

European Rates Supply Preview: Week ahead

Moderate supply, dominated by Germany and Italy

EGBs: BE, GE, IT, FI and EU Syndication

Gross EGB auctions down to c.21.4€bn with Belgium, Germany, Italy and Finland in the market. The EU likely adds a syndicated bond transaction. On the potential reinvestment front, France is to repay c. €20bn in coupons and redemptions.

On Monday, Belgium taps the BGB Jun28, Jun33 and Jun54 for up to €3.5bn.

On Tuesday, Germany launches the BKO Jun25 for a "sizeable" €6bn.

On Wednesday, again Germany taps the DBR Jan37 and May38 for €1bn and €1.5bn respectively.

On Thursday, Italy is expected offer the 5y, 10y BTP + CCTeu (details TBA on 25-Apr).

On Friday, Finland runs an ORI operation (details TBA on 25-Apr).

Bills: Cyprus, France, Germany, Austria, Greece and Italy

On Monday, **Cyprus** offers bills (details TBA). Also on Monday, **France** offers two 3m lines and one 12m line for up to €6.5bn. Also on Monday, **Germany** offers the 3m line for €2bn and the 9 line for €4bn. On Tuesday, **Austria** offers the 3m line for \$1bn and the 6m line for \$1bn. On Wednesday, **Greece** fofers the 6m line for €625mln. Also on Wednesday, **Italy** offers the 3m line for €3.5bn and the 9m line for €2.5bn.

Exhibit 3: EGB spread residuals (in bp) according to PCA RV (cheap = positive residual) Cheaper Belgian 5y-10y

	2у	5у	7у	10y	15y	25y
Austria	-1.2	1.0	0.8	-0.6	-1.6	0.5
Netherlands	-2.1	2.2	2.5	0.8	-1.6	-0.6
Belgium	-1.9	2.8	3.5	2.4	-0.7	0.9
France	1.8	0.9	0.9	-1.1	-3.2	-0.9
Italy	0.4	1.4	0.0	-2.6	-0.9	1.4
Spain	-2.8	-0.2	-0.8	-2.1	1.7	1.9
Portugal	0.9	0.1	0.5	-0.8	0.1	0.2

Source: BofA Global Research, Bloomberg (BFV rates). Residuals = Actual - Fitted EGB yield (expressed in bp and as a spread to Germany). The current value of dislocation (top-left corner of the table) is the z-score of the current standard deviation of EGB residuals originating from the regression on the first 11 principal components. For the full methodology please refer to report.

BofA GLOBAL RESEARCH

UK: No auctions on schedule

In the UK, there are no auctions on schedule..

US: 2y, 5y, 7y Notes and 2y FRN

In the US, the Treasury issues the new 2y Note for \$42bn, 5y Note for \$43bn, 7y Note for \$35bn and 2y FRN for \$24bn.

For a complete list of our open trade ideas and risks, see latest Global Rates Weekly.

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

Bof A Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 8 to 10.

12547587

21 April 2023

Rates Research Europe

European Rates Research

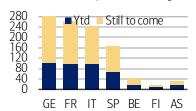
MLI (UK)

Erjon Satko Rates Strategist BofASE (France) +33 1 8770 0304 erjon.satko@bofa.com

See Team Page for List of Analysts

Exhibit 1: Euro fixed coupon bond issuance, ytd vs. our estimates for the rest of 2023

Year to date versus expected 2023 target

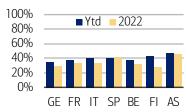


Source: BofA Global Research Note that this is only an indication of issuance evolution in the EUR FIXED COUPON market. It does not incorporate the funding through inflation linked bonds, CTZs and CCTs

BofA GLOBAL RESEARCH

Exhibit 2: Ytd Euro fixed coupon bond issuance in % of 2022 estimated targets

39% of the issuance done so far



BofA Global Research Note that this is only an indication of issuance evolution in the EUR FIXED COUPON market. It does not incorporate the funding through inflation linked bonds, CTZs and CCTs

Global bond supply/redemptions next 2 weeks

Exhibit 4: Eurozone, UK and US government bond supply and C&R in the next two weeksSignificant redemptions and coupons flow with a smaller gross supply lead to a positive net supply of €1.5bn

