

April 17, 2026 02:47 PM GMT

Global Rates Strategy | Global

Government Bond Auctions:
The Month Ahead

We review the supply, coupon, and redemption picture for the US, UK, Euro, JPY, AUS, NZ, and CAN government bond markets over the next month. This week, G7 net DVO1 is expected to be \$32.6mn/bp, compared to an average* \$68.3mn/bp; US \$28.8mn/bp; Euro \$6.0mn/bp; Japan \$0.0mn/bp; UK \$-4.8mn/bp.

The Week Ahead: Net issuance (gross issuance less coupons less redemptions)

In the euro area, we estimate €14bn of issuance this week vs. €14bn in coupons and no redemptions. Over the next five weeks, we expect €136.5bn of supply vs. €21.8bn in coupons and €82.9bn in redemptions, for net issuance of €31.9bn. Our Euro Area Rates Strategy team [expects](#) a €20bn increase in EU bond issuance during H2.

In the UK, the DMO is expected to issue a UKT 4% May 2029 for £5bn vs. £4.51bn in coupons and no redemptions. We expect about £17.5bn of supply in the coming five weeks against £5.3bn in coupons and no redemptions, resulting in net issuance of £12.2bn.

In the US, a 20y UST will re-open for \$13bn and a new 5y TIPS will be issued for \$26bn next week with no cash flows. Over the next five weeks, we expect \$382bn of supply vs. \$104.7bn in coupons and \$286.8bn in redemptions, for net negative issuance of \$9.5bn.

In Japan, an Auction for Enhanced Liquidity (AEL) will be held for an estimated ¥0.25tn during the coming week, with no coupons or redemptions.

In Australia, ACGB 2.5% May 2030 will be issued for \$1bn and ACGBi 2% Aug 2035 for \$0.15bn next week, with \$3.8bn in coupons and \$39.6bn in redemptions.

In New Zealand, we expect NZGB to be issued for an estimated \$0.45bn during the coming week, with \$0.3bn in coupons and no redemptions.

In Canada, we expect CAN 10y issuance for \$5bn during the coming week, with no coupons or redemptions.

Note: *Average Net DVO1 (gross issuance less coupons less redemptions plus purchases less sales) issuance over the coming five weeks and past four weeks.

MORGAN STANLEY INDIA COMPANY PRIVATE LIMITED+

Vivek Jikar

Strategist

Vivek.Jikar@morganstanley.com

+91 22 6995-6755

MORGAN STANLEY & CO. LLC

Matthew Hornbach

Strategist

Matthew.Hornbach@morganstanley.com

+1 212 761-1837

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

+ = Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to FINRA restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Supply Overview

Exhibit 1: Bond Supply Overview

Monday 20-Apr	Tuesday 21-Apr	Wednesday 22-Apr	Thursday 23-Apr	Friday 24-Apr
	GER: New BKO Jun 2028, €6bn FIN: RFGB 2.875% Apr 2029, €0.5bn* FIN: RFGB 3.2% Apr 2045, €1bn* UK: UKT 4% May 2029, £5bn JPN: AEL, ¥250bn	GER: DBR 3.4% May 2047 Tap, €1bn GER: DBR 2.6% May 2041 Tap, €2bn US: Re-opening 20y UST, \$13bn CAN: CAN 10y, \$5bn	US: New 5y TIPS, \$26bn JPN: AEL, ¥700bn* AUS: ACGBi 2% Aug 2035, \$0.15bn **NZ: NZGB Auction, \$0.45bn* **CAN: CAN 30y, \$3bn*	ITA: BTPst Auction €3-3.5bn* ITA: BTPei Auction €0.5-1bn* AUS: ACGB 2.5% May 2030, \$1bn
27-Apr	28-Apr	29-Apr	30-Apr	1-May
BEL: OLO Auction, €2.5-3bn* US: New 2y UST, \$69bn* US: New 5y UST, \$70bn* ***AUS: ACGB Auction, \$2bn*	NETH: DSL Auction, €2.5bn* **POR: OT Auction, €3bn* UK: UKT 4.75% Oct 2035, £1.25bn* US: New 7y UST, \$44bn*	GER: DBR 2.9% Feb 2036, €5bn ITA: BTPS M-L Auction €11-12bn*	JPN: 2y JGB, ¥2800bn* **NZ: NZGB Auction, \$0.45bn*	
4-May	5-May	6-May	7-May	8-May
***AUS: ACGB Auction, \$2bn*	AUT: RAGB Auction, €2-2.5bn*	GER: DBR 2.5% Nov 2032, €3.5bn UK: UKTi 1.125% Sep 2035, £1.25bn* CAN: CAN 2y, \$5.5bn*	FRA: OAT Auction, €11.5-12bn* SPA: SPGB Auction, €7-8bn* **NZ: NZGB Auction, \$0.45bn*	BEL: OLO ORI Auction, €0.5bn* JPN: AEL ¥700bn*
11-May	12-May	13-May	14-May	15-May
***AUS: ACGB Auction, \$2bn* US: New 3y UST, \$58bn*	GER: BKO 0% Jun 2028 Tap, €6bn NETH: DSL Auction, €2-2.5bn* ***POR: OT Auction, €1.5-2bn* UK: UKT 4.125% Mar 2031, £5bn* US: New 10y UST, \$42bn* JPN: 10y JGB, ¥2600bn*	GER: DBR 30y M-A, €2.5bn ITA: BTPS M-L Auction, €7-8bn* US: New 30y UST, \$25bn* CAN: CAN 5y, \$5.25bn*	IRE: IRISH Auction, €1.25bn* JPN: 30y JGB, ¥700bn* **NZ: NZGB Auction, \$0.45bn*	
18-May	19-May	20-May	21-May	22-May
***AUS: ACGB Auction, \$2bn*	GER: OBL 2.5% Apr 2031 Tap, €5bn FIN: RFGB Auction, €1-1.5bn*	GER: DBR 2.9% Feb 2036 Tap, €5bn US: New 20y UST, \$16bn* JPN: 20y JGB, ¥800bn* CAN: CAN 2y, \$5.5bn*	FRA: OAT Auction, €11.5-12bn* FRA: OATei Auction, €2.5-3bn* SPA: SPGB Auction, €15-20bn* UK: UKT 4.875% Jul 2036, £3.75bn* US: Re-opening 10y TIPS, \$19bn* **NZ: NZGB Auction, \$0.45bn*	JPN: AEL, ¥650bn*

Source: Treasuries, Morgan Stanley Research. * Morgan Stanley estimate. ** Possible Auction date, as it is not yet announced by the Treasury. *** Issuance may be conducted during the respective week. AEL: Auction for Enhanced Liquidity. M-A Auction: Multi-ISIN Auction.

G7 Gross Notional and DV01 Estimates

Exhibit 2: G7 Gross Issuance, respective currencies

Notional, bn Week Beginning	US \$	UK £	Euro €	Japan ¥	AUS AUD	NZ NZD	CAN CAD
23-Mar	183.0	2.5	24.4	1100.0	2.2	0.5	5.3
30-Mar	0.0	0.0	21.5	5400.0	1.0	0.5	5.5
6-Apr	119.0	4.4	29.1	3100.0	1.6	0.5	5.0
13-Apr	0.0	16.1	58.7	1350.0	2.0	0.7	8.5
20-Apr	39.0	5.0	14.0	250.0	1.2	0.2	5.0
27-Apr	183.0	1.3	25.5	3050.0	2.2	0.5	5.3
4-May	0.0	1.3	25.3	700.0	2.0	0.5	5.5
11-May	125.0	5.0	21.8	3300.0	2.0	0.5	5.3
18-May	35.0	5.0	50.0	3950.0	1.0	0.5	5.5

