MANAGING UNDERWRITERS

Global Debt Capital Markets Review

First Half 2023

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An LSEG Business

Global Debt Capital Markets Review

First Half 2023 | Managing Underwriters

Global Deals Intelligence

GLOBAL DEBT CAPITAL MARKETS ACTIVITY FALLS 5%, HITS FOUR-YEAR LOW
Overall global debt capital markets activity totaled US$4.7 trillion during the first half of 2023, down 5% compared to the first six months of 2022 and slowest opening period for DCM activity since 2019. The number of new offerings brought to market during first half 2023 totaled just over 14,000, a 6% decline compared to a year ago and a three-year low. DCM issuance during the second quarter of 2023 has decreased 9% compared to the first quarter of this year.

INVESTMENT GRADE CORPORATE DEBT ISSUANCE UP 1% FROM 2022 LEVELS
Global Investment Grade corporate debt offerings totaled US$2.4 trillion during the first half of 2023, up 1% compared to 2022 levels, which marked the slowest opening period for global high-grade corporate debt since 2019. Investment Grade debt issuance during the second quarter registered a 5% decrease compared to the first quarter of this year and which marked the second consecutive quarter to surpass US$1 trillion.

GLOBAL HIGH YIELD ISSUANCE UP 30%
Global High Yield debt activity during the first half of 2023 totaled US$119.5 billion, an increase of 30% compared to the first half of 202 and marking a two-year high. Second quarter high yield issuance increased 36% compared to the first quarter of this year. High yield offerings from issuers in the United States, Germany and Canada accounted for 75% first half 2023 issuance, up from 66% a year ago.

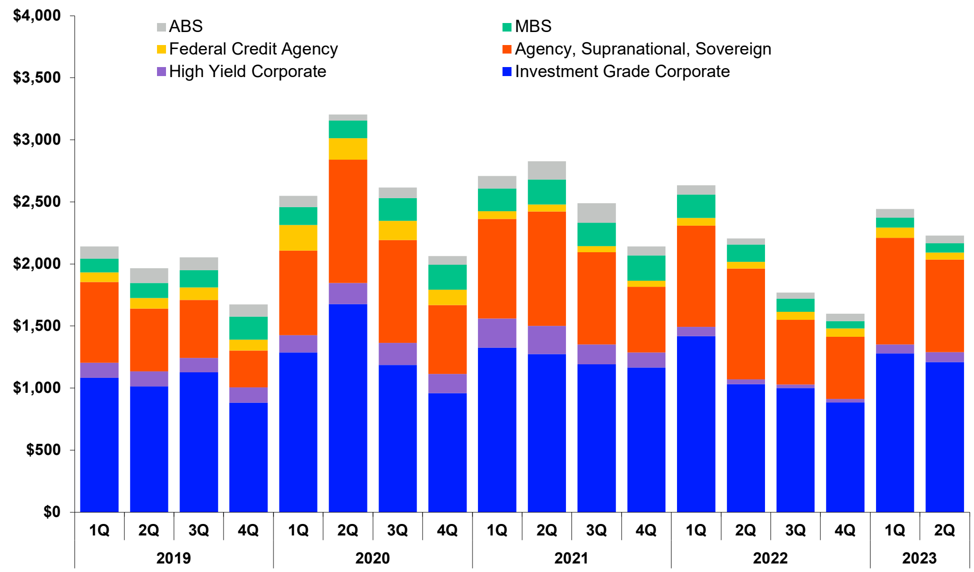
GREEN BOND ISSUANCE BREAKS SECOND CONSECUTIVE QUARTERLY RECORD
According to figures compiled by Refinitiv and The Climate Bonds Initiative, green bond issuance totaled US$270.9 billion during the first half of 2023, a 19% increase compared to year ago levels and the largest first half for issuance since records began in 2015. The second quarter of 2023 registered a 11% increase compared to the first quarter of the year, setting a quarterly issuance record for the second consecutive quarter.

MEDIA, CONSUMER PRODUCTS AND ENERGY AND POWER
DCM activity from Media & Entertainment, Consumer Products and Energy & Power issuers registered double-digit percentage increases compared to year ago levels, while Retail and Telecommunications industries lead the decliners. Financials, Government & Agency issuers accounted for 77% of issuance during the first half of 2023, down from 79% during the first half of 2022.