	Date	Settle	Country	Sector	Amount (bn)	Bond	Туре	Date	Country		Amt (bn)		Туре
	24-Apr-	-28-Apr	EU	TBA	TBA	EU	Syndication	25-Apr	FR	-	10.6	OAT 8.5% 04/23	R
	24-Apr	27-Apr	BE	5у		BGB 0.80% 06/28	Тар	25-Apr	FR	0-37y	9.3	OAT	C
	24-Apr	27-Apr	BE	10y	3.0-3.5	BGB 3% 06/33	Тар						
	24-Apr	27-Apr	BE	31y		BGB 3.30% 06/54	Тар						
	25-Apr	27-Apr	GE	2y	6.0	BKO 0% 06/25	New						
	26-Apr	28-Apr	GE	15y	1.5	DBR 1% 05/38	Тар						
	26-Apr	28-Apr	GE	13y	1.0	DBR 4% 01/37	Тар						
•	27-Apr	02-May	IT	TBA on 25-Apr	7.0-9.0(e)	5y BTPS, 10y BTPS, CCTeu	TBA on 25-Apr						
Europe	27-Apr	02-May	FI	TBA on 25-Apr	max 0.4	RFGB ORI	ORI Facility						
团						Total week	€18.9-21.4(e)					Total week	€19.9
	03-May	05-May	GE	6у	3.0	DBR 2.1% 11/29	Тар	30-Apr	SP	-	21.8	SPGB 0% 04/23	R
	04-May	02-May	FR	TBA on 28-Apr	11.0-12.0(e)	>8y OAT	TBA on 28-Apr	30-Apr	SP	2-10y	3.6	SPGB	C
	04-May	02-May	SP	TBA on 28-Apr	5.0-6.0(e)	SPGB/SPGB€I	TBA on 28-Apr	30-Apr- 06-May	IT	0-23y	4.9	BTP/ITALY	С
	05-May	08-May	BE	TBA on 04-May	0.5-0.7(e)	BGB/ORI Facility	ORI Facility	01-May	IT	-	17.1	BTPS 4.5% 05/23	R
						Total week	€19.5-21.7					Total week	€47.4

¥						Total week	£6.0					Total week	£0.0
	03-May	04-May	UK	2y	TBA	UKT 3.5% 10/25	Тар						
						Total week	TBA					Total week	£0.0
	25-Apr	01-May	US	2y	42.0	Т	New						
	26-Apr	01-May	US	2y 2y	24.0	FRN	New						
	26-Apr	01-May	US	5y	43.0	T	New						
	27-Apr	01-May	US	7у	35.0	Т	New						
NS							\$144.0						\$0.0
_								30-Apr	US	-	85.3	FRN	R
								30-Apr	US	-	146.4	T	R
								30-Apr	US	0-2	22.6	FRN	С
								30-Apr	US	0-6y	11.5	T	C
						Total week	\$0.0					Total week	\$265.8

Treasuries, BofA Global Research. (e) = estimate, C= Coupon, R= Redemption

Source: Treasuries, BofA Global Research.

BofA GLOBAL RESEARCH

Exhibit 5: Euro-area bill auction calendar next week (€ bn)

Strong activity in the T-bill market

Auctions	Date	Ctry	Amt €bn	Sector	Maturity
Week 17	24-Apr	CY	-	3m	28-Jul-23
	24-Apr	FR	2.2-2.6	3m	19-Jul-23
	24-Apr	FR	1.5-1.9	3m	20-Sep-23
	24-Apr	FR	1.6-2.0	12m	17-Apr-24
	24-Apr	GE	2.0	3m	20-Sep-23
	24-Apr	GE	4.0	9m	20-Mar-24
	25-Apr	AS	1.5	3m	27-Jul-23
	25-Apr	AS	1.0	6m	27-Oct-23
	26-Apr	GR	0.625	6m	27-Oct-23
	26-Apr	IT	3.5	3m	29-Sep-23
	26-Apr	IT	2.5	9m	14-Feb-24

Source: Treasuries, BofA Global Research.

