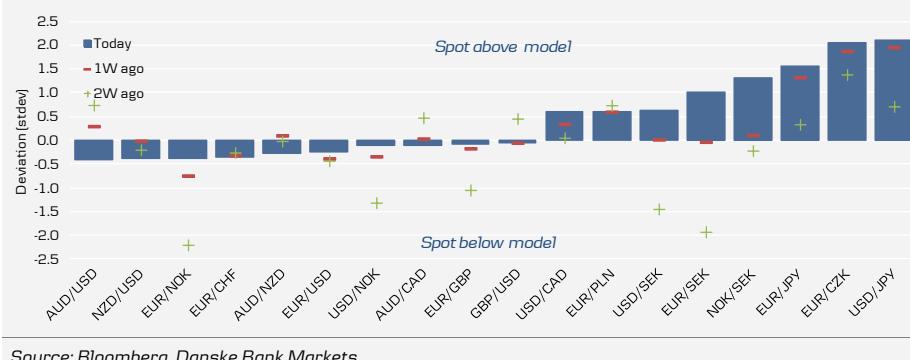


FX Market Update

A near-term correction lower in USD/JPY looks imminent

Short-term model and spot misalignments



Contents

Spot overview.....	2
Forecasts and market pricing.....	3
Short-term financial models.....	5
Correlation monitor.....	9
Carry monitor.....	11
Volatility summary.....	12
Range-trading monitor.....	15
Option market positioning.....	16
Central bank overview.....	18
FX trade overview.....	19
FX Market Update provides a quantitative overview of the currency market.	

What stands out

Looking at the signals from our short-term financial models, JPY and CZK stand out. Both currencies have depreciated considerably over the past weeks as the market has been pricing in a higher probability of further central bank easing. According to our short-term models USD/JPY is currently trading with the biggest misalignment (2.1 standard deviation above model estimate) and looks significantly overbought. EUR/JPY and EUR/CZK are also trading with significant misalignments versus models estimates, and we still recommend being long USD/JPY and EUR/CZK, even though our models are unable to explain the current misalignments.

In particular, we see a strong case for a considerably weaker yen as an economic recession and the forthcoming general election in Japan have raised speculations of an increase of the BoJ's inflation target from the current 1% to 3%. If a credible higher inflation target is introduced, it could prompt a structural shift in the underlying appreciation trend of recent decades and thus pave the way for a significant weakening of the yen.

However, there are several factors suggesting that the recent spike in USD/JPY currently looks excessive and indicates that a short-term correction could be imminent. First, USD/JPY, as mentioned earlier, is significantly overbought according to our short-term financial model. Second, the RSI index has reached levels above 70 (currently 79), which also implies that USD/JPY is overbought. Finally, investors are already net long USD/JPY, according to the latest *IMM* data. Hence, there are many indications that the recent move higher has been a bit too fast.

Trade idea: Buy 1M USD/JPY 82.50 KI call with barrier at 81.75

We expect a significant weakening of JPY over the coming 6-12 months and still prefer to buy USD/JPY on dips. One way to utilise a possible correction lower in USD/JPY could be to buy a 1M USD/JPY 82.50 KI call option with barrier at 81.75 (*slightly above the strong technical resistance level at 81.65*) The option costs an initial premium of 40 JPY pips (indicative, spot ref: 82.30) which is half the price of a vanilla 82.50 call option (indicatively 81 JPY pips). The option expires on 21 December and covers the general election on 16 December and the next BoJ meeting on 20 December, when we expect the BoJ to increase its asset purchase programme by an additional JPY10trl.

Senior Analyst
Morten Helt
+45 45 12 85 18
mohel@danskebank.com

www.danskeresearch.com
Bloomberg: DRFX <GO>

Spot overview

Spot overview

	Spot	1M change	Trend Direction	Trend Strength	Bollinger-bands -/+ 2 std dev	20-day MA	50-day MA	1M Low-High	RSI
				Sup./Res.					
EUR/USD	1.2853	-1.0%	➡		1.2646 / 1.3120	1.2819	1.2914	1.2662 / 1.3023	52.3
EUR/JPY	106.30	2.5%	➡		100.60 / 105.71	103.12	102.45	100.33 / 106.58	71.6 (Overbought)
EUR/GBP	0.8055	-1.0%	➡		0.7956 / 0.8148	0.8026	0.8039	0.7961 / 0.8148	54.3
EUR/CHF	1.2047	-0.5%	➡		1.2027 / 1.2116	1.2060	1.2086	1.2035 / 1.2112	41.4
EUR/SEK	8.62	-0.1%	➡		8.5344 / 8.6970	8.6079	8.5885	8.5016 / 8.7187	52.5
EUR/NOK	7.34	-1.4%	➡		7.2748 / 7.4711	7.3549	7.3890	7.2887 / 7.4845	45.1
EUR/AUD	1.2401	-2.0%	➡		1.2129 / 1.2745	1.2347	1.2471	1.2159 / 1.266	52.2
EUR/CAD	1.2813	-0.6%	➡		1.2650 / 1.2985	1.2800	1.2767	1.2648 / 1.3023	54.6
EUR/NZD	1.5783	-1.3%	➡		1.5446 / 1.6050	1.5662	1.5739	1.5392 / 1.6009	54.9
EUR/PLN	4.11	-0.3%	➡		4.0767 / 4.1849	4.1399	4.1225	4.1 / 4.192	44.1
EUR/RUB	40.03	-1.8%	➡		39.95 / 40.80	40.35	40.33	39.9 / 40.81	39.2
EUR/TRY	2.31	-1.2%	➡		2.265 / 2.366	2.3012	2.3224	2.2682 / 2.3443	53.7
EUR/CZK	25.49	2.3%	➡		24.66 / 25.68	25.3128	25.0672	24.78 / 25.59	63.1
USD/JPY	82.70	3.6%	⬆	➡	80.8460	80.45	79.34	79.08 / 82.85	79 (Overbought)
GBP/USD	1.5958	0.0%	➡		1.582 / 1.618	1.5971	1.6062	1.5829 / 1.6175	48.3
USD/CHF	0.9372	0.5%	➡		0.923 / 0.952	0.9409	0.9360	0.9277 / 0.9513	45.4
USD/SEK	6.71	0.9%	➡		6.565 / 6.812	6.7157	6.6514	6.598 / 6.816	50.4
USD/NOK	5.71	-0.3%	➡		5.643 / 5.803	5.7377	5.7219	5.672 / 5.808	44.9
AUD/USD	1.0364	1.0%	➡		1.026 / 1.046	1.0381	1.0356	1.0257 / 1.048	49.6
USD/CAD	0.9967	0.4%	➡		0.982 / 1.008	0.9985	0.9887	0.9875 / 1.0057	52
NZD/USD	0.8144	0.3%	➡		0.809 / 0.827	0.8184	0.8205	0.8053 / 0.831	46.4
USD/RUB	31.14	-0.9%	➡		30.79 / 31.90	31.48	31.23	31.08 / 31.85	40.7
NOK/SEK	1.1753	1.3%	⬆	➡	1.1675	1.1704	1.1624	1.1553 / 1.1821	58
AUD/NZD	1.2727	0.6%	➡		1.2504 / 1.2818	1.2684	1.2620	1.2526 / 1.2833	55.6

Top 10 overbought range-trading currency pairs

	Currency pair	RSI
1	CHF/JPY	73.0
2	EUR/JPY	71.6
3	CAD/JPY	70.9
4	NZD/JPY	69.6
5	SEK/JPY	67.5
6	AUD/NZD	55.6
7	EUR/NZD	54.9
8	EUR/CAD	54.6
9	CHF/SEK	54.4
10	EUR/GBP	54.3

Top 10 oversold range-trading currency pairs

	Currency pair	RSI
1	EUR/CHF	40.4
2	GBP/CHF	43.2
3	GBP/NOK	43.6
4	CAD/CHF	43.8
5	NZD/CHF	43.9
6	EUR/PLN	44.1
7	USD/NOK	44.9
8	AUD/NOK	45.0
9	USD/PLN	45.1
10	EUR/NOK	45.1

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)

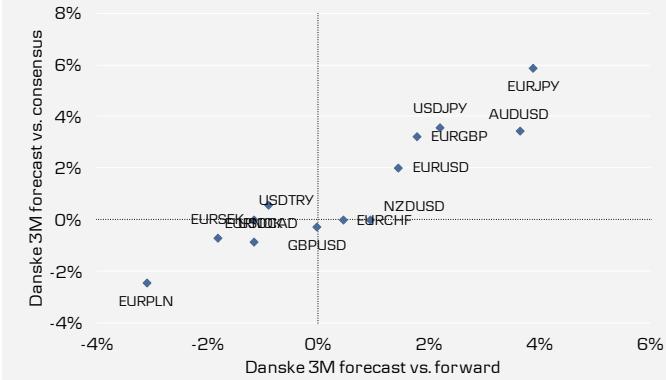
Source: Bloomberg

Forecasts and market pricing

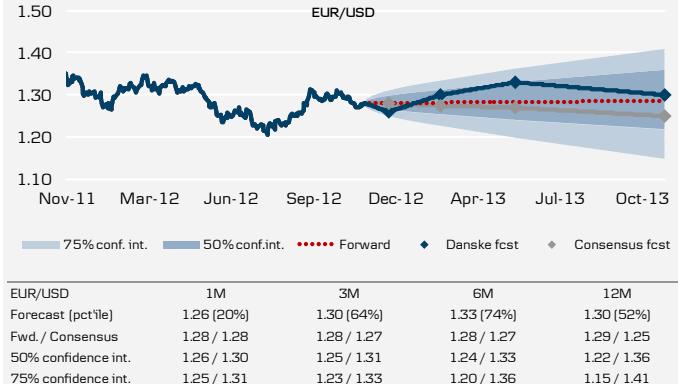
Danske Bank Markets FX forecasts

	Spot	+1m	Forecast	+3m	+6m	+12m	+1m	+3m	+6m	+12m
Exchange rates vs EUR										
USD	1.286	1.26	1.30	1.33	1.30	-2.0	1.0	3.2	0.7	
JPY	106.4	102	108	112	110	-4.1	1.5	5.3	3.4	
GBP	0.806	0.79	0.82	0.83	0.81	-2.0	1.6	2.8	0.0	
CHF	1.205	1.20	1.21	1.22	1.21	-0.4	0.5	1.4	0.7	
DKK	7.46	7.46	7.46	7.46	7.46	0.1	0.1	0.2	0.3	
NOK	7.34	7.40	7.30	7.20	7.15	0.7	-1.0	-2.8	-4.4	
SEK	8.62	8.75	8.50	8.40	8.40	1.3	-1.8	-3.2	-3.8	
Exchange rates vs USD										
CAD	1.00	1.01	0.99	0.97	0.99	1.3	-0.9	-3.1	-1.5	
AUD	1.04	1.04	1.07	1.09	1.06	0.6	4.0	6.6	5.1	
NZD	0.81	0.80	0.82	0.83	0.81	-1.6	1.3	3.1	1.8	

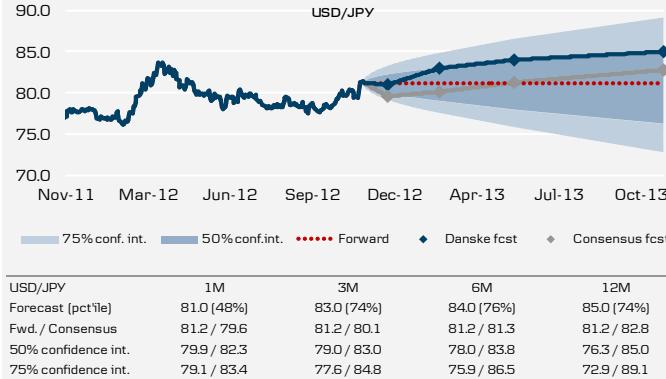
Danske Bank forecasts vs forwards and consensus



