

European rates: The long and short of it

DM Rates Strategy

MARKETS 360™

STRATEGY & ECONOMICS

The key data point next week will be US CPI which is likely to deliver another strong reading to the upside, which could add to the sell-off we have seen after the latest NFPs. FOMC meeting minutes, and the Michigan sentiment survey will also be of note to watch out for.

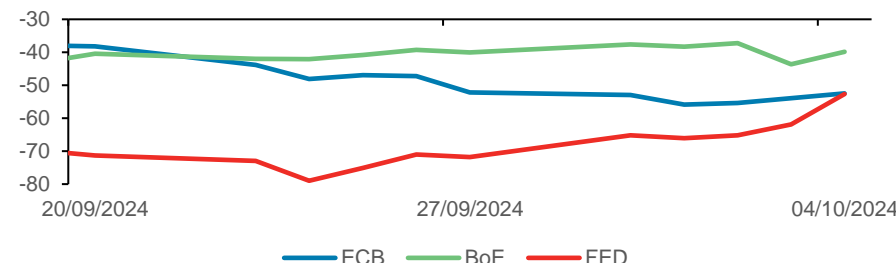
With the latest NFP report, the tail-risk of a hard landing in the US has diminished, leaving geopolitics as the main downside risk for duration, at-least in the near-term. In the absence of geopolitical escalation, and considering the supply backdrop for next week, some of the bearish momentum could continue. The magnitude of any further sell-off however is likely to be limited as we have already retraced towards FV in the Eurozone, and are only 15bp away in the US on the 10y, with yields already back to levels persisting just before the August NFP. In part due to the aforementioned geopolitical risk, in combination with the expectation for a moderate level of Dutch pension funds receiving on swaps, we decided to [take profit on EUR 10s30s steepener](#) in advance of NFPs. We also [took profit on our 10y10y ESTR/Bor basis widener](#) due to suppressed spot basis and the loss of the implicit embedded optionality.

Supply will remain relatively plentiful both in Europe and the US. In Europe, next week will likely be the last week of positive net supply before a forecasted drop in net issuance as we head further into October. Gross and net supply we forecast to amount to EUR26bn in EGBs and EU, similar to this week, with no redemptions. Over in the US we will have USD119bn of issuance in 3y, 10y and 30y.

Volatility in France is likely to persist with the NFP having just filed the first motion of no-confidence against the government, which will be defended by the Socialist Party leader next week, in addition to any further headlines we could get around the budget. Moreover, we will have a credit rating review from Fitch on Friday (AA-, stable outlook). Our view is that we do not expect a negative outlook to emerge on France.

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Shift in cumulative rate cut pricing for 2024 after NFPs (bp)



Sources: Bloomberg, BNP Paribas.

Trade ideas

CURRENT TRADES			Entry date	Units	Entry level	Current level	Target	Stop	P/L (bp)	Local ccy	Risk	P/L (\$)	Status
EMEA	Options	Buy 9m30y EUR ATM/+40bp payer spread	06/03/2024	c	311.00	243.00	830.00	0.00	-68.00	EUR	10mm	(74,120)	Open
	Options	Buy EUR 6m5y payer ladder	03/07/2024	c	0.00	1.00	67.00	-37.00	1.00	EUR	75mm	8,175	Open
	Options	Buy GBP 1y1y rec spread (A/A-75bp)	01/10/2024	c	26.00	22.00	50.00	0.00	-4.00	GBP	125mm	(63,000)	New
	Curve	3y fwd EUR 10s30s steepener	18/09/2023	bp	-39.25	-22.40	-5.00	-65.00	16.85	EUR	24k	440,796	Closed
	Curve	10s30s BTP-OAT box	12/12/2023	bp	8.00	9.90	-7.00	15.00	-7.90	EUR	20k	(172,220)	Open
	Curve	Short 10y EU vs 8y and 14y	31/05/2024	bp	-14.60	-15.05	-7.00	-18.50	-1.33	EUR	25k	(36,243)	Open
	Curve	Long 30y Buxl ASW vs short 10y Bund ASW (rolled)	04/09/2024	bp	-47.80	-47.37	-13.80	-60.30	1.62	EUR	20k	35,316	Open
	Basis	Pay 10y10y ESTR/3s basis	01/03/2024	bp	1.85	4.70	6.85	-2.15	2.85	EUR	100k	310,650	Closed
Asia	Spread	BoJ date Sept-Dec steepener	23/04/2024	bp	11.20	8.00	20.00	5.00	-3.20	JPY	6.16mm	(125,554)	Open
	Spread	Long 2y JGB swap spread	19/09/2024	bp	-5.60	-6.00	-9.00	-3.50	-0.40	JPY	5.72mm	(16,000)	Closed
	Spread	Short 5y JGB swap spread	02/10/2024	bp	-6.50	-6.50	-3.00	-8.50	0.00	JPY	5.72mm	-	New
	Duration	JPY 25M start 3m IMM IRS pay	30/08/2024	bp	40.00	38.00	55.00	30.00	-2.00	JPY	2.5mm	(31,847)	Open
	curve	IRS 10s20s flattener	27/09/2024	bp	57.70	55.00	52.00	61.00	2.70	JPY	2.86mm	49,185	Open
AMERICAS	Options	Buy 5y USD fwd 5s30s ATMF +25/+75bp cap spread	26/04/2021	bp	13.00	11.25	50.00	0.00	-1.75	USD	84k	(147,000)	Open
	Options	2y1y USD A/A-50/A-100 receiver ladder (1x-1x-0.75)	09/01/2024	bp	0.80	7.25	31.00	-14.20	6.45	USD	25k	161,250	Open
	Options	2y10y USD A+75 vs A+175 payer spread	07/05/2024	bp	20.00	10.75	50.00	0.00	-9.25	USD	25k	(231,250)	Open
	Options	Sell USD 8m10y +50 payer, buy 1y10y +30 payer (rolled strikes)	07/05/2024	bp	14.75	4.25	40.00	0.00	-10.50	USD	25k	(262,500)	Open
	Options	6m1y A-30/A-80 rec spread	04/09/2024	bp	11.50	6.25	50.00	0.00	-5.25	USD	25k	(131,250)	Open
	Options	6m1y A+5/A+25/A+45 payer ladder (1x-1x-0.75)	02/10/2024	bp	0.00	-2.50	20.00	-6.00	-2.50	USD	25k	(62,500)	New
	Curve	5s10s UST steepener 91282CLN9 and 91282CLF6	27/09/2024	bp	24.00	19.00	70.00	8.00	-5.00	USD	25k	(125,000)	Open

Source: BNP Paribas (inception To Date P/L shown in the table, with total year-to-date P/L underneath the table)

* Past publications has been the YTD P/L of the listed current portfolio, now is the total YTD P/L of all trades active in 2024

2024 YTD P/L (eq. USD) *

3,297k



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Key publications

Date	Title
04-Oct-24	EUR rates: Taking profit on 10s30s steepener
04-Oct-24	EUR basis: Changing optionality
03-Oct-24	Positioning for a harder of softer landing
02-Oct-24	JPY rates: Implication of modest richening in 2&5y ASW
01-Oct-24	EUR rates vol: Receiver skew falls as neutral in view
27-Sep-24	How the UST curve reacts to Fed rate cuts
27-Sep-24	JPY rates: Where to fade Takaichi steepening
25-Sep-24	JPY rates: BoJ picks caution amid political uncertainty
24-Sep-24	DM rates: Take profit on cross Atlantic spread trade
23-Sep-24	Front-end center: Distribution of risks for the end of QT
19-Sep-24	Bank of England: Steering a steady course
18-Sep-24	Dutch PF hedge ratio hits new highs in Q2
16-Sep-24	Dutch pension indexation sensitivity analysis
10-Sep-24	EGBs: Preliminary 2025 supply estimates
10-Sep-24	Japanese flows: Selling of OATs in July but unlikely to continue further
18-Jul-24	Macro vol outlook: Vol in the US election and the Fed's cutting cycle
18-Jul-24	ECB: On the one hand, on the other hand
11-Jul-24	Rating agencies in a wait and see mode
07-Jul-24	French elections: Two steps back, one step forwards
05-Jul-24	UK election: Labour secures a landslide victory
04-Jul-24	EGB: H2 2024 supply expectations
03-Jul-24	French elections: Last sprint to the finish
27-Jun-24	EUR rates: Dutch PF hedging resumed in Q1
27-Jun-24	French elections: Our answers to your questions
25-Jun-24	EUR rates: ESTR volumes and EIOPA transition status
24-Jun-24	GBP rates: BoE lowers long QT gilt sales in new quarter
17-Jun-24	French elections: Rates repricing to a new equilibrium
24-May-24	Long gilt futures: June 2024-September 2024
21-May-24	G10 rates: EUREX futures rolls M4-U4
20-May-24	Eurozone inflation: Approaching value zone for French CPIxT
17-May-24	Dutch coalition agreement silent on pension reform
16-May-24	G3 rates: Central bank rates, looking beyond the linear
14-May-24	EGBs: Key topics heading into the summer



G3: Supply for the week ahead

- Gross EGB supply forecast: We forecast EUR26bn of EGB + EU supply next week, same as this week’s EUR26bn.
- Net EGB supply forecast: We also forecast EUR26bn of EGB + EU net supply next week given 0 redemptions, same as EUR26bn net supply this week.

LONG TERM GOVERNMENT FLOWS			
Date	Country/Region	Description	Amount/Announcement Date
Week commencing 7 th Oct 8-Oct-2024	EU	Syndication	
	Austria	RAGB 2.9% 20/02/2034 RAGB 3.15% 20/10/2053	EUR1.725bn
	Germany	DBR (g) 2.3% 15/02/2033	EUR1bn
	Netherlands	NET 2.5% 15/07/2034	EUR2.5bn
	UK	UKTi 0.125% 22/03/2039	GBP1bn
9-Oct-2024	US	3-yr note	USD58bn
	Germany	DBR 0% 15/05/2036	EUR0.5bn
		DBR 2,6% 15/05/2041	EUR1bn
10-Oct-2024		UKT 4.25% 31/07/2034	GBP3.75bn
	US	10-yr note (reopening)	USD39bn
	US	30-yr bond (reopening)	USD22bn
11-Oct-2024	Italy	BTP medium-long auction	Details on Tues

National treasuries, BNP Paribas

REDEMPTIONS				
Date	Time GMT	Country/Region	Description	Amount

G3: Monthly and weekly supply overview

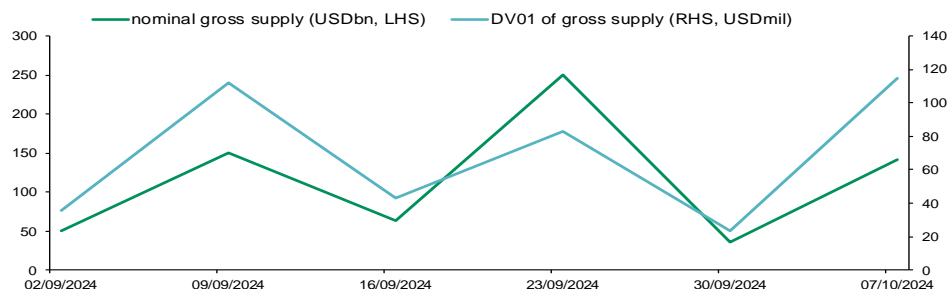
Gross issuance (local ccy, bn) 2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
EZ 2024 (EURbn)	181	120	115	121	125	98	102	75	106	90	82	24	1,238
US 2024 (USDbn)	331	360	360	369	398	370	389	395	361	369	408	365	4,475
UK 2024 (GBPbn)	28	23	19	23	20	28	27	16	27	30	18	16	278
TOTAL 2024 (USD)	566	521	512	532	562	514	537	498	513	507	522	412	6,198
TOTAL 2023 (USD)	448	502	424	459	467	431	399	435	409	464	431	361	5,229
AVERAGE 2021-2023 (USD)	530	549	489	514	538	481	460	463	449	459	473	364	5,769

Net supply net of QT (local ccy, bn) 2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
EZ 2024 (EURbn)	121	61	47	58	39	72	42	48	67	24	26	-15	590
US 2024 (USDbn)	90	111	192	130	173	212	118	150	207	118	154	213	1,868
UK 2024 (GBPbn)	0	28	8	14	23	32	22	19	24	33	18	16	238
TOTAL 2024 (USD)	223	214	254	212	246	333	192	227	311	188	206	218	2,826
TOTAL 2023 (USD)	104	251	203	120	188	228	32	157	183	107	198	188	1,958
AVERAGE 2021-2023 (USD)	181	197	149	141	169	179	172	38	114	146	108	124	1,719

Weekly gross supply and weighted average maturity (WAM)	EGB		UKT		UST		Total gross supply (USDbn)	
	EGB gross supply (EURbn)	WAM (years)	UKT gross supply (GBPbn)	WAM (years)	UST gross supply (USDbn)	WAM (years)	Total gross supply (USDbn)	Average WAM (years)
30-Sep-24	26	11	6	10	0	0	36	11
07-Oct-24	26	8	5	11	119	10	141	10
14-Oct-24	26	11	7	23	0	0	37	14
21-Oct-24	20	6	6	7	37	10	67	8
28-Oct-24	14	6	10	25	213	4	241	5

Weekly gross supply in 10y equivalent terms	EGB (EURbn)	UKT (GBPbn)	UST (USDbn)	Total (USDbn)
30-Sep-24	24	6	0	34
07-Oct-24	13	6	105	127
14-Oct-24	21	11	0	37
21-Oct-24	13	5	28	48
28-Oct-24	12	11	87	111

Gross supply in nominal and in 10y equivalent DV01 terms



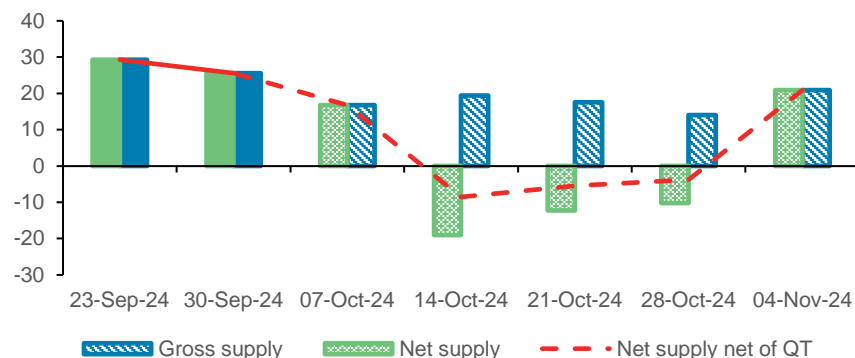
Weekly DV01 Supplied	EGB (EURmil)	UKT (GBPmil)	UST (USDmil)	Total (USDmil)
30-Sep-24	22	5	-	30
07-Oct-24	12	5	86	105
14-Oct-24	19	9	-	33
21-Oct-24	11	4	23	40
28-Oct-24	10	10	72	96