BofA GLOBAL RESEARCH



2

Exhibit 6: Issuance of EUR denominated fixed coupon bonds YTD versus estimated 2023 target – comparison with % reached at same time in '22 (**) Issuance led by France

	EZ total	AS	BE	FI	FR***	GE	GR*	CY	IR	IT**	NE	PO	SP
Issued week 17 Apr	33.2	5.0	-	1.5	11.5	4.0	0.3		-	2.5	1.9	-	6.4
Issued YTD, Gross	445.9	16.2	16.9	7.7	99.4	103.2	6.3		4.8	96.7	22.9	5.1	66.9
As% of 2023	39%	48%	38%	43%	38%	35%			68%	40%	46%	33%	40%
Difference vs 22	7%	2%	6%	15%	5%	5%			4%	7%	-3%	-28%	0%
Gross supply left	700.0	17.6	28.1	10.3	164.6	195.8	0.7		2.3	144.3	27.1	10.1	99.1
Redemptions (bn) **	545.4	21.9	21.3	5.8	115.3	113.5			0.0	170.9	17.5	9.7	69.5
Net supply left	154.6	-4.3	6.8	4.5	49.3	82.3	0.7		2.3	-26.6	9.6	0.4	29.6

Source: BofA Global Research, Bloomberg. Difference vs 22: positive when the country is more advanced than in 2022. Numbers may not add-up due to rounding Numbers between bracket correspond to provisory figures (awaiting second day allocation), (***) NOT netted for buy-back operations (estimated at €20bn).(*) we expect very small Euro bond issuance from these countries, as they will mainly rely on EU/IMF help to pay back their debt and fund their deficit; (*) Exclusively held by the ECB/EIB(**) This is an indication of issuance evolution in the EUR FIXED COUPON bonds. It may not translate the full picture of evolution of state funding as it does not incorporate inflation linked bonds, zeros and floating rate notes issuance / redemp. The table only tracks auctions and syndications

BofA GLOBAL RESEARCH

Exhibit 7: Total bond and Bill issuance in 2023 across all bond types, with buybacks included where relevant

Supply through the year

2023	Austria	Belgium	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain	Totals
EUR fixed coupon bonds (1)	34	45	18	264	303	7	7	241	50	15	166	1150
Change versus 2021	1	2	0	4	81	1	0	17	6	8	22	141
Other Bonds (EUR linkers/floaters/zero cpn) (2)	0	0	0	26	7	0	0	70	0	0	7	110
Gross Bond Issuance (3) = (1)+(2)	34	45	18	290	310	7	7	311	50	15	173	1260
Change versus 2021	1	1	0	4	81	-1	0	40	6	8	22	161
Total Redemptions* (4)	28	21	11	156	189	5	7	266	30	10	92	815
Net Bond issuance (*inc. Buybacks)	6	23	7	116	121	4	0	45	20	10	81	433
Change versus 2022	-1	7	0	-7	60	0	5	4	7	6	-2	78
Net Bill issuance (6)	6	1	1	3	42	1	0	0	4	4	-5	57
Net Total (5)+(6)	12	24	8	120	163	4	0	45	24	14	76	489

Source: BofA Global Research, Countries Treasuries. Note: Numbers are expressed in EUR bn and may not add up due to rounding. (2) Total bonds correspond to the sum of EUR-denominated fixed coupon bonds

BofA GLOBAL RESEARCH

Exhibit 8: Forecasted European government bond gross supply in 2023

Supply through the year

Austria	Jan 6	Feb 2	Mar 2	Apr (est.)	May (est.)	Jun (est.)	Jul (est.)	Aug (est.)	Sep (est.)	Oct (est.)	Nov (est.)	Dec (est.)	2023 34
Belgium	7	6	4	5	5	5	4	2	5	3	0	0	45
Finland	4	0	2	1	4	1	0	3	1	1	2	0	18
France	27	30	25	26	33	28	31	14	31	25	17	3	290
Germany	28	32	28	25	33	21	25	29	27	25	29	8	310
Greece	4	0	3	0	0	0	0	0	0	0	0	0	7
Ireland	4	0	1	0	1	0	0	0	1	0	0	0	7
Italy	31	31	37	27	24	30	22	12	28	26	30	15	311
Netherlands	6	8	2	3	6	7	3	0	7	3	4	0	50
Portugal	3	1	1	4	1	1	0	0	2	1	2	0	15
Spain	20	17	13	14	14	23	15	8	20	15	8	5	173
Total	139	127	118	106	127	119	102	68	126	102	93	32	1260