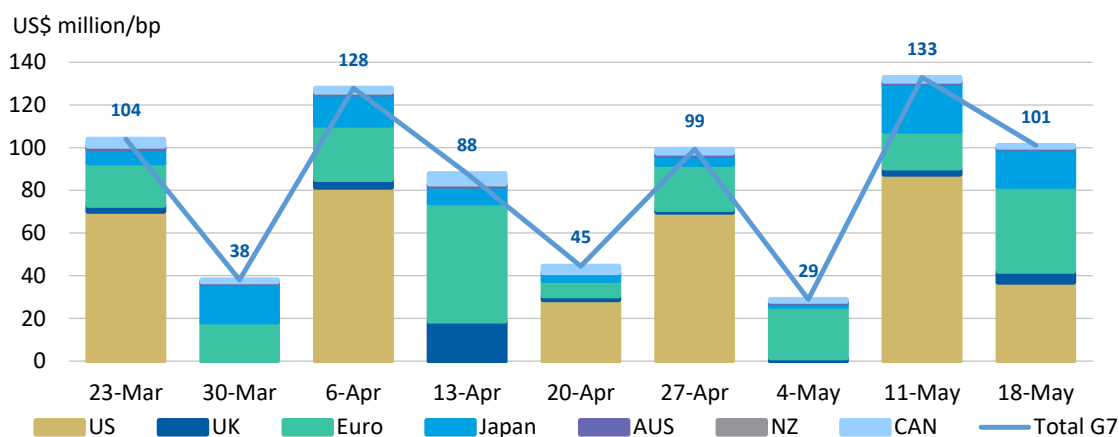
Source: Treasuries, Morgan Stanley Research

Exhibit 3: G7 Gross Issuance, DV01, USD M/bp

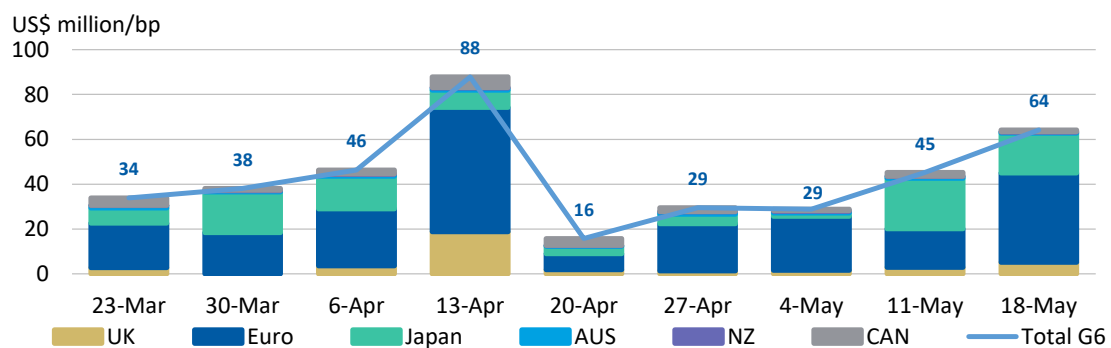
Notional, bn Week Beginning	US	UK	Euro	Japan	AUS	NZ	CAN	Total G7
23-Mar	70.2	2.8	19.8	6.8	1.0	0.2	3.3	104.0
30-Mar	0.0	0.0	18.3	18.2	0.6	0.2	0.8	38.1
6-Apr	81.5	3.5	25.5	14.6	0.8	0.1	1.8	127.8
13-Apr	0.0	18.7	55.5	7.8	0.9	0.2	4.8	87.8
20-Apr	28.8	1.9	7.2	3.2	0.4	0.1	3.1	44.5
27-Apr	69.8	1.3	21.2	4.2	1.0	0.2	1.7	99.3
4-May	0.0	1.5	24.2	1.4	0.9	0.2	0.8	28.9
11-May	87.6	2.9	17.3	22.4	0.9	0.2	1.7	132.9
18-May	36.9	5.2	39.9	17.7	0.5	0.1	0.8	101.1

Source: Treasuries, Morgan Stanley Research

Exhibit 4: G7 Gross Issuance, DV01, USD M/bp



Source: Treasuries, Morgan Stanley Research

Exhibit 5: G6 Gross Issuance (excluding the US), DV01, USD M/bp

Source: Treasuries, Morgan Stanley Research

G7 Net Notional and DV01 Estimates

Exhibit 6: G7 Net Issuance, respective currencies

Notional, bn Week Beginning	US \$	UK £	Euro €	Japan ¥	AUS AUD	NZ NZD	CAN CAD
23-Mar	183.0	-11.4	24.4	458.7	2.2	0.5	5.3
30-Mar	-180.5	0.0	-13.3	2296.7	1.0	0.5	-4.7
6-Apr	119.0	4.4	0.9	2524.4	1.6	0.5	5.0
13-Apr	-92.3	16.1	3.0	548.4	2.0	-0.1	8.5
20-Apr	39.0	0.5	12.6	-595.0	-42.3	-0.1	5.0
27-Apr	-15.5	1.3	-46.2	206.4	2.2	0.5	-18.0
4-May	0.0	1.3	25.3	315.0	2.0	0.5	5.5
11-May	-68.0	5.0	-2.6	2495.0	2.0	-9.3	5.3
18-May	35.0	4.2	42.9	3057.4	-3.9	0.5	5.5

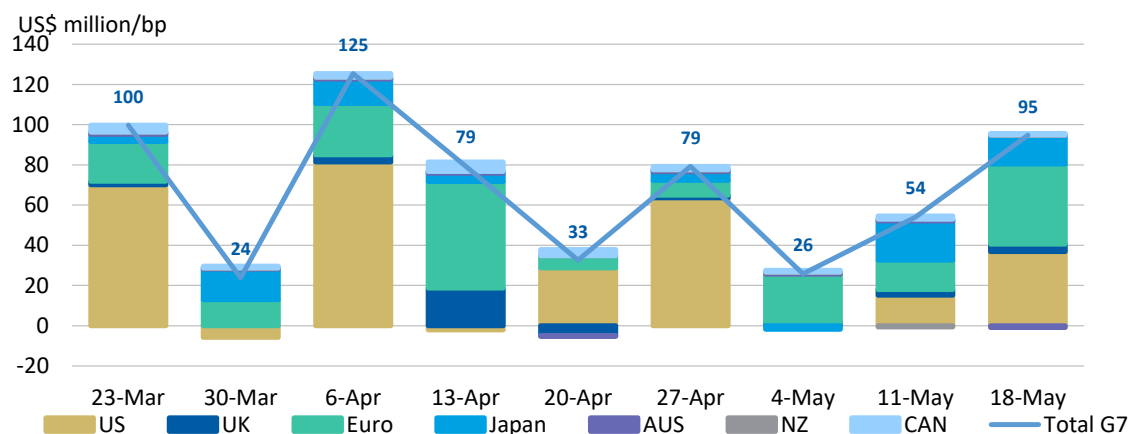
Source: Treasuries, Morgan Stanley Research

Exhibit 7: G7 Net DV01 Issuance, US\$ million/bp

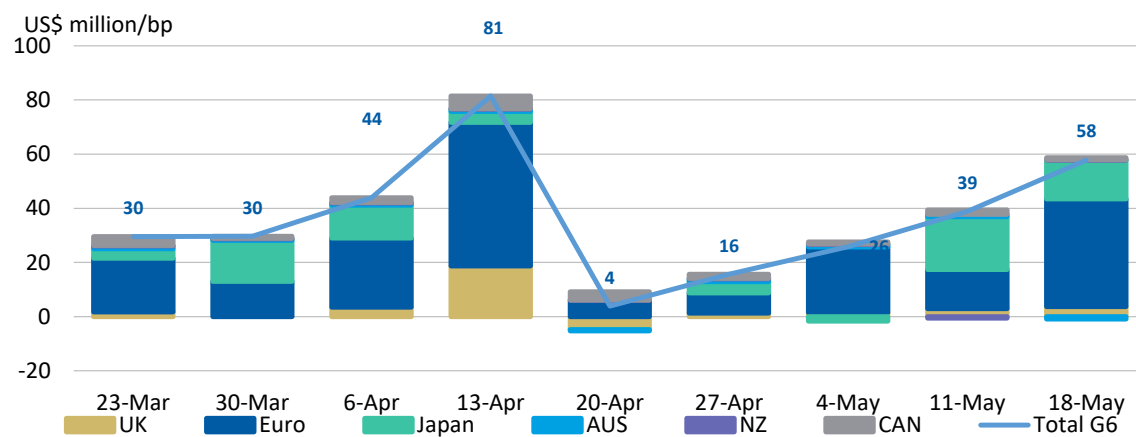
Notional, bn Week Beginning	US	UK	Euro	Japan	AUS	NZ	CAN	Total G7
23-Mar	70.2	1.7	19.8	3.6	1.0	0.2	3.3	99.7
30-Mar	-5.8	0.0	13.0	15.1	0.6	0.2	0.8	23.8
6-Apr	81.5	3.5	25.5	12.2	0.8	0.1	1.8	125.4
13-Apr	-2.0	18.7	53.0	4.1	0.9	0.1	4.8	79.5
20-Apr	28.8	-4.8	6.0	0.0	-0.5	0.0	3.1	32.6
27-Apr	63.6	1.3	7.5	4.2	1.0	0.2	1.6	79.3
4-May	0.0	1.5	24.2	-1.7	0.9	0.2	0.8	25.8
11-May	15.2	2.9	14.6	19.5	0.9	-0.6	1.7	54.0
18-May	36.9	3.7	39.8	14.3	-0.9	0.1	0.8	94.8