Sources: National Treasuries, ECB, BoE, Fed, BNP Paribas



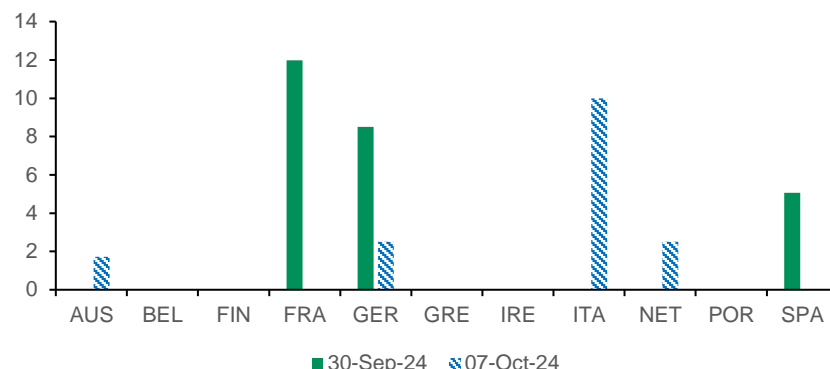
EGBs: Supply for the week ahead

Indicative path of upcoming EGB supply (EURbn)



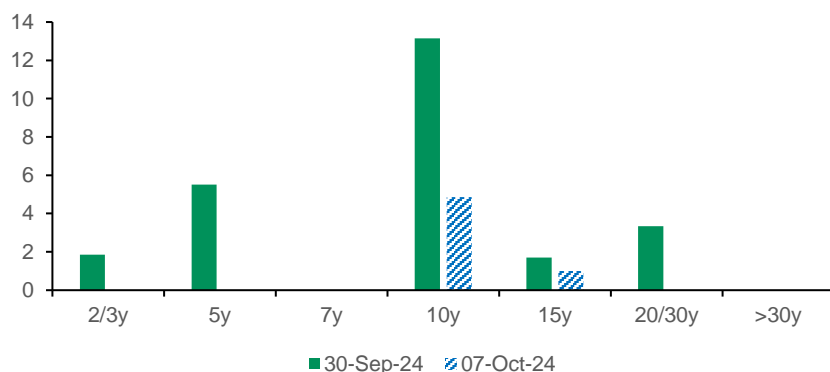
Forecasts shown as shaded/dotted bars. Numbers are indicative and are based on scheduled announcements only. Syndications and non-comps will add to the supply. BTP Valore not included. Sources: National Treasuries, Bloomberg, BNP Paribas

Supply breakdown by country for this week and next (EURbn)



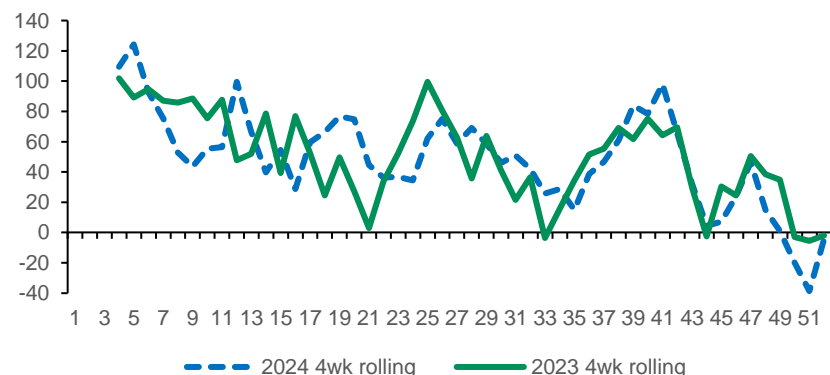
Forecasts shown as shaded/dotted bars. Numbers are indicative and are based on scheduled announcements only. Syndications and non-comps will add to the supply. BTP Valore not included. Sources: National Treasuries, Bloomberg, BNP Paribas

Maturity of supply this week and next week (volumes, EURbn)*



*Based on maturity dates that have officially been announced. BTP Valore not included. Sources: National Treasuries, BNP Paribas.

Path of net supply net of QT (4 week rolling volumes, EURbn)



Forecasts shown as dotted lines. Supply is indicative. Syndications and non-comps will increase the supply for the week. Sources: National Treasuries, ECB, Bloomberg, BNP Paribas.



EGBs: 2024 monthly supply heatmap (EURbn)

Gross issuance	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Austria	11	3	4	3	6	4	2	6	2	2	3	3	48
Belgium	7	6	5	7	3	3	4	0	3	3	1	1	41
Finland	3	2	2	6	2	1	0	4	2	0	0	0	21
France	33	33	32	25	32	25	25	21	26	21	21	0	295
Germany	35	21	25	30	19	25	27	23	21	26	17	8	276
Greece	4	0	0	3	0	0	0	0	0	1	0	0	10
Ireland	3	0	1	0	1	0	0	0	1	0	0	0	6
Italy	45	25	26	25	33	25	27	12	31	23	28	12	314
Netherlands	4	8	4	8	3	2	2	0	2	3	3	0	40
Portugal	6	2	1	2	4	0	0	0	0	0	0	0	15
Spain	29	18	15	13	22	13	15	8	19	10	10	0	173
2024	181	120	115	121	125	98	102	75	106	90	82	24	1,238
2023	147	138	120	131	108	112	101	80	92	108	72	19	1229
Net supply	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Austria	11	3	4	3	6	4	-10	6	2	-9	3	3	24
Belgium	7	6	5	7	3	-13	4	0	3	-10	1	1	13
Finland	3	2	2	1	2	1	0	4	-3	0	0	0	12
France	33	2	-1	25	-4	25	10	21	26	21	-15	0	143
Germany	22	-2	5	6	-4	8	27	1	4	4	17	-8	80
Greece	4	0	-1	1	0	0	0	0	0	1	0	0	7
Ireland	3	0	-7	0	1	0	0	0	1	0	0	0	-2
Italy	16	11	4	-2	4	25	9	-2	-2	2	9	-26	50
Netherlands	-11	8	4	8	3	2	-15	0	2	3	3	0	7
Portugal	6	-4	1	2	4	0	0	0	0	0	0	0	8
Spain	12	18	15	-8	2	13	-2	8	19	-14	-3	0	60
2024	106	46	31	42	19	65	21	38	52	-3	14	-30	402
2023	93	107	39	43	7	72	23	19	53	-41	35	-11	440
Net supply net of QT	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Austria	11	3	4	3	6	4	-8	6	2	-7	3	3	29
Belgium	7	6	5	7	3	-10	4	0	3	-8	1	1	18
Finland	3	2	2	2	2	1	0	4	-1	0	0	0	15
France	33	8	5	25	2	25	13	22	27	22	-8	0	173
Germany	25	4	10	12	2	12	28	7	9	11	17	-3	134
Greece	4	0	-1	1	0	0	0	0	0	1	0	0	7
Ireland	3	0	-5	0	1	0	0	0	1	0	0	0	1
Italy	20	14	7	3	9	25	13	1	5	7	13	-19	98
Netherlands	-7	8	4	8	3	2	-11	0	2	3	3	0	16
Portugal	6	-2	1	2	4	0	0	0	0	0	0	0	10
Spain	15	18	15	-4	6	13	2	8	19	-8	0	0	86
2024	121	61	47	58	39	72	42	48	66	21	30	-17	588
2023	93	107	51	52	20	81	45	32	62	-9	42	-4	572

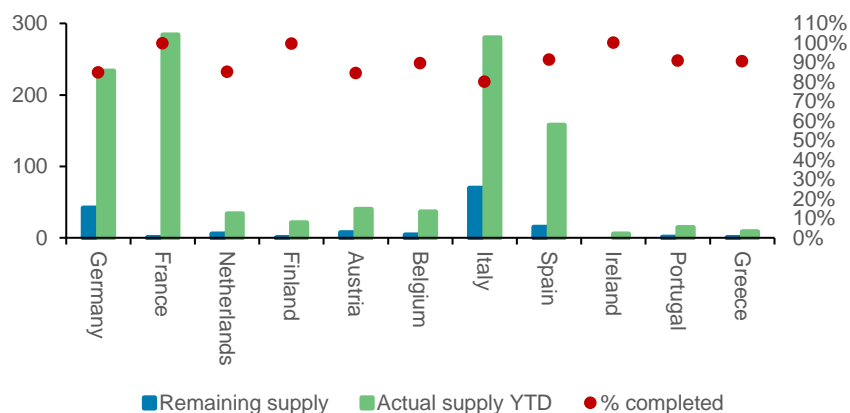
Italian supply excludes retail issuance such as the BTP Valore. Sources: National Treasuries, ECB, BNP Paribas



EGBs: Supply targets and YTD progress

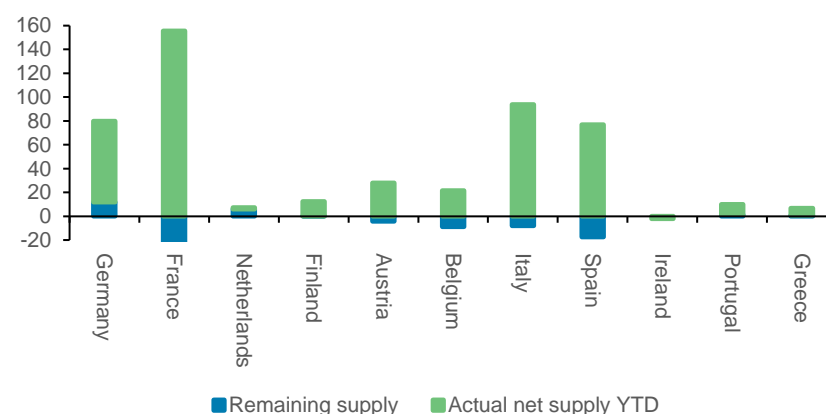
Supply forecasts and funding progress (EURbn)										
	Actual supply YTD		Full-year supply forecasts			Remaining supply		Gross issuance completed, 2024 versus 2023		
	Gross	Net	Gross	Net	Net supply net of QT	Gross	Net	2024 YTD	2023 YTD	Difference
Germany	234	68	276	80	134	42	12	85%	80%	4%
France	284	155	285	133	163	1	-22	100%	0%	100%
Netherlands	34	1	40	7	16	6	6	85%	80%	5%
Finland	21	12	22	12	15	0	0	100%	88%	12%
Austria	40	28	48	24	29	7	-4	84%	77%	8%
Belgium	37	21	41	13	18	4	-9	89%	90%	0%
Italy	280	94	350	86	135	70	-8	80%	76%	4%
Spain	158	77	173	60	86	15	-17	91%	82%	9%
Ireland	6	-2	6	-2	1	0	0	100%	100%	0%
Portugal	15	8	16	10	12	1	1	91%	100%	-9%
Greece	9.1	5.8	10	7	7	0.9	1	91%	94%	-3%
Total	1,118	469	1,266	430	615	148	-40	88%	62%	27%

Eurozone gross supply progress (EURbn)



Remaining supply shown in blue. Sources: National Treasuries, Bloomberg, BNP Paribas

Eurozone net supply progress (EURbn)

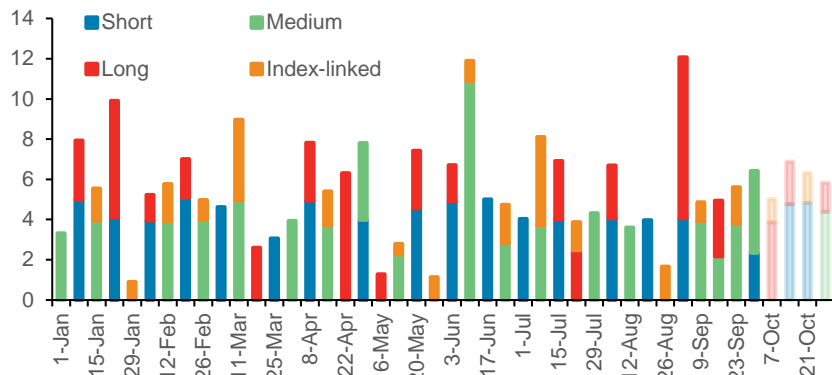


Remaining supply shown in blue. Sources: National Treasuries, Bloomberg, BNP Paribas

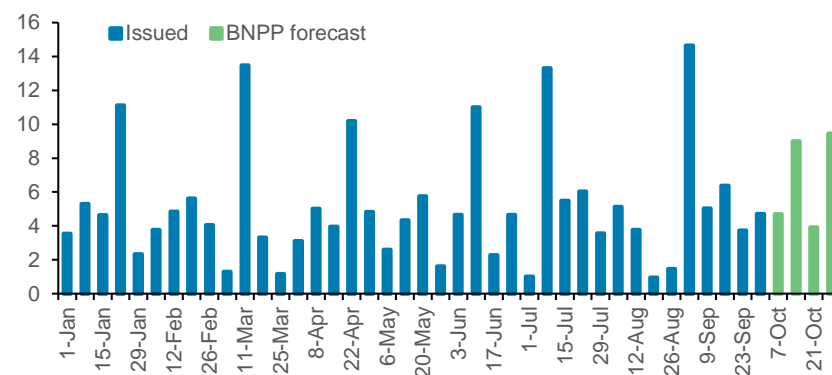


UK: Weekly supply; net supply, net of QE/QT path and implied 10y

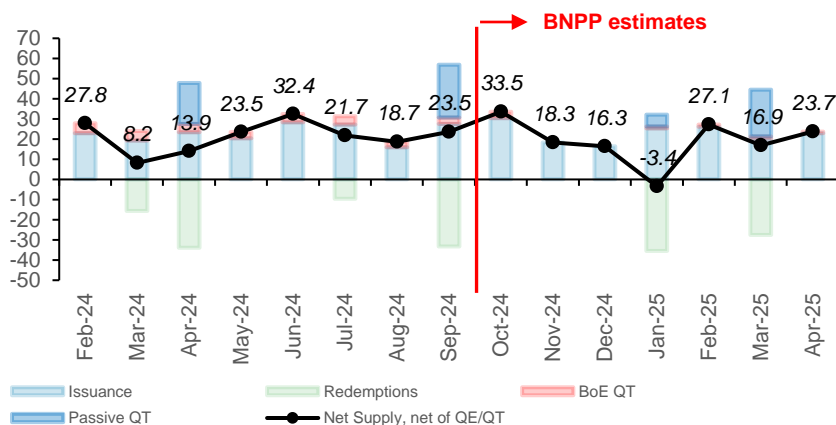
Weekly gilt issuance path, incl. BNPP forecasts (cash, GBPbn)