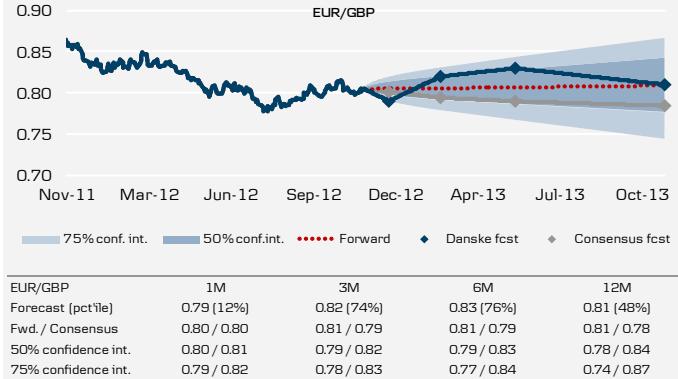
EUR/USD



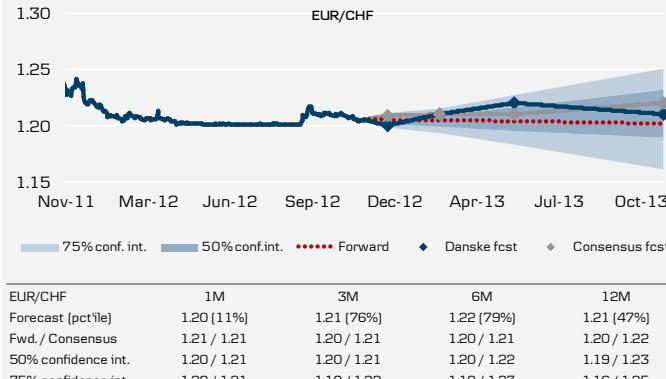
USD/JPY



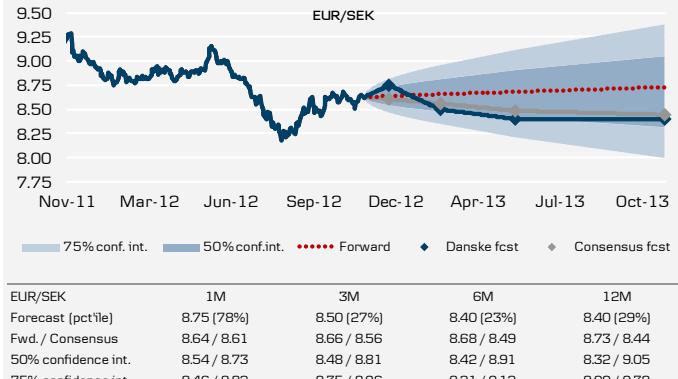
EUR/GBP



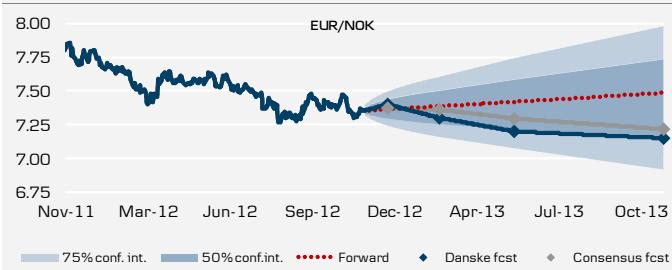
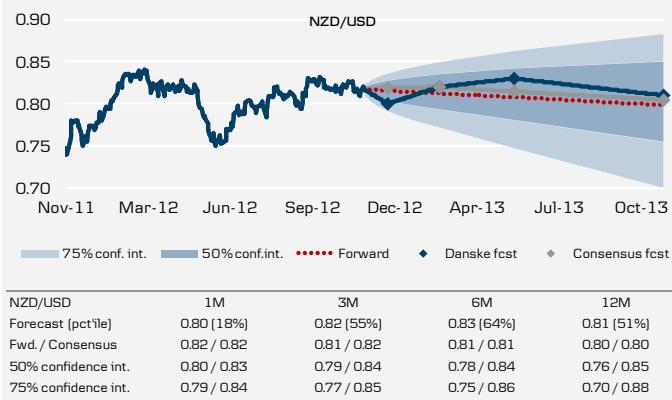
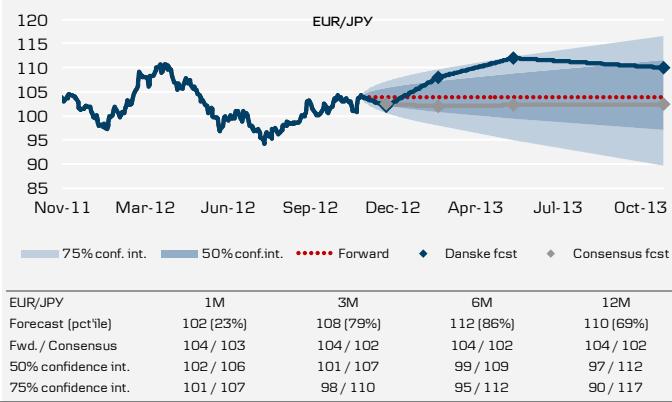
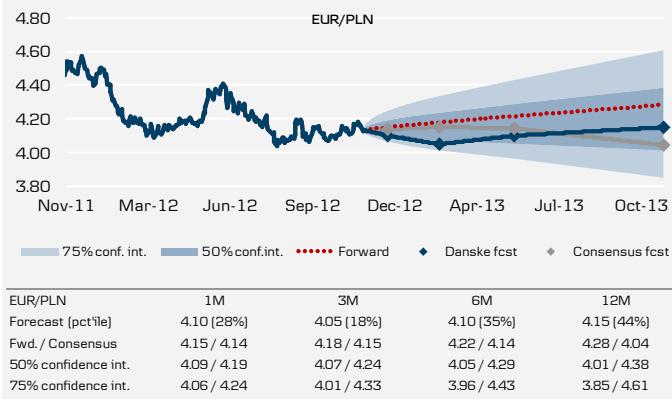
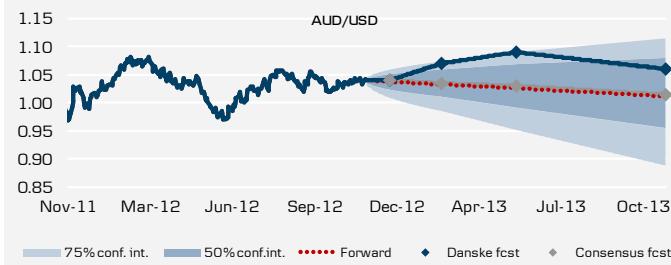
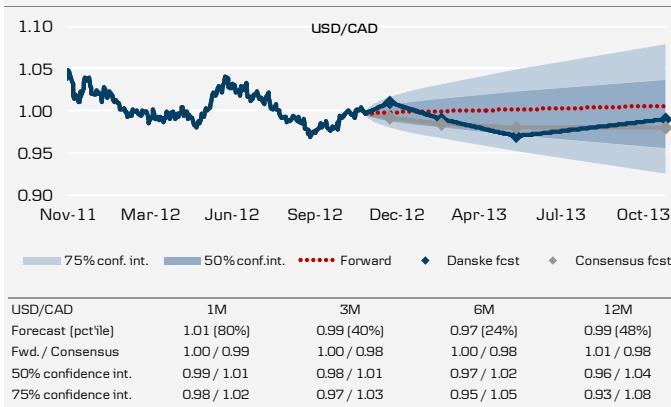
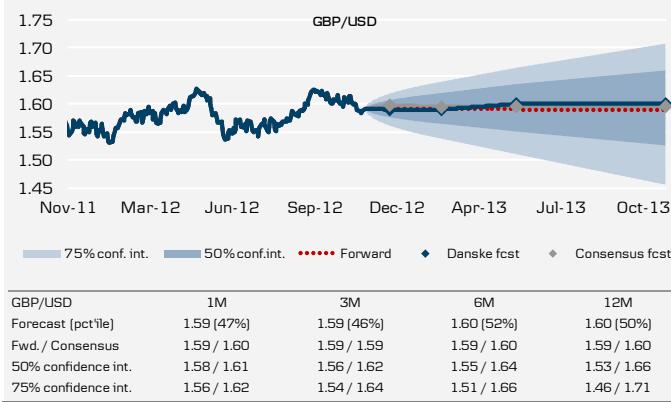
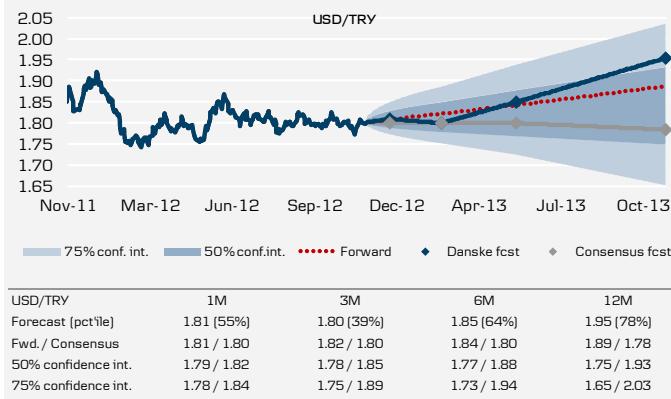
EUR/CHF



EUR/SEK



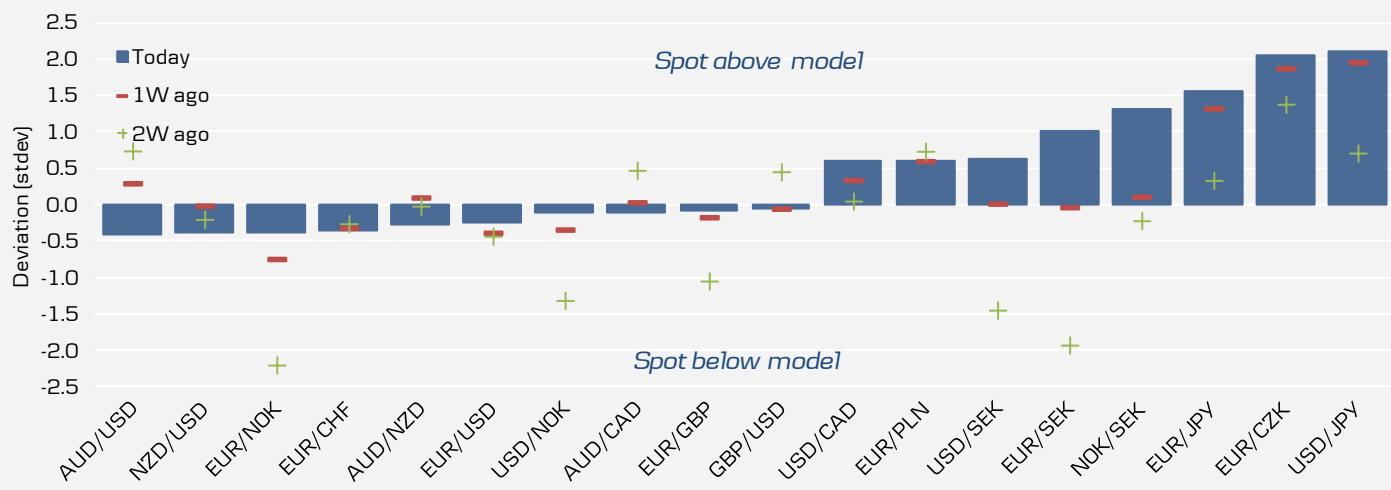
Note: The cone charts show confidence regions derived from option market prices. Source: Bloomberg and Danske Bank Markets calculations