Source: Treasuries, Morgan Stanley Research

Exhibit 8: G7 Net DV01 Issuance, US\$ million/bp



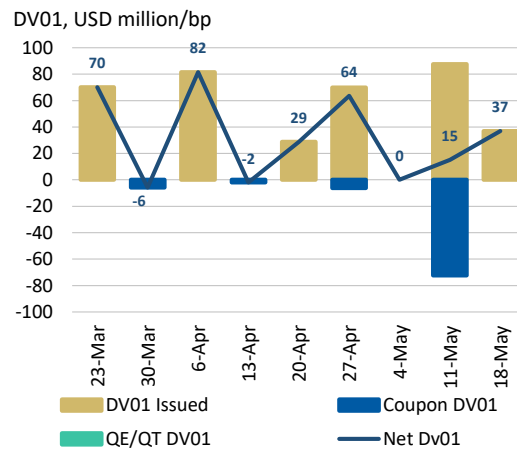
Source: Treasuries, Morgan Stanley Research

Exhibit 9: G6 Net Issuance (Excluding the US), DV01, US\$ million/bp

Source: Treasuries, Morgan Stanley Research

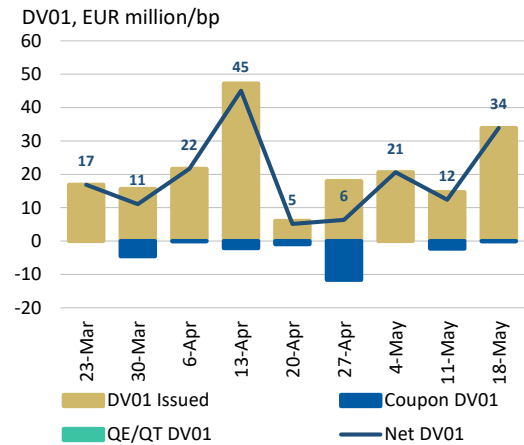
G7 Net DV01 Estimates

Exhibit 10: US Net DV01, US\$ million/bp



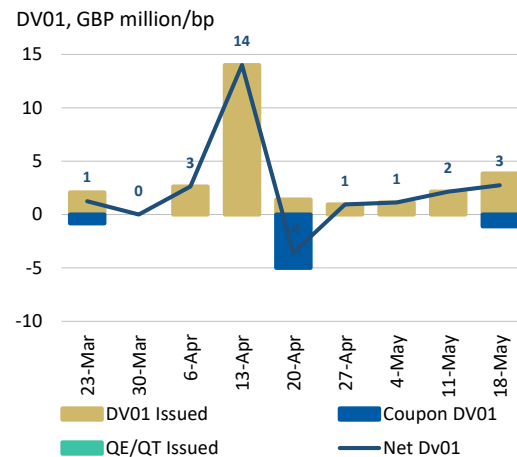
Source: Treasuries, Morgan Stanley Research

Exhibit 11: Euro Area Net DV01, EUR million/bp



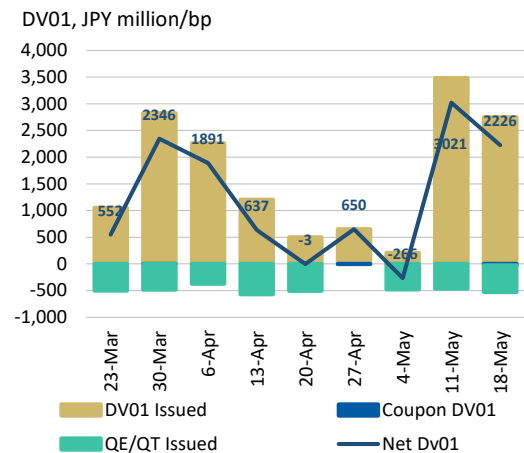
Source: Treasuries, Morgan Stanley Research

Exhibit 12: UK Net DV01, GBP million/bp



Source: Treasuries, Morgan Stanley Research

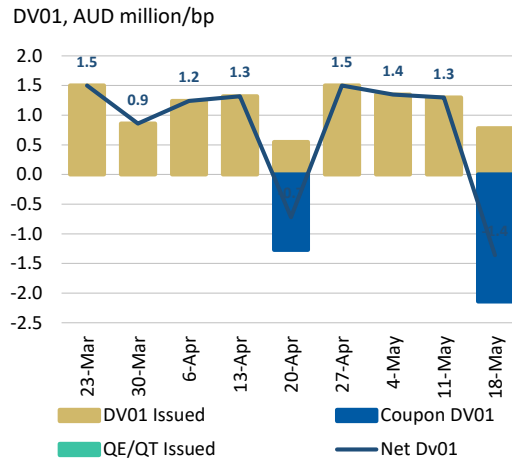
Exhibit 13: JPN Net DV01, JPY million/bp



Source: Treasuries, Morgan Stanley Research

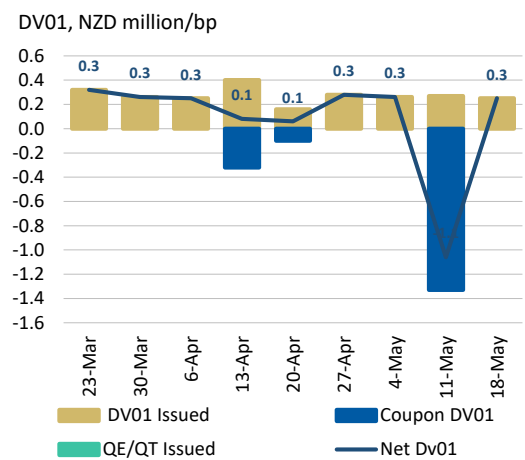
G7 Net DV01 Estimates

Exhibit 14: AUS Net DV01, AUD million/bp



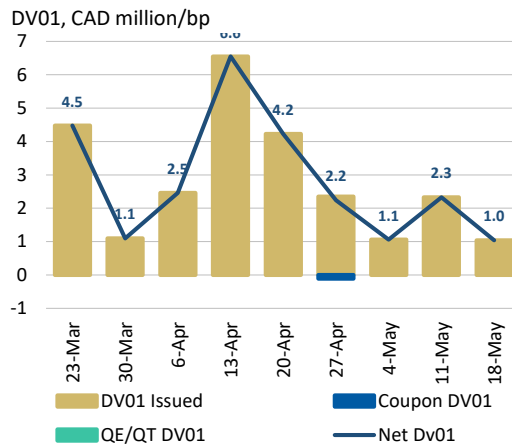
Source: Treasuries, Morgan Stanley Research

Exhibit 15: NZ Net DV01, NZD million/bp



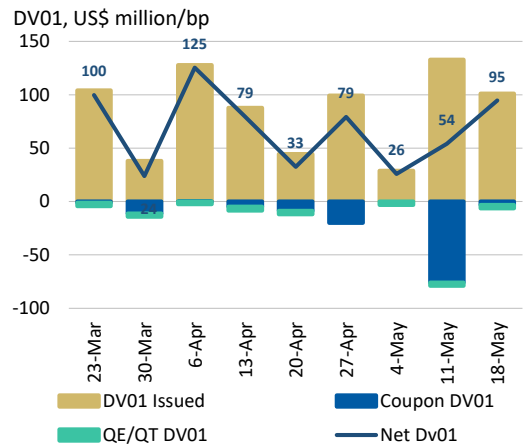
Source: Treasuries, Morgan Stanley Research