 $\textbf{Source:} \ \ \text{BofA Global Research. Note: Numbers} \ \ \text{are expressed in EUR bn.}$



Exhibit 9: Projected supply net of coupons, redemptions, buybacks and QE

Monthly supply through the year

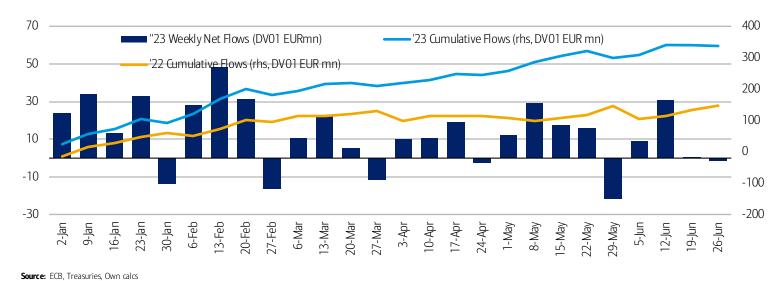
	<u>Jan</u>	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2023
Austria	6	2	1	-4	7	2	-7	1	6	-9	1	11	8
Belgium	7	6	2	5	5	-9	4	2	5	-5	0	0	21
Finland	4	0	2	-4	4	1	0	3	-4	1	2	0	9
France	27	16	3	7	-14	29	8	14	30	-21	15	4	118
Germany	26	12	16	-7	15	9	22	10	14	10	30	-6	150
Greece	-2	0	2	0	0	0	0	0	0	0	0	0	0
Ireland	4	0	-6	0	1	0	0	0	1	0	0	0	0
<u> Italy</u>	14	27	-2	16	-14	11	9	-28	-1	-7	-4	3	24
<u>Netherlands</u>	-8	9	2	4	6	7	-12	0	7	4	4	0	22
Portugal	3	0	1	3	1	1	0	0	1	-8	1	0	3
Spain	-5	17	12	12	-5	23	-9	7	19	-8	1	4	67
Total	76	87	34	33	4	73	14	9	79	-42	50	6	423

Source: BofA Global Research. Note: Numbers are expressed in EUR bn.

BofA GLOBAL RESEARCH

Exhibit 10: Weekly DV01 of gross issuance net of reinvestment flows (from privates and ECB)

Net supply in DV01 terms is seen accelerating over May



Eurozone bond supply/redemption quarterly

Exhibit 11: Euro-area government bond auctions (incl. fixed coupons, IL, CTZ, CCT), coupons and redemptions (only EUR) for Q2 2023 Flows through the quarter

Auctions	Date	Ctry	Amt	Sector(s)		Date	Country	Amount	Type
Syndication	May	AS		30y					
	Apr-May	FI		10y					
	May	FR		10/20y OATi					
	Apr-May	GE		Green/Convention 10y/>10y					
Wk 13					Wk 13	1-Apr	IT	0.9	С
Wk 14	4-Apr	AS	1.0-2.0(e)	RAGB	Wk 14				
	4-Apr	NE	3.0-5.0	DSL 2.50% 01/30					
	5-Apr	GE	4.0	DBR 2.1%11/29					
	6-Apr	FR	11.0-12.0(e)	>8y OAT					

Exhibit 11: Euro-area government bond auctions (incl. fixed coupons, IL, CTZ, CCT), coupons and redemptions (only EUR) for Q2 2023 Flows through the quarter

