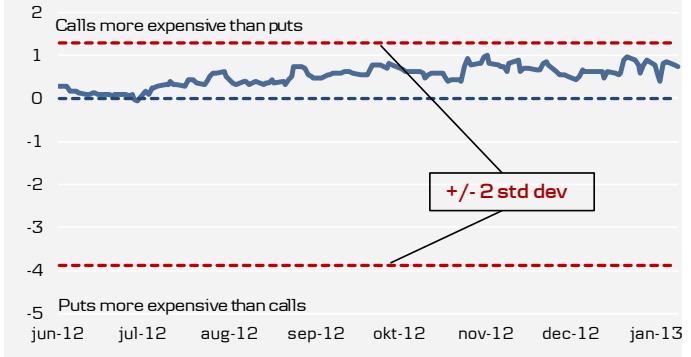
## Valuation signals from simple comparison with equity betas

'RR sign' = 'Risk beta sign'				Residuals (simple model)					
#	Currency	Risk beta	RR [adj]	RR	#	Currency	Residual	RR [adj]	RR
1	SEKJPY	0,7	0,0	rich	1	EURCHF	0,3	0,3	rich
2	NOKJPY	0,6	0,0	rich	2	AUDCAD	-0,2	-0,2	cheap
3	EURJPY	0,5	0,0	rich	3	TRYNOK	-0,1	-0,1	cheap
4	GBPJPY	0,5	0,0	rich	4	EURPLN	0,1	0,2	rich
5	TRYJPY	0,5	0,0	rich	5	AUDUSD	-0,1	-0,1	cheap
6	EURCHF	0,0	0,3	rich	6	PLNCHF	-0,1	-0,1	cheap
7	USDJPY	0,3	0,1	rich	7	NOKCHF	-0,1	-0,1	cheap
8	EURUSD	0,2	0,0	rich	8	NZDUSD	-0,1	-0,1	cheap
9	CHFSEK	-0,2	0,0	cheap	9	AUDSEK	-0,1	-0,1	cheap
10	TRYSEK	-0,2	0,0	cheap	10	USDTRY	0,1	0,1	rich