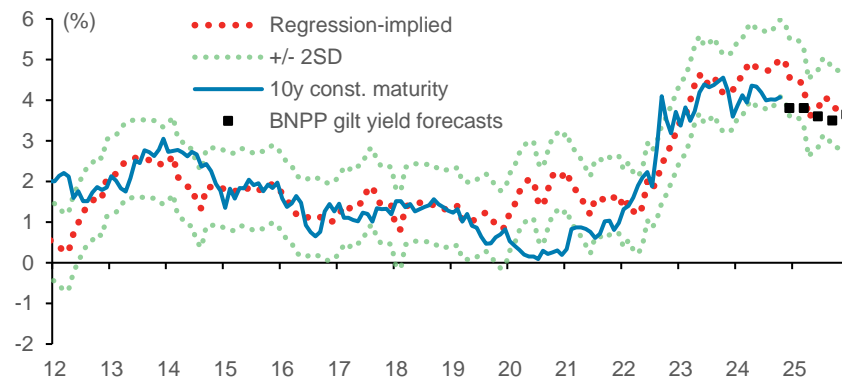
Weekly gilt issuance, DV01 (GBPmn/bp)



Gilt issuance, redemptions and BoE active gilt sales (cash, GBPbn)



10y yield (incl. BNPP forecast) and net supply, net of QE/QT implied



Front end overview

Central Banks' pricing (bp)

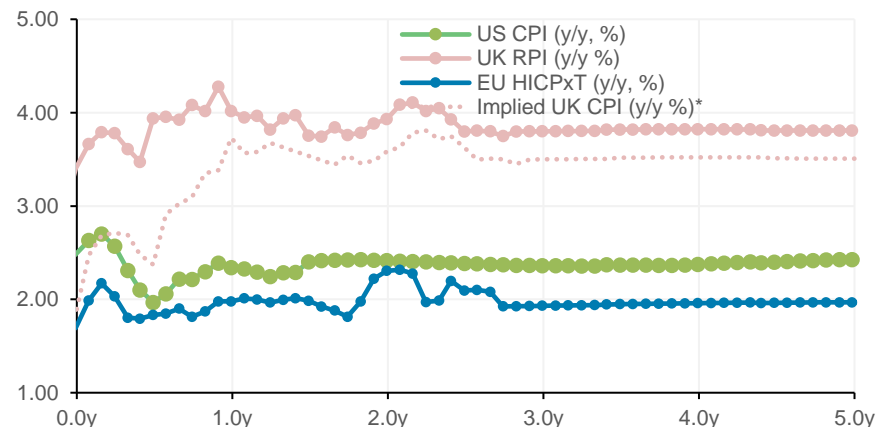
Market pricing at upcoming meetings				Cumulative pricing of cuts per year			
CB meetings	FED	ECB	BOE	Year	FED	ECB	BOE
#1	-32	-23	-25	2024	-115	-103	-66
#2	-34	-31	-17	2025	-113	-109	-101
#3	-28	-25	-23	2026	-3	13	-4
#4	-20	-28	-18	2027	6	14	-3
#5	-16	-18	-21	2028	7	12	-2
#6	-15	-17	-10	2029	7	10	2

Changes shown since 27-Sep-24

#1	5	-3	1	2024	11	-1	-3
#2	5	1	-4	2025	9	12	17
#3	5	1	2	2026	-7	-3	-2
#4	5	3	5	2027	-2	-1	-2
#5	3	3	5	2028	1	1	-3
#6	2	3	3	2029	-2	-3	-1

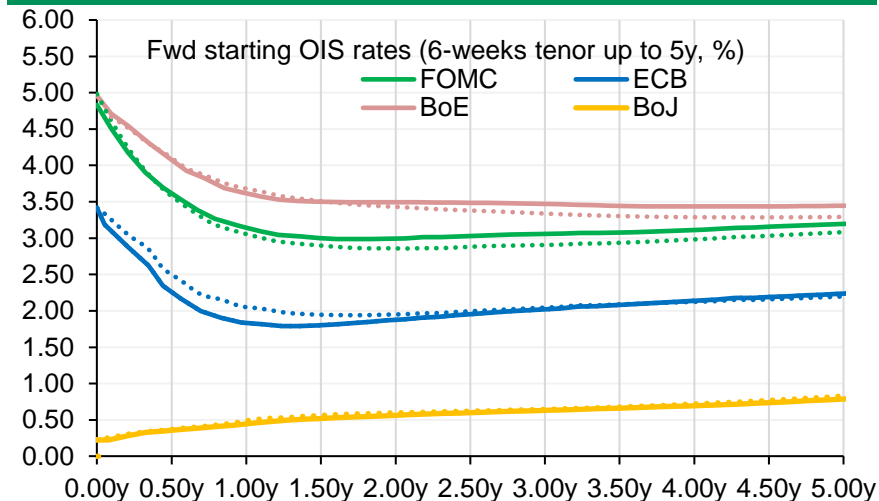
Source: BNP Paribas

Forward inflation term structure



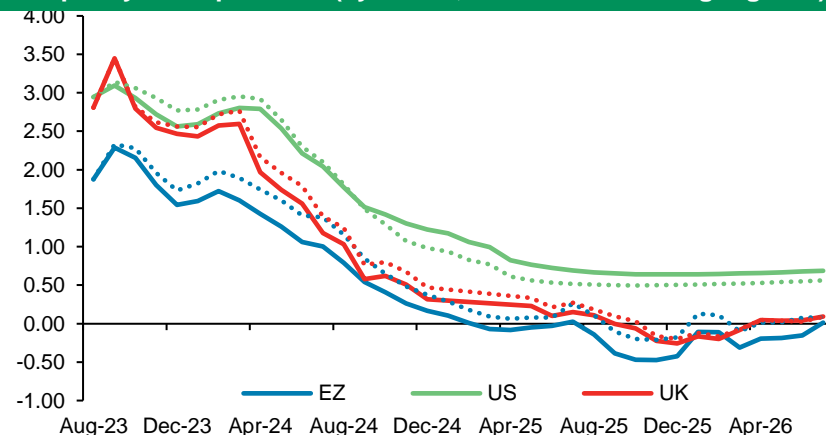
Source: BNP Paribas (* UK priced versus CPI using our forecast of the CPI-RPI wedge)

Forward term structure*



Source: BNP Paribas (dotted lines show data 1 month ago)

Real policy rates priced in (1y ahead, next 12-months highlighted)*



Source: BNP Paribas (UK priced versus CPI using our forecast of the CPI-RPI wedge; dotted line 1m ago)



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European government bonds and swaps

Weekly outright change (bp)

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Germany	4	6	6	6	5	4	3
France	2	6	6	5	4	3	3
Italy	6	7	6	6	5	5	4
Spain	2	4	4	3	2	1	1
EUR swap	4	6	6	5	4	2	1

Sources: BNP Paribas, Bloomberg

Monthly outright change (bp)

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Germany	-19	-8	-5	-1	2	3	4
France	-20	-2	3	6	9	10	12
Italy	-23	-15	-14	-13	-10	-8	-5
Spain	-22	-10	-8	-5	-2	-1	0
EUR swap	-23	-10	-7	-5	-2	0	2

Sources: BNP Paribas, Bloomberg

1-year Z-score

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Germany	-2.2	-1.5	-1.3	-1.0	-0.7	-0.6	-0.5
France	-2.1	-0.8	-0.4	-0.1	0.1	0.2	0.4
Italy	-2.1	-1.6	-1.4	-1.3	-1.2	-1.1	-0.9
Spain	-2.3	-1.6	-1.4	-1.3	-1.1	-1.0	-0.9
EUR swap	-2.3	-1.7	-1.5	-1.3	-1.2	-1.1	-1.0

Sources: BNP Paribas, Bloomberg

Weekly spreads change (bp)

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
OAT - Bund	-2	-1	-1	-1	-1	-1	-1
BTP - Bund	1	1	0	0	0	1	1
Bono - Bund	-2	-3	-2	-3	-3	-3	-3
BTP - OAT	3	1	1	1	1	2	1
Bono - OAT	0	-2	-2	-2	-2	-2	-2
Bund - swap	1	0	0	1	1	2	3

Sources: BNP Paribas, Bloomberg

Monthly spreads change (bp)

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
OAT - Bund	-2	6	8	7	7	7	8
BTP - Bund	-5	-7	-9	-12	-12	-10	-9
Bono - Bund	-4	-2	-2	-4	-5	-4	-4
BTP - OAT	-3	-14	-17	-19	-19	-18	-17
Bono - OAT	-2	-8	-11	-11	-11	-11	-12
Bund - swap	5	2	2	4	4	3	2

Sources: BNP Paribas, Bloomberg

1-year Z-score

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
OAT - Bund	1.2	1.8	2.0	1.9	1.7	1.8	2.0
BTP - Bund	-1.0	-1.0	-1.0	-1.2	-1.3	-1.3	-1.0
Bono - Bund	-0.7	-0.9	-0.8	-1.1	-1.3	-1.3	-1.2
BTP - OAT	-1.5	-1.7	-1.7	-1.8	-1.9	-1.8	-1.8

Sources: BNP Paribas, Bloomberg

Weekly curve change (bp)

	2s5s	2s10s	5s10s	5s30s	10s20s	10s30s
Germany	2	2	-1	-3	-2	-3
France	4	3	-1	-3	-2	-2
Italy	2	1	-1	-3	-1	-2
Spain	2	1	-1	-3	-1	-3
Swaps	3	1	-2	-6	-3	-4

Sources: BNP Paribas, Bloomberg

Monthly curve change (bp)

	2s5s	2s10s	5s10s	5s30s	10s20s	10s30s
Germany	10	18	7	12	4	5
France	18	26	8	14	4	6
Italy	8	11	3	11	5	8
Spain	13	17	5	10	3	5
Swaps	13	19	6	12	4	6

Sources: BNP Paribas, Bloomberg

1-year Z-score

	2s5s	2s10s	5s10s	5s30s	10s20s	10s30s
Germany	2.9	3.0	2.2	2.3	2.1	2.3
France	3.1	3.0	2.4	2.3	1.8	2.2
Italy	2.1	1.9	1.3	2.1	2.1	2.3
Spain	2.7	2.5	2.1	2.1	2.0	2.1
Swaps	3.1	2.8	2.0	2.1	2.1	2.1

Sources: BNP Paribas, Bloomberg

Weekly fly change (bp)

	2s5s7s	2s5s10s	5s10s30s	10s15s20s	10s20s30s
Germany	2.6	2.9	2.0	-0.1	-1.9
France	3.9	4.3	1.7	0.2	-2.3
Italy	2.4	2.7	1.2	-1.1	-0.2
Spain	2.0	2.5	1.9	-0.4	-2.0
Swaps	3.5	4.7	2.2	0.5	-1.0

Sources: BNP Paribas, Bloomberg

Monthly fly change (bp)

	2s5s7s	2s5s10s	5s10s30s	10s15s20s	10s20s30s
Germany	7.4	3.0	2.5	2.4	2.5
France	13.4	10.2	2.3	1.9	2.1
Italy	6.4	5.0	-5.1	-0.2	2.1
Spain	10.4	7.6	-0.2	1.3	2.6
Swaps	9.4	7.1	-0.5	0.7	2.5

Sources: BNP Paribas, Bloomberg

1-year Z-score

	2s5s7s	2s5s10s	5s10s30s	10s15s20s	10s20s30s
Germany	2.7	1.9	1.1	2.3	1.8
France	3.0	2.7	1.8	0.8	0.9
Italy	2.4	2.4	-1.0	0.0	1.2
Spain	2.8	2.6	0.9	1.2	1.8
Swaps	3.0	2.6	0.3	0.8	1.6

Sources: BNP Paribas, Bloomberg



EUR volatility market

Current normal vols (bp)						
	1y	2y	5y	10y	20y	30y
1m	68	79	74	68	67	65
3m	67	77	75	72	71	70
6m	73	80	76	74	72	71
1y	79	81	76	74	72	71
5y	79	80	76	75	71	70
10y	78	77	74	71	66	64
20y	70	70	65	61	56	54

Source: BNP Paribas

One-week change in normal vols (bp)						
	1y	2y	5y	10y	20y	30y
1m	-2	1	1	5	5	6
3m	-7	-2	0	2	2	2
6m	-5	-1	-1	2	2	2
1y	-4	-3	-2	0	1	1
5y	-2	-1	-1	0	0	0
10y	0	-1	0	-1	0	0
20y	0	0	0	0	0	0

Source: BNP Paribas

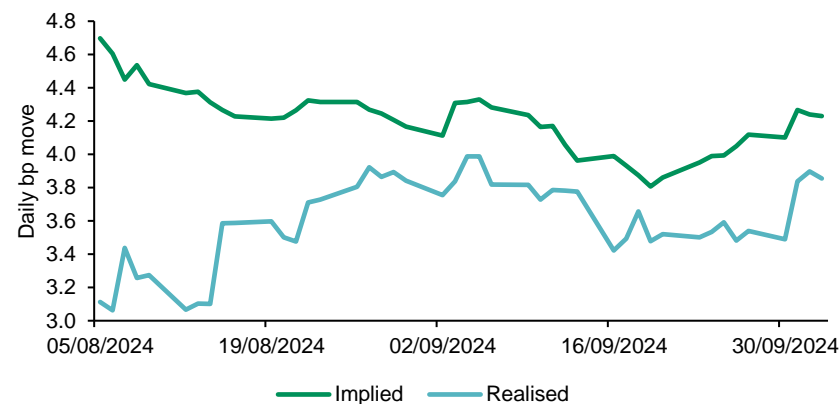
RV: Vol spread vs 1y10y tether point (color coded by 3m z-score)

	1y	2y	5y	10y	20y	30y
1m	-9	1	-4	-10	-11	-12
3m	-11	-2	-3	-6	-7	-8
6m	-3	3	-1	-3	-4	-5
1y	4	6	2	0	-3	-4
5y	6	6	3	1	-3	-4
10y	4	4	0	-2	-7	-9
20y	-3	-3	-8	-12	-17	-19

Z-score colours	-2 StDev	+2 StDev
	Red	Green

Z-score based on 3m avg. Red=cheap, green=rich.
Source: BNP Paribas

Realised* vs implied vol 3m10y



* 1m rolling realised vol
Source: BNP Paribas

UK government bonds and swaps

Weekly outright change (bp)

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Gilt	-1	0	0	1	0	0	0
Swap	-3	-1	-1	-1	-1	-1	-2
Spread	-2	-1	-1	-2	-1	-1	-2

Sources: Bloomberg, BNP Paribas

Monthly outright change (bp)

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Gilt	-14	-1	2	3	6	8	8
Swap	-20	-7	-3	-1	2	4	5
Spread	-7	-6	-5	-4	-4	-4	-3

Sources: Bloomberg, BNP Paribas

1-year Z-score

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Gilt	-1.7	-0.8	-0.5	-0.4	-0.4	-0.3	-0.1
Swap	-1.8	-1.1	-0.8	-0.7	-0.5	-0.4	-0.2
Spread	-1.6	-1.6	-1.7	-1.6	-0.9	-1.0	-1.2

Sources: Bloomberg, BNP Paribas

Weekly spreads change (bp)

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Gilt-Bunds	4	3	3	4	3	4	4
Gilt-UST	-7	-4	-3	-3	-3	-4	-4