Exhibit 16: CAN Net DV01, CAD million/bp



Source: Treasuries, Morgan Stanley Research

Exhibit 17: G7 Net DV01, US\$ million/bp

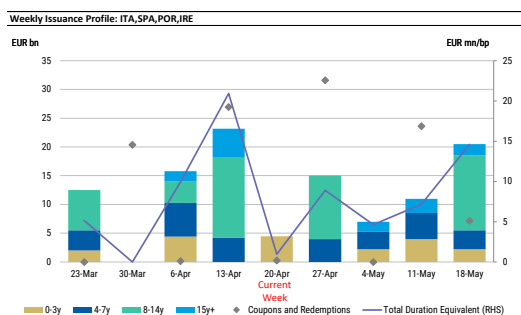
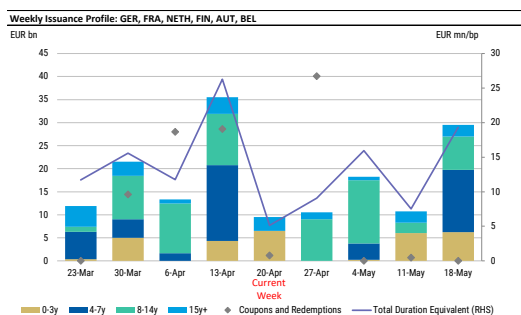
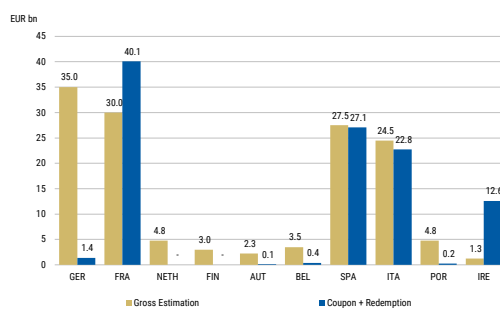


Source: Treasuries, Morgan Stanley Research

EUR Total Cash Flow (€bn)

Exhibit 18: EUR Total Cash Flow €bn

w/o	Day	Country	Supply	Coupons	Redemption	Net Issuance*	10y Futures
20-Apr	Mon	GER POR AUT		0.67 0.23 0.12		-0.67 -0.23 -0.12	
21-Apr	Tue	GER FIN	6.0 1.5			6.00 1.50	9.73k 15.46k
22-Apr	Wed	GER IRE BEL	2.0	0.03 0.39		2.00 -0.03 -0.39	27.01k
23-Apr	Thu						
24-Apr	Fri	ITA	4.5			4.50	9.69k
Sub Total			14.00	1.4	0.0	12.6	
w/o	Day	Country	Supply	Coupons	Redemption	Net Issuance*	10y Futures
27-Apr	Mon	BEL FRA ITA	3.0	8.31 0.03	31.79	3.00 -40.09 -0.03	28.01k
28-Apr	Tue	NETH POR ITA	2.5 3.0	0.13		2.5 3.00 -0.1	22.28k 32.68k
29-Apr	Wed	ITA GER	12.0 5.0			12.0 5.0	58.31k 42.71k
30-Apr	Thu	SPA ITA		4.11 0.95	22.95	-27.1 -0.9	
1-May	Fri	ITA		3.45		-3.4	
Sub Total			25.5	17.0	54.7	-46.2	
w/o	Day	Country	Supply	Coupons	Redemption	Net Issuance*	10y Futures
4-May	Mon						
5-May	Tue	AUT	2.3			2.25	20.14k
6-May	Wed	GER	3.5			3.50	20.93k
7-May	Thu	FRA SPA	12.0 7.0			12.00 7.00	118.2k 47.46k
8-May	Fri	BEL	0.5			0.50	3.88k
Sub Total			25.3	0.0	0.0	25.3	
w/o	Day	Country	Supply	Coupons	Redemption	Net Issuance*	10y Futures
11-May	Mon						
12-May	Tue	NETH GER POR	2.3 6.0 1.8			2.25 6.00 1.75	19.97k 9.44k 17.55k
13-May	Wed	ITA GER	8.0 2.5			8.00 2.50	47.41k 47.38k
14-May	Thu	IRE ITA	1.3	0.09		1.25 -0.09	8.24k
15-May	Fri	ITA IRE GER		1.50 0.90 0.70	9.49 11.64	-10.99 -12.54 -0.70	
Sub Total			21.8	3.2	21.1	-2.6	
w/o	Day	Country	Supply	Coupons	Redemption	Net Issuance*	10y Futures
18-May	Mon	ITA		0.04		-0.04	
19-May	Tue	FIN GER	1.5 5.0			1.50 5.00	10.5k 23.17k
20-May	Wed	GER IRE	5.0	0.01		5.00 -0.01	42.42k
21-May	Thu	FRA SPA ITA	18.0 20.5	0.02	6.99	18.00 20.50 -7.01	121.2k 149.39k
22-May	Fri	ITA		0.08		-0.08	
Sub Total			50.0	0.2	7.0	42.9	
Total			136.5	21.75	82.9	31.9	


Euroland Supply, Coupons & Redemptions by Country, for the coming five weeks.


Funding Progress (Eur Bn)				
Country	Bond Planned for 2026, € bn	Issued through Apr 17	Issuance Remaining € bn	Issued through Apr 17, % of Planned
Austria	45.0	21.7	23.3	48%
Belgium	51.6	21.0	30.6	41%
Finland	26.0	10.4	15.6	40%
France	355.0	143.1	211.9	40%
Germany	348.0	121.0	227.0	35%
Ireland	12.0	6.3	5.8	52%
Italy *	375.0	139.4	235.6	37%
Netherlands	50.0	18.5	31.5	37%
Portugal	24.0	9.8	14.2	41%
Spain*	176.9	76.5	100.4	43%
EMU 16	1464	567.7	895.8	39%
EMU 4	1255	480.1	774.8	38%

* Morgan Stanley Estimates

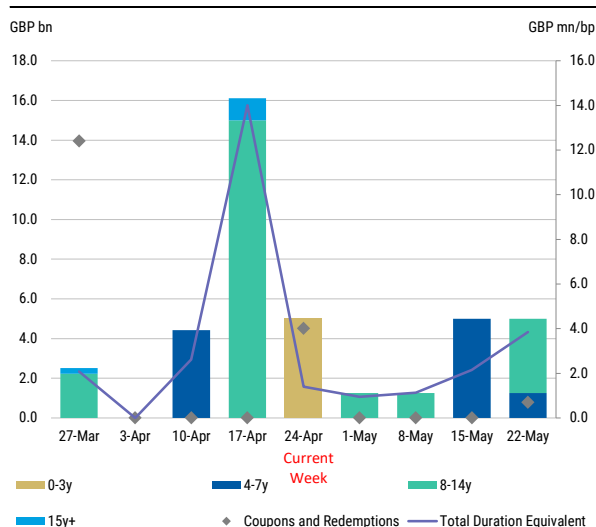
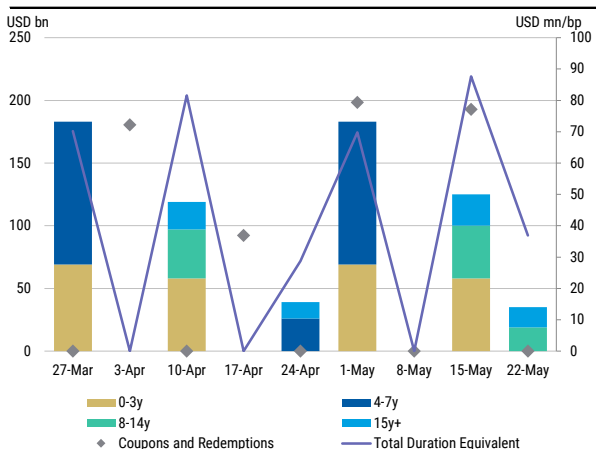
Source: Morgan Stanley, National Treasuries. Numbers may not add exactly due to rounding. Floaters' supply and cash flows are not included.