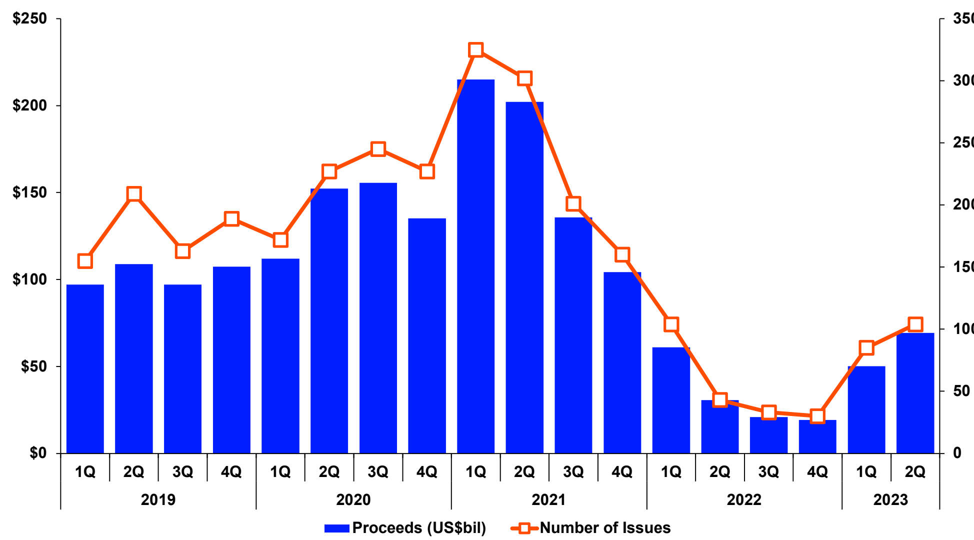
INTERNATIONAL BOND OFFERINGS UP 5%; EMERGING MARKETS UP 7%
International bond offerings totaled US$2.4 trillion during the first half of 2023, a 5% increase compared to a year ago. Debt from emerging market corporate issuers totaled US$139.7 billion during the first half of 2023, up 7% compared to a year ago. Corporate debt issuers from India, Thailand and Saudi Arabia and accounted for 56% of emerging markets activity during the first half of 2023.

ASIA LOCAL CURRENCY DEBT FALLS 13%; JAPANESE YEN DEBT UP 12%
Asia local currency bond offerings totaled US$1.7 trillion during the first half of 2023, a 13% decrease compared to a year ago and the slowest opening period for issuance in two years. China Yuan offerings have decreased 15% compared to a year ago. Japanese Yen offerings have increased 12% compared to first half 2022, totaling JPY11.4 trillion and a two-year high.

Global Debt Capital Markets - Issue Type Composition (US$bil)



Global High Yield Corporate Debt - Quarterly Issuance



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Global Insights

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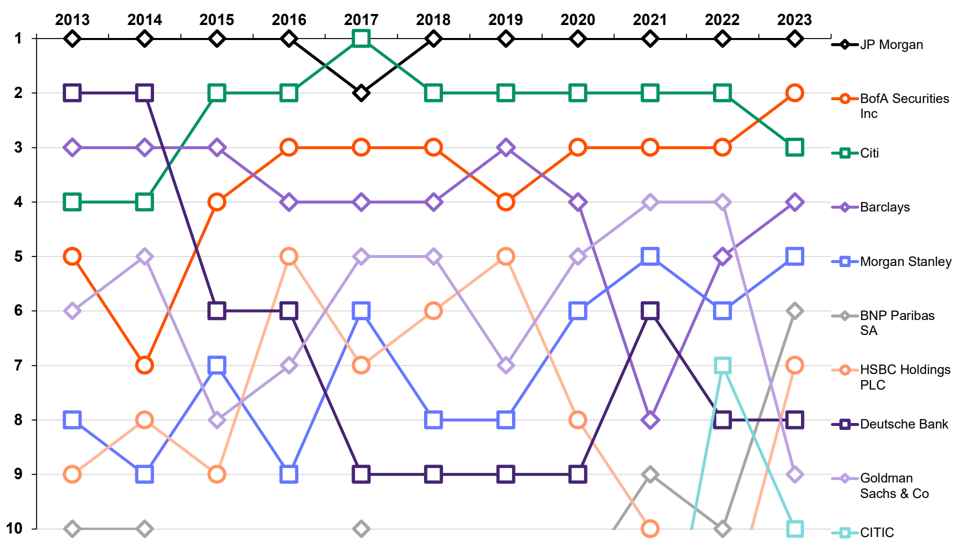
Global Debt Rankings by Proceeds