Sources: BNP Paribas, Bloomberg

Monthly spreads change (bp)

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Gilt-Bunds	18	19	19	15	13	14	13
Gilt-UST	4	3	4	2	4	6	3

Sources: BNP Paribas, Bloomberg

1-year Z-score

	2Y	5Y	7Y	10Y	15Y	20Y	30Y
Gilt-Bunds	2.7	2.2	2.9	2.6	1.5	1.7	1.9
Gilt-UST	2.1	2.1	2.2	2.1	1.9	2.1	1.9

Sources: BNP Paribas, Bloomberg

Weekly curve change (bp)

	2s5s	2s10s	5s7s	5s10s	5s30s	10s20s	10s30s
Gilt	2	2	0	1	0	-1	-1
Swap	2	2	0	0	-1	0	-1
Spread	0	0	0	0	0	0	0

Sources: BNP Paribas, Bloomberg

Monthly curve change (bp)

	2s5s	2s10s	5s7s	5s10s	5s30s	10s20s	10s30s
Gilt	12	17	3	5	10	5	5
Swap	13	20	4	6	12	4	6
Spread	1	3	0	2	2	0	0

Sources: BNP Paribas, Bloomberg

1-year Z-score

	2s5s	2s10s	5s7s	5s10s	5s30s	10s20s	10s30s
Gilt	2.8	2.8	2.5	2.0	1.9	1.0	1.5
Swap	3.1	3.0	2.5	2.2	1.9	1.7	1.7
Spread	1.1	1.3	0.1	1.3	1.5	1.4	1.3

Sources: BNP Paribas, Bloomberg

Weekly fly change (bp)

	2-5-7	2-5-10	2-10-30	5-10-30	10-15-20	10-20-30
Gilt	2	1	3	1	0	-1
Swap	2	2	3	1	0	0
Spread	0	1	0	0	0	1

Sources: BNP Paribas, Bloomberg

Monthly fly change (bp)

	2-5-7	2-5-10	2-10-30	5-10-30	10-15-20	10-20-30
Gilt	9	8	11	-1	1	4
Swap	9	7	14	1	1	3
Spread	1	-1	3	2	1	-1

Sources: BNP Paribas, Bloomberg

1-year Z-score

	2-5-7	2-5-10	2-10-30	5-10-30	10-15-20	10-20-30
Gilt	2.5	1.9	2.6	1.2	-1.5	-0.1
Swap	2.8	2.0	3.0	0.3	1.6	1.8
Spread	1.2	0.4	0.3	-0.8	1.9	1.4

Sources: BNP Paribas, Bloomberg



Inflation-linked: EU HICP ex-tobacco

Real yield and breakeven changes (bp)

	Real yield		Breakeven	
	Weekly	Monthly	Weekly	Monthly
BTPei May-26	-19	-58	17	19
BTPei May-30	-6	-42	6	10
BTPei May-33	-6	-37	7	10
BTPei May-51	-2	-18	3	4
BUNDei Apr-26	-21	-50	15	15
BUNDei Apr-30	-13	-27	10	7
BUNDei Apr-33	-10	-19	7	2
BUNDei Apr-46	-9	-11	5	5
OATei Mar-26	-24	-59	17	22
OATei Jul-30	-12	-17	7	4
OATei Jul-34	-11	-12	6	6
OATei Jul-47	-7	-1	3	4
BONOSEi Nov-27	-18	-45	15	17
BONOSEi Nov-30	-11	-32	9	10
BONOSEi Nov-33	-9	-24	6	6
BONOSEi Nov-39	-8	-19	5	5

Source: Bloomberg, BNP Paribas, at close Thursday

Cross-market real yield and breakeven spread changes (bp)

	Real yield		Breakeven	
	Weekly	Monthly	Weekly	Monthly
OATei Jul-34 - BUNDei Apr-33	-1	6	-1	4
BTPei May-33 - BUNDei Apr-33	4	-19	0	8
BONOSEi Nov-33 - BUNDei Apr-33	1	-6	-1	4
BTPei May-33 - OATei Jul-34	5	-25	0	4
BONOSEi Nov-33 - OATei Jul-34	1	-12	0	0
BTPei May-33 - BONOSEi Nov-33	4	-13	0	4

Source: Bloomberg, BNP Paribas, at close Thursday



Inflation-linked: EU HICP ex-tobacco

Real yield and breakeven changes (bp)								
Real yield: weekly change				Breakeven: weekly change				
	BTPei May-30	BTPei May-33	BTPei May-51		BTPei May-30	BTPei May-33	BTPei May-51	
BTPei May-26	13	13	17	BTPei May-26	-11	-11	-14	
BTPei May-30		0	4	BTPei May-30		0	-3	
BTPei May-33			4	BTPei May-33			-3	
	BUNDei Apr-30	BUNDei Apr-33	BUNDei Apr-46		BUNDei Apr-30	BUNDei Apr-33	BUNDei Apr-46	
BUNDei Apr-26	15	15	19	BUNDei Apr-26	-9	-8	-12	
BUNDei Apr-30		7	11	BUNDei Apr-30		-3	-7	
BUNDei Apr-33			8	BUNDei Apr-33			-4	
	OATei Jul-30	OATei Jul-34	OATei Jul-47		OATei Jul-30	OATei Jul-34	OATei Jul-47	
OATei Mar-26	19	19	22	OATei Mar-26	-10	-10	-13	
OATei Jul-30		6	9	OATei Jul-30		-1	-4	
OATei Jul-34			8	OATei Jul-34			-3	
	BONOSei Nov-30	BONOSei Nov-33	BONOSei Nov-39		BONOSei Nov-30	BONOSei Nov-33	BONOSei Nov-39	
BONOSei Nov-27	12	12	16	BONOSei Nov-27	-8	-8	-12	
BONOSei Nov-30		6	9	BONOSei Nov-30		-2	-6	
BONOSei Nov-33			7	BONOSei Nov-33			-3	
Real yield: monthly change				Breakeven: monthly change				
	BTPei May-30	BTPei May-33	BTPei May-51		BTPei May-30	BTPei May-33	BTPei May-51	
BTPei May-26	16	21	40	BTPei May-26	-9	-9	-15	
BTPei May-30		5	24	BTPei May-30		0	-6	
BTPei May-33			19	BTPei May-33			-6	
	BUNDei Apr-30	BUNDei Apr-33	BUNDei Apr-46		BUNDei Apr-30	BUNDei Apr-33	BUNDei Apr-46	
BUNDei Apr-26	7	12	32	BUNDei Apr-26	-5	-5	-10	
BUNDei Apr-30		-10	9	BUNDei Apr-30		3	-3	
BUNDei Apr-33			1	BUNDei Apr-33			2	
	OATei Jul-30	OATei Jul-34	OATei Jul-47		OATei Jul-30	OATei Jul-34	OATei Jul-47	
OATei Mar-26	16	21	41	OATei Mar-26	-12	-12	-18	
OATei Jul-30		-20	-1	OATei Jul-30		6	0	
OATei Jul-34			-6	OATei Jul-34			-2	
	BONOSei Nov-30	BONOSei Nov-30	BONOSei Nov-30		BONOSei Nov-30	BONOSei Nov-30	BONOSei Nov-30	
BONOSei Nov-27	3	8	27	BONOSei Nov-27	-7	-6	-12	
BONOSei Nov-30		-6	14	BONOSei Nov-30		0	-6	
BONOSei Nov-33			6	BONOSei Nov-33			-2	

Sources: Bloomberg, BNP Paribas, at close Thursday

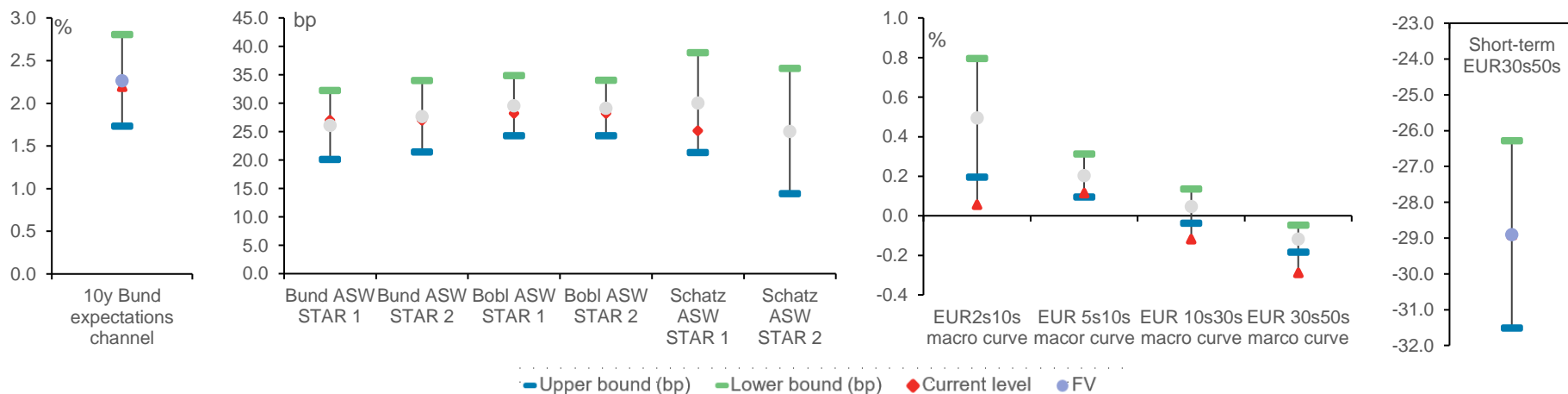


Rates quantitative model output summary

Macro/medium-term models	Asset	FV (%)	Current level (%)	Residual (%)	Upper bound (%)	Lower bound (%)	Z-score
10y Bund expectations channel	10y Bunds	2.26	2.19	-0.1	1.7	2.8	-0.2
EUR2s10s macro curve	EUR 2s10s	0.49	0.06	-0.4	0.2	0.8	-1.5
EUR 5s10s macro curve	EUR 5s10s	0.20	0.11	-0.1	0.1	0.3	-0.6
EUR 10s30s macro curve	EUR 10s30s	0.05	-0.12	-0.2	0.0	0.1	-1.5
EUR 30s50s macro curve	EUR 30s50s	-0.12	-0.29	-0.2	-0.2	0.0	-2.3
Short-term models	Asset	FV (bp)	Current level (bp)	Residual (bp)	Upper bound (bp)	Lower bound (bp)	Z-score
Schatz ASW STAR 1	Schatz ASW	30.1	25.2	-4.9	21.3	38.9	-1.1
Schatz ASW STAR 2	Schatz ASW	25.1	25.2	0.1	14.0	36.1	0.0
Bobl ASW STAR 1	Bobl ASW	29.6	28.2	-1.3	24.3	34.9	-0.5
Bobl ASW STAR 2	Bobl ASW	29.1	28.2	-0.9	24.2	34.0	-0.4
Bund ASW STAR 1	Bund ASW	26.1	27.0	0.9	20.1	32.2	0.2
Bund ASW STAR 2	Bund ASW	27.7	27.0	-0.7	21.4	34.0	-0.3
Short-term EUR5s10s30s	EUR 5s10s30s	19.7	23.3	3.6	11.3	28.0	0.8
Short-term EUR30s50s	EUR 30s50s	-28.9	-28.9	0.0	-31.5	-26.3	0.2

A positive Z-score indicates the following based on the asset: yields are too high, curves are too steep, ASWs are too cheap (bonds cheap vs swaps), or the belly on the fly is cheap. A negative Z-score would indicate the exact opposite. Source: BNP Paribas

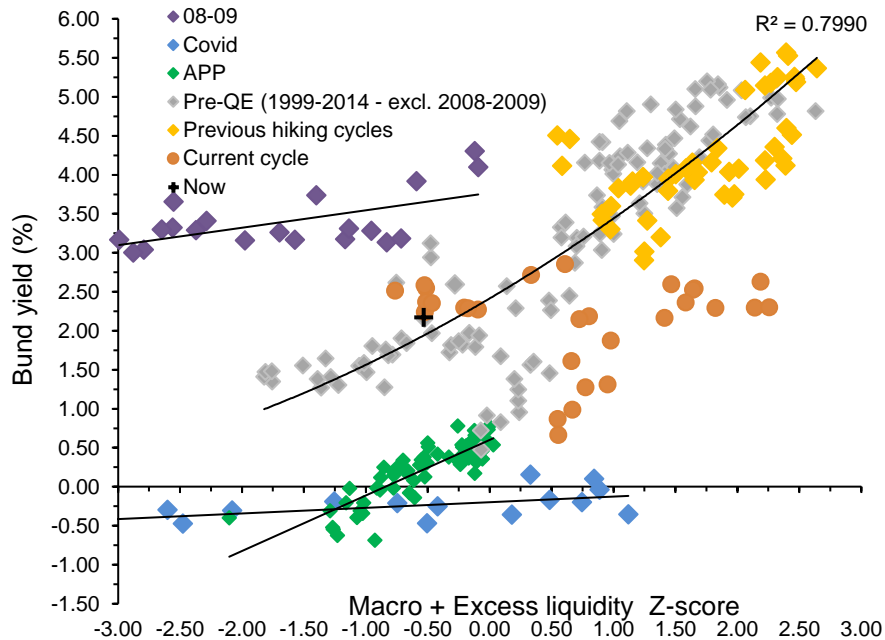
Current levels compared to our model upper/lower bounds



Source: BNP Paribas

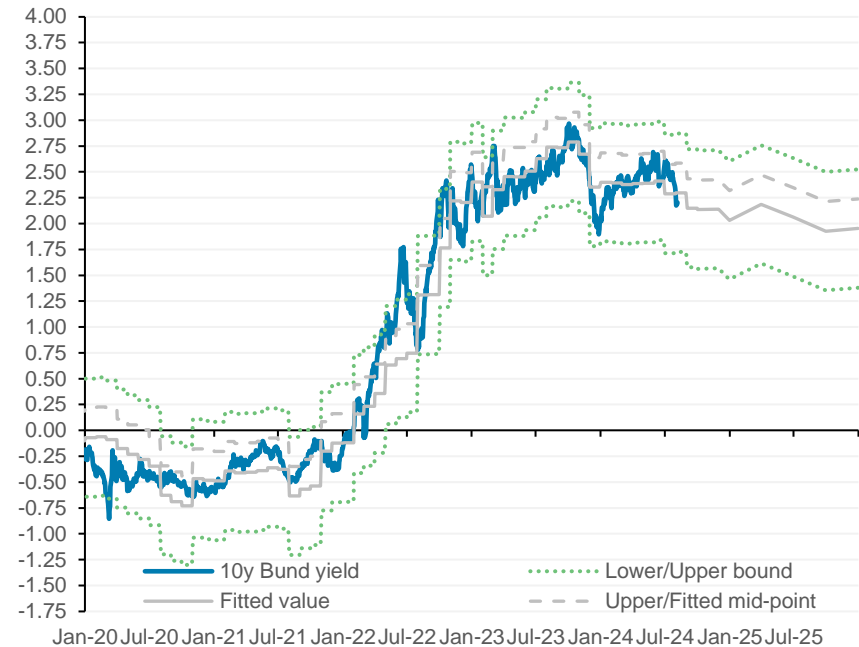
Bund yield vs macro fundamentals

Bund yield vs fundamentals' z-score



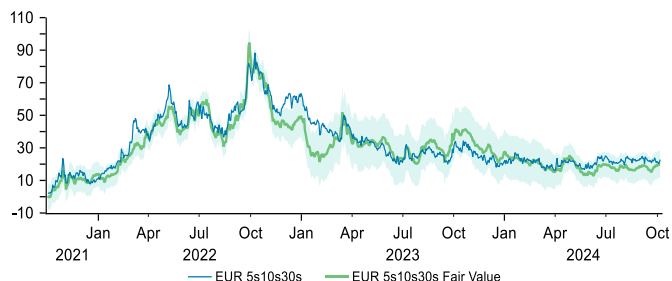
Sources: Bloomberg, Eurostat, ECB, BNP Paribas (standardized scores derived from core EU HICP, European Sentiment indicator, ECB excess liquidity)