EUR/NOK**NZD/USD****EUR/JPY****EUR/PLN****AUD/USD****USD/CAD****GBP/USD****USD/TRY**

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

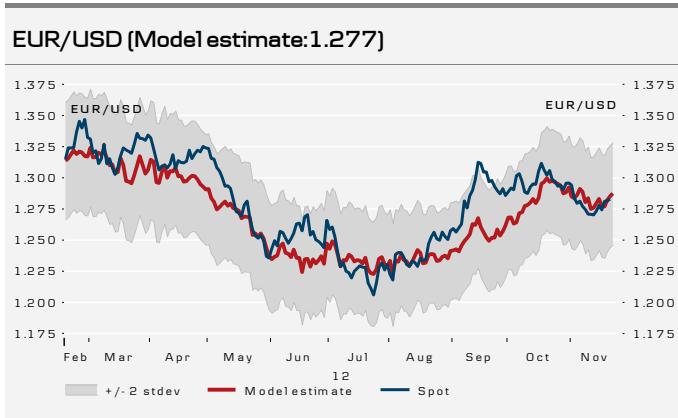
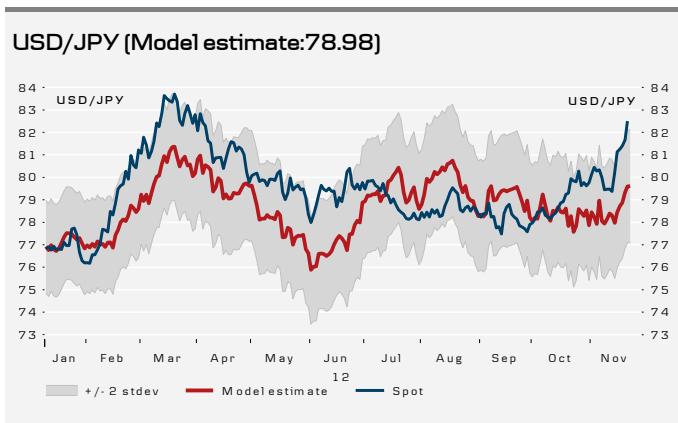
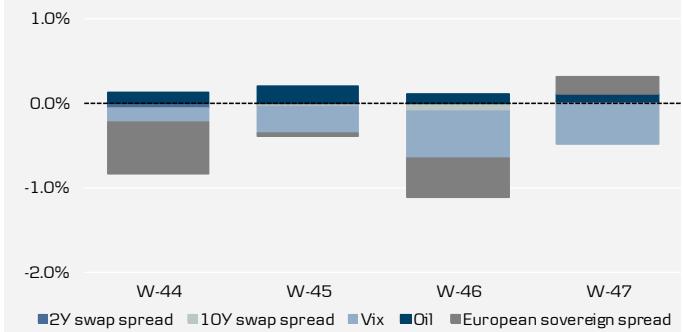
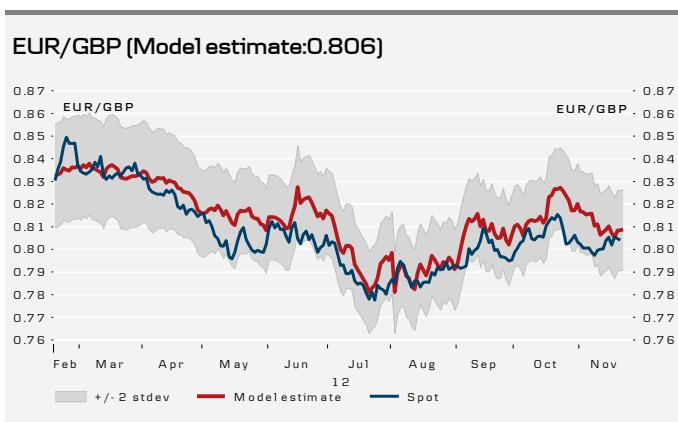
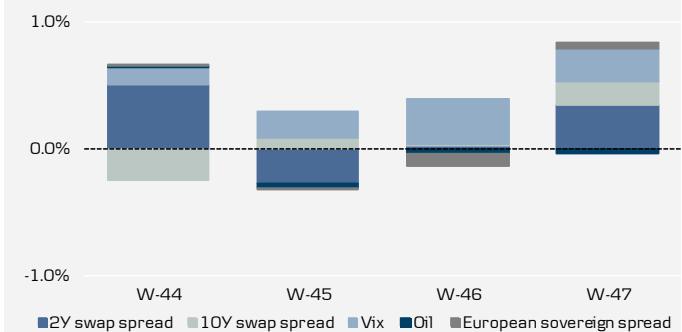
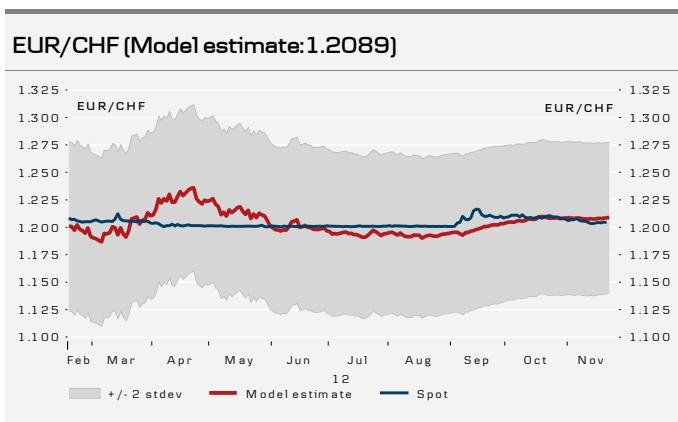
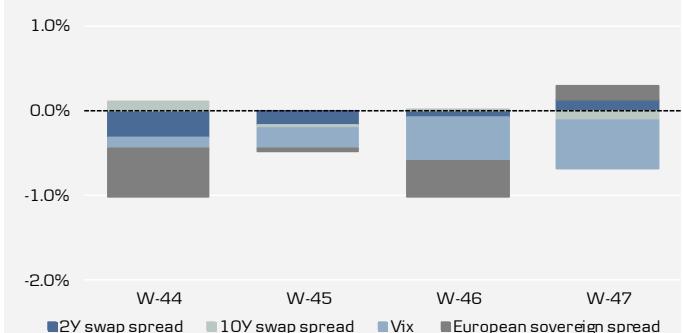
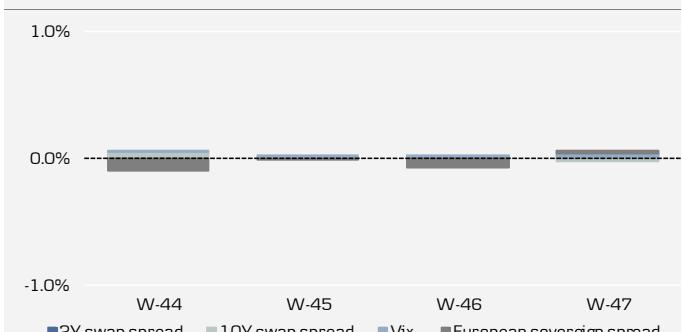


Spot deviations from model estimate

	Spot	Model	Signal	Deviation (%)	Deviation (stddev)
EUR/USD	1.285	1.287		-0.2%	-0.3
EUR/JPY	106.33	102.21	Oversold	4.0%	1.6
USD/JPY	82.73	79.65	Very Oversold	3.9%	2.1
EUR/GBP	0.805	0.809		-0.5%	-0.1
EUR/CHF	1.205	1.209		-0.4%	-0.4
EUR/SEK	8.630	8.601		0.3%	1.0
EUR/NOK	7.336	7.389		-0.7%	-0.4
AUD/USD	1.038	1.037		0.0%	-0.4
USD/CAD	0.997	0.989		0.7%	0.6
NZD/USD	0.815	0.813		0.2%	-0.4
NOK/SEK	1.176	1.166		0.9%	1.3
EUR/PLN	4.113	4.076		0.9%	0.6
EUR/CZK	25.46	24.91	Very Oversold	2.2%	2.1
AUD/NZD	1.273	1.274		0.0%	-0.3
USD/SEK	6.715	6.666		0.7%	0.6
USD/NOK	5.708	5.739		-0.5%	-0.1
GBP/USD	1.597	1.594		0.2%	0.0
AUD/CAD	1.034	1.023		1.1%	-0.1

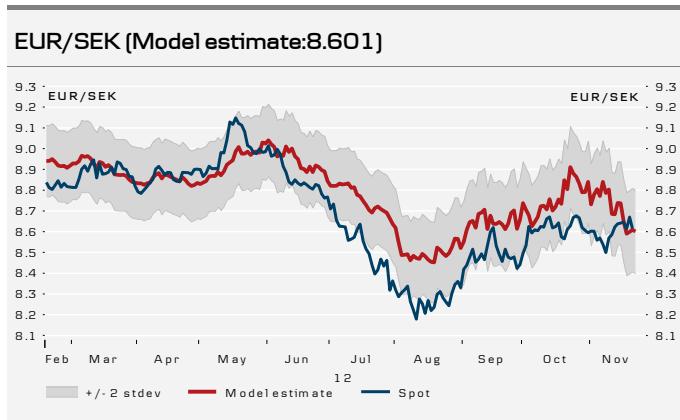
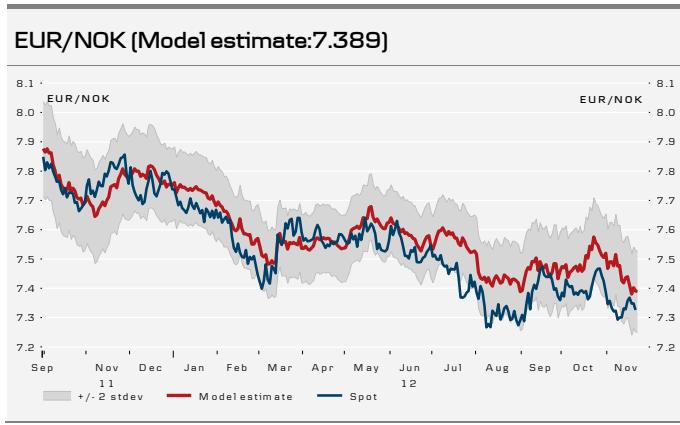
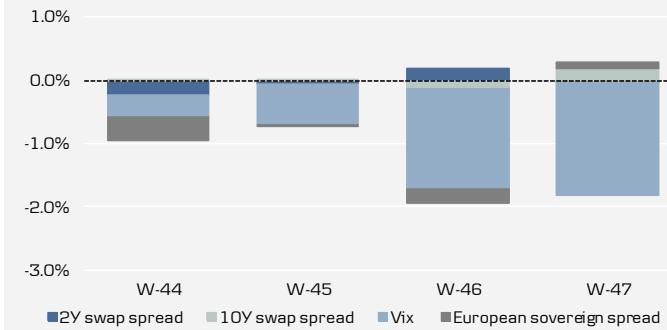
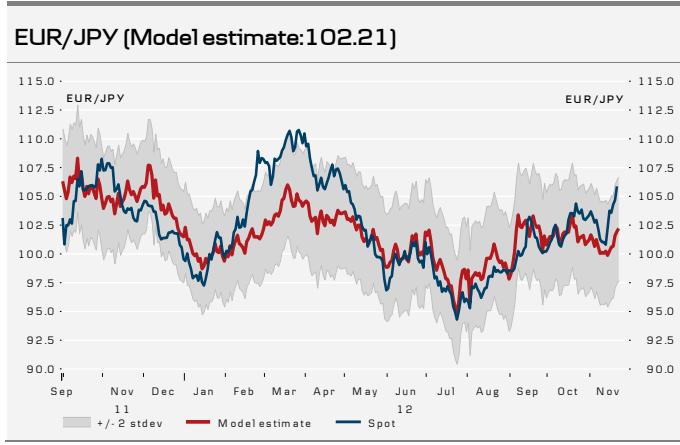
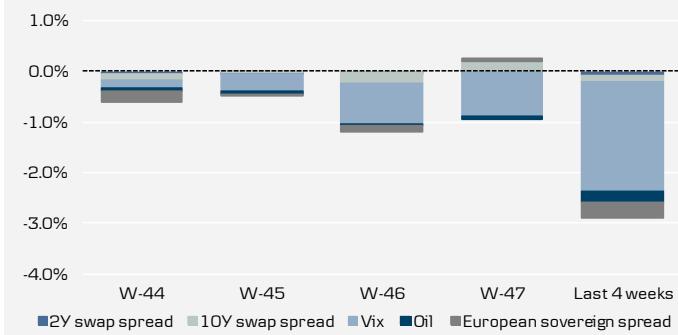
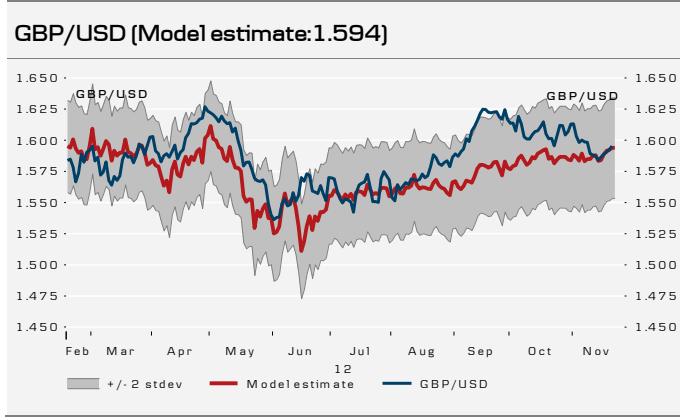
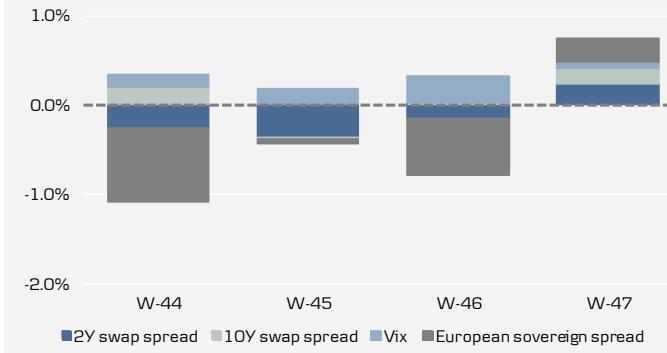
Note: Linear regression models using a 200-day rolling estimation window. 2Y swap spread is included only when spot beta is positive. Short-term financial models are partial models, implying that there is no built-in consistency between, e.g., EUR/NOK, EUR/SEK and NOK/SEK models