## EUR/USD 1M 25-delta risk reversal

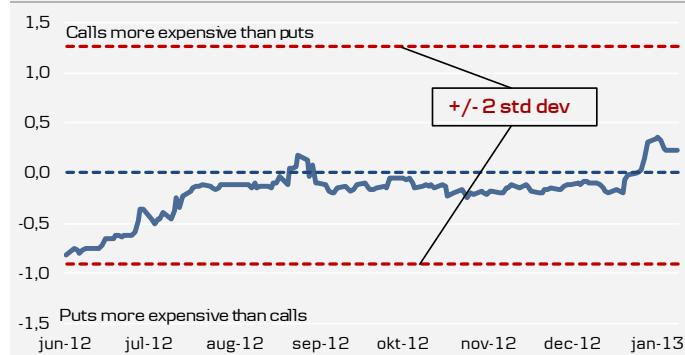
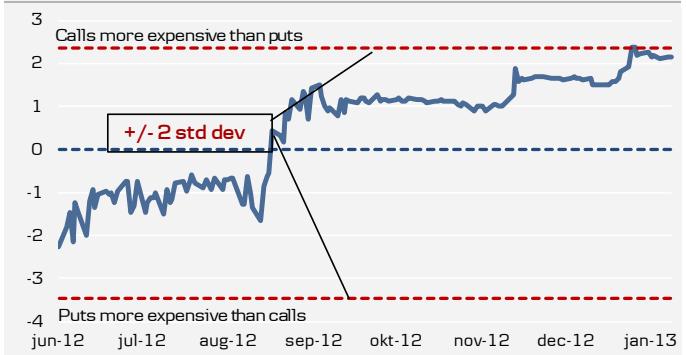
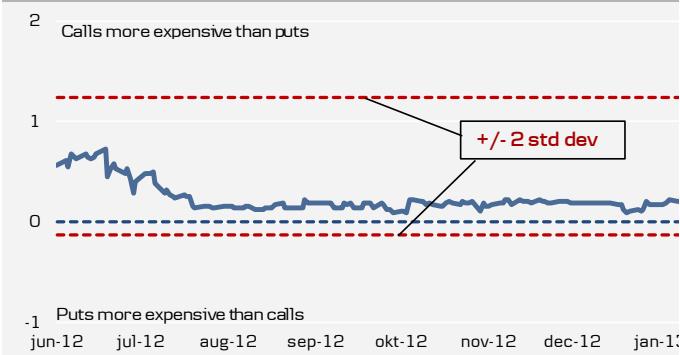
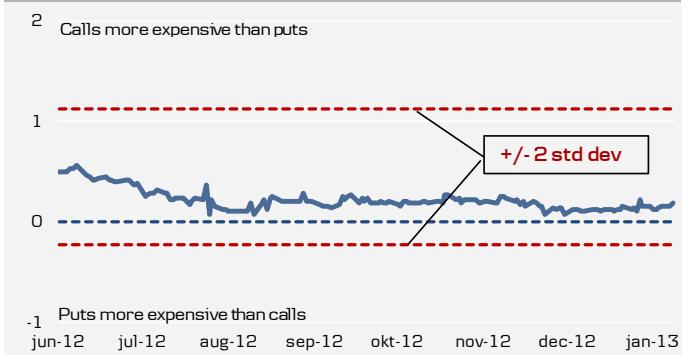
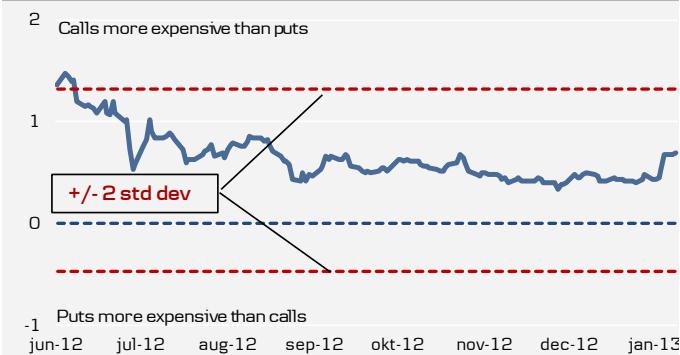
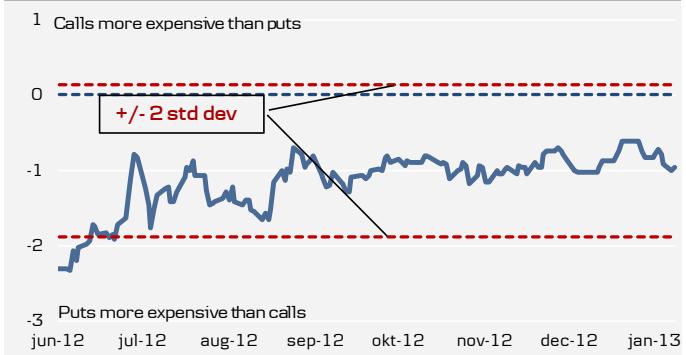


## USD/JPY 1M 25-delta risk reversal



Note: Z-scores are computed using maximum available data and on risk reversals divided by ATM volatility. Spot beta to equities ('risk beta') is the beta coefficient from a linear regression of weekly spot returns on weekly returns on the S&P500 equity index using a 1Y estimation window. Red broken lines in 1M RR charts indicate the +/- 2 std dev band (computed on a volatility adjusted basis)

Source: Bloomberg (synthetic risk reversal quotes are used for non-standard currency pairs), Danske Bank Markets calculations

**EUR/GBP 1M 25-delta risk reversal****EUR/CHF 1M 25-delta risk reversal****EUR/SEK 1M 25-delta risk reversal****EUR/NOK 1M 25-delta risk reversal****USD/CAD 1M 25-delta risk reversal****AUD/USD 1M 25-delta risk reversal****NZD/USD 1M 25-delta risk reversal****EM 1M 25-delta risk reversal**

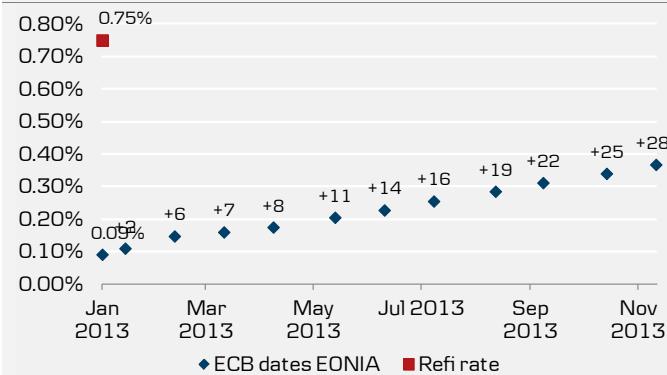
Source: Bloomberg [synthetic risk reversal quotes are used for non-standard currency pairs], Danske Bank Markets calculations