The 'expectations channel' model*

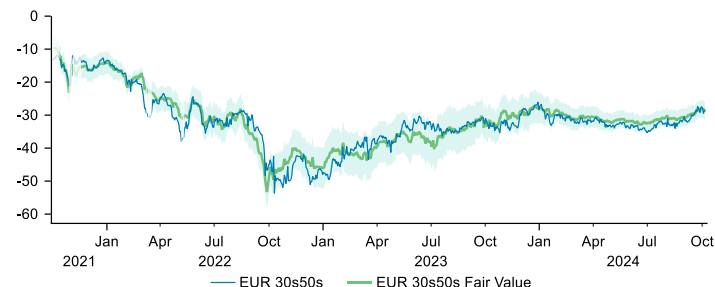


*Regression based on four inputs: survey based inflation expectations (the 'expectations channel' model), ECB policy rate, realised inflation and excess liquidity. Sources: Bloomberg, BNP Paribas, ECB

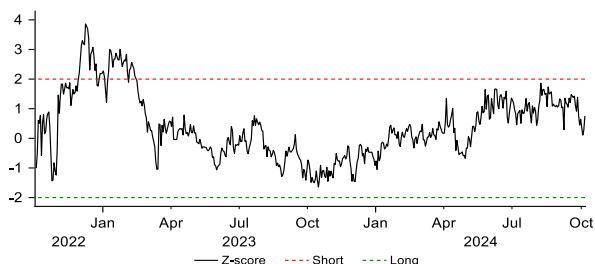
Curve & Convexity: Short-term models

EUR5s10s30s


Sources: BNPP, Bloomberg, Macrobond

EUR30s50s


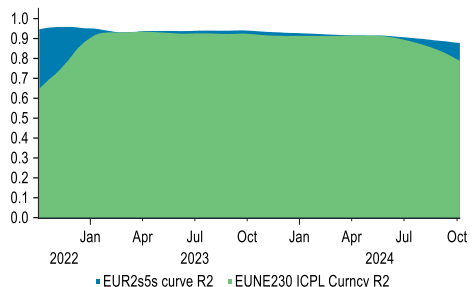
Sources: BNPP, Bloomberg, Macrobond

EUR5s10s30s Z-score


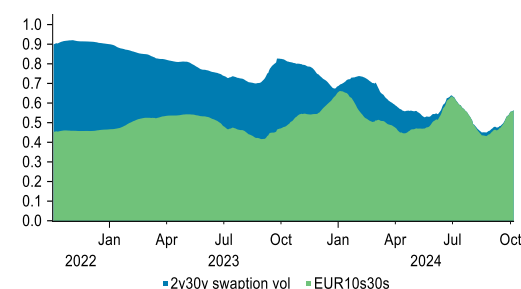
Sources: BNPP, Bloomberg, Macrobond

EUR30s50s Z-score


Sources: BNPP, Bloomberg, Macrobond

EUR5s10s30s R-squared contribution


Sources: BNPP, Bloomberg, Macrobond

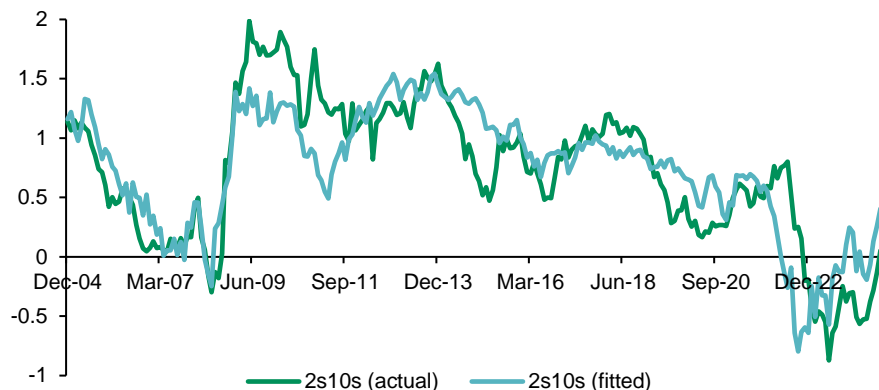
EUR30s50s R-squared contributions


Sources: BNPP, Bloomberg, Macrobond



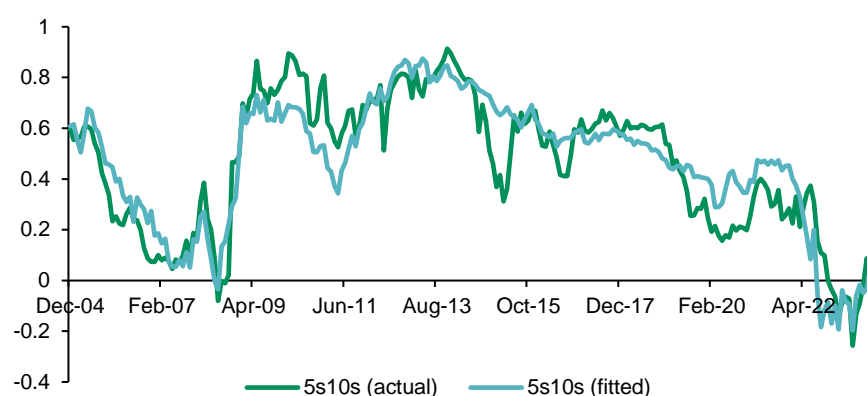
Curve: Macro models

EUR2s10s



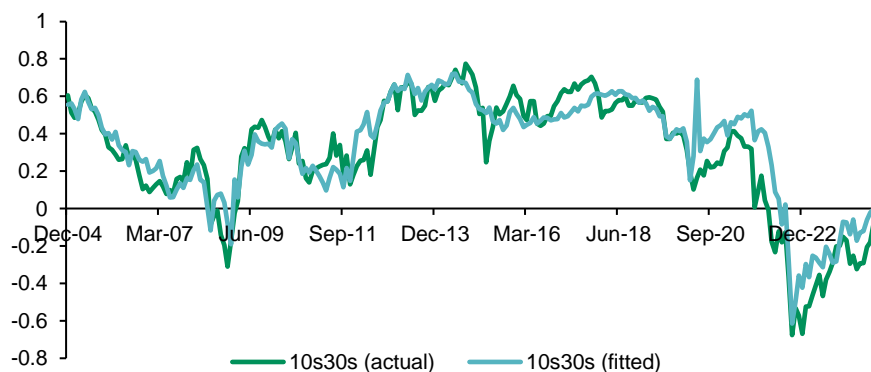
See [here](#) for model details
Sources: Bloomberg, BNP Paribas

EUR5s10s



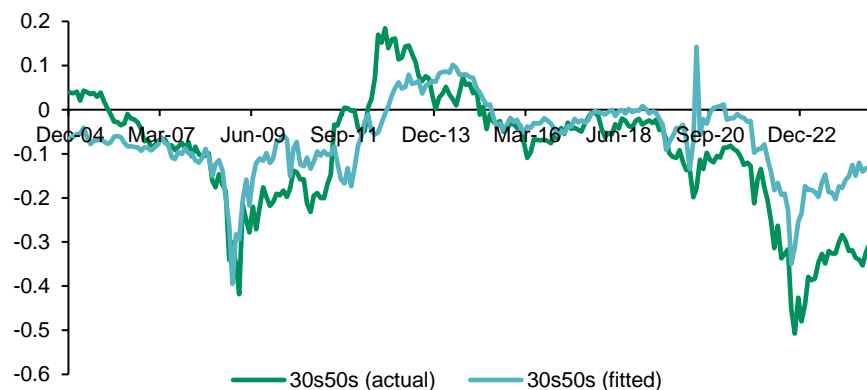
See [here](#) for model details
Sources: Bloomberg, BNP Paribas

EUR10s30s



See [here](#) for model details
Sources: Bloomberg, BNP Paribas

EUR30s50s

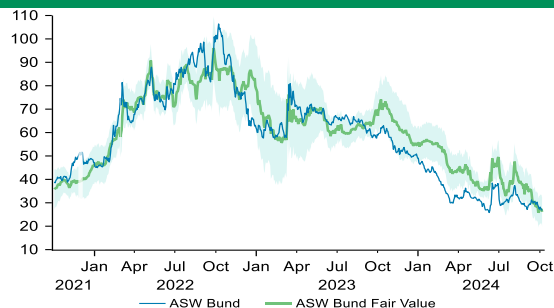


See [here](#) for model details
Sources: Bloomberg, BNP Paribas



German ASW: STAR 1

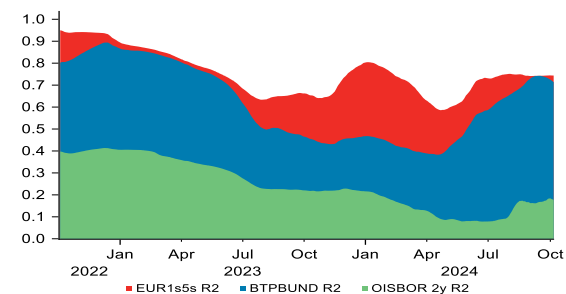
STAR 1 – Bund ASW (bp)



See [here](#) for details. Sources: Bloomberg, BNP Paribas, Macrobond



Sources: Bloomberg, BNP Paribas, Macrobond



Sources: BNPP, Bloomberg, Macrobond

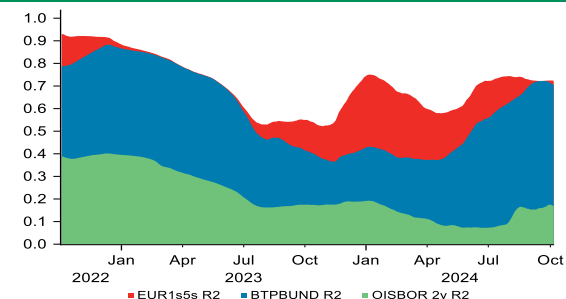
STAR 1 – Bobl ASW (bp)



See [here](#) for details. Sources: Bloomberg, BNP Paribas, Macrobond

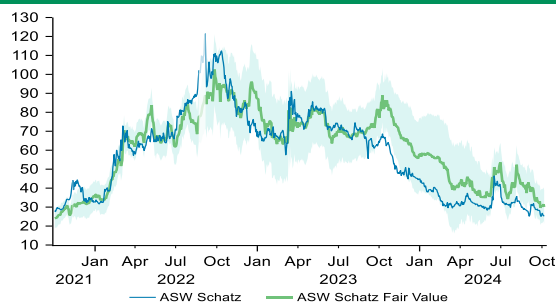


Sources: Bloomberg, BNP Paribas, Macrobond



Sources: BNPP, Bloomberg, Macrobond

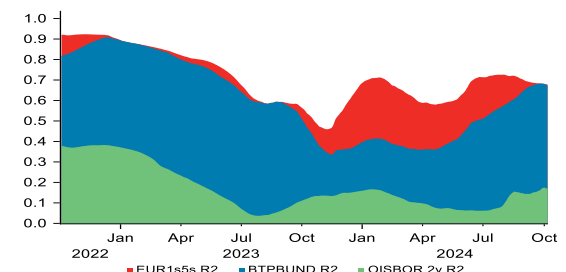
STAR 1 – Schatz ASW (bp)



See [here](#) for details. Sources: Bloomberg, BNP Paribas, Macrobond



Sources: Bloomberg, BNP Paribas, Macrobond

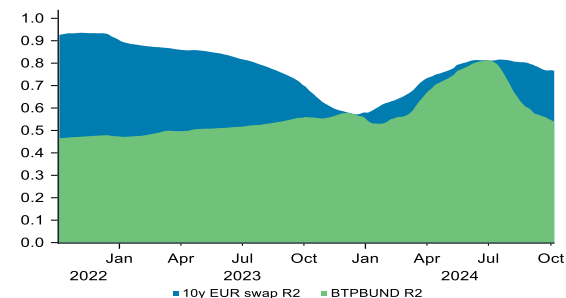
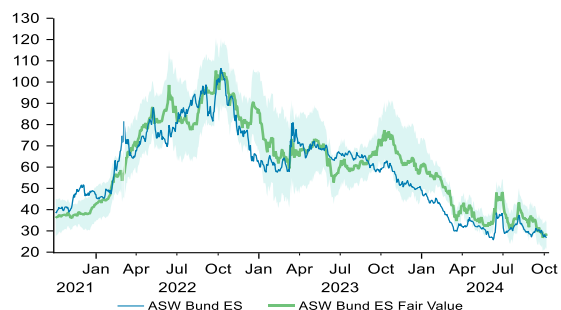


Sources: BNPP, Bloomberg, Macrobond

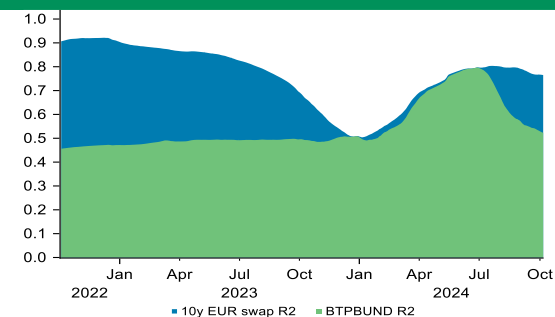
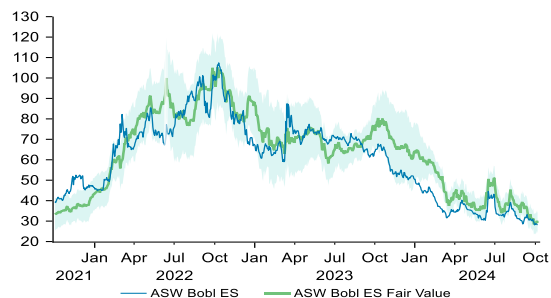