Source: Bloomberg, Danske Bank Markets calculations

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

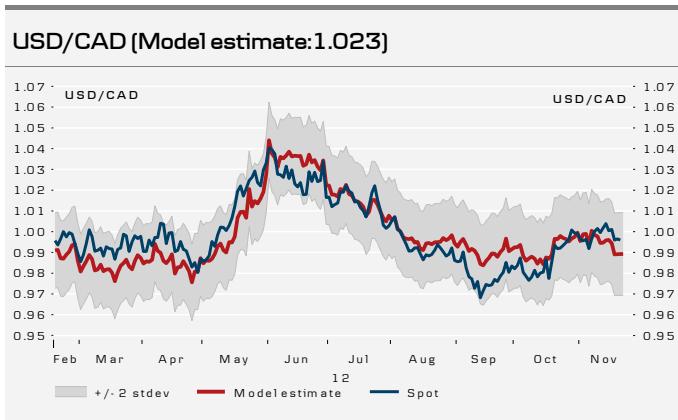
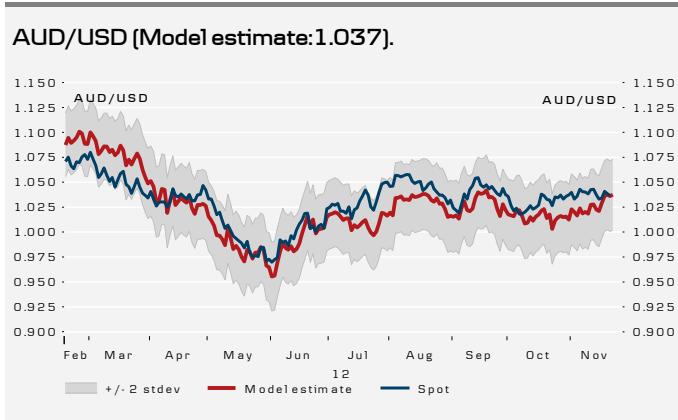
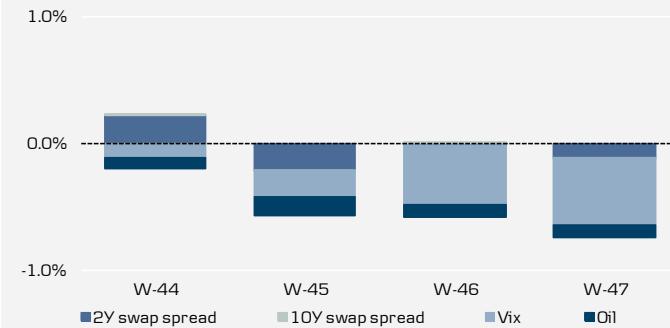
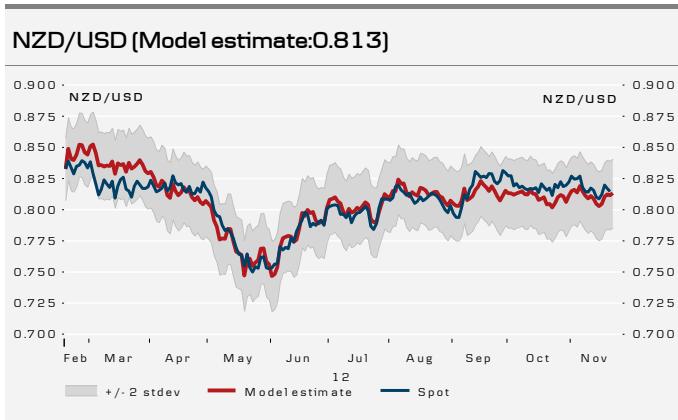
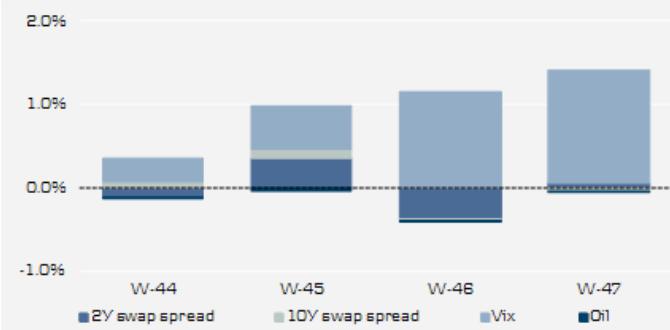
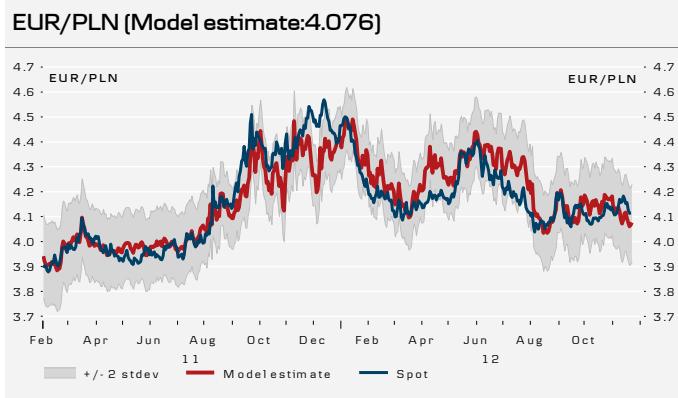
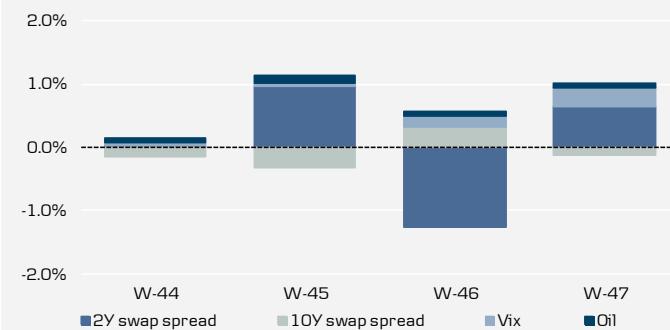
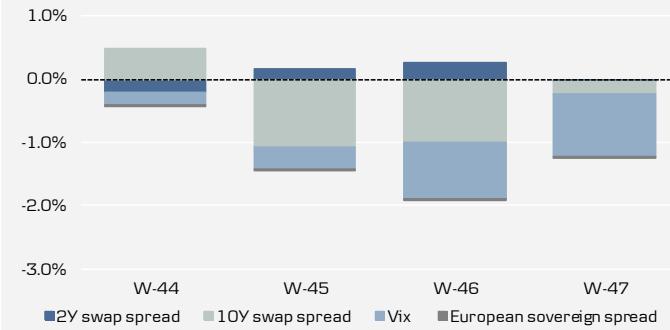
Note: Linear regression models using a 200-day rolling estimation window. 2Y swap spread is included only when spot beta is positive. Short-term financial models are partial models, implying that there is no built-in consistency between, e.g., EUR/NOK, EUR/SEK and NOK/SEK models

Source: Bloomberg, Danske Bank Markets calculations

**EUR/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

Correlation monitor

Correlation monitor - current levels (52-week window) and 10-week changes (arrows)

Correlation monitor - current levels (52-week window) and 10-week changes (arrows)

	USD	JPY	GBP	CHF	AUD	NZD	CAD	SEK	NOK	PLN	CZK	HUF	RUB	TRY	ZAR
USD															
JPY	80% ↑														
GBP	70% ↓	58% ↑													
CHF	35% ↑	19% ↑	19% ↑												
AUD	43% ↑	38% ↑	57% ↑	12% ↑											
NZD	36% ↑	28% ↑	50% ↑	22% ↑	89% ↑										
CAD	69% ↑	55% ↑	76% ↑	7% ↑	74% ↑	67% ↓									
SEK	16% ↑	7% ↑	37% ↑	10% ↑	58% ↓	56% ↓	36% ↓								
NOK	23% ↑	7% ↑	36% ↑	9% ↑	46% ↓	41% ↓	45% ↓	67% ↓							
PLN	-47% ↑	-44% ↑	-15% ↑	-14% ↓	21% ↓	26% ↓	4% ↓	19% ↓	13% ↓						
CZK	-40% ↓	-36% ↓	-18% ↓	0% ↓	17% ↓	8% ↓	-5% ↓	-1% ↓	-3% ↓	56% ↓					
HUF	-39% ↑	-41% ↑	-8% ↑	-12% ↓	23% ↓	19% ↓	2% ↓	18% ↓	12% ↓	64% ↑	56% ↓				
RUB	8% ↑	-4% ↑	28% ↑	-7% ↓	41% ↓	36% ↓	38% ↓	20% ↓	23% ↓	48% ↑	19% ↓	33% ↑			
TRY	52% ↑	46% ↑	60% ↑	19% ↑	75% ↑	74% ↑	70% ↑	55% ↑	57% ↑	19% ↓	0% ↓	24% ↑	34% ↓		
ZAR	15% ↑	13% ↑	44% ↑	1% ↑	76% ↑	68% ↓	55% ↓	58% ↓	39% ↓	34% ↓	20% ↓	26% ↓	36% ↓	61% ↑	
BRL	35% ↑	28% ↑	45% ↑	2% ↑	70% ↑	67% ↑	62% ↑	52% ↓	47% ↓	21% ↓	22% ↓	22% ↑	36% ↓	65% ↑	58% ↓

Highest correlation with MSCI wld.

#	FX	Corr. (10w chg.)	Beta
1	USDCAD	-82% ↑	-0.34*
2	NZDUSD	78% ↓	0.49*
3	AUDJPY	77% ↓	0.59*
4	USDSEK	-77% ↑	-0.51*
5	AUDUSD	77% ↓	0.48*
6	NZDJPY	76% ↓	0.61*
7	USDHUF	-74% ↓	-0.78*
8	JPYZAR	-73% ↑	-0.75*
9	SEKJPY	72% □	0.62*
10	JPYHUF	-72% ↓	-0.89*

Highest correlation with 2Y swap spr.

#	FX	Corr. (10w chg.)	Beta
1	AUDJPY	80% ↑	0.1*
2	NZDJPY	78% ↓	0.16*
3	CHFHUF	-77% ↑	-0.06*
4	AUDUSD	77% ↑	0.08*
5	USDCAD	73% ↓	0.09*
6	USDSEK	72% □	0.11*
7	EURHUF	-71% ↑	-0.05*
8	NZDUSD	70% ↑	0.09*
9	EURSEK	68% □	0.08*
10	AUDCAD	68% ↑	0.06*

Highest correlation with crude oil

#	FX	Corr. (10w chg.)	Beta
1	CHFRUB	-64% ↓	-0.29*
2	USDRUB	-62% ↑	-0.35*
3	EURRUB	-61% ↓	-0.26*
4	GBPRUB	-59% ↑	-0.26*
5	NOKRUB	-49% ↓	-0.22*
6	JPYRUB	-49% ↑	-0.37*
7	USDCAD	-48% ↑	-0.14*
8	CADRUB	-47% ↓	-0.21*
9	AUDUSD	43% ↓	0.19*
10	SEKRUB	-42% ↓	-0.2*

EUR/USD correlations

#	Asset	Corr. (10w chg.)	Beta
1	EURGBP	71% □	1.04*
2	Copper	63% ↑	0.27*
3	Itraxx	-59% ↑	-0.12*
4	Global equit.	57% ↓	0.32*
5	Aluminium	57% ↑	0.24*
6	Gold	56% ↓	0.31*
7	Zinc	56% ↑	0.2*
8	USDCAD	-51% ↑	-0.69*
9	NZDUSD	51% ↓	0.45*
10	G10 Carry	50% ↓	0.58*

USD/JPY correlations

#	Asset	Corr. (10w chg.)	Beta
1	US1OYSPW	59% ↑	0.06*
2	US1OYGOV	56% ↑	0.05*
3	Jap. equit.	52% ↑	0.23*
4	VIX	-48% ↓	0*
5	10Y swp. spr.	47% ↑	0.06*
6	US2YGOV	45% ↑	0.18*
7	Rel. equit.	-43% ↓	-0.22*
8	G10 Carry	36% ↑	0.35*
9	2Y10Y spr.	35% ↑	0.04*
10	Gold	-32% ↓	-0.15*

EUR/GBP correlations

#	Asset	Corr. (10w chg.)	Beta
1	EURUSD	71% □	0.49*
2	Gold	48% ↑	0.18*
3	EURSEK	38% ↑	0.32*
4	Aluminium	37% ↑	0.11*
5	EURNOK	37% ↑	0.4*
6	Zinc	34% □	0.08*
7	10Y swp. spr.	31% ↑	0.05*
8	Itraxx	-29% ↑	-0.04*
9	Copper	29% □	0.09*
10	EURCHF	28% ↑	0.89*

Notes: Correlations and betas are calculated using a rolling window of 52 weeks. Arrows denote the change in correlation over the past 10 weeks. Significant betas (at 95% confidence level) are denoted by an asterisk

Source: Bloomberg, Danske Bank Markets calculations

EUR/CHF correlations

#	Asset	Corr. (10w chg.)	Beta
1	US10YGOV	54%	0.01*
2	10Y swp. spr.	51%	0.02*
3	US10YSWP	48%	0.01*
4	EURUSD	47%	0.1*
5	Global equit.	46%	0.06*
6	USDCAD	-45%	-0.13*
7	US equit.	44%	0.06*
8	Ger. equit.	43%	0.04*
9	Itraxx	-43%	-0.02*
10	G10 Carry	40%	0.1*

EUR/SEK correlations

#	Asset	Corr. (10w chg.)	Beta
1	2Y swp. spr.	68%	0.08*
2	EURNOK	67%	0.87*
3	G10 Carry	-52%	-0.49*
4	10Y swp. spr.	42%	0.06*
5	2Y10Y spr.	-42%	-0.07*
6	US equit.	-41%	-0.21*
7	AUDUSD	-41%	-0.31*
8	Ger. equit.	-40%	-0.15*
9	Global equit.	-40%	-0.19*
10	EURGBP	38%	0.46*