*Net Issuance=Gross issuance less coupons less redemption

UK, US, and Japan Total Cash Flow (Local Currency)

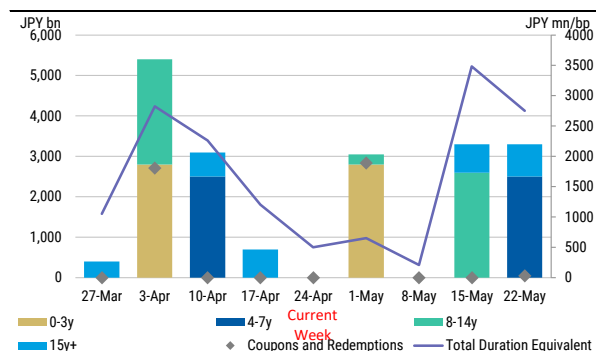
Exhibit 19: UK, US, and Japan Total Cash Flow (Local Currency)

w/e	Country	Maturity	Supply	Coupons	Redemption	Net Issuance*	10y Futures
24-Apr	UK	3y	5.0	4.51		0.5	14k
1-May	UK	10y	1.3			1.3	9k
8-May	UK	9y	1.3			1.3	11k
15-May	UK	5y	5.0			5.0	21k
22-May	UK	5y 10y	1.3 3.8	0.79		0.5 3.8	9k 30k
Total			17.50	5.30	0.0	12.2	

Weekly Issuance Profile: UK Gilts

Weekly Issuance Profile: US Treasuries


w/e	Country	Maturity	Supply	Coupons	Redemption	Net Issuance	10y Futures
24-Apr	US	20y 5y TIPS	13.00 26.00			13 26	251k 188k
1-May	US	2y 5y 7y	69.00 70.00 44.00	24.6	173.8	-129 70 44	193k 473k 398k
8-May	US						
15-May	US	3y 10y 30y	58.00 42.00 25.00	80.1	113.0	-135 42 25	242k 505k 590k
22-May	US	20y 10y TIPS	16.00 19.00			16 19	307k 257k
Sub Total			382.0	104.7	286.8	-9.5	

w/e	Country	Maturity	Supply	Coupons	Redemption	Net Issuance*
24-Apr	JPN	AEL	250			250.0
1-May	JPN	2y 10 JGBI	2800 250	35.8	2807.8	-43.6 250.0
8-May	JPN	AEL	700			700.0
15-May	JPN	10y 30y	2600 700			2600.0 700.0
22-May	JPN	5y 20y AEL	2500 800 650	47.6		2452.4 800.0 650.0
Sub Total			11250.0	83.4	2807.8	8358.8

Weekly Issuance Profile: Japanese Government Bonds


Source: Morgan Stanley, National Treasuries.

AEL: Auction for Enhanced Liquidity. Numbers may not add exactly due to rounding. Floaters' and retail bonds' supply and cash flows are not included.

*Net Issuance=Gross issuance less coupons less redemptions

T-Bills Issuance

Exhibit 20: T-Bill Issuance

Date	Country	Details	Tenor (Months)	Maturity	Crncy	Amt, bn
4/20/2026	FRA	BTF Auction	3	22-Jul-26	EUR	3.0-3.4
4/20/2026	FRA	BTF Auction	6	7-Oct-26	EUR	0.3-0.7
4/20/2026	FRA	BTF Auction	6	21-Oct-26	EUR	1.5-1.9
4/20/2026	FRA	BTF Auction	12	21-Apr-27	EUR	1.6-2.0
4/20/2026	GER	Bubill Auction	6	16-Sep-26	EUR	2
4/20/2026	GER	Bubill Auction	12	17-Mar-27	EUR	2
4/20/2026	NETH	DTB Auction	3	29-Jun-26	EUR	
4/20/2026	NETH	DTB Auction	6	29-Sep-26	EUR	
4/20/2026	US	B Auction	3	23-Jul-26	USD	89
4/20/2026	US	B Auction	6	22-Oct-26	USD	77
4/21/2026	US	B Auction	1.5	4-Jun-26	USD	70
4/22/2026	US	B Auction	3	25-Aug-26	USD	
4/23/2026	US	B Auction	1.5	26-May-26	USD	
4/23/2026	US	B Auction	1.5	23-Jun-26	USD	
4/24/2026	UK	UKT Bills			GBP	
4/27/2026	FRA	BTF Auction			EUR	
4/27/2026	US	B Auction	3	30-Jul-26	USD	
4/27/2026	US	B Auction	6	29-Oct-26	USD	
4/28/2026	ITA	BOTS Auction			EUR	
4/28/2026	US	B Auction	1.5	11-Jun-26	USD	
4/29/2026	US	B Auction	3	1-Sep-26	USD	
4/30/2026	US	B Auction	1.5	2-Jun-26	USD	
4/30/2026	US	B Auction	1.5	30-Jun-26	USD	
5/1/2026	UK	UKT Bills			GBP	
5/4/2026	FRA	BTF Auction			EUR	
5/4/2026	GER	Bubill Auction	6	19-Aug-26	EUR	2
5/4/2026	GER	Bubill Auction	12	17-Feb-27	EUR	3
5/4/2026	NETH	DTB Auction	6	28-Aug-26	EUR	
5/4/2026	NETH	DTB Auction	12	29-Oct-26	EUR	
5/4/2026	US	B Auction	3	6-Aug-26	USD	
5/4/2026	US	B Auction	6	5-Nov-26	USD	
5/5/2026	BEL	BGTB Auction	3	13-Aug-26	EUR	
5/5/2026	BEL	BGTB Auction	6	12-Nov-26	EUR	
5/5/2026	BEL	BGTB Auction	12	8-Apr-27	EUR	
5/5/2026	SPA	SGLT Auction	6	6-Nov-26	EUR	
5/5/2026	SPA	SGLT Auction	12	7-May-27	EUR	
5/5/2026	US	B Auction	1.5	18-Jun-26	USD	
5/6/2026	US	B Auction	3	8-Sep-26	USD	
5/7/2026	UK	UKT Bills			GBP	
5/7/2026	US	B Auction	1.5	9-Jun-26	USD	
5/7/2026	US	B Auction	1.5	7-Jul-26	USD	
5/8/2026	UK	UKT Bills			GBP	
5/11/2026	FRA	BTF Auction			EUR	
5/11/2026	GER	Bubill Auction	6	18-Nov-26	EUR	2
5/11/2026	GER	Bubill Auction	12	12-May-27	EUR	3
5/11/2026	US	B Auction	3	13-Aug-26	USD	
5/11/2026	US	B Auction	6	12-Nov-26	USD	
5/12/2026	BEL	BGTB Auction	3	13-Aug-26	EUR	
5/12/2026	BEL	BGTB Auction	12	13-May-27	EUR	
5/12/2026	SPA	SGLT Auction	3	7-Aug-26	EUR	
5/12/2026	SPA	SGLT Auction	12	5-Feb-27	EUR	
5/12/2026	US	B Auction	1.5	25-Jun-26	USD	
5/12/2026	US	B Auction	12	13-May-27	USD	
5/13/2026	US	B Auction	3	15-Sep-26	USD	
5/14/2026	US	B Auction	1.5	16-Jun-26	USD	
5/14/2026	US	B Auction	1.5	14-Jul-26	USD	
5/15/2026	UK	UKT Bills			GBP	
5/18/2026	FRA	BTF Auction			EUR	
5/18/2026	GER	Bubill Auction	6	14-Oct-26	EUR	2
5/18/2026	GER	Bubill Auction	12	14-Apr-27	EUR	2
5/18/2026	NETH	DTB Auction	3	30-Jul-26	EUR	
5/18/2026	NETH	DTB Auction	6	29-Oct-26	EUR	
5/18/2026	US	B Auction	3	20-Aug-26	USD	
5/18/2026	US	B Auction	6	19-Nov-26	USD	
5/19/2026	US	B Auction	1.5	2-Jul-26	USD	
5/20/2026	US	B Auction	3	22-Sep-26	USD	
5/21/2026	US	B Auction	1.5	23-Jun-26	USD	
5/21/2026	US	B Auction	1.5	21-Jul-26	USD	
5/22/2026	UK	UKT Bills			GBP	

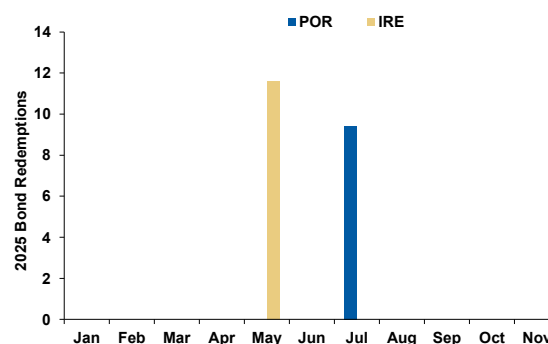
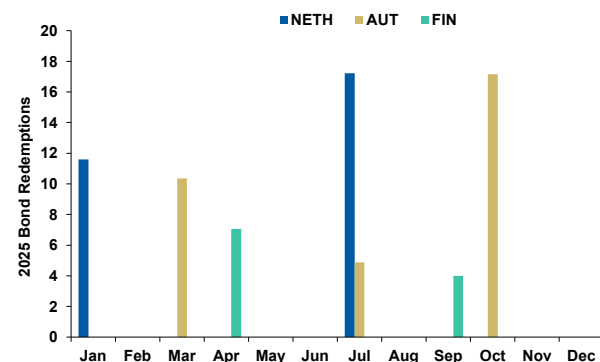
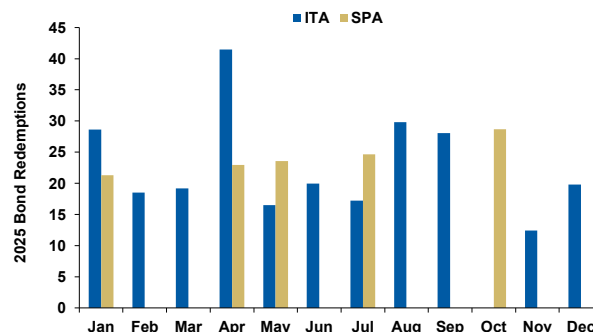
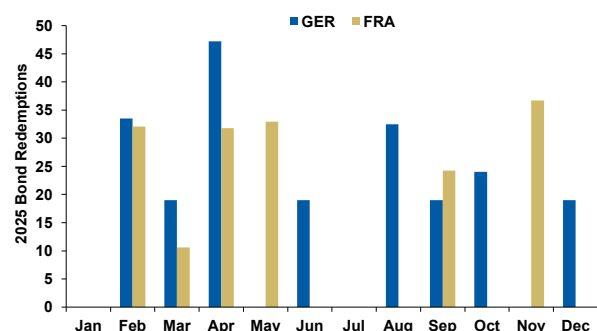
Source: Morgan Stanley Research, Bloomberg

Appendix – Eurozone Government Redemptions

Exhibit 21: Redemptions of Domestic Bonds and Bills (€bn)

2026	GER		FRA		ITA		SPA		NETH		BEL		IRE		AUT		POR		FIN		Total	
Jan	0.0	13.0	0.0	9.4	28.6	8.0	21.3	8.2	11.6	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	61.5	47.0
Feb	33.5	0.0	32.1	0.0	18.5	0.0	0.0	8.6	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.1	13.9
Mar	19.0	0.0	10.6	0.0	19.2	0.0	0.0	8.5	0.0	0.0	11.1	6.5	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	70.2	15.0
Apr	47.2	0.0	31.8	0.0	41.5	0.0	23.0	8.8	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	150.5	14.4
May	0.0	0.0	32.9	0.0	16.5	0.0	23.6	8.0	0.0	0.0	0.0	3.4	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.6	11.4
Jun	19.0	0.0	0.0	0.0	19.9	0.0	0.0	7.5	0.0	0.0	15.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.0	11.1
Jul	0.0	0.0	0.0	0.0	17.2	0.0	24.7	7.8	17.2	0.0	0.0	3.6	0.0	0.0	4.9	0.0	9.4	0.0	0.0	0.0	73.4	11.4
Aug	32.5	0.0	0.0	0.0	29.8	0.0	0.0	6.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.3	8.9
Sep	19.0	0.0	24.3	0.0	28.1	0.0	0.0	6.2	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	75.4	9.4
Oct	24.0	0.0	0.0	0.0	0.0	0.0	28.7	6.5	0.0	0.0	0.0	2.4	0.0	0.0	17.2	0.0	0.0	0.0	0.0	0.0	69.8	8.9
Nov	0.0	0.0	36.7	0.0	12.4	0.0	0.0	3.7	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.1	6.4
Dec	19.0	0.0	0.0	0.0	19.8	0.0	0.0	4.2	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.8	7.2
Total	213	13	168	9	252	8	121	84	29	0	26	48	12	0	32	0	9	3	11	0	874	165

2027	GER		FRA		ITA		SPA		NETH		BEL		IRE		AUT		POR		FIN		Total	
Jan	0.0	0.0	0.0	0.0	19.7	0.0	22.8	4.5	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.6	4.5
Feb	30.5	0.0	43.6	0.0	34.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	108.6	0.0
Mar	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.5	0.0
Apr	22.0	0.0	0.0	0.0	16.7	0.0	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8	0.0	7.7	0.0	4.3	0.0	92.4	0.0
May	0.0	0.0	43.8	0.0	0.0	0.0	23.8	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.4	0.0
Jun	0.0	0.0	0.0	0.0	19.9	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.9	0.0
Jul	13.8	0.0	24.6	0.0	14.1	0.0	23.1	0.0	17.7	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0	103.0	0.0
Aug	32.5	0.0	0.0	0.0	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.7	0.0
Sep	0.0	0.0	43.9	0.0	21.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	72.8	0.0
Oct	39.8	0.0	61.9	0.0	22.2	0.0	25.2	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	7.6	0.0	0.0	0.0	167.6	0.0
Nov	22.0	0.0	0.0	0.0	27.8	0.0	17.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.2	0.0
Dec	0.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	0.0
Total	179	0	218	0	217	0	138	4	33	0	28	0	8	0	25	0	15	0	11	0	873	4.5

Bond Redemptions by Country (excluding T-Bills, EUR Bn)


Source: Morgan Stanley Research, Bloomberg



Appendix – Eurozone Sovereign Issuance Estimates

Exhibit 22: Eurozone Gross Issuance, Redemptions and Net Issuance

Gross Issuance, EUR bn

2026	AUT	BEL	FIN	FRA	GER	IRE	ITA	NETH	POR	SPA	Total
Jan	9.3	8.1	4.2	36.6	37.9	5.5	44.9	6.1	7.3	27.7	187.5
Feb	3.4	5.6	1.5	38.6	29.5	0.0	37.8	7.3	3.0	19.1	145.8
Mar	3.5	5.8	1.7	35.5	32.1	1.9	32.1	6.5	1.9	14.8	135.8
Apr	6.7	5.8	4.9	30.0	36.3	0.0	36.9	6.8	2.4	13.3	143.0
May	4.5	5.7	1.5	30.4	27.8	1.3	36.5	4.0	2.5	20.9	135.1
Jun	2.5	4.0	1.9	30.0	27.4	0.7	32.2	3.1	0.5	16.7	118.9
Jul	1.7	3.9	0.0	29.2	33.5	0.0	28.7	2.7	1.3	13.9	115.0
Aug	4.6	3.0	5.1	25.2	31.0	0.0	14.5	0.0	0.0	6.6	89.9
Sep	2.3	4.1	1.9	32.6	28.1	2.3	35.2	5.0	1.8	16.9	130.1
Oct	3.8	2.9	1.8	30.1	30.1	0.2	36.8	5.3	0.8	13.3	125.0
Nov	1.8	2.0	1.6	29.7	26.2	0.1	30.4	2.9	2.6	10.4	107.7
Dec	0.9	0.7	0.0	7.0	8.2	0.0	9.0	0.3	0.0	3.3	29.5
Total	45.0	51.6	26.0	355.0	348.0	12.0	375.0	50.0	24.0	176.9	1464

YTD numbers are updated at the end of the month with actual issuance. Other numbers are based on MS estimates for the year and last three years % issuance by month.

Redemptions, EUR bn

2026	AUT	BEL	FIN	FRA	GER	IRE	ITA	NETH	POR	SPA	Total
Jan	0.0	0.0	0.0	0.0	0.0	0.0	28.6	11.6	0.0	21.3	61.5
Feb	0.0	0.0	0.0	32.1	33.5	0.0	18.5	0.0	0.0	0.0	84.1
Mar	10.4	11.1	0.0	10.6	19.0	0.0	20.2	0.0	0.0	0.0	71.2
Apr	0.0	0.0	7.1	31.8	47.2	0.0	41.5	0.0	0.0	23.0	150.5
May	0.0	0.0	0.0	33.3	0.0	11.6	16.5	0.0	0.0	23.6	85.0
Jun	0.0	15.0	0.0	0.0	19.0	0.0	19.9	0.0	0.0	0.0	54.0
Jul	4.9	0.0	0.0	0.0	0.0	0.0	17.2	17.2	9.4	24.7	73.4
Aug	0.0	0.0	0.0	0.0	32.5	0.0	29.9	0.0	0.0	0.0	62.4
Sep	0.0	0.0	4.0	27.3	19.0	0.0	28.1	0.0	0.0	0.0	78.4
Oct	17.2	0.0	0.0	0.0	24.0	0.0	0.0	0.0	0.0	28.7	69.8
Nov	0.0	0.0	0.0	37.0	0.0	0.0	9.4	0.0	0.0	0.0	46.4
Dec	0.0	0.0	0.0	0.0	19.0	0.0	19.8	0.0	0.0	0.0	38.8
Total	32.4	26.1	11.1	172.0	213.2	11.6	249.7	28.8	9.4	121.2	875

Net Issuance, EUR bn

2026	AUT	BEL	FIN	FRA	GER	IRE	ITA	NETH	POR	SPA	Total
Jan	9.3	8.1	4.2	36.6	37.9	5.5	16.2	-5.5	7.3	6.4	126.0
Feb	3.4	5.6	1.5	6.5	-4.0	0.0	19.3	7.3	3.0	19.1	61.7
Mar	-6.9	-5.3	1.7	25.0	13.1	1.9	11.9	6.5	1.9	14.8	64.6
Apr	6.7	5.8	-2.2	-1.8	-10.9	0.0	-4.5	6.8	2.4	-9.7	-7.5
May	4.5	5.7	1.5	-2.8	27.8	-10.3	20.1	4.0	2.5	-2.7	50.2
Jun	2.5	-11.0	1.9	30.0	8.4	0.7	12.2	3.1	0.5	16.7	65.0
Jul	-3.2	3.9	0.0	29.2	33.5	0.0	11.4	-14.5	-8.1	-10.7	41.6
Aug	4.6	3.0	5.1	25.2	-1.5	0.0	-15.5	0.0	0.0	6.6	27.4
Sep	2.3	4.1	-2.1	5.3	9.1	2.3	7.1	5.0	1.8	16.9	51.7
Oct	-13.3	2.9	1.8	30.1	6.1	0.2	36.8	5.3	0.8	-15.4	55.2
Nov	1.8	2.0	1.6	-7.3	26.2	0.1	21.0	2.9	2.6	10.4	61.3
Dec	0.9	0.7	0.0	7.0	-10.8	0.0	-10.8	0.3	0.0	3.3	-9.2
Total	12.6	25.5	14.9	183.0	134.8	0.4	125.3	21.2	14.6	55.7	588

Net Issuance = Gross Issuance - Redemptions

Source: Morgan Stanley Research, National Treasuries, Bloomberg

Appendix – Eurozone Sovereign Issuance Estimates

Exhibit 23: QT, EUR bn

QT

2026	AUT	BEL	FIN	FRA	GER	IRE	ITA	NETH	POR	SPA	Total
Jan	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.8	0.0	2.3	7.9
Feb	0.0	0.0	0.0	21.7	20.8	0.0	11.7	0.0	0.0	0.0	54.2
Mar	0.8	1.0	0.0	5.9	5.5	0.0	8.2	0.0	0.0	0.0	21.4
Apr	0.0	0.0	0.9	5.9	30.1	0.0	14.5	0.0	0.0	7.2	58.6
May	0.0	0.0	0.0	9.0	0.0	4.7	5.2	0.0	0.0	3.9	22.8
Jun	0.0	5.8	0.0	0.0	4.3	0.0	8.7	0.0	0.0	0.0	18.8
Jul	1.2	0.0	0.0	0.0	0.0	0.0	6.9	2.2	1.8	10.4	22.5
Aug	0.0	0.0	0.0	0.0	15.1	0.0	3.9	0.0	0.0	0.0	19.0
Sep	0.0	0.0	0.2	3.5	2.5	0.0	3.0	0.0	0.0	0.0	9.2
Oct	1.1	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	3.3	18.2
Nov	0.0	0.0	0.0	17.4	0.0	0.0	5.4	0.0	0.0	0.0	22.8
Dec	0.0	0.0	0.0	0.0	2.7	0.0	4.8	0.0	0.0	0.0	7.5
Total	3.1	6.9	1.0	63.4	94.9	4.7	76.1	4.0	1.8	27.1	283.0

Source: Morgan Stanley Research estimates, ECB

Exhibit 24: Issuance* net of QT and redemptions, EUR bn

2026	AUT	BEL	FIN	FRA	GER	IRE	ITA	NETH	POR	SPA	Total
Jan	9.3	8.1	4.2	36.6	37.9	5.5	20.0	-3.7	7.3	8.8	133.9
Feb	3.4	5.6	1.5	28.2	16.8	0.0	31.0	7.3	3.0	19.1	115.9
Mar	-6.1	-4.2	1.7	30.8	18.6	1.9	20.2	6.5	1.9	14.8	86.0
Apr	6.7	5.8	-1.3	4.1	19.2	0.0	9.9	6.8	2.4	-2.5	51.1
May	4.5	5.7	1.5	6.2	27.8	-5.6	25.2	4.0	2.5	1.2	73.0
Jun	2.5	-5.2	1.9	30.0	12.7	0.7	21.0	3.1	0.5	16.7	83.8
Jul	-2.0	3.9	0.0	29.2	33.5	0.0	18.3	-12.3	-6.2	-0.3	64.1
Aug	4.6	3.0	5.1	25.2	13.6	0.0	-11.6	0.0	0.0	6.6	46.5
Sep	2.3	4.1	-1.9	8.8	11.6	2.3	10.1	5.0	1.8	16.9	60.9
Oct	-12.3	2.9	1.8	30.1	19.9	0.2	36.8	5.3	0.8	-12.1	73.4
Nov	1.8	2.0	1.6	10.2	26.2	0.1	26.4	2.9	2.6	10.4	84.1
Dec	0.9	0.7	0.0	7.0	-8.1	0.0	-5.9	0.3	0.0	3.3	-1.7
Total	15.7	32.3	16.0	246.4	229.7	5.1	201.4	25.2	16.4	82.8	871.0

Source: Morgan Stanley Research, ECB, National Treasuries, Bloomberg. *Values as in Exhibit 22.

Appendix – US and Japan Issuance Estimates

Exhibit 25: US Gross Issuance, USD bn

2026	2y	3y	5y	7y	10y	20y	30y	5T	10T	30T	Total
Jan	69	58	70	44	39	13	22	0	21	0	336
Feb	69	58	70	44	42	16	25	0	0	9	333
Mar	69	58	70	44	39	13	22	0	19	0	334
Apr	69	58	70	44	39	13	22	26	0	0	341
May	69	58	70	44	42	16	25	0	19	0	343
Jun	69	58	70	44	39	13	22	24	0	0	339
Jul	69	58	70	44	39	13	22	0	21	0	336
Aug	69	58	70	44	42	16	25	0	0	8	332
Sep	69	58	70	44	39	13	22	0	19	0	334
Oct	69	58	70	44	39	13	22	26	0	0	341
Nov	69	58	70	44	42	16	25	0	19	0	343
Dec	69	58	70	44	39	13	22	24	0	0	339
Total	828	696	840	528	480	168	276	100	118	17	4051

Source: Morgan Stanley Research, Bloomberg

Exhibit 26: Japan Gross Issuance, JPY tr

2026	2y	5y	10y	20y	30y	40y	IL	AEL	Total
Jan	2.8	2.5	2.6	0.8	0.7	0.4	0.0	1.6	11.4
Feb	2.8	2.5	2.6	0.8	0.7	0.0	0.25	1.6	11.25
Mar	2.8	2.5	2.6	0.8	0.7	0.4	0.0	1.6	11.4
Apr	2.8	2.5	2.6	0.7	0.6	0.0	0.0	1.6	10.8
May	2.8	2.5	2.6	0.7	0.6	0.3	0.25	1.6	11.35
Jun	2.8	2.5	2.6	0.7	0.6	0.0	0.0	1.6	10.8
Jul	2.8	2.5	2.6	0.7	0.6	0.3	0.0	1.6	11.1
Aug	2.8	2.5	2.6	0.7	0.6	0.0	0.25	1.6	11.05
Sep	2.8	2.5	2.6	0.7	0.6	0.3	0.0	1.6	11.1
Oct	2.8	2.5	2.6	0.7	0.6	0.0	0.0	1.6	10.8
Nov	2.8	2.5	2.6	0.7	0.6	0.3	0.25	1.6	11.35
Dec	2.8	2.5	2.6	0.7	0.6	0.0	0.0	1.6	10.8
Total	33.6	30.0	31.2	8.7	7.5	2.0	1.0	19.2	133

Source: Morgan Stanley Research, Bloomberg

2026 European Sovereigns Ratings

Exhibit 27: 2026 Rating Agency Review Calendar for European Sovereigns

	Moody's					S&P					Fitch					DBRS				
	Current Rating	Outlook	First	Second		Current Rating	Outlook	First	Second	Third	Current Rating	Outlook	First	Second	Third	Current Rating	Outlook	First	Second	Third
Austria	Aa1	NEG	13-Feb	14-Aug		AA+	STABLE	6-Feb	7-Aug		AA	STABLE	5-Jun	4-Dec		AAA	NEG	5-Jun	4-Dec	
Belgium	Aa3	NEG	17-Apr	9-Oct		AAu	NEG	24-Apr	23-Oct		A+u	STABLE	22-May	20-Nov		AA	STABLE	23-Jan	24-Jul	
Cyprus	A3	STABLE	29-May	20-Nov		A-	POS	15-May	13-Nov		A-	POS	8-May	6-Nov		A	STABLE	13-Mar	4-Sep	
Finland	Aa1	STABLE	12-Jun	11-Dec		AA+u	STABLE	24-Apr	23-Oct		AA	STABLE	23-Jan	17-Jul		AAH	STABLE	20-Mar	18-Sep	
France	Aa3	NEG	10-Apr	23-Oct		A+u	STABLE	29-May	27-Nov		A+u	STABLE	6-Mar	28-Aug		AA	STABLE	20-Mar	18-Sep	
Germany	Aaa	STABLE	13-Mar	18-Sep		AAAu	STABLE	24-Apr	23-Oct		AAA	STABLE	9-Jan	15-May	13-Nov	AAA	STABLE	8-May	6-Nov	
Greece	Baa3	STABLE	13-Mar	18-Sep		BBB	STABLE	24-Apr	23-Oct		BBB	STABLE	8-May	6-Nov		BBB	STABLE	6-Mar	4-Sep	
Ireland	Aa3	POS	20-Feb	21-Aug		AA+	STABLE	20-Mar	18-Sep		AA	STABLE	1-May	23-Oct		AA	STABLE	13-Mar	11-Sep	
Italy	Baa2u	STABLE	27-Mar	25-Sep		BBB+u	POS	30-Jan	15-May	13-Nov	BBB+u	STABLE	13-Mar	11-Sep		AL	STABLE	17-Apr	16-Oct	
Netherlands	Aaa	STABLE	13-Feb	21-Aug		AAAu	STABLE	17-Apr	16-Oct		AAA	STABLE	16-Jan	10-Jul		AAA	STABLE	27-Feb	28-Aug	
Portugal	A3	STABLE	22-May	20-Nov		A+u	POS	27-Feb	28-Aug		Au	POS	6-Mar	4-Sep		AH	STABLE	16-Jan	15-May	13-Nov
Spain	A3	STABLE	27-Mar	17-Jul		A+u	STABLE	13-Mar	11-Sep		Au	STABLE	13-Mar	11-Sep		AH	STABLE	29-May	30-Oct	
UK	Aa3	STABLE	22-May	20-Nov		AAu	STABLE	10-Apr	9-Oct		AA-	STABLE	20-Feb	14-Aug		AA	STABLE	15-May	13-Nov	

Source: Bloomberg

Disclosure Section

The information and opinions in Morgan Stanley Research were prepared or are disseminated by Morgan Stanley & Co. LLC and/or Morgan Stanley C.T.V.M. S.A. and/or Morgan Stanley México, Casa de Bolsa, S.A. de C.V. and/or Morgan Stanley Canada Limited and/or Morgan Stanley & Co. International plc and/or Morgan Stanley Europe S.E. and/or RMB Morgan Stanley Proprietary Limited and/or Morgan Stanley MUFG Securities Co., Ltd. and/or Morgan Stanley Capital Group Japan Co., Ltd. and/or Morgan Stanley Asia Limited and/or Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International plc, Seoul Branch, and/or Morgan Stanley Australia Limited (A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents), and/or Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents), and/or Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105), Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India; Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com which accepts the responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research, and their affiliates (collectively, "Morgan Stanley"). Morgan Stanley India Company Private Limited (MSICPL) may use AI tools in providing research services. All recommendations contained herein are made by the duly qualified research analysts.

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/eqr/disclosures/webapp/generalresearch, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Matthew Hornbach; Vivek Jikar.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflict/policies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important Regulatory Disclosures on Subject Companies

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of March 31, 2026)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1534	42%	461	50%	30%	698	43%
Equal-weight/Hold	1573	43%	372	40%	24%	716	44%
Not-Rated/Hold	4	0%	1	0%	25%	1	0%
Underweight/Sell	568	15%	89	10%	16%	209	13%
Total	3,679		923			1624	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O or Over) - The stock's total return is expected to exceed the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis over the next 12-18 months.

Equal-weight (E or Equal) - The stock's total return is expected to be in line with the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis over the next 12-18 months.

Not-Rated (NR) - Currently the analyst does not have adequate conviction about the stock's total return relative to the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U or Under) - The stock's total return is expected to be below the total return of the relevant country MSCI Index or the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding any material conflict of interest that can reasonably be expected to have influenced Morgan Stanley Smith Barney LLC's choice of a third-party research provider or the subject company of a third-party research report, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures.

For Morgan Stanley specific disclosures, you may refer to <https://www.morganstanley.com/eqr/disclosures/webapp/generalresearch>.

Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at <http://www.morganstanley.com/matrix>.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (<http://www.morganstanley.com/terms.html>). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (<http://www.morganstanley.com/terms.html>). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html). Please use the provided link to review the Terms and Conditions and Most Important Terms and Conditions for Morgan Stanley India Company Private Limited (https://www.morganstanley.com/assets/pdfs/about-us-global-offices/india/Terms_and_conditions.pdf) and the following link to review the audit report (https://ny.matrix.ms.com/eqr/research/webapp/researchdocs/MSICPL_Morgan_Stanley_Research_Audit_Report.pdf).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research.

Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Certain information in Morgan Stanley Research was sourced by employees of the Shanghai Representative Office of Morgan Stanley Asia Limited for the use of Morgan Stanley Asia Limited. Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V. which is regulated by Comisión Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FCO118); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India; Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com. Morgan Stanley India Company Private Limited (MSICPL) may use AI tools in providing research services. All recommendations contained herein are made by the duly qualified research analysts; in Canada by Morgan Stanley Canada Limited; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 14-9169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are high net worth entities falling within Article 49(2)(a) to (d) of the Order; or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended) may otherwise lawfully be communicated or caused to be communicated. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital

Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA) or by Morgan Stanley & Co. International plc (ADGM Branch), regulated by the Financial Services Regulatory Authority Abu Dhabi (the FSRA), and is directed at Professional Clients only, as defined by the DFSA or the FSRA, respectively. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria of a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The issuers and/or fixed income products recommended or discussed in certain fixed income research reports may not be continuously followed. Accordingly, investors should regard those fixed income research reports as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or individual fixed income products. Morgan Stanley may hold, from time to time, material financial and commercial interests regarding the company subject to the Research report.

Registration granted by SEBI and certification from the National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

The following authors are Fixed Income Research Analysts/Strategists and are not opining on or expressing recommendations on equity securities: Vivek Jikar; Matthew Hornbach.