German ASW: STAR 2

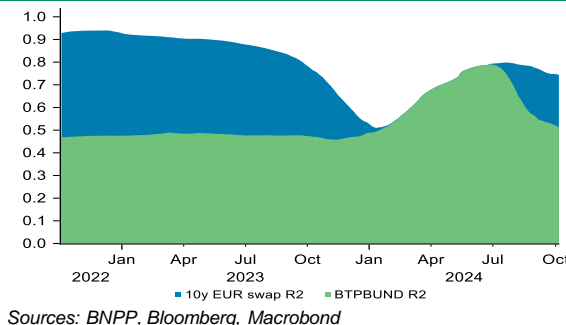
STAR 2 – Bund ASW (bp)



STAR 2 – Bobl ASW (bp)



STAR 2 – Schatz ASW (bp)



MarFA™ Macro – Rates

R ²										R ²										
Asset		Z Score	Fair value	Actual	Deviation	PC 1	PC 2	PC 3	All	Asset		Z Score	Fair value	Actual	Deviation	PC 1	PC 2	PC 3	All	
Nominal	Canada 10yr yield	1.9	2.946	3.093	14.7bp	60	30	2	92	Real Yield	USD 5y5y real yield	1.1	0.8675	0.9333	6.6bp	49	41	1	91	
	USD 30y	1.7	3.2443	3.3506	10.6bp	55	39	0	95		GBP 5y5y real yield	0.4	0.3799	0.4164	3.7bp	0	42	33	75	
	USD 20y	1.7	3.3718	3.4759	10.4bp	56	39	1	95		UK 10y real yield (bond)	0.2	0.5248	0.546	2.1bp	1	41	20	63	
	US 5yr yield	1.7	3.5135	3.6209	10.7bp	52	38	7	97		US 10y real yield (bond)	-0.2	1.6407	1.632	-0.9bp	46	49	0	95	
	USD 10y	1.7	3.2681	3.3718	10.4bp	54	39	3	96		EUR 5y5y real yield	-0.9	0.4473	0.398	-4.9bp	28	6	54	89	
	US 10yr yield	1.7	3.7401	3.839	9.9bp	49	45	2	96		Germany 10y real yield (bond)	-1.9	0.3583	0.238	-12.0bp	0	65	8	73	
	UK 2yr yield	1.6	3.7594	3.9883	22.9bp	72	4	1	76		Curve	EUR 2s5s	2.6	-13.062	-6.29	6.8bp	43	1	49	93
	UK 10yr yield	1.6	3.9198	4.0388	11.9bp	18	67	3	88			Australia 2s10s	2.6	25.485	39.94	14.5bp	21	0	10	32
	Canada 2yr yield	1.6	2.9529	3.047	9.4bp	79	6	13	98			GBP 2s5s	2.2	-32.52	-24.335	8.2bp	33	3	48	85
	Australia 10yr yield	1.6	3.9555	4.0736	11.8bp	55	29	4	89			EUR 2s10s	2.2	-3.9123	5.72	9.6bp	34	8	60	92
	USD 5y	1.5	3.2043	3.306	10.2bp	50	38	9	97	EUR 30s50s		2.1	-30.943	-28.5	2.4bp	1	64	0	66	
	Sweden 10yr yield	1.4	1.8994	2.048	14.9bp	71	14	0	85	Germany 2s10s		1.9	-1.4094	5.906	7.3bp	29	0	64	94	
	USD 2y	0.7	3.4591	3.4966	3.8bp	53	28	17	98	GBP 2s10s		1.8	-32.745	-22.86	9.9bp	44	0	41	85	
	Switzerland 10yr yield	0.6	0.3448	0.391	4.6bp	85	1	0	86	France 5s30s		1.7	98.91	106.75	7.8bp	13	12	61	87	
	Sweden 2yr yield	0.5	1.6434	1.699	5.6bp	93	0	3	95	EUR 5s30s		1.5	-5.0227	1.54	6.6bp	7	35	44	86	
	US 2yr yield	0.4	3.6758	3.701	2.5bp	56	27	15	98	German 5s30s		1.4	42.186	48.154	6.0bp	5	15	66	86	
	EUR 30y	-0.1	2.2946	2.2889	-0.6bp	63	18	12	93	EUR 10s30s		1.4	-14.026	-10.51	3.5bp	15	40	25	81	
	Australia 2yr yield	-0.3	3.6905	3.6655	-2.5bp	42	35	1	79	France 10s30s		1.4	57.462	61.427	4.0bp	7	18	42	66	
	EUR 20y	-0.4	2.4769	2.4589	-1.8bp	64	21	9	95	USD 30s50s		1.4	-37.057	-35.91	1.1bp	35	22	27	84	
	Germany 10yr yield	-0.4	2.1884	2.168	-2.0bp	28	64	1	93	Germany 10s30s		1.4	27.933	31.283	3.3bp	6	14	58	78	
	France 10yr yield	-0.7	2.9895	2.949	-4.1bp	4	70	18	92	USD 2s5s		1.3	-0.2547	-0.1906	6.4bp	33	0	45	78	
	Japan 10yr yield	-0.8	0.9161	0.877	-3.9bp	11	75	1	88	USD 2s10s		1.1	-0.191	-0.1248	6.6bp	25	4	56	86	
	EUR 10y	-0.9	2.4349	2.3939	-4.1bp	64	29	3	96	US 2s10s		1.0	6.1401	13.617	7.5bp	35	1	45	81	
	France 2yr yield	-1.0	2.4589	2.318	-14.1bp	62	12	1	75	Canada 2s10s	0.9	-1.0145	4.164	5.2bp	65	3	27	95		
	Japan 2yr yield	-1.0	0.3961	0.364	-3.2bp	59	35	0	94	JPY 10s30s	0.9	72.2	74.4	2.2bp	49	23	1	73		
	Spain 10yr yield	-1.2	3.0007	2.942	-5.9bp	60	29	6	95	France 2s10s	0.8	52.015	62.226	10.2bp	47	9	20	76		
	Italy 10yr yield	-1.2	3.5649	3.482	-8.3bp	69	14	12	95	JPY 5s30s	0.6	100.64	102.85	2.2bp	2	33	0	35		
EUR 5y	-1.5	2.344	2.2735	-7.1bp	58	38	0	96	Sweden 2s10	0.6	22.035	31.051	9.0bp	61	9	7	77			
Germany 2yr yield	-1.6	2.1962	2.104	-9.2bp	44	37	15	96	Italy 5s30s	0.3	129.44	130.95	1.5bp	13	39	34	86			
EUR 2y	-2.4	2.4733	2.336	-13.7bp	64	27	6	97	GBP 5s30s	0.2	16.532	18.075	1.5bp	57	6	8	71			
Spread	5y UST vs Bobl Spread	1.7	1.4656	1.6181	15.2bp	60	5	12	76	USD 5s30s	0.1	0.04	0.0446	0.5bp	20	19	49	89		
	10y UST vs Bund Spread	1.5	1.5486	1.6684	12.0bp	47	8	16	71	USD 10s30s	0.1	-2.373	-2.12	0.3bp	29	21	37	87		
	10y OAT vs Bund Spread	-0.3	80.232	78.314	-1.9bp	30	2	42	75	Italy 10s30s	0.1	65.851	66.125	0.3bp	43	30	3	76		
	10y BTP vs Bono Spread	-0.5	56.692	54.502	-2.2bp	51	2	24	77	JPY 2s5s	0.1	14.327	14.5	0.2bp	86	1	0	88		
	10y BTP vs Bund Spread	-0.9	137.64	131.44	-6.2bp	58	6	22	86	JPY 2s10s	0.1	42.762	42.95	0.2bp	88	1	0	89		
	2y BTP vs Schatz Spread	-1.1	46.882	40.719	-6.2bp	53	2	9	64	GBP 10s30s	0.0	16.757	16.58	-0.2bp	65	5	2	72		
ASW	10y Bono vs Bund Spread	-1.2	0.8095	0.7694	-4.0bp	57	13	17	87	UK 10s30s	-0.1	57.778	57.538	-0.2bp	12	37	5	53		
	US 2y ASW	0.4	-21.684	-20.531	1.2bp	12	21	30	63	US 10s30s	-0.1	33.407	33.054	-0.4bp	46	5	34	86		
	US 10y ASW	0.2	-47.212	-46.925	0.3bp	74	0	14	88	Japan 2s10s	-0.1	50.138	49.5	-0.6bp	42	26	1	70		
	US 5y ASW	-0.4	-31.018	-31.572	-0.6bp	8	14	40	61	US 5s30s	-0.2	55.995	54.986	-1.0bp	43	6	40	89		
	Bobl ASW	-0.8	30.771	28.14	-2.6bp	70	8	8	86	UK 5s30s	-0.5	76.316	72.762	-3.6bp	50	1	3	54		
	Bund ASW	-0.9	29.126	26.601	-2.5bp	67	14	9	90	GBP 30s50s	-0.7	-16.314	-17.36	-1.0bp	60	10	0	70		
Inflation	Schatz ASW	-1.0	28.994	25.137	-3.9bp	65	3	10	78	UK 2s10s	-1.1	15.152	4.629	-10.5bp	47	27	7	81		
	Germany 10y BE	2.7	1.7308	1.8268	9.6bp	69	18	6	93	Fly	EUR 2s5s10s	1.9	-0.2201	-0.1829	3.7bp	69	14	8	91	
	US 10y BE	2.3	2.0986	2.2074	10.9bp	41	24	11	75		GBP 2s5s10s	1.5	-0.323	-0.2581	6.5bp	4	23	33	60	
	GBP 5y5y Inflation	1.8	3.1968	3.266	6.9bp	71	12	3	87		USD 2s5s10s	1.5	-0.3185	-0.2569	6.2bp	31	16	5	51	
	UK 10y BE	1.8	3.3769	3.469	9.2bp	38	40	5	83		GBP 5s10s30s	1.3	-0.1698	-0.1511	1.9bp	44	0	28	72	
	EUR 5y5y Inflation	1.5	2.0898	2.13	4.0bp	72	17	3	93		JPY 2s5s10s	0.1	-0.1411	-0.1395	0.2bp	38	2	2	42	
USD 5y5y Inflation	1.3	2.4029	2.448	4.5bp	63	18	4	85	USD 5s10s30s		0.0	0.0875	0.0872	-0.0bp	39	5	26	70		
										EUR 5s10s30s	-0.4	0.2311	0.2255	-0.6bp	17	0	54	71		
										JPY 5s10s30s	-1.0	-0.4377	-0.4595	-2.2bp	85	6	2	92		

For more charts please refer to the latest MarFA™ update on [Quant Vault](#)

[Michael Sneyd](#), Head of Macro Quantitative & Derivatives Strategy | [Oleksandr Tsymbalov](#), Macro Quantitative Strategist | BNP Paribas London Branch | [Joana Carvalho Oliveira](#), Macro Quantitative Strategist | [Tongshuo Li](#), Macro Quantitative Strategist | [Davide Altieri](#), Marco Quantitative Analyst | BNP Paribas Portugal Branch



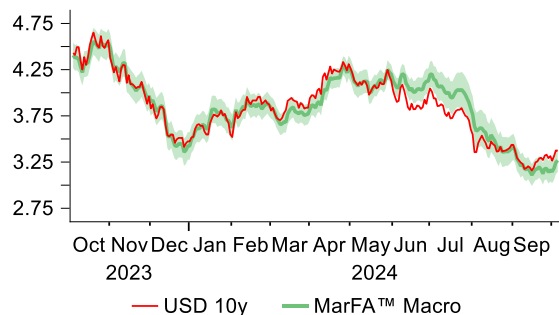
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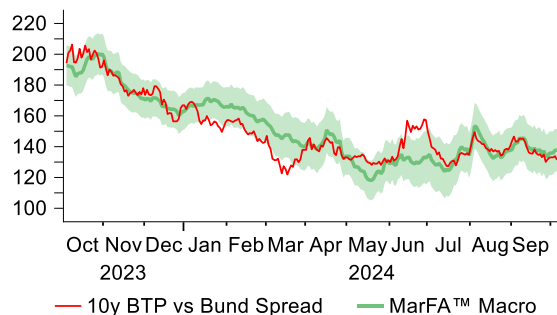
MARKETS 360

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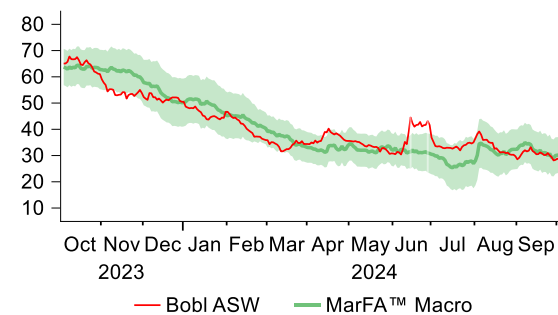
MarFA™ Macro – Rates



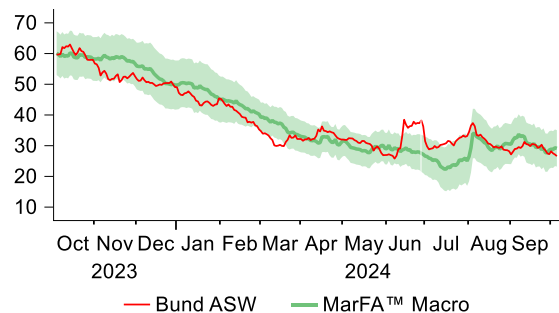
Sources: BNPP, Bloomberg, Macrobond



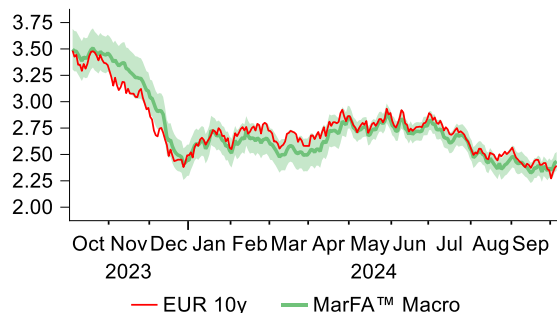
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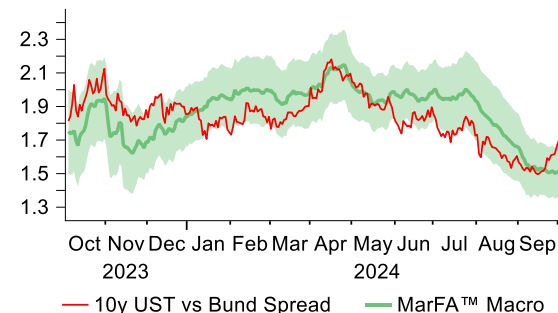
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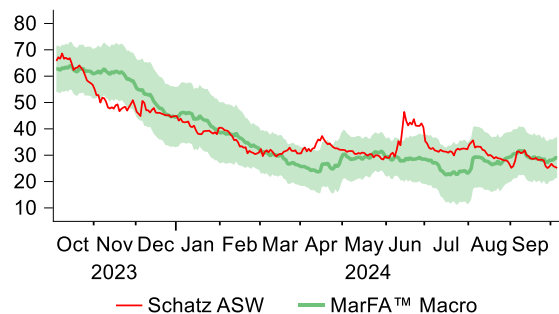
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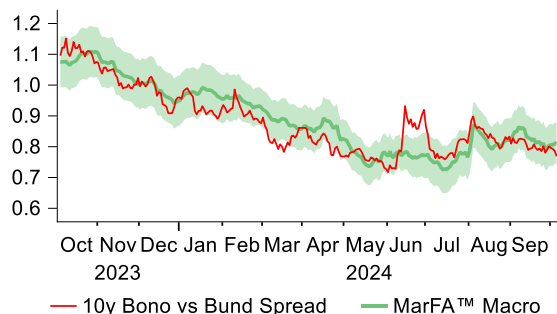
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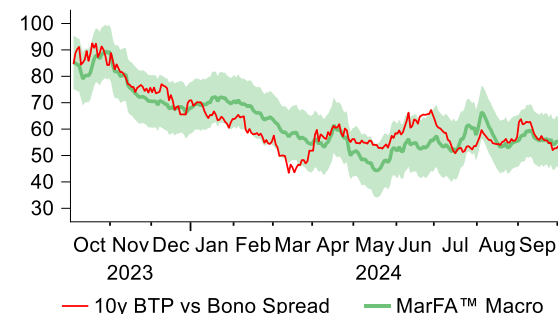
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EGB carry and roll