12-Apr PO 0.75-1.25(e) PGB (potential auction) 14-Apr P 13-Apr IT 7.0-9.0(e) 3y BTPS, 7y BTPS, >10y BTPS 15-Apr G 13-Apr SP 5.0-6.0(e) SPGB/SPGB€I 15-Apr G 15-Apr G 15-Apr I 15-Apr I 15-Apr P	ntry Amount	Type
13-Apr IT 7.0-9.0(e) 3y BTPS, 7y BTPS, >10y BTPS 15-Apr G 13-Apr SP 5.0-6.0(e) SPGB/SPGB€I 15-Apr G 15-Apr G 15-Apr I 15-Apr I 15-Apr P	E 18.5	R
13-Apr SP 5.0-6.0(e) SPGB/SPGB€I 15-Apr f 15-Apr G 15-Apr f 15-Apr I 15-Apr P	0.4	C
15-Apr G 15-Apr f 15-Apr I 15-Apr P	E 16.5	R
15-Apr G 15-Apr f 15-Apr I 15-Apr P	5.0	R
15-Apr f 15-Apr l 15-Apr P	E 0.2	C
15-Apr I 15-Apr P	0.5	C
15-Apr P	Г 1.2	C
Wk 16 18-Apr El 1.0.1.5(a) PEGR Wk 16 18-Apr P		С
	0.2	С
	S 6.2	R
	Г 9.3	R
20-Apr FR 11.0-12.0(e) 2-8y OAT/OAT€i 22-Apr E	E 0.3	C
20-Apr SP 5.0-6.0(e) SPGB		
21-Apr IT 3.0-5.0(e) BTPShort, BTP€I		
Wk 17 24-Apr BE 2.0-3.0(e) BGB Wk 17 25-Apr F	R 10.6	R
25-Apr GE 6.0 BKO 0% 6/25 25-Apr F	R 9.3	C
27-Apr IT 7.0-9.0(e) 5y BTPS, 10y BTPS, CCTeu		
27-Apr FI 0.4(e) RFGB ORI		
Wk18 Wk18 30-Apr S	P 21.8	R
30-Apr S	P 3.4	C
30-Apr I	Γ 0.3	C
Total Apr up to €77.6-93.7(e) Tota	IApr € 105.0	
Wk18 3-May GE 3.0 DBR 2.1% 11/29 Wk18 1-May I		R
	Г 4.3	C
4-May SP 5.0-6.0(e) SPGB/SPGB€I		
5-May BE 0.5-0.7(e) ORI Facility		
Wk 19 9-May AS 1.0-2.0(e) RAGB Wk 19		
9-May GE 5.0 OBL 2.2% 4/28		
10-May PO 0.75-1.25(e) PGB (potential auction)		
11-May IR 1.0-2.0(e) IRISH (potential auction)		
11-May IT 7.0-9.0(e) 3y BTPS, 7y BTPS, >10y BTPS		
Wk 20 16-May FI 1.0-1.5(e) RFGB Wk 20 15-May G	E 22.5	R
	Г 10.1	R
	E 0.8	C
	Г 0.8	C
	E 0.9	C
, , , , , , , , , , , , , , , , , , ,	Т 8.6	R
23-May GE 6.0 BKO 0% 6/25 22-May I		C
23-May NE 1.5-2.5(e) DSL 23-May A		C
		R
24-May GF 1.5 DRR 1% 5/38 25-May F		C
24-May GE 1.5 DBR 1% 5/38 25-May F 25-May IT 3.0-5.0(e) RTPShort RTP6I 25-May F		C
25-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May F		C
25-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May F 26-May I		C
25-May IT 3.0-5.0(e) BTPShort, BTP€l 25-May F 26-May I 26-May I 26-May I 26-May I 27-May I 28-May I		
25-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May 26-May F Wk 22 30-May IT 7.0-9.0(e) 5y BTPS, 10y BTPS, CCTeu Wk 22 30-May I 31-May GE 3.0 DBR 2.1% 11/29 31-May S	May € 117.9	
25-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May F 26-May 1 26-May 26-Ma		С
25-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May FE 26-May TE	May € 117.9	
Wk 22 30-May 31-May 32-May 31-May IT GEA 3.0-5.0(e) 3.0-May 31-May 31-May 5y BTPS, 10y BTPS, CCTeu 31-May 3	May € 117.9	
Wk 22 30-May 31-May IT (3.0-5.0(e)) BTPShort, BTP€I (26-May) 25-May 26-May (26-May) FR (26-May) PR (May € 117.9	
25-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May 26-May	May € 117.9	
Wk 22 30-May 31-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May 26-May 2	May € 117.9	
Wk 22 30-May 31-May IT (T) (T) (T) (T) (T) (T) (T) (T) (T) (T	May € 117.9 T 2.3	С
Z5-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May 26-May	May € 117.9 Γ 2.3 Γ 12.3	C
Z5-May IT 3.0-5.0(e) BTPShort, BTP€I 25-May 26-May	May €117.9 ☐ 2.3 ☐ 12.3 ☐ 0.7	C R C
Wk 22 30-May 31-May IT general Graph 3.0-5.0(e) and solution in the properties of the properties	May €117.9 T 2.3 T 12.3 T 0.7 D 0.2	C R C C
Wk 22 30-May 31-May GE 3.0-5.0(e) BTPShort, BTP€I 25-May 26-May	May €117.9 ☐ 2.3 ☐ 12.3 ☐ 0.7	C R C