EUR/NOK correlations

#	Asset	Corr. (10w chg.)	Beta
1	EURSEK	67%	0.52*
2	G10 Carry	-39%	-0.28*
3	US2YSWP	38%	0.08*
4	EURGBP	37%	0.35*
5	2Y swp. spr.	36%	0.04*
6	USDTRY	31%	0.21*
7	EURUSD	28%	0.18*
8	US2YGOV	26%	0.08
9	Ger. equit.	-25%	-0.07
10	2Y10Y spr.	-23%	-0.03

USD/SEK correlations

#	Asset	Corr. (10w chg.)	Beta
1	EURSEK	64%	0.48*
2	2Y swp. spr.	62%	0.05*
3	2Y10Y spr.	-43%	-0.05*
4	US equit.	-35%	-0.13*
5	NZDUSD	-35%	-0.19*
6	Global equit.	-34%	-0.12*
7	10Y swp. spr.	33%	0.03*
8	AUDUSD	-33%	-0.18*
9	VIX	32%	0*
10	GR10YGOV	32%	0*

USD/NOK correlations

#	Asset	Corr. (10w chg.)	Beta
1	EURUSD	-80%	-0.82*
2	G10 Carry	-74%	-0.87*
3	Global equit.	-67%	-0.39*
4	USDTRY	65%	0.72*
5	Copper	-61%	-0.27*
6	USDCAD	61%	0.84*
7	Ger. equit.	-60%	-0.27*
8	Itraxx	59%	0.12*
9	2Y swp. spr.	59%	0.11*
10	US equit.	-58%	-0.37*

NOK/SEK correlations

#	Asset	Corr. (10w chg.)	Beta
1	EURSEK	64%	0.48*
2	2Y swp. spr.	62%	0.05*
3	2Y10Y spr.	-43%	-0.05*
4	US equit.	-35%	-0.13*
5	NZDUSD	-35%	-0.19*
6	Global equit.	-34%	-0.12*
7	10Y swp. spr.	33%	0.03*
8	AUDUSD	-33%	-0.18*
9	VIX	32%	0*
10	GR10YGOV	32%	0*

AUD/USD correlations

#	Asset	Corr. (10w chg.)	Beta
1	NZDUSD	89%	0.87*
2	G10 Carry	82%	1.04*
3	2Y swp. spr.	77%	0.08*
4	Global equit.	77%	0.48*
5	USDCAD	-75%	-1.12*
6	USDTRY	-74%	-0.87*
7	US equit.	72%	0.48*
8	Ger. equit.	70%	0.34*
9	2Y10Y spr.	-70%	-0.09*
10	Copper	63%	0.3*

NZD/USD correlations

#	Asset	Corr. (10w chg.)	Beta
1	AUDUSD	89%	0.91*
2	G10 Carry	79%	1.02*
3	Global equit.	78%	0.49*
4	US equit.	74%	0.51*
5	USDCAD	-73%	-1.11*
6	USDTRY	-73%	-0.88*
7	2Y swp. spr.	70%	0.09*
8	Ger. equit.	69%	0.34*
9	Copper	66%	0.32*
10	Itraxx	-64%	-0.14*

USD/CAD correlations

#	Asset	Corr. (10w chg.)	Beta
1	Global equit.	-82%	-0.34*
2	US equit.	-81%	-0.37*
3	Ger. equit.	-75%	-0.25*
4	AUDUSD	-75%	-0.51*
5	Copper	-74%	-0.23*
6	NZDUSD	-73%	-0.48*
7	2Y swp. spr.	73%	0.09*
8	G10 Carry	-70%	-0.6*
9	Itraxx	68%	0.1*
10	EURPLN	67%	0.54*

EUR/CZK correlations

#	Asset	Corr. (10w chg.)	Beta
1	Global equit.	-62%	-0.29*
2	Ger. equit.	-60%	-0.22*
3	EURPLN	60%	0.54*
4	USDCAD	59%	0.66*
5	Itraxx	59%	0.1*
6	US equit.	-59%	-0.3*
7	AUDUSD	-57%	-0.43*
8	Copper	-54%	-0.19*
9	IT10YGOV	53%	0.02*
10	Aluminium	-52%	-0.18*

EUR/RUB correlations

#	Asset	Corr. (10w chg.)	Beta
1	Crude oil	-61%	-0.26*
2	EURPLN	48%	0.55*
3	VIX	45%	0*
4	FX volatility	44%	0.12*
5	US equit.	-36%	-0.23*
6	AUDUSD	-36%	-0.34*
7	G10 Carry	-36%	-0.43*
8	USDCAD	34%	0.48*
9	Gen. equit.	-34%	-0.16*
10	Global equit.	-33%	-0.19*

EUR/PLN correlations

#	Asset	Corr. (10w chg.)	Beta
1	Itraxx	69%	0.13*
2	USDCAD	67%	0.83*
3	USDTRY	66%	0.65*
4	Global equit.	-65%	-0.34*
5	NZDUSD	-64%	-0.52*
6	US equit.	-63%	-0.36*
7	AUDUSD	-59%	-0.49*
8	G10 Carry	-58%	-0.61*
9	Gen. equit.	-57%	-0.23*
10	Copper	-56%	-0.22*

EUR/HUF correlations

#	Asset	Corr. (10w chg.)	Beta
1	USDTRY	76%	0.98*
2	10Y swp. spr.	-75%	-0.06*
3	2Y swp. spr.	-71%	-0.05*
4	EURPLN	68%	0.89*
5	Global equit.	-67%	-0.45*
6	Itraxx	65%	0.15*
7	USDCAD	65%	1.04*
8	AUDUSD	-65%	-0.7*
9	US equit.	-64%	-0.47*
10	G10 Carry	-64%	-0.87*

USD/TRY correlations

#	Asset	Corr. (10w chg.)	Beta
1	AUDUSD	-74%	-0.62*
2	NZDUSD	-73%	-0.61*
3	Global equit.	-68%	-0.36*
4	G10 Carry	-68%	-0.73*
5	EURPLN	66%	0.67*
6	Gen. equit.	-65%	-0.27*
7	USDCAD	64%	0.81*
8	Itraxx	63%	0.12*
9	US equit.	-62%	-0.36*
10	US2YSWP	59%	0.17*

USD/ZAR correlations

#	Asset	Corr. (10w chg.)	Beta
1	AUDUSD	-82%	-1.23*
2	G10 Carry	-74%	-1.39*
3	NZDUSD	-72%	

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	0.3%	0.3%	0.4%	0.5%	USD	0.0	0.0	0.1
JPY	0.0%	0.0%	0.0%	0.0%	JPY	0.0	0.0	0.0
GBP	0.5%	0.5%	0.5%	0.5%	GBP	0.1	0.1	0.1
CHF	-0.1%	-0.2%	-0.2%	-0.3%	CHF	-0.1	-0.1	-0.1
SEK	1.3%	1.5%	1.4%	1.2%	SEK	0.2	0.3	0.2
NOK	1.6%	1.9%	1.8%	1.8%	NOK	0.3	0.4	0.4
AUD	3.2%	3.3%	3.4%	3.3%	AUD	0.6	0.5	0.5
NZD	2.7%	2.8%	2.9%	2.8%	NZD	0.4	0.4	0.3
CAD	1.0%	1.1%	1.2%	1.3%	CAD	0.2	0.2	0.2
DKK	-0.3%	-0.3%	-0.3%	-0.2%	DKK	n/a	n/a	n/a
PLN	4.7%	4.7%	4.5%	3.6%	PLN	0.8	0.7	0.6
TRY	5.6%	5.0%	4.9%	5.3%	TRY	1.0	0.9	0.7
MXN	4.2%	4.0%	4.1%	4.2%	MXN	0.4	0.4	0.4
ZAR	5.3%	5.7%	6.0%	5.4%	ZAR	0.0	0.0	0.0

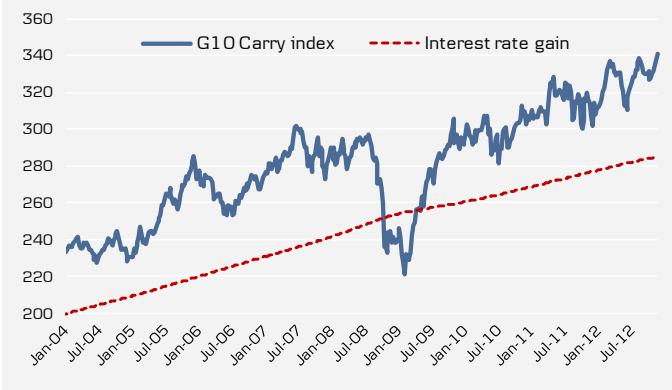
Top 10 carry currency pairs (1M)

	Currency pair	Carry-to-risk	Carry
1	TRY/EUR	0.85	5.0%
2	TRY/USD	0.82	4.7%
3	PLN/EUR	0.70	4.7%
4	AUD/CHF	0.55	3.5%
5	AUD/EUR	0.52	3.3%
6	AUD/GBP	0.48	2.8%
7	AUD/USD	0.43	3.0%
8	NZD/CHF	0.43	2.9%
9	AUD/CAD	0.42	2.2%
10	NZD/EUR	0.40	2.8%

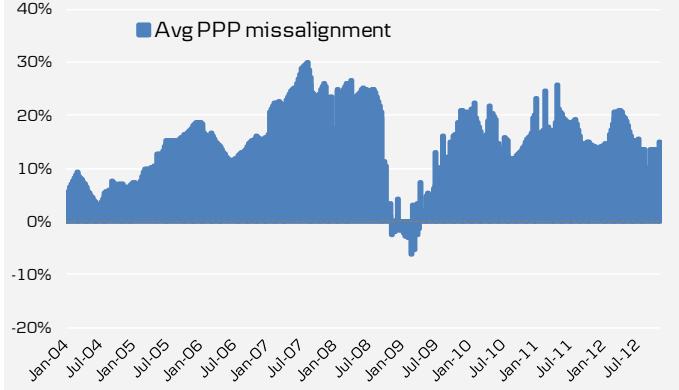
Top 10 carry currency pairs (3M)

	Currency pair	Carry-to-risk	Carry
1	TRY/EUR	0.73	4.9%
2	TRY/USD	0.65	4.5%
3	PLN/EUR	0.59	4.4%
4	AUD/CHF	0.53	3.6%
5	AUD/EUR	0.51	3.4%
6	AUD/GBP	0.46	2.9%
7	NZD/CHF	0.42	3.1%
8	AUD/USD	0.40	3.0%
9	NZD/EUR	0.40	2.9%
10	AUD/CAD	0.38	2.2%

G10 carry index (total return)



G10 carry index (average deviation from PPP)