# Central bank overview

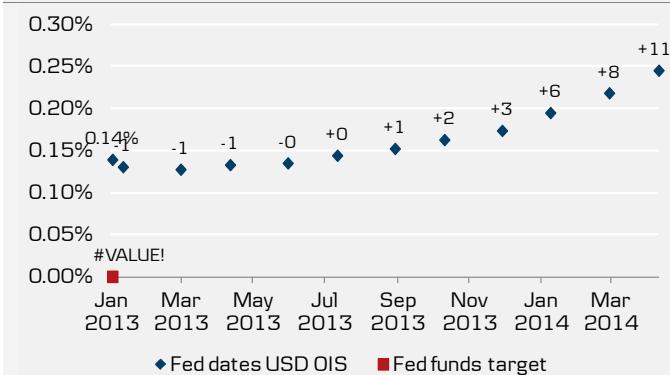
## Main G10 central banks outlook

	Official policy rate	Current	Next decision	DB forecasts [3M-6M-12M]			Official policy rate	Current	Next decision	DB forecasts [3M-6M-12M]			
EUR	Minimum bid rate	0.75%	07 Feb 13	0.75	0.75	0.75	SEK	Repo rate	1.00%	13 Feb 13	0.75	0.75	0.75
USD	Federal funds rate	0.25%	30 Jan 13	0.25	0.25	0.25	NOK	Sight deposit rate	1.50%	14 Mar 13	1.50	1.50	2.00
JPY	Overnight call rate	0.10%	14 Feb 13	0.10	0.10	0.10	CAD	Overnight rate	1.00%	06 Mar 13	1.00	1.25	1.50
GBP	Base rate	0.50%	07 Feb 13	0.50	0.50	0.50	AUD	Cash rate	3.00%	05 Feb 13	3.00	3.00	3.00
CHF	3-month Libor	0.00%	14 Mar 13	0.00	0.00	0.00	NZD	Cash rate	2.50%	30 Jan 13	2.50	2.50	2.50

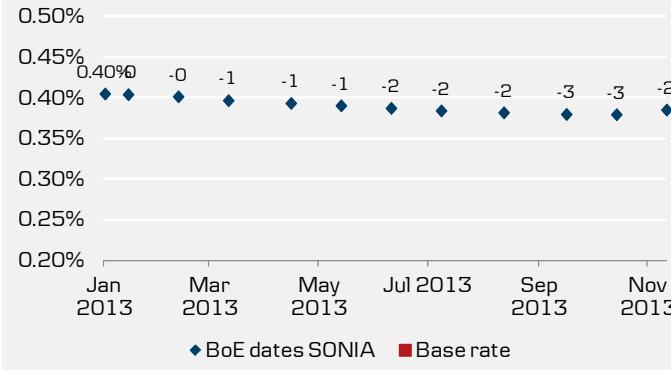
## ECB market pricing



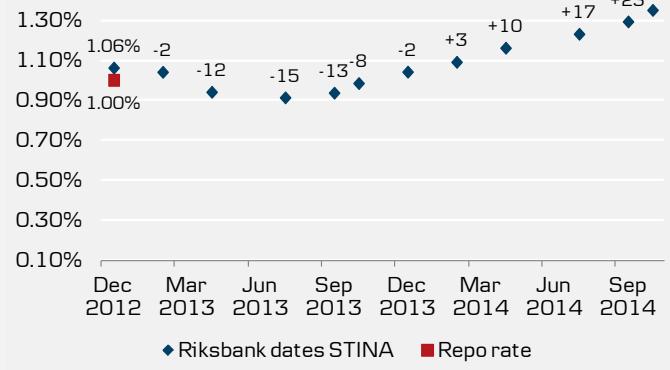
## Fed market pricing



## BoE market pricing



## Riksbank market pricing



Note: The charts show the cumulated market pricing of rate changes on meeting dates

Source: Danske Bank Markets

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## FX and Commodities Research

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