Exhibit 11: Euro-area government bond auctions (incl. fixed coupons, IL, CTZ, CCT), coupons and redemptions (only EUR) for Q2 2023 Flows through the quarter

Auctions	Date	Ctry	Amt	Sector(s)		Date	Country	Amount	Туре
	15-Jun	FI	0.4(e)	RFGB ORI					
	15-Jun	FR	11.0-12.0(e)	2-8y OAT/OAT€i					
	15-Jun	SP	5.0-6.0(e)	SPGB					
Wk 25	19-Jun	BE	2.0-3.0(e)	BGB	Wk 25	18-Jun	GR	0.2	C
	20-Jun	GE	5.5	BKO 0% 6/25		18-Jun	PO	0.1	C
						20-Jun	AS	0.2	C
						22-Jun	BE	12.8	R
						22-Jun	BE	3.9	С
						22-Jun	IT	0.1	С
Wk 26	27-Jun	ΙΤ	3.0-5.0(e)	BTPShort, BTP€I	Wk 26	25-Jun	FR	0.6	С
	27-Jun	NE	1.5-2.5(e)	DSL 2.50% 07/33		28-Jun	IT	0.1	С
	30-Jun	IT	7.0-9.0(e)	5y BTPS, 10y BTPS, CCTeu					
		Total Jun	up to €72.5-87.8(e)				Total Jun	€ 49.8	

BofA Global Research estimates and national debt GE management agencies. Note: Numbers are expressed in EUR bn. In the leftmost column, C indicates a coupon payment, Ra redemption

BofA GLOBAL RESEARCH

Exhibit 12: Common acronyms/abbreviations used in our Europe Economics Research reports

This list is subject to change

Acronym/Abbreviatio	n Definition	Acronym/Abbreviation	Definition
1H	First Half	IT	Italy
2H	Second Half	Jan	January
1Q	First Quarter	Jul	July
2Q	Second Quarter	Jun	June
3Q	Third Quarter	lhs	left-hand side
4Q	Fourth Quarter	m	month
ann	annualized	MA	Moving Average
APP	Asset Purchase Programme	Mar	March
Apr	April	MBM	Meeting-by-meeting
AS	Austria	mom	month-on-month
Aug	August	Mon	Monday
BdF	Banque de France (Bank of France)	MPC	Monetary Policy Committee
BE	Belgium	MWh	Megawatt-hour
BEA	Bureau of Economic Analysis	NGEU	NextGenerationEU
BLS	Bank Lending Survey	NE	Netherlands
BoE	Bank of England	Nov	November
BofA	Bank of America	NRRP	National Recovery and Resilience Plan
Bol	Banca d'Italia (Bank of Italy)	NSA	Non-seasonally Adjusted
BoJ	Bank of Japan	OAT	Obligations assimilables du Trésor
BoS	Banco de España (Bank of Spain)	OBR	Office for Budget Responsibility
bp	basis point	Oct	October
BTP	Buoni Poliennali del Tesoro	OECD	Organisation for Economic Co-operation and Development
Buba	Bundesbank	ONS	Office for National Statistics
C	circa	р	preliminary/flash print
CA	Current Account	PBoC	People's Bank of China
CPI	Consumer Price Index	PEPP	Pandemic Emergency Purchase Programme
CSPP	Corporate Sector Purchase Programme	PMI	Purchasing Managers' Index
d	day	PSPP	Public Sector Purchase Programme
GE	Germany	PT	Portugal
Dec	December	QE	Quantitative Easing
DS	Debt sustainability	qoq	quarter-on-quarter
EA	Euro area	QT	Quantitative Tightening
EC	European Commission	RBA	Reserve Bank of Australia
ECB	European Central Bank	RBNZ	Reserve Bank of New Zealand
ECJ	European Court of Justice	rhs	right-hand side
EFSF	European Financial Stability Facility	RPI	Retail Price Index
EGB	European Government Bond	RRF	Recovery and Resilience Facility
EIB	European Investment Bank	SA	Seasonally Adjusted
EMOT	Economic Mood Tracker	SAFE	Survey on the access to finance of enterprises