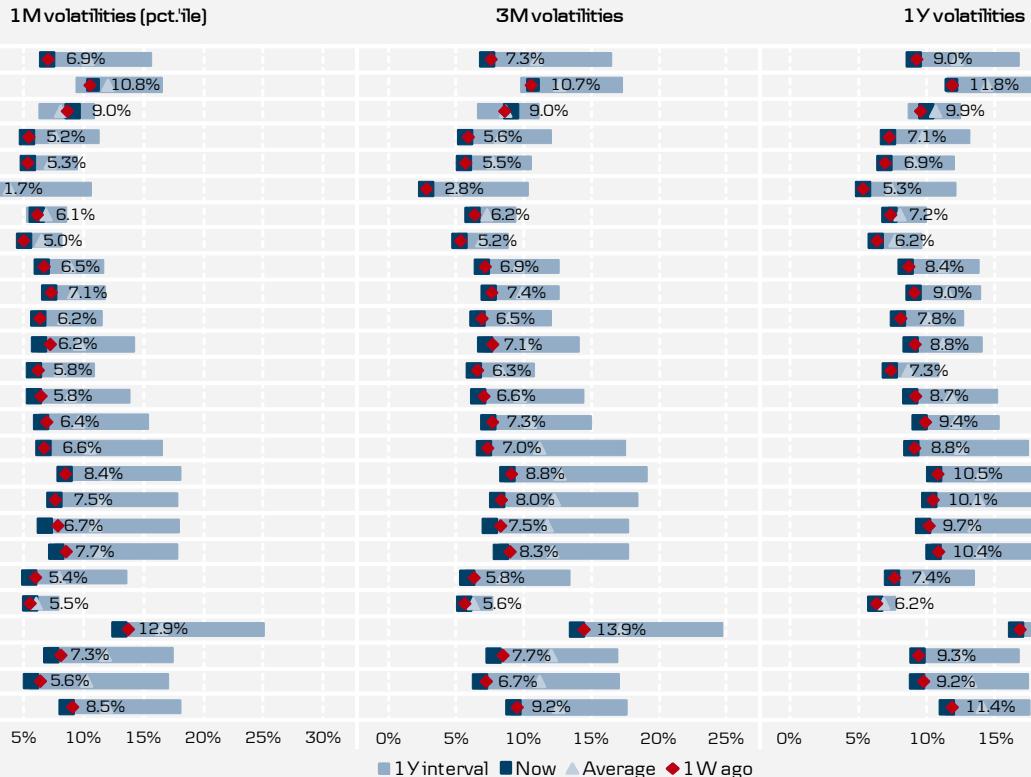


Source: Bloomberg, Danske Bank Markets calculations

Volatility overview

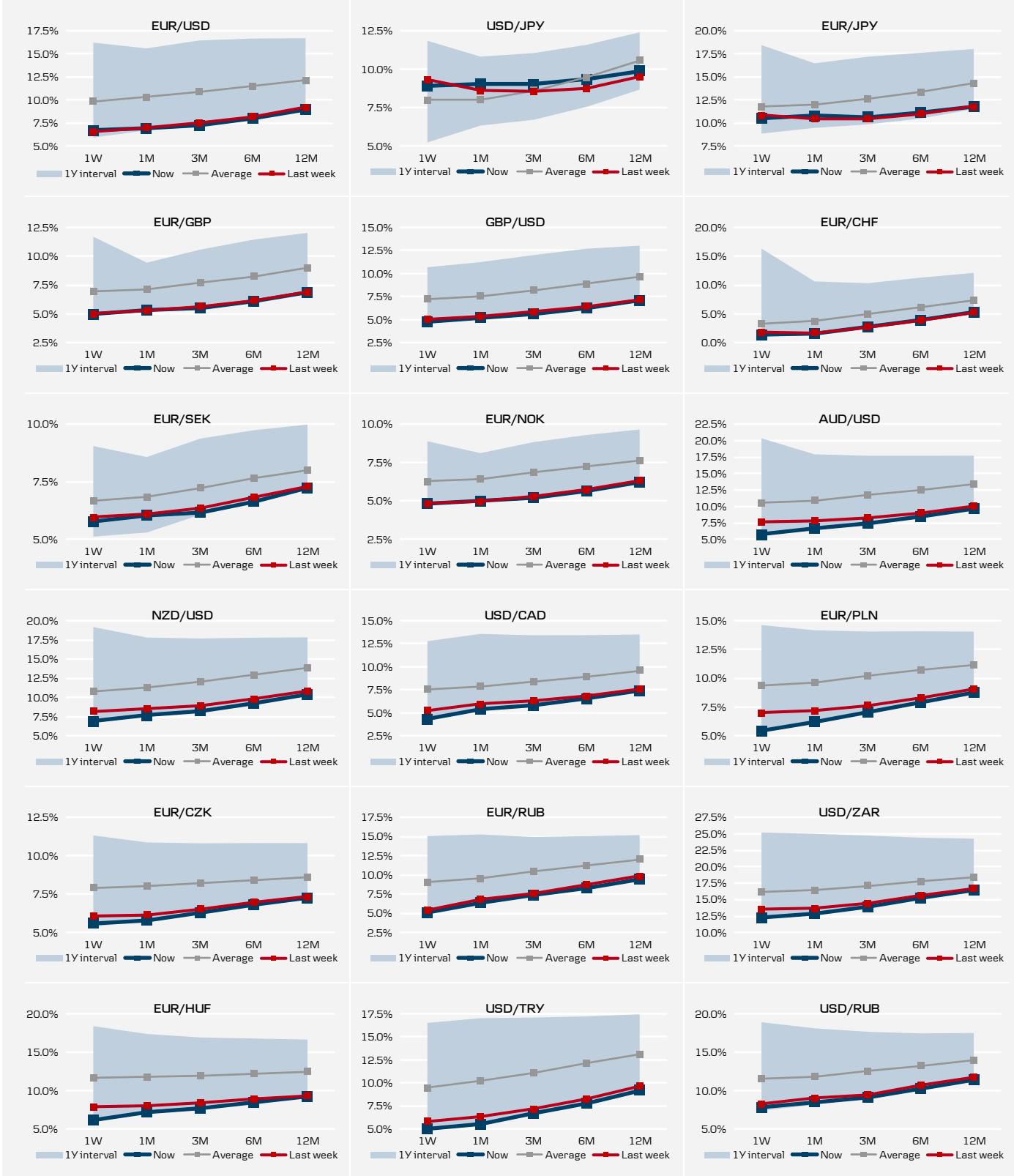
Current implied volatilities, one-week changes and actual volatilities

	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	6.7% ▲	7.3%	-1.2	6.9% ▼	7.0%	-1.1	7.3% ▼	7.4%	-1.2	9.0% ▼	9.0%	-1.0	2.1 ▲
EUR/JPY	10.6% ▼	11.3%	-0.9	10.8% ▲	10.7%	-0.5	10.7% ▲	10.0%	-0.2	11.8% ▲	11.2%	-0.6	1.0 ▲
USD/JPY	8.9% ▼	8.2%	-0.2	9.0% ▲	7.5%	0.6	9.0% ▲	6.4%	1.5	9.9% ▲	7.4%	1.8	0.9 ▲
GBP/USD	4.8% ▼	4.5%	-0.2	5.2% ▼	4.8%	-0.1	5.6% ▼	5.3%	-0.4	7.1% ▼	7.0%	-0.9	1.9 ▲
EUR/GBP	5.0% ▼	5.8%	-1.2	5.3% ▼	5.6%	-0.9	5.5% ▼	5.6%	-0.8	6.9% ▼	6.8%	-0.8	1.5 ▲
EUR/CHF	1.4% ▼	1.5%	-0.5	1.7% ▼	1.9%	-0.8	2.8% ▼	3.3%	-0.8	5.3% ▼	3.3%	1.7	3.6 ▲
EUR/SEK	5.8% ▼	5.7%	0.2	6.1% ▼	6.6%	-0.8	6.2% ▼	7.3%	-1.7	7.2% ▼	6.9%	0.4	1.2 ▲
EUR/NOK	4.8% ▲	5.1%	-0.2	5.0% ▲	6.1%	-1.6	5.2% ▼	6.2%	-1.6	6.2% ▼	6.4%	0.1	1.2 ▲
EUR/AUD	6.1% ▼	6.6%	-0.9	6.5% ▼	6.6%	-1.1	6.9% ▼	7.0%	-1.9	8.4% ▼	8.0%	-1.3	1.9 ▲
EUR/NZD	6.7% ▼	7.4%	-0.5	7.1% ▼	8.3%	-1.8	7.4% ▼	8.2%	-1.6	9.0% ▲	9.0%	-0.2	1.9 ▲
EUR/CAD	6.1% ▼	6.0%	-0.2	6.2% ▼	6.5%	-1.1	6.5% ▼	7.0%	-1.8	7.8% ▼	7.7%	-0.9	1.7 ▲
EUR/PLN	5.5% ▼	6.3%	-1.2	6.2% ▼	7.1%	-1.3	7.1% ▼	8.0%	-0.9	8.8% ▼	9.2%	-0.7	2.5 ▲
EUR/CZK	5.6% ▼	6.2%	0.0	5.8% ▼	6.4%	0.2	6.3% ▼	6.9%	0.2	7.3% ▼	8.7%	-1.0	1.4 ▲
EUR/TRY	5.6% ▼	6.5%	-0.4	5.8% ▼	6.4%	-0.6	6.6% ▼	6.6%	-0.5	8.7% ▼	8.5%	-0.1	2.9 ▲
EUR/RUB	5.1% ▼	5.8%	-1.3	6.4% ▼	5.6%	-0.6	7.3% ▼	6.7%	-0.8	9.4% ▼	8.0%	-0.6	3.0 ▲
USD/CHF	6.6% ▲	7.5%	-1.2	6.6% ▼	7.0%	-1.3	7.0% ▼	7.3%	-0.9	8.8% ▼	9.0%	1.0	2.2 ▲
USD/SEK	8.2% ▲	9.2%	-0.7	8.4% ▼	9.2%	-1.0	8.8% ▼	9.8%	-1.2	10.5% ▼	11.3%	-0.3	2.1 ▲
USD/NOK	7.4% ▲	8.2%	-0.5	7.5% ▼	8.6%	-1.3	8.0% ▼	9.0%	-1.4	10.1% ▼	10.7%	-0.4	2.6 ▲
AUD/USD	5.7% ▼	7.1%	-1.3	6.7% ▼	6.9%	-0.6	7.5% ▼	7.9%	-0.6	9.7% ▼	10.4%	-0.6	3.0 ▲
NZD/USD	6.9% ▼	8.7%	-1.3	7.7% ▼	8.8%	-1.3	8.3% ▼	9.1%	-0.9	10.4% ▼	11.0%	-0.3	2.8 ▲
USD/CAD	4.3% ▼	5.4%	-1.5	5.4% ▼	5.9%	-1.1	5.8% ▼	6.4%	-0.7	7.4% ▼	7.5%	0.2	2.0 ▲
NOK/SEK	5.5% ▼	5.5%	0.9	5.5% ▲	6.2%	0.2	5.6% ▼	6.9%	-0.8	6.2% ▼	6.9%	0.5	0.7 ▲
USD/ZAR	12.3% ▼	12.4%	-0.4	12.9% ▼	12.6%	-0.2	13.9% ▼	15.5%	-0.9	16.5% ▼	15.7%	0.4	3.5 ▲
EUR/HUF	6.2% ▼	7.4%	-0.6	7.3% ▼	8.2%	-0.5	7.7% ▼	9.7%	0.8	9.3% ▼	12.0%	-1.0	2.0 ▲
USD/TRY	5.1% ▼	5.6%	-0.7	5.6% ▼	5.7%	-0.9	6.7% ▼	5.9%	-0.4	9.2% ▼	9.0%	-0.8	3.7 ▲
USD/RUB	7.8% ▼	6.8%	-0.5	8.5% ▼	7.3%	-0.4	9.2% ▼	8.9%	-0.9	11.4% ▼	10.0%	-1.1	2.9 ▲



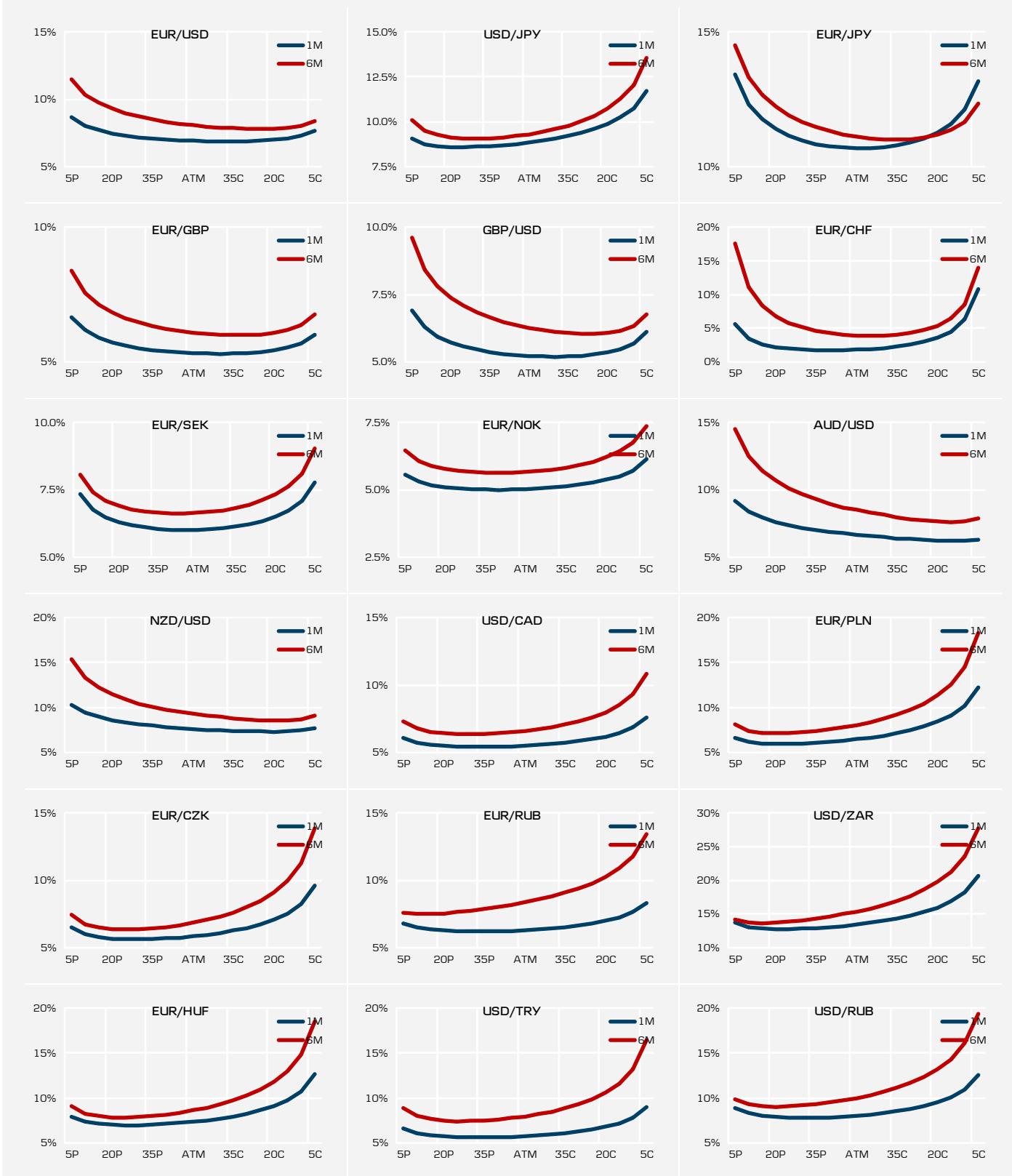
Note: The table shows current levels of ATM implied volatilities, historical volatilities and the Z-score on the spread calculated using one year of observations. The last column shows the slope of the implied volatility term structure and a Z-score calculated using one year of observations. The chart 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 1 and 6 months for various moneyness. Put deltas are denoted 'xP', while call deltas are denoted 'xC'

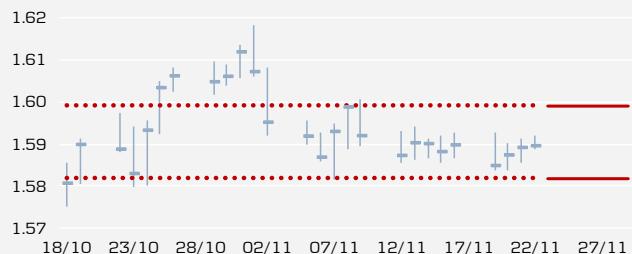
Source: Danske Bank Markets

Range trading monitor (UPDATE!!!)