3m carry on long positions (bp)

	2y	3y	5y	7y	10y	15y	30y
GER	-15.8	-11.3	-6.4	-4.4	-2.9	-1.6	-0.8
FRA	-13.3	-8.1	-4.7	-2.0	-0.8	-0.1	0.4
ITA	-11.7	-7.7	-2.3	-0.9	0.6	1.3	1.3
SPA	-15.6	-9.7	-4.9	-2.6	-0.9	0.1	0.6

Source: BNP Paribas

3m carry on curve flatteners (bp)

	2s5s	2s10s	5s10s	3s7s	10s30s	5s10s
GER	9.4	12.9	3.5	6.9	2.1	3.5
FRA	8.6	12.5	3.9	6.2	1.2	3.9
ITA	9.4	12.3	2.9	6.8	0.8	2.9
SPA	10.7	14.7	4.0	7.2	1.5	4.0

Source: BNP Paribas

3m carry on spread tighteners (bp)

	2y	3y	5y	7y	10y	15y	30y
BTP-Bund	4.1	3.6	4.1	3.6	3.5	2.9	2.2
OAT-Bund	2.5	3.2	1.8	2.5	2.1	1.5	1.3
Bono-Bund	0.2	1.6	1.5	1.9	2.0	1.7	1.4
BTP-Bono	3.9	2.0	2.6	1.7	1.5	1.2	0.7

Source: BNP Paribas

3m carry and roll on long positions (bp)

	2y	3y	5y	7y	10y	15y	30y
GER	-17.5	-12.6	-6.9	-4.4	-2.1	-0.3	-3.0
FRA	-12.2	-6.9	-3.3	-0.4	0.8	1.5	-0.3
ITA	-9.2	-5.2	0.2	1.6	2.9	3.1	0.3
SPA	-15.0	-8.9	-3.7	-1.0	0.9	2.0	-0.5

Source: BNP Paribas

3m carry and roll on curve flatteners (bp)

	2s5s	2s10s	5s10s	3s7s	10s30s	5s10s
GER	10.6	15.4	4.8	8.2	-0.8	4.8
FRA	8.8	13.0	4.1	6.5	-1.1	4.1
ITA	9.4	12.1	2.7	6.8	-2.6	2.7
SPA	11.3	15.9	4.6	7.9	-1.5	4.6

Source: BNP Paribas

3m carry and roll on spread tighteners (bp)

	2y	3y	5y	7y	10y	15y	30y
BTP-Bund	8.3	7.3	7.1	6.0	5.0	3.5	3.3
OAT-Bund	5.4	5.6	3.6	3.9	2.9	1.8	2.6
Bono-Bund	2.6	3.7	3.2	3.3	3.1	2.3	2.4
BTP-Bono	5.8	3.6	3.9	2.6	2.0	1.1	0.9

Source: BNP Paribas

EUR swap carry and roll

3m carry and roll on paid positions

Tenor → Fwd start ↓	1y	2y	5y	7y	10y	20y	30y	50y
Spot	41.1	18.7	5.4	3.5	2.1	1.8	1.7	1.4
3m	33.8	16.1	5.1	3.3	2.0	1.8	1.7	1.4
6m	20.8	9.0	2.3	1.2	0.5	1.0	1.1	1.0
1y	1.6	-0.9	-1.6	-1.6	-1.5	-0.1	0.3	0.4
2y	-3.3	-3.0	-2.2	-2.1	-1.7	-0.1	0.2	0.4
3y	-2.7	-2.4	-1.9	-1.7	-1.4	0.1	0.4	0.5
5y	-1.6	-1.5	-1.5	-1.3	-0.7	0.6	0.7	0.6
10y	-1.0	-0.7	0.3	0.9	1.3	1.4	1.2	0.9
15y	2.7	2.7	2.6	2.4	2.2	1.6	1.5	0.9
20y	2.0	1.9	1.7	1.6	1.4	1.1	1.0	0.4
30y	0.4	0.4	0.6	0.7	0.8	0.7	0.3	0.0

Source: BNP Paribas (NB: ref rate is 6m Euribor)

3m carry and roll on steepeners (bp)

Curve → Fwd start ↓	1s2s	2s5s	5s10s	2s10s	10s20s	20s30s	10s30s	5s30s
Spot	-22.4	-13.3	-3.9	-16.6	-0.3	-0.1	-0.4	-3.7
3m	-17.7	-11.0	-3.5	-14.1	-0.2	-0.1	-0.3	-3.4
6m	-11.8	-6.7	-1.7	-8.4	0.4	0.1	0.5	-1.2
1y	-2.4	-0.7	0.9	-0.6	1.4	0.4	1.7	1.9
2y	0.3	0.8	1.5	1.3	1.6	0.3	1.9	2.4
3y	0.3	0.5	1.5	1.0	1.5	0.2	1.8	2.3
5y	0.1	0.0	1.8	0.8	1.2	0.1	1.3	2.1
10y	0.3	1.0	1.2	2.1	0.0	-0.1	-0.1	1.0
15y	0.0	-0.1	-0.8	-0.5	-0.6	-0.1	-0.8	-1.2
20y	-0.1	-0.2	-0.6	-0.6	-0.2	-0.2	-0.4	-0.8
30y	0.1	0.2	0.2	0.4	-0.1	-0.4	-0.5	-0.3

Source: BNP Paribas (NB: ref rate is 6m Euribor)

3m carry and roll on flies (bp)

Fly → Fwd start ↓	2s5s10s	5s10s15s	10s15s20s	5s10s30s	10s20s30s	10s30s50s	15s20s25s	20s25s30s
Spot	-9.9	-2.8	-0.8	-2.9	-0.2	-0.2	0.2	0.1
3m	-7.9	-2.6	-0.6	-2.7	-0.1	-0.1	0.2	0.1
6m	-5.0	-1.7	-0.4	-2.2	0.4	0.6	0.3	0.1
1y	-0.9	-0.6	0.1	-1.6	1.0	1.6	0.4	0.2
2y	0.3	-0.5	0.4	-1.4	1.3	1.8	0.4	0.2
3y	0.0	-0.6	0.5	-1.3	1.3	1.7	0.3	0.2
5y	-0.8	-0.1	0.6	-0.5	1.2	1.3	0.2	0.1
10y	-0.1	1.0	0.2	1.2	0.1	0.2	0.0	-0.1
15y	0.3	0.0	-0.1	0.4	-0.5	-0.2	-0.2	0.0
20y	0.2	-0.2	-0.2	0.0	-0.1	0.1	0.0	0.1
30y	0.0	0.2	0.2	0.7	0.2	-0.2	0.0	0.0

Source: BNP Paribas (NB: ref rate is 6m Euribor; for a paid position in the belly)



EUR volatility carry and roll

3m carry and roll on payer (bp running)

	1y	2y	5y	10y	20y	30y
6m	6.5	-1.7	-4.8	-5.9	-5.4	-5.3
9m	-1.0	-3.8	-4.9	-5.1	-4.2	-3.9
1y	-4.1	-4.9	-4.9	-4.7	-3.8	-3.7
2y	-4.5	-4.2	-3.7	-3.5	-2.6	-2.5
5y	-1.5	-1.9	-1.9	-1.5	-0.7	-0.7
10y	-1.5	-0.7	-0.3	0.3	0.4	0.4
20y	1.1	0.7	1.0	0.9	0.7	0.7

Source: BNP Paribas

3m carry and roll on receiver (bp running)

	1y	2y	5y	10y	20y	30y
6m	-14.2	-10.7	-7.1	-6.4	-6.4	-6.3
9m	-9.3	-6.3	-4.6	-4.3	-4.4	-4.5
1y	-5.7	-4.1	-3.3	-3.3	-3.8	-4.0
2y	-1.3	-1.3	-1.5	-1.8	-2.5	-2.7
5y	0.1	-0.3	-0.4	-0.9	-1.3	-1.4
10y	-0.5	0.1	-0.5	-1.0	-1.0	-0.9
20y	-0.9	-1.2	-0.7	-0.5	-0.4	-0.3

Source: BNP Paribas

3m carry and roll on conditional bearish curve trades (bp running)

	2s5s	5s10s	2s10s	5s30s	10s30s
6m	-3.1	-1.0	-4.2	-0.5	0.6
9m	-1.1	-0.2	-1.2	0.9	1.1
1y	0.0	0.1	0.2	1.2	1.1
2y	0.5	0.2	0.7	1.2	1.0
5y	-0.1	0.4	0.3	1.2	0.8
10y	0.4	0.6	1.0	0.6	0.0
20y	0.3	-0.2	0.1	-0.4	-0.2

Bear steepeners: +ve = profit; -ve = loss // Bear flatteners: -ve = profit; +ve = loss
Source: BNP Paribas

3m carry and roll on conditional bullish curve trades (bp running)

	2s5s	5s10s	2s10s	5s30s	10s30s
6m	3.5	0.7	4.3	0.8	0.1
9m	1.7	0.4	2.1	0.2	-0.2
1y	0.8	0.1	0.8	-0.6	-0.7
2y	-0.2	-0.3	-0.4	-1.2	-0.9
5y	-0.1	-0.5	-0.5	-1.0	-0.5
10y	-0.6	-0.5	-1.1	-0.4	0.1
20y	0.5	0.2	0.8	0.4	0.1

Bull flattening: +ve = profit; -ve = loss // Bull steepening: -ve = profit; +ve = loss
Source: BNP Paribas

UK gilts carry and roll

3m carry and roll on long gilt positions (bp)

	3m carry	3m roll	3m roll and carry
2y	-12.7	-2.7	-15.3
3y	-10.9	0.2	-10.7
5y	-6.7	-0.5	-7.2
7y	-4.3	1.9	-2.4
10y	-3.0	1.4	-1.7
15y	-1.3	1.3	0.0
20y	-0.8	0.6	-0.2
30y	-0.5	-0.3	-0.8

Source: Bloomberg, BNP Paribas, at close Thursday

3m carry and roll on gilt flatteners (bp)

	3m carry	3m roll	3m roll and carry
2s5s	6.0	2.2	8.2
2s10s	9.6	4.0	13.7
5s10s	3.6	1.8	5.5
3s7s	6.6	1.6	8.3
10s30s	2.5	-1.6	0.9
5s30s	6.1	0.2	6.3

Source: Bloomberg, BNP Paribas, at close Thursday

3m carry and roll on gilt flies (bp)

	3m carry	3m roll	3m roll and carry
2s5s7s	3.6	-0.1	3.5
2s5s10s	2.3	0.4	2.7
5s10s30s	1.2	3.5	4.6
10s15s20s	1.2	0.7	1.8
10s20s30s	2.0	0.1	2.1

Source: Bloomberg, BNP Paribas, at close Thursday



UK GBP swap carry and roll

3m carry and roll on paid swap positions (bp)

Fwd	1y	2y	5y	10y	15y	20y	30y
Spot	39.1	20.5	7.9	3.1	1.9	1.7	1.6
3m	33.5	17.9	7.5	3.0	1.9	1.7	1.6
6m	23.2	12.0	5.0	1.6	0.9	0.9	1.0
9m	12.9	6.6	2.7	0.3	0.0	0.2	0.4
1y	5.9	3.1	1.1	-0.6	-0.6	-0.3	0.0
2y	0.3	0.1	-0.6	-1.5	-1.1	-0.7	-0.3
5y	-1.0	-1.6	-2.3	-1.8	-1.1	-0.7	-0.2
10y	-2.3	-2.1	-1.1	-0.3	0.1	0.4	0.6
20y	0.9	1.0	1.1	1.3	1.3	1.4	1.3

Source: BNP Paribas, at close Thursday

3m carry and roll on paid swap positions (bp)

Fwd	2s5s	5s10s	2s10s	5s30s	10s30s
Spot	-12.6	-4.8	-17.4	-6.3	-1.5
3m	-10.4	-4.6	-14.9	-5.9	-1.4
6m	-7.0	-3.4	-10.4	-4.0	-0.6
9m	-4.0	-2.4	-6.4	-2.3	0.1
1y	-2.0	-1.7	-3.7	-1.0	0.6
2y	-0.7	-0.9	-1.6	0.3	1.2
5y	-0.8	0.6	-0.2	2.1	1.5
10y	1.0	0.8	1.9	1.7	0.9
20y	0.2	0.1	0.3	0.1	0.0

Source: BNP Paribas, at close Thursday

3m carry and roll on paid swap positions (bp)

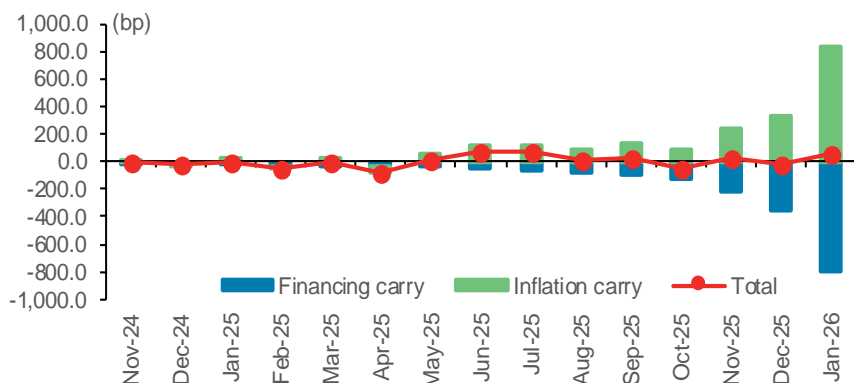
Fwd	2s5s10s	5s10s15s	5s10s30s	10s20s30s
Spot	7.7	3.7	3.4	1.3
3m	5.8	3.5	3.2	1.2
6m	3.6	2.8	2.8	0.7
9m	1.6	2.1	2.5	0.3
1y	0.4	1.7	2.3	0.0
2y	-0.2	1.3	2.1	-0.3
5y	1.3	0.1	0.9	-0.6
10y	-0.2	-0.4	0.1	-0.4
20y	0.0	-0.1	-0.1	-0.2