Exhibit 12: Common acronyms/abbreviations used in our Europe Economics Research reportsThis list is subject to change

Acronym/Abbreviation	n Definition	Acronym/Abbreviation	Definition
EP	European Parliament	Sat	Saturday
SP	Spain	Sep	September
ESI	Economic Sentiment Indicator	SMA	Survey of Monetary Analysts
ESM	European Stability Mechanism	SNB	Swiss National Bank
EU	European Union	SPF	Survey of Professional Forecasters
f	final print	Sun	Sunday
Feb	February	SURE	Support to mitigate Unemployment Risks in an Emergency
Fed	Federal Reserve	S&P	Standard & Poor's
FR	France	Thu	Thursday
Fri	Friday	TLTRO	Targeted Longer-term Refinancing Operations
GC	Governing Council	TPI	Transmission Protection Instrument
GDP	Gross Domestic Product	TTF	Title Transfer Facility
GNI	Gross National Income	Tue	Tuesday
GR	Greece	UK	United Kingdom
HICP	Harmonised Index of Consumer Prices	US	United States
HMT	His Majesty's Treasury	WDA	Work-day Adjusted
IMF	International Monetary Fund	Wed	Wednesday
INSEE	National Institute of Statistics and Economic Studies	у	year
IP	Industrial Production	yoy	year-on-year
IR	Ireland	ytd	year-to-date
PCA	Principal Component Analysis	EGB	Eurozone Governmeny Bond

Source: BofA Global Research



Disclosures

Important Disclosures

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

BofA Securities fixed income analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities or other financial instruments that may not be offered or sold in one or more states or jurisdictions, or to certain categories of investors, including retail investors. Readers of this report are advised that any discussion, recommendation or other mention of such instruments is not a solicitation or offer to transact in such instruments. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor for information relating to such instruments. Rule 144A securities may be offered or sold only to persons in the U.S. who are Qualified Institutional Buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended. SECURITIES OR OTHER FINANCIAL INSTRUMENTS DISCUSSED HEREIN MAY BE RATED BELOW INVESTMENT GRADE AND SHOULD THEREFORE ONLY BE CONSIDERED FOR INCLUSION IN ACCOUNTS QUALIFIED FOR SPECULATIVE INVESTMENT.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

The securities or other financial instruments discussed in this report may be traded over-the-counter. Retail sales and/or distribution of this report may be made only in states where these instruments are exempt from registration or have been qualified for sale.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

This report, and the securities or other financial instruments discussed herein, may not be eligible for distribution or sale in all countries or to certain categories of investors, including retail investors.

Refer to BofA Global Research policies relating to conflicts of interest.

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no. 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Áctivity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch (Canada): Merrill Lynch (Mexico): Mexico): Merrill Lynch (Mexico): Mexico (Mexico): Mexico (Mexico): Mexico (Mexico): Mexico (Mexico): Mexic CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to "Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securit

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security



discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities. This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

This report may contain a trading idea or recommendation which highlights a specific identified near-term catalyst or event impacting a security, issuer, industry sector or the market generally that presents a transaction opportunity, but does not have any impact on the analyst's particular "Overweight" or "Underweight" rating (which is based on a three month trade horizon). Trading ideas and recommendations may differ directionally from the analyst's rating on a security or issuer because they reflect the impact of a near-term catalyst or event.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information. In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Copyright 2023 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities. Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public inform

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.





Research Analysts

European Rates Research

Ralf Preusser, CFA Rates Strategist MLI (UK) ralf.preusser@bofa.com

Sphia Salim Rates Strategist MLI (UK)

sphia.salim@bofa.com

Mark Capleton Rates Strategist MLI (UK) mark.capleton@bofa.com

Ronald Man Rates Strategist MLI (UK) ronald.man@bofa.com

Erjon SatkoRates Strategist
BofASE (France)
erjon.satko@bofa.com

Agne Stengeryte Rates Strategist MLI (UK) agne.stengeryte@bofa.com

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