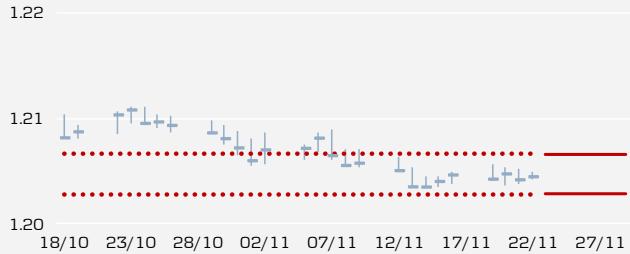
Ranking of range trade candidates

#	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	GBP/CAD	90 pips	87 pips	1.0	11.5	1	USD/CAD	182 pips	130 pips	1.4	11.2	1	EUR/RUB	14522 pips	11595 pips	1.3	16.0
2	EUR/CHF	22 pips	19 pips	1.2	17.1	2	AUD/USD	244 pips	167 pips	1.5	8.9	2	CHF/NOK	1687 pips	1342 pips	1.3	13.8
3	EUR/CAD	109 pips	86 pips	1.3	14.3	3	EUR/PLN	931 pips	614 pips	1.5	19.0	3	USD/TRY	610 pips	476 pips	1.3	15.2

1W range trade no. 1 - GBP/CAD



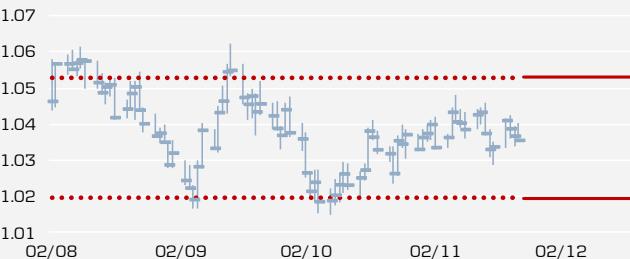
1W range trade no. 2 - EUR/CHF



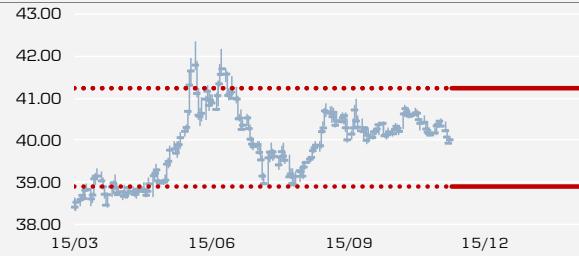
1M range trade no. 1 - USD/CAD



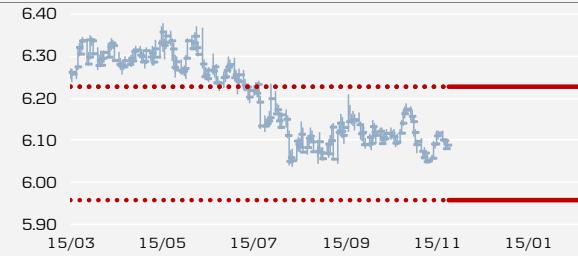
1M range trade no. 2 - AUD/USD



3M range trade no. 1 - EUR/RUB



3M range trade no. 2 - CHF/NOK

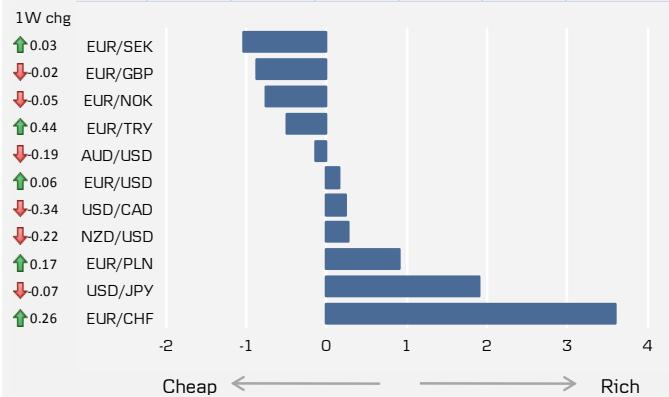


Notes: Range trades are ranked by the realised range relative to the payoff received by selling a straddle, with the strike set at-the-money (DNS convention). *A ratio below 1 implies that the historically realised range is smaller than the break-even range. **ADX provides a measure of the strength of the trend in a given currency pair. Generally, a value above 25 characterizes 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

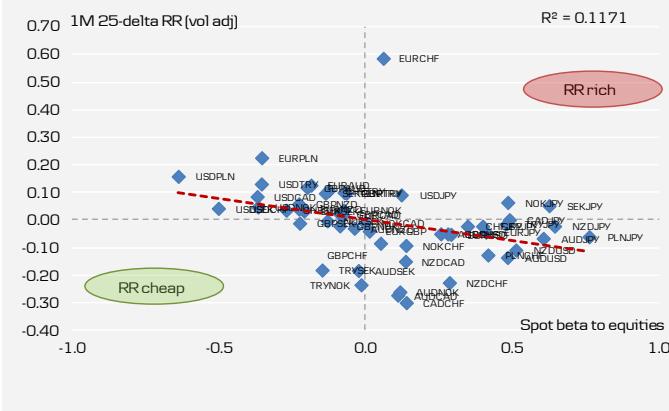
1M 25-delta risk reversals [z-scores, vol adjusted]



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

Cheap				Rich					
#	Currency	Z-score	RR	1W chg	#	Currency	Z-score	RR	1W chg
1	CAD/CHF	-7.3	-1.7	↓	1	EUR/CHF	3.6	1.0	↑
2	AUD/NOK	-4.3	-1.7	↓	2	NOK/JPY	3.5	0.6	↑
3	AUD/CAD	-2.9	-1.5	↓	3	TRY/JPY	3.4	-0.1	↓
4	AUD/SEK	-2.7	-1.3	↓	4	SEK/JPY	3.3	0.5	↑
5	TRY/NOK	-2.5	-1.6	↓	5	CAD/JPY	2.2	0.0	↓
6	NZD/CHF	-2.1	-1.6	↓	6	NZD/JPY	2.1	-0.2	↓
7	USD/TRY	-1.6	0.8	↓	7	PLN/JPY	2.0	-0.9	↑
8	TRY/SEK	-1.5	-1.3	↓	8	GBP/JPY	1.9	-0.2	↑
9	NZD/CAD	-1.1	-0.9	↓	9	USD/JPY	1.9	0.7	↓
10	EUR/SEK	-1.0	0.2	↑	10	EUR/JPY	1.9	-0.4	↑

Risk reversals explained by currency spot betas to equities



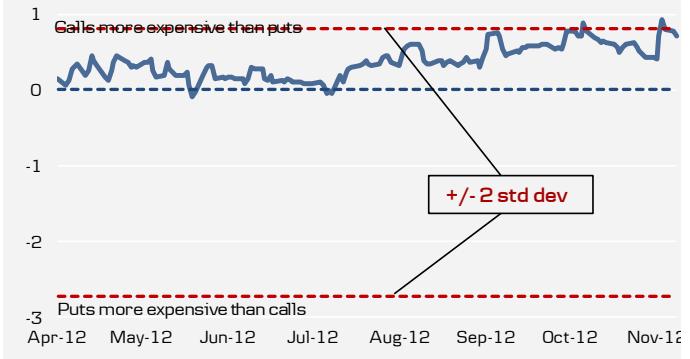
Valuation signals from simple comparison with equity betas

'RR sign' = 'Risk beta sign'				Residuals (simple model)					
#	Currency	Risk beta	RR [adj]	RR	#	Currency	Residual	RR [adj]	RR
1	SEKJPY	0.6	0.1	rich	1	EURCHF	0.6	0.6	rich
2	EURCHF	0.1	0.6	rich	2	CADCHF	-0.3	-0.3	cheap
3	NOKJPY	0.5	0.1	rich	3	AUDCAD	-0.3	-0.3	cheap
4	CADJPY	0.5	0.0	rich	4	AUDNOK	-0.2	-0.3	cheap
5	TRYSEK	-0.1	-0.2	cheap	5	TRYNOK	-0.2	-0.2	cheap
6	TRYNOK	0.0	-0.2	cheap	6	TRYSEK	-0.2	-0.2	cheap
7	GBPSEK	-0.2	0.0	cheap	7	AUDSEK	-0.2	-0.2	cheap
8	USDJPY	0.1	0.1	rich	8	NZDCHF	-0.2	-0.2	cheap
9	AUDSEK	0.0	-0.2	cheap	9	EURPLN	0.2	0.2	rich
10	NOKSEK	-0.1	0.0	cheap	10	SEKJPY	0.1	0.1	rich

EUR/USD 1M 25-delta risk reversal

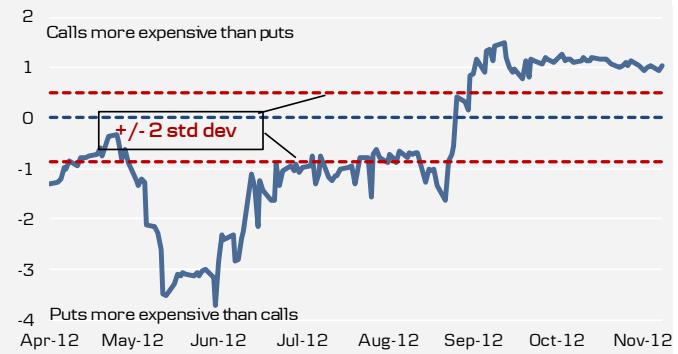
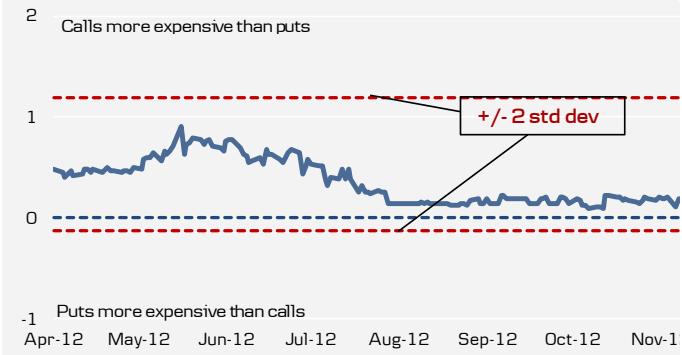
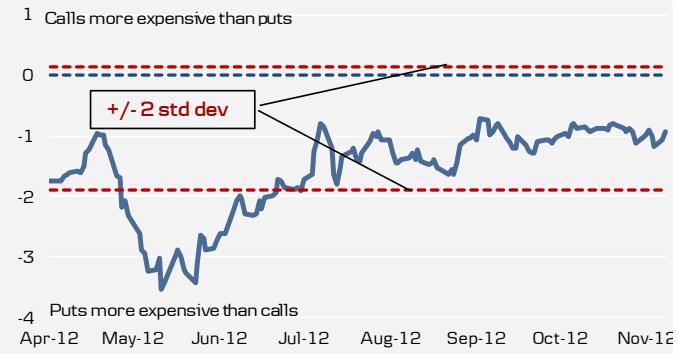
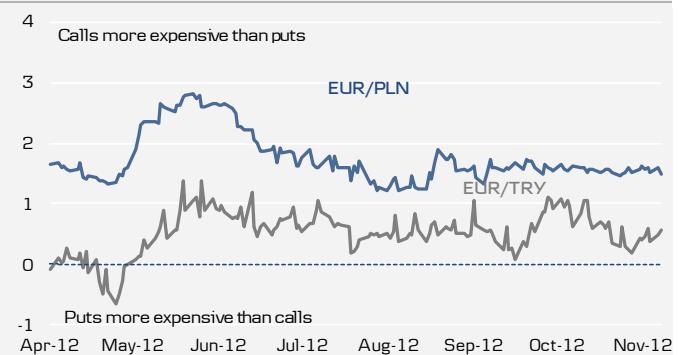