Source: BNP Paribas, at close Thursday



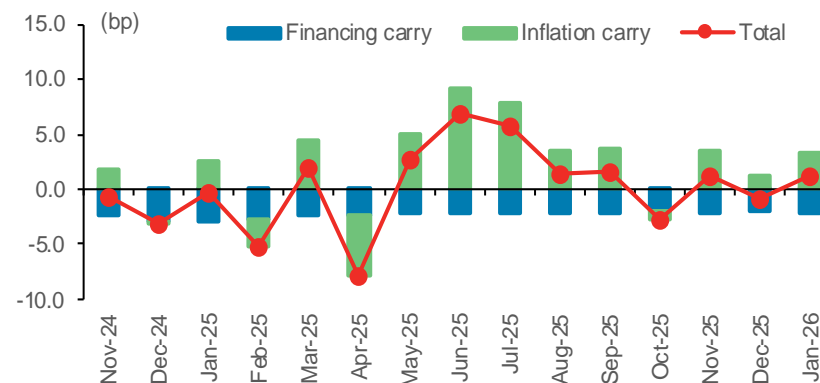
Inflation-linked: Breakdown of OATei real yield and breakeven carry

Breakdown of carry for OATei26



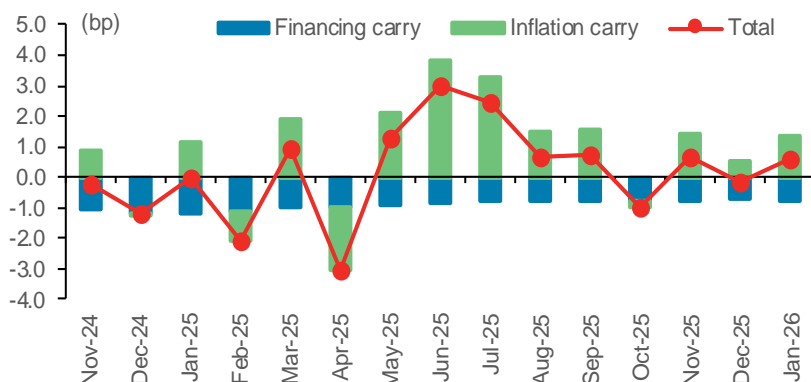
Using market based inflation swap fixings and curve and mid-market repo levels. Sources: Bloomberg, BNP Paribas

Breakdown of monthly carry for OATei34



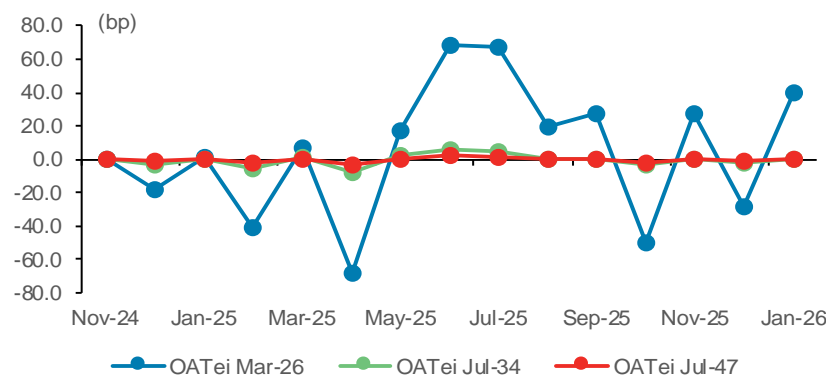
Using market based inflation swap fixings and curve and mid-market repo levels. Sources: Bloomberg, BNP Paribas

Breakdown of monthly carry for OATei47



Using market based inflation swap fixings and curve and mid-market repo levels. Sources: Bloomberg, BNP Paribas

Breakevens: monthly carry for OATei curve

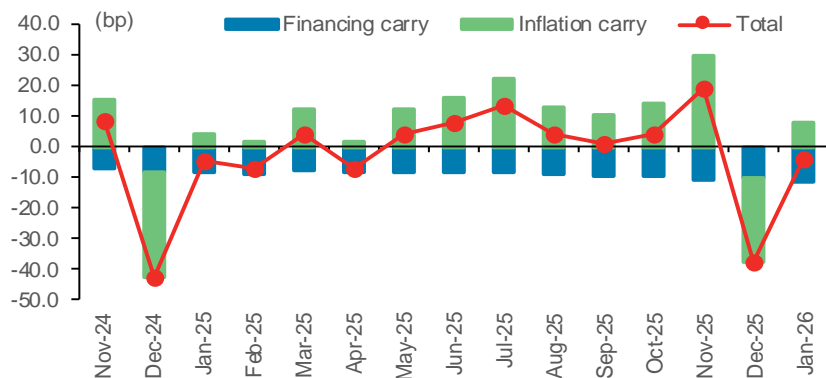


Using market based inflation swap fixings and curve and mid-market repo levels. Sources: Bloomberg, BNP Paribas



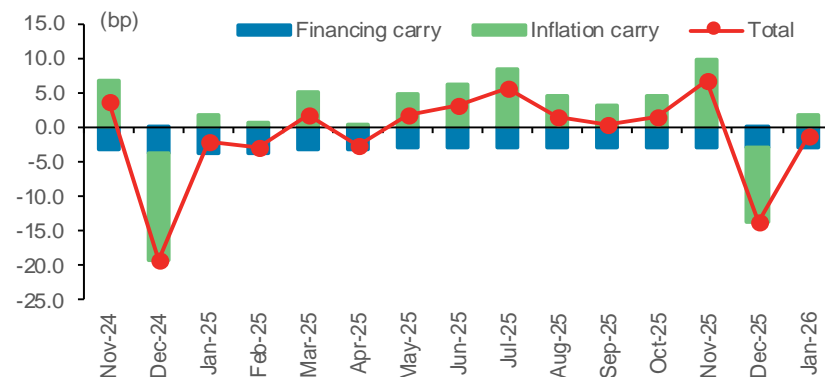
Inflation-linked: Breakdown of OATi real yield and breakeven carry

Breakdown of carry for OATi28



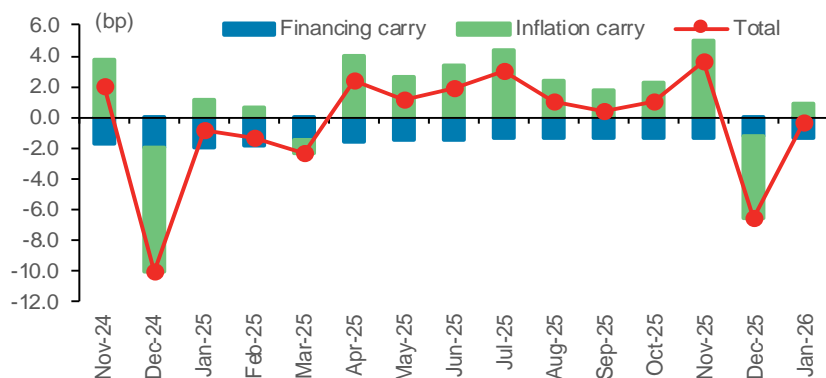
Using market based inflation swap fixings and curve and mid-market repo levels. Sources: Bloomberg, BNP Paribas

Breakdown of monthly carry for OATi32



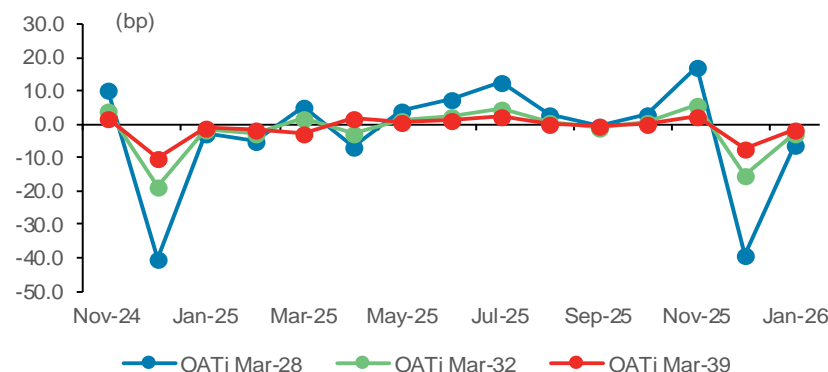
Using market based inflation swap fixings and curve and mid-market repo levels. Sources: Bloomberg, BNP Paribas

Breakdown of monthly carry for OATi39



Using market based inflation swap fixings and curve and mid-market repo levels. Sources: Bloomberg, BNP Paribas

Breakevens: monthly carry for OATei curve



Using market based inflation swap fixings and curve and mid-market repo levels. Sources: Bloomberg, BNP Paribas

Seasonal patterns

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
10y Bund yield	14*					9	12	18		11	11	
Bund ASW		2				6		4	3			3
10y OAT ASW						9		5			7	8
30y OAT ASW	7				7	11		9				6
10y OAT/Bund				5		7	8				11	
BTP/Bund 5s10s box				9								8
BTP/Bund 10s30s box	10							8			6	
EUR swap 2s10s		5	10	5					11	5		
EUR swap 10s30s	4	3		2					5	3		3
EUR swap 2s5s				2		3			6	3		
EUR swap 5s10s		3	5		4				4		3	
10y Gilt		14				15	16	21	17	13	18	
10y Gilt ASW	2		4	2		4		3	4			
GBP swap 2s5s		5	2				5	7	5			
GBP swap 2s10s	5	9					6	7	8			3
GBP swap 5s10s	2	5	4		2			2		4		
GBP swap 10s30s		2					5		2		4	5
GBP swap 30s50s				1		1	2		1		2	

 Outright rally/ASW richening/curve flattening/box tightening – dark green for probability $\geq 80\%$, light green for $61\% < p < 80\%$

 Outright sell-off/ASW cheapening/curve steepening/box widening – * average move in basis points when the pattern occurred

ASW richening here refers to bonds richening vs swaps, indicated in green. Source: Bloomberg, BNP Paribas

Ratings snapshot and calendar

	S&P			Moody's			Fitch			DBRS			Average rating (S/F/M)	Average rating (S/F/MD)
	Rating	Outlook	Next review	Rating	Outlook	Next review	Rating	Outlook	Next review	Rating	Outlook	Next review		
Germany	AAA	Stable		Aaa	Stable		AAA	Stable		AAA	Stable	29-Nov	1.00	1.00
Finland	AA+	Stable	25-Oct	Aa1	Stable	13-Dec	AA+	Negative		AAH	Stable		2.00	2.00
Netherlands	AAA	Stable	18-Oct	Aaa	Stable		AAA	Stable		AAA	Stable		1.00	1.00
Austria	AA+	Positive		Aa1	Stable		AA+	Stable		AAA	Stable		2.00	1.75
France	AA-	Stable	29-Nov	Aa2	Stable	25-Oct	AA-	Stable	11-Oct	AAH	Stable		3.67	3.25
Belgium	AA	Stable	25-Oct	Aa3	Stable	11-Oct	AA-	Negative		AA	Stable		3.67	3.50
Italy	BBB	Stable	18-Oct	Baa3	Stable	22-Nov	BBB	Stable	18-Oct	BBBH	Stable	25-Oct	9.33	9.00
Ireland	AA	Stable	15-Nov	Aa3	Positive		AA	Stable	15-Nov	AA	Stable		3.33	3.25
Spain	A	Stable		Baa1	Positive		A-	Stable	08-Nov	A	Positive	29-Nov	7.00	6.75
Portugal	A-	Positive		A3	Stable	15-Nov	A-	Positive		A	Positive		7.00	6.75
Greece	BBB-	Positive	18-Oct	Ba1	Positive		BBB-	Stable	22-Nov	BBBL	Positive		10.33	10.25
Slovenia	AA-	Stable	06-Dec	A3	Stable	11-Oct	A	Stable	11-Oct	AH	Stable	06-Dec	5.67	5.50
UK	AA	Stable	18-Oct	Aa3	Stable	29-Nov	AA-	Stable		AA	Stable	15-Nov	3.67	3.50

Average rating shown takes into account the rating bucket only, not the outlook. Source: S&P, Moody's, Fitch, DBRS, BNP Paribas

Ratings calendar																																					
Jan			Feb			Mar				Apr			May			June		Jul				Aug				Sep			Oct			Nov				Dec	
12 19 26			9 16 23			1 8 15 22				12 19 26			3 17 31			7 14		12 19 26 9 16 23 30				6 13 20			11 18 25			8 15 22 29				6 13					
Germany			M					F	S					D					M					F	S							D					
Finland			F						D							M						F			D			S						M			
Netherlands				F		D	M					S									F					D				S							
	D																	D	F									S									
Austria					F																																
				M																																	
				S																																	
France									D				F		S											D	F		M			S					
Belgium			D		F					M			S						D			F						M		S							
Italy											S	D	F		M													M	F	D			M				
Ireland				M					D							S	F						M					D					F				
																																	S				
Spain								M						F	D											S					F			D			
								S																													
Portugal		D																																			
Greece						S			F					M					D							M											
							D	M				S			F														S				F				
Slovenia										F	M					D	S											F	M					D			
																																		S			
UK								F			S			D		M											F		S			D		M			

Source: S&P, Moody's, Fitch, DBRS, BNP Paribas



DM Rates Strategy - Europe

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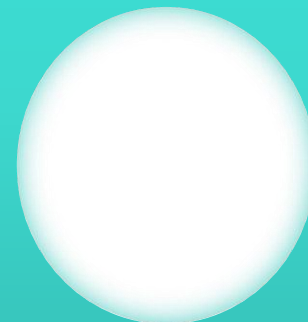
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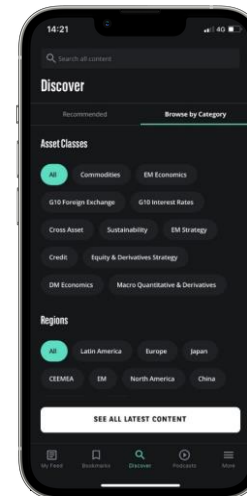
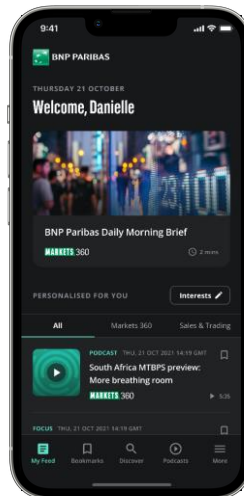
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