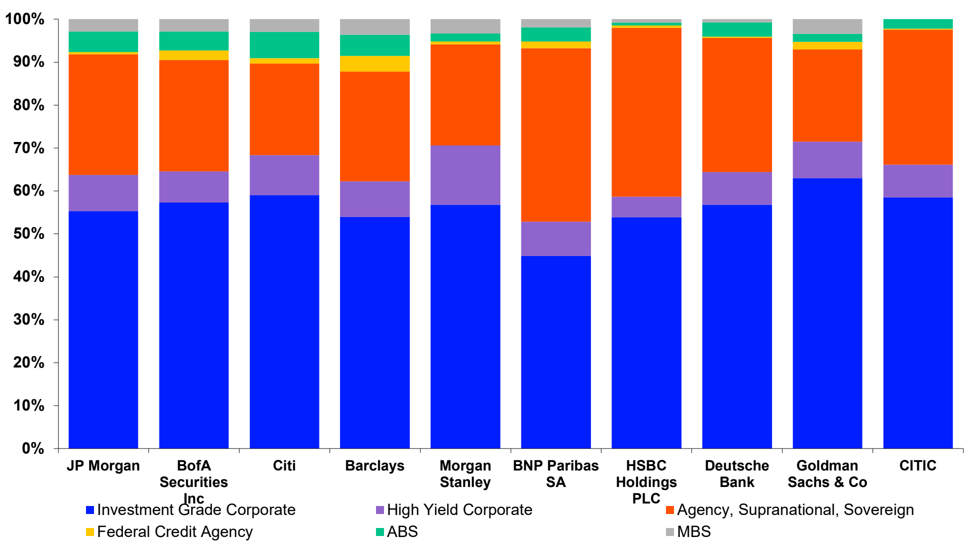


*League Table positions reflect consolidation within the banking sector. Rankings are as of the current quarter end in each calendar year.

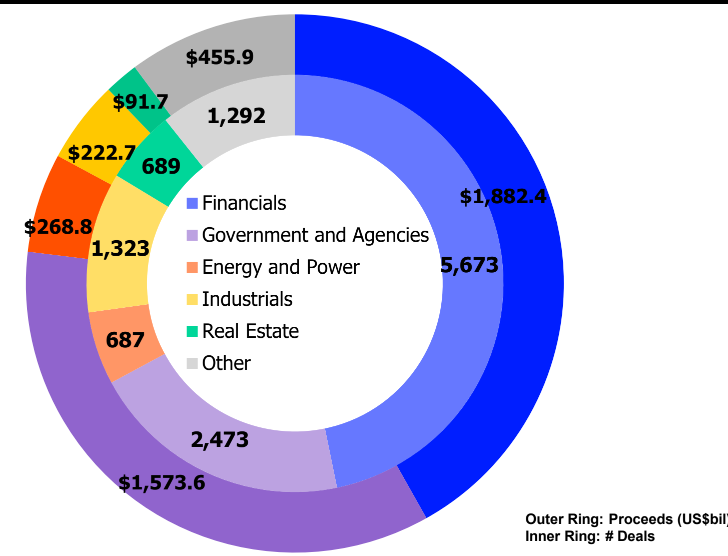
Global Scorecard

	1/1/2023- 6/30/2023 Proceeds ($mil)	1/1/2023- 6/30/2023 # of Deals	1/1/2022- 6/30/2022 Proceeds ($mil)	1/1/2022- 6/30/2022 # of Deals	YoY % Chg. ($)
All Global Debt (B1)	**4,730,601**	**14,100**	**4,976,734**	**15,061**	**-5%** ▼
Global Long-term Debt (B2)	4,495,233	12,136	4,780,400	13,124	-6% ▼
Global Long-term Debt ex MBS, ABS & Munis (B3)	4,158,274	11,321	4,208,067	11,989	-1% ▼
Global High Yield Corporate Debt (B4)	119,464	189	91,651	147	30% ▲
Global Investment Grade Corporate Debt (B7)	2,352,787	8,112	2,337,170	8,119	1% ▲
US Federal Credit Agency Debt (B8)	80,903	487	69,364	407	17% ▲
Global Agency, Sovereign & Supranational (B9)	1,566,570	2,481	1,672,242	3,255	-6% ▼
Global Mortgage-backed Securities (B10)	154,644	415	327,279	636	-53% ▼
Global Asset-backed Securities (B11)	182,316	400	245,054	499	-26% ▼
Global Short-term Debt (B14)	254,219	2,095	219,727	2,083	16% ▲
Global Emerging Markets Corporate Debt (B15)	139,653	645	129,920	771	7% ▲
All US Debt (F1)	**1,385,558**	**2,007**	**1,565,411**	**2,372**	**-11%** ▼
US Long-term Debt (F2)	1,294,994	1,322	1,492,131	1,500	-13% ▼
US Long-term Straight ex MBS, ABS & Munis (F3)	1,119,834	1,479	1,073,394	1,528	4% ▲
US Federal Credit Agency Debt (F7)	72,993	469	62,169	391	17% ▲
US High Yield Corporate Debt (F8)	90,291	119	69,462	98	30% ▲
US Investment Grade (F9)	726,451	494	742,743	509	-2% ▼
Agency, Sovereign & Supranational Debt (F10)	208,818	376	161,171	493	30% ▲
US Mortgage-backed Securities (F11)	124,876	296	285,980	500	-56% ▼
US Asset-backed Securities (F14)	140,848	232	206,038	344	-32% ▼
US Taxable Municipal Debt (F15)	7,482	272	16,977	408	-56% ▼
US Short-term Debt - including MBS, ABS (F16)	90,564	685	73,280	872	24% ▲

Top 10 Global Debt Bookrunners by Proceeds - Issue Type Composition



Global Debt Capital Markets - Macro Industry Composition



Outer Ring: Proceeds (US$bil)
Inner Ring: # Deals

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Global Rankings

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Global Debt (B1) YoY Change ($) -5% QoQ Change ($) -9%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	1	210,595	4.5	-0.7	879
BofA Securities Inc	2	3	189,245	4.0	-0.2	725
Citi	3	2	181,558	3.8	-0.4	713
Barclays	4	5	158,670	3.4	0.6	682
Morgan Stanley	5	6	141,550	3.0	0.3	597
BNP Paribas SA	6	10	138,051	2.9	0.5	612
HSBC Holdings PLC	7	12	127,165	2.7	0.4	653
Deutsche Bank	8	8	126,931	2.7	0.2	574
Goldman Sachs & Co	9	4	126,473	2.7	-0.7	480
CITIC	10	7	107,920	2.3	-0.3	1,721
Credit Agricole CIB	11	20	104,412	2.2	0.6	496
RBC Capital Markets	12	19	96,284	2.0	0.3	619
Bank of China Ltd	13	9	87,732	1.9	-0.5	1,285
Wells Fargo & Co	14	14	87,035	1.8	-0.3	560
ICBC	15	11	79,318	1.7	-0.7	1,190
China Securities Co Ltd	16	18	79,183	1.7	0.0	1,297
Mizuho Financial Group	17	24	77,754	1.6	0.2	541
TD Securities Inc	18	25	70,505	1.5	0.2	434
UBS	19	17	70,239	1.5	-0.3	457
Societe Generale	20	22	69,566	1.5	0.1	260
China Construction Bank	21	13	68,227	1.4	-0.8	1,165
Huatai Securities Co Ltd	22	21	66,448	1.4	-0.1	1,111
Nomura	23	23	66,292	1.4	0.0	385
Agricultural Bank of China	24	15	66,226	1.4	-0.6	1,111
China International Capital Co	25	26	61,729	1.3	0.0	1,071
Industry Total			**4,730,601**	**100.0**		**14,100**

Global Investment Grade Corporate Debt (B7) YoY Change ($) 1% QoQ Change ($) -4%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
BofA Securities Inc	1	2	95,107	4.0	-0.5	371
JP Morgan	2	1	94,088	4.0	-0.9	426
Morgan Stanley	3	8	82,053	3.5	0.8	287
Citi	4	3	80,226	3.4	-0.6	339
HSBC Holdings PLC	5	7	75,083	3.2	0.4	392
Barclays	6	11	70,955	3.0	0.9	308
BNP Paribas SA	7	9	69,059	2.9	0.2	349
CITIC	8	5	59,516	2.5	-0.6	852
Goldman Sachs & Co	9	4	57,875	2.5	-0.8	226
Mizuho Financial Group	10	14	53,037	2.3	0.6	288
UBS	11	6	52,259	2.2	-0.6	256
Credit Agricole CIB	12	17	52,079	2.2	0.6	257
Deutsche Bank	13	12	50,692	2.2	0.2	239
China Securities Co Ltd	14	10	45,257	1.9	-0.4	617
RBC Capital Markets	15	18	41,103	1.8	0.2	200
Societe Generale	16	16	38,749	1.7	0.1	168
Wells Fargo & Co	17	13	37,539	1.6	-0.2	190
Santander Corp & Invest Bkg	18	24	33,116	1.4	0.3	170
Mitsubishi UFJ Financial Group	19	22	31,578	1.3	0.0	196
Bank of China Ltd	20	15	30,862	1.3	-0.4	298
China International Capital Co	21	20	29,769	1.3	-0.1	411
TD Securities Inc	22	27	28,954	1.2	0.2	171
Sumitomo Mitsui Finl Grp Inc	23	32	28,767	1.2	0.4	185
Huatai Securities Co Ltd	24	23	27,108	1.2	0.0	366
Guotai Junan Securities	25	19	25,133	1.1	-0.4	408
Industry Total			**2,352,787**	**100.0**		**8,112**

Global Agency, Sovereign Corporate Debt (B9) YoY Change ($) -6% QoQ Change ($) -13%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	6	64,745	4.1	0.2	181
Citi	2	9	55,081	3.5	0.8	119
Bank of China Ltd	3	4	54,845	3.5	-1.2	951
ICBC	4	1	54,499	3.5	-1.5	950
Agricultural Bank of China	5	3	54,082	3.5	-1.3	936
China Construction Bank	6	2	53,917	3.4	-1.6	947
Deutsche Bank	7	8	52,471	3.4	0.6	173
BNP Paribas SA	8	12	49,513	3.2	0.9	115
Bank of Communications Co Ltd	9	5	46,471	3.0	-1.2	816
BofA Securities Inc	10	13	42,889	2.7	0.5	95
Barclays	11	11	42,373	2.7	0.3	98
CITIC	12	7	39,464	2.5	-0.6	717
HSBC Holdings PLC	13	14	37,254	2.4	0.4	114
Credit Agricole CIB	14	20	36,103	2.3	0.7	91
Huatai Securities Co Ltd	15	10	36,073	2.3	-0.2	682
Goldman Sachs & Co	16	15	33,992	2.2	0.2	70
UniCredit	17	26	31,046	2.0	0.8	41
Morgan Stanley	18	19	30,565	2.0	0.4	104
China International Capital Co	19	16	29,743	1.9	0.1	612
China Securities Co Ltd	20	18	28,887	1.8	0.1	575
Nomura	21	24	28,565	1.8	0.5	138
RBC Capital Markets	22	22	26,880	1.7	0.2	137
TD Securities Inc	23	21	26,170	1.7	0.2	130
Societe Generale	24	23	21,254	1.4	0.1	37
Industrial Bank Co Ltd	25	17	20,894	1.3	-0.4	484
Industry Total			**1,566,570**	**100.0**		**2,481**

Global MBS (B10) YoY Change ($) -53% QoQ Change ($) -6%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	1	19,463	12.6	1.4	53
BofA Securities Inc	2	2	15,845	10.3	-0.2	52
Goldman Sachs & Co	3	3	15,015	9.7	-0.6	49
Citi	4	4	14,766	9.6	-0.6	53
Wells Fargo & Co	5	6	11,695	7.6	-0.1	45
Morgan Stanley	6	5	11,323	7.3	-1.0	42
BMO Capital Markets	7	13	10,841	7.0	4.9	28
Barclays	8	9	9,955	6.4	1.7	61
Santander Corp & Invest Bkg	9	39	5,149	3.3	3.1	18
Truist Financial Corp	10	10	4,144	2.7	-0.7	8
Nomura	11	8	3,763	2.4	-2.5	21
Mizuho Financial Group	12	11	3,416	2.2	-0.3	33
Deutsche Bank	13	12	3,160	2.0	-0.2	23
National Australia Bank	14	15	2,619	1.7	0.2	20
Apollo Global Management Inc	15	7	1,937	1.3	-5.9	13
Natixis	16	29	1,624	1.1	0.7	14
Lloyds Bank	17	57	1,621	1.1	1.1	10
BNP Paribas SA	18	17	1,577	1.0	0.2	21
HSBC Holdings PLC	19	24	1,548	1.0	0.5	11
Commonwealth Bank of Australia	20	19	1,235	0.8	0.2	12
Mitsubishi UFJ Financial Group	21	21	1,220	0.8	0.3	12
Westpac Banking	22	28	1,187	0.8	0.4	12
Jefferies LLC	23	23	987	0.6	0.1	8
Cantor Fitzgerald LP	24	18	915	0.6	0.0	7
Performance Trust Capital	25	16	820	0.5	-0.4	9
Industry Total			**154,644**	**100.0**		**415**

Global ABS (B11) YoY Change ($) -26% QoQ Change ($) -2%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
BofA Securities Inc	1	2	18,252	10.0	1.9	74
JP Morgan	2	1	15,359	8.4	-1.3	69
Citi	3	3	11,645	6.4	-0.7	54
Wells Fargo & Co	4	6	11,607	6.4	0.3	49
Barclays	5	4	10,873	6.0	-1.0	54
RBC Capital Markets	6	7	10,540	5.8	0.4	57
Mizuho Financial Group	7	10	10,454	5.7	1.4	81
BNP Paribas SA	8	12	8,866	4.9	0.9	39
Deutsche Bank	9	9	8,099	4.4	-0.2	45
Mitsubishi UFJ Financial Group	10	14	7,254	4.0	1.1	33
Societe Generale	11	15	6,232	3.4	1.1	30
Jefferies LLC	12	13	5,659	3.1	-0.6	9
TD Securities Inc	13	17	5,327	2.9	1.4	25
Goldman Sachs & Co	14	8	4,798	2.6	-2.2	27
Apollo Global Management Inc	15	5	4,767	2.6	-4.0	29
BMO Capital Markets	16	20	4,145	2.3	1.1	25
Credit Agricole CIB	17	16	3,740	2.1	0.4	17
Morgan Stanley	18	11	3,654	2.0	-2.2	18
Sumitomo Mitsui Finl Grp Inc	19	24	3,212	1.8	1.0	18
Truist Financial Corp	20	21	2,798	1.5	0.5	28
Natixis	21	23	2,530	1.4	0.6	7
Lloyds Bank	22	22	2,428	1.3	0.4	10
Santander Corp & Invest Bkg	23	19	2,359	1.3	0.1	16
Sumitomo Mitsui Trust Holdings	24	27	2,013	1.1	0.6	4
UniCredit	25	30	1,475	0.8	0.4	6
Industry Total			**182,316**	**100.0**		**400**

Global Debt and Loans Islamic Finance YoY Change ($) 4% QoQ Change ($) 51%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
Malayan Banking Bhd	1	6	2,587	7.9	2.2	41
CIMB Group Holdings Bhd	2	2	2,384	7.2	-1.8	34
Citi	3	10	2,266	6.9	3.0	10
Standard Chartered PLC	4	5	2,111	6.4	0.4	11
RHB	5	8	2,048	6.2	1.3	33
Intl Islamic Trade Finance	6	7	1,914	5.8	0.7	7
JP Morgan	7	36	1,854	5.6	5.1	9
HSBC Holdings PLC	8	3	1,815	5.5	-2.3	22
Emirates NBD PJSC	9	1	1,358	4.1	-6.1	13
BNP Paribas SA	10	41*	1,338	4.1	3.8	3
Goldman Sachs & Co	11	37	1,274	3.9	3.5	3
First Abu Dhabi Bank PJSC	12	17	1,260	3.8	2.8	11
AMMB Holdings Bhd	13	14	1,172	3.6	0.8	26
Al Jazira Capital	14	-	1,000	3.0	-	1
Abu Dhabi Islamic Bank PSJC	15	49*	515	1.6	1.3	4
Dubai Islamic Bank PJSC	16	4	505	1.5	-5.1	7
Sumitomo Mitsui Finl Grp Inc	17*	18	472	1.4	0.4	3
Societe Generale	17*	22	472	1.4	0.5	3
Islamic Development Bank	19	30	421	1.3	0.7	3
Abu Dhabi Commercial Bank PJSC	20	29	421	1.3	0.6	5
Mizuho Financial Group	21	24	371	1.1	0.3	3
Kuwait Finance House	22	11	362	1.1	-2.8	4
Al Rajhi Capital	23	38	346	1.1	0.7	3
Credit Agricole CIB	24	41*	338	1.0	0.7	2
Mitsubishi UFJ Financial Group	25	35	329	1.0	0.5	3
Industry Total			**32,926**	**100.0**		**118**

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United States Insights

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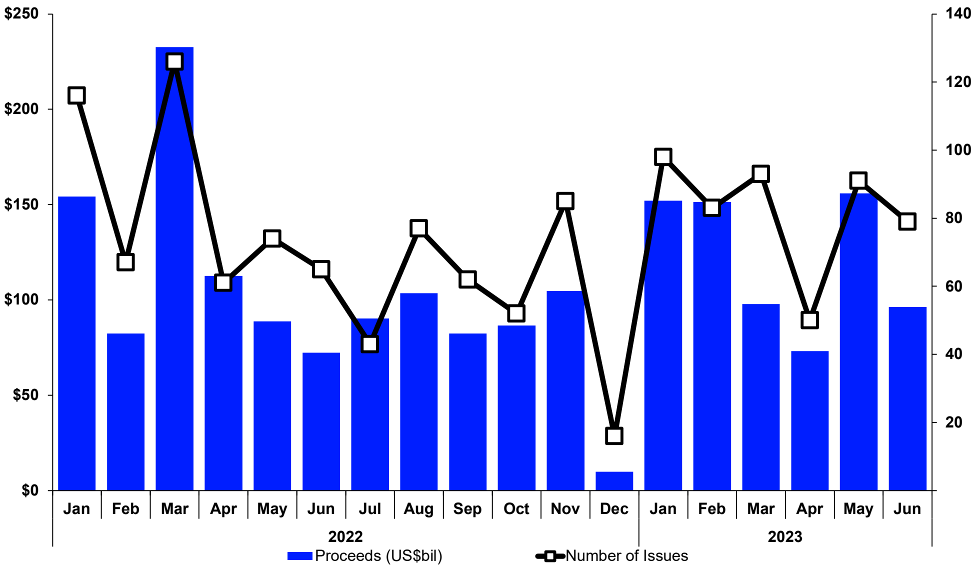
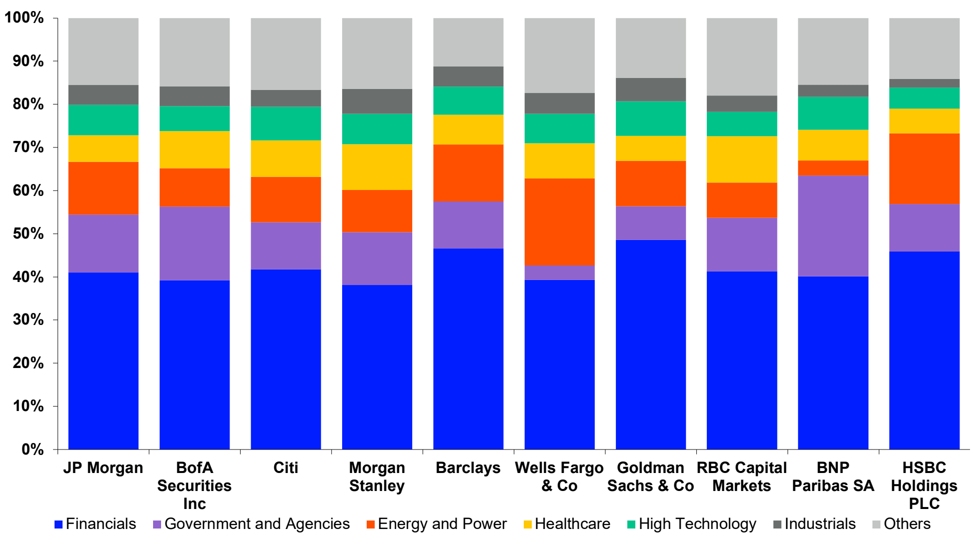
United States Marketed Monthly High Yield Volume



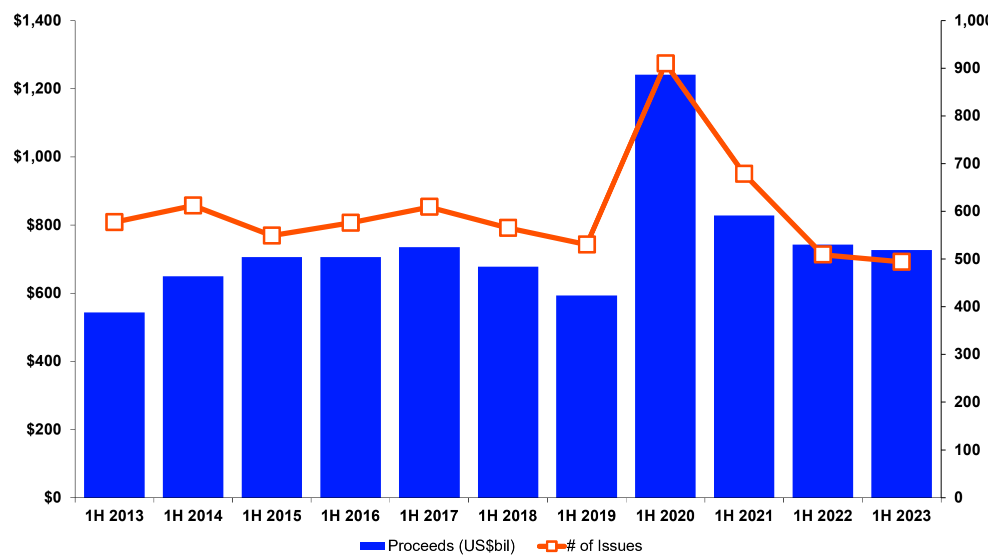
Top United States Investment Grade Corporate Deals

Issue Date	Issuer	Domicile Nation	Deal Size (US$mil)	Issue Type	Macro Sector
5/16/23	Pfizer Invest Entrps Pte Ltd	United States	30,831	Investment Grade Corporate	Financials
2/15/23	Amgen Inc	United States	23,925	Investment Grade Corporate	Healthcare
2/7/23	Intel Corp	United States	10,990	Investment Grade Corporate	High Technology
4/19/23	Bank of America Corp	United States	8,500	Investment Grade Corporate	Financials
5/1/23	Meta Platforms Inc	United States	8,484	Investment Grade Corporate	High Technology
3/8/23	Kenvue Inc	United States	7,726	Investment Grade Corporate	Consumer Products and Services
3/2/23	HSBC Holdings PLC	United Kingdom	7,000	Investment Grade Corporate	Financials
3/23/23	UnitedHealth Group Inc	United States	6,462	Investment Grade Corporate	Healthcare
4/19/23	Morgan Stanley	United States	6,000	Investment Grade Corporate	Financials
1/17/23	Morgan Stanley	United States	6,000	Investment Grade Corporate	Financials
5/8/23	Merck & Co Inc	United States	5,983	Investment Grade Corporate	Healthcare
2/13/23	CVS Health Corp	United States	5,980	Investment Grade Corporate	Healthcare
1/3/23	Sumitomo Mitsui Finl Grp Inc	Japan	5,800	Investment Grade Corporate	Financials

Top 10 United States DCM Bookrunners by Proceeds - Macro Industry Composition



United States Investment Grade - Proceeds



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United States Rankings

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U.S. Debt (F1) YoY Change ($) -11% QoQ Change ($) -13%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	1	134,316	9.7	-1.8	521
BofA Securities Inc	2	2	133,764	9.7	-0.3	492
Citi	3	3	122,053	8.8	-1.1	458
Morgan Stanley	4	6	88,066	6.4	0.5	319
Goldman Sachs & Co	5	4	81,974	5.9	-2.2	302
Barclays	6	7	81,670	5.9	1.2	351
Wells Fargo & Co	7	5	76,257	5.5	-0.6	460
RBC Capital Markets	8	8	52,625	3.8	0.6	319
HSBC Holdings PLC	9	13	48,678	3.5	1.2	132
BNP Paribas SA	10	12	48,593	3.5	1.1	190
Deutsche Bank	11	9	46,067	3.3	0.1	180
Mizuho Financial Group	12	14	42,002	3.0	0.8	220
TD Securities Inc	13	16	37,945	2.7	0.7	208
BMO Capital Markets	14	17	29,692	2.1	0.4	123
Mitsubishi UFJ Financial Group	15	15	28,248	2.0	0.0	168
UBS	16	10	22,384	1.6	-1.0	138
Sumitomo Mitsui Finl Grp Inc	17	23	21,164	1.5	0.6	123
Credit Agricole CIB	18	22	20,891	1.5	0.6	102
Truist Financial Corp	19	19	20,184	1.5	-0.1	151
Scotiabank	20	21	18,410	1.3	0.4	112
Industry Total			**1,385,558**	**100.0**		**2,007**

U.S. High Yield Corporate Debt (F8) YoY Change ($) 30% QoQ Change