USD/JPY 1M 25-delta risk reversal



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

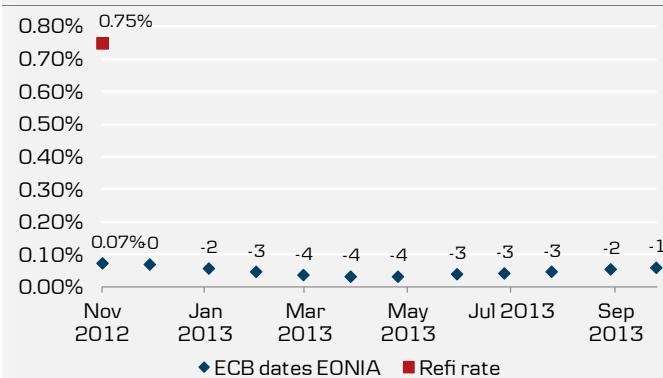
Central bank overview

Main G10 central banks outlook

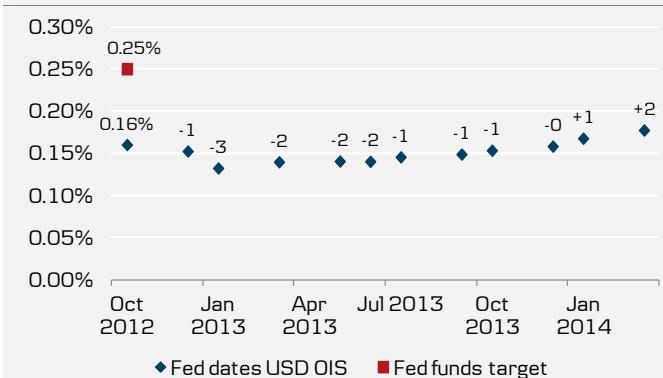
	Official policy rate	Current	Next decision	DB forecasts (3M-6M-12M)		
EUR	Minimum bid rate	0.75%	06 Dec 12	0.75	0.75	0.75
USD	Federal funds rate	0.25%	12 Dec 12	0.25	0.25	0.25
JPY	Overnight call rate	0.10%	20 Dec 12	0.10	0.10	0.10
GBP	Base rate	0.50%	06 Dec 12	0.50	0.50	0.50
CHF	3-month Libor	0.00%	13 Dec 12	0.00	0.00	0.00

	Official policy rate	Current	Next decision	DB forecasts (3M-6M-12M)		
SEK	Repo rate	1.25%	18 Dec 12	1.00	1.00	1.00
NOK	Sight deposit rate	1.50%	19 Dec 12	1.50	1.75	1.75
CAD	Overnight rate	1.00%	04 Dec 12	1.00	1.00	1.00
AUD	Cash rate	3.25%	04 Dec 12	3.00	2.75	2.75
NZD	Cash rate	2.50%	05 Dec 12	2.25	2.00	2.00

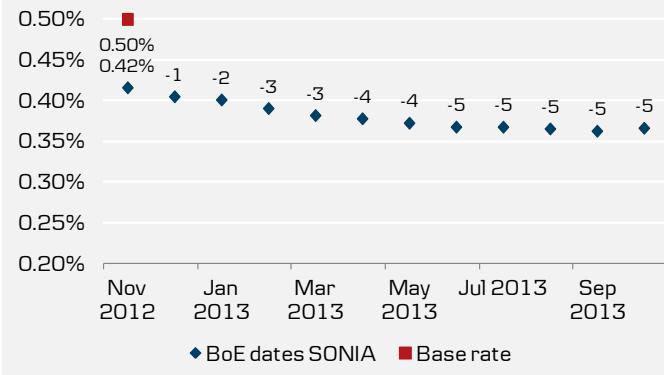
ECB market pricing



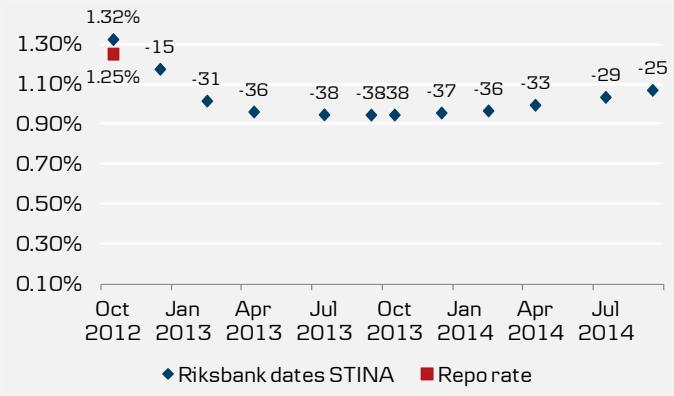
Fed market pricing



BoE market pricing



Riksbank market pricing



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

Source: Danske Bank Markets

FX trade recommendation overview

Open FX trades

Open FX Trades		
Type	Trade	Idea
Spot	Buy NOK, SEK versus GBP	We recommend being short GBP against a equally weighted basket of NOK and SEK based on economic and monetary policy divergence in the autumn.
Option	Enter 6M USD/JPY Seagull	Enter GM 77.00-79.30-84.00 USD/JPY Seagull at zero cost to position for a move higher in USD/JPY. We expect Bank of Japan (BoJ) easing to drive the yen weaker but we doubt that we will see a move much above 84.
Spot	Buy RUB, AUD, NOK versus USD	Go long carry (RuB, AUD, NOK versus USD) to position for the effect of Fed's policy response.
Option	Enter 1M-3M EUR/SEK call calendar spread	Enter 1M-3M EUR/SEK 8.60 call spread to position for a temporary move higher in EUR/SEK.
Spot	Buy EUR/CZK	We recommend buying EUR/CZK as lower Czech interest rates for longer and a considerable risk of FX intervention by the CNB have increased the probability of a substantially weaker CZK on a one to six month horizon.
Spot	Buy AUD/NZD	We recommend to buy AUD/NZD spot @ 1.2733 with a 1.3000 target and 1.2600 stop to position for continued divergence between Australia and New Zealand - this provides an approximate carry of 0.7% p.a.

FX trade performance 2012

FX Trade Performance 2012				
	#	Cum Return	Avg Return	Avg Days Open
Profitable	10	13.3%	1.3%	67 days
Loss-Making	5	-5.4%	-1.1%	51 days
All Trades	15	7.9%	0.5%	60 days

Closed FX Trades							
#	Type	Trade	Opened	Level	Closed	Level	P/L
1	Spot	Sell GBP/NOK	19/01/12	9.17	23/02/12	8.850	3.93%
2	Option	Sold EUR/CHF put spread	06/02/12	1.2068	06/04/12	1.204	-0.67%
4	Option	Buy 1M EUR/SEK Strangle	25/07/12	8.46	02/08/12	8.305	0.35%
9	Spot	Buy AUD/USD	15/08/12	1.049	05/09/12	1.020	-2.90%
7	Forward	Buy EUR/DKK 1Y forward	15/08/12	7.4176	24/10/12	7.446	0.38%
3	Option	Enter EUR/NOK calendar spread	09/05/12	7.58	09/11/12	7.305	0.70%
13	Option	Enter 1M AUD/NZD risk reversal	09/10/12	1.2445	09/11/12	1.274	1.51%
5	Option	Enter 3M EUR/USD call spread	15/08/12	1.2280	15/11/12	1.2779	1.39%
10	Spot	Buy EUR/USD [spot hedge to option trade]	14/09/12	1.3034	15/11/12	1.2779	-1.51%

Source: Danske Bank Markets

FX and Commodities Research

Arne Lohmann Rasmussen	Head of FX Research	NOK, SEK, DKK	+45 45 12 85 32	arr@danskebank.dk
Kasper Kirkegaard	Senior Analyst	G10	+45 45 13 70 18	kaki@danskebank.dk
Stefan Mellin	Senior Analyst	SEK	+46 8 568 805 92	mell@danskebank.se
Morten Helt	Senior Analyst	G10	+45 45 12 85 18	mohel@danskebank.dk
Christin Kyrme Tuxen	Senior Analyst	Commodities	+45 45 13 78 67	tux@danskebank.dk

Disclosure

This research report has been prepared by Danske Research, a division of Danske Bank A/S ('Danske Bank'). The author of the research report is Morten Helt, Senior Analyst.

Analyst certification

Each research analyst responsible for the content of this research report certifies that the views expressed in the research report accurately reflect the research analyst's personal view about the financial instruments and issuers covered by the research report. Each responsible research analyst further certifies that no part of the compensation of the research analyst was, is or will be, directly or indirectly, related to the specific recommendations expressed in the research report.

Regulation

Danske Bank is authorised and subject to regulation by the Danish Financial Supervisory Authority and is subject to the rules and regulation of the relevant regulators in all other jurisdictions where it conducts business. Danske Bank is subject to limited regulation by the Financial Services Authority (UK). Details on the extent of the regulation by the Financial Services Authority are available from Danske Bank upon request.

The research reports of Danske Bank are prepared in accordance with the Danish Society of Financial Analysts' rules of ethics and the recommendations of the Danish Securities Dealers Association.

Conflicts of interest

Danske Bank has established procedures to prevent conflicts of interest and to ensure the provision of high-quality research based on research objectivity and independence. These procedures are documented in Danske Bank's research policies. Employees within Danske Bank's Research Departments have been instructed that any request that might impair the objectivity and independence of research shall be referred to Research Management and the Compliance Department. Danske Bank's Research Departments are organised independently from and do not report to other business areas within Danske Bank.

Research analysts are remunerated in part based on the overall profitability of Danske Bank, which includes investment banking revenues, but do not receive bonuses or other remuneration linked to specific corporate finance or debt capital transactions.

Financial models and/or methodology used in this research report

Calculations and presentations in this research report are based on standard econometric tools and methodology as well as publicly available statistics for each individual security, issuer and/or country. Documentation can be obtained from the authors upon request.

Risk warning

Major risks connected with recommendations or opinions in this research report, including as sensitivity analysis of relevant assumptions, are stated throughout the text.

Date of first publication

See the front page of this research report for the first date of publication.

General disclaimer

This research has been prepared by Danske Markets (a division of Danske Bank A/S). It is provided for informational purposes only. It does not constitute or form part of, and shall under no circumstances be considered as, an offer to sell or a solicitation of an offer to purchase or sell any relevant financial instruments (i.e. financial instruments mentioned herein or other financial instruments of any issuer mentioned herein and/or options, warrants, rights or other interests with respect to any such financial instruments) ('Relevant Financial Instruments').

This research report has been prepared independently and solely on the basis of publicly available information that Danske Bank considers to be reliable. While reasonable care has been taken to ensure that its contents are not untrue or misleading, no representation is made as to its accuracy or completeness and Danske Bank, its affiliates and subsidiaries accept no liability whatsoever for any direct or consequential loss, including without limitation any loss of profits, arising from reliance on this research report.

The opinions expressed herein are the opinions of the research analysts responsible for the research report and reflect their judgement as of the date hereof. These opinions are subject to change and Danske Bank does not undertake to notify any recipient of this research report of any such change nor of any other changes related to the information provided in the research report.

This research report is not intended for retail customers in the United Kingdom or the United States.

This research report is protected by copyright and is intended solely for the designated addressee. It may not be reproduced or distributed, in whole or in part, by any recipient for any purpose without Danske Bank's prior written consent.

Disclaimer related to distribution in the United States

This research report is distributed in the United States by Danske Markets Inc., a U.S. registered broker-dealer and subsidiary of Danske Bank, pursuant to SEC Rule 15a-6 and related interpretations issued by the U.S. Securities and Exchange Commission. The research report is intended for distribution in the United States solely to 'U.S. institutional investors' as defined in SEC Rule 15a-6. Danske Markets Inc. accepts responsibility for this research report in connection with distribution in the United States solely to 'U.S. institutional investors'.

Danske Bank is not subject to U.S. rules with regard to the preparation of research reports and the independence of research analysts. In addition, the research analysts of Danske Bank who have prepared this research report are not registered or qualified as research analysts with the NYSE or FINRA but satisfy the applicable requirements of a non-U.S. jurisdiction.

Any U.S. investor recipient of this research report who wishes to purchase or sell any Relevant Financial Instrument may do so only by contacting Danske Markets Inc. directly and should be aware that investing in non-U.S. financial instruments may entail certain risks. Financial instruments of non-U.S. issuers may not be registered with the U.S. Securities and Exchange Commission and may not be subject to the reporting and auditing standards of the U.S. Securities and Exchange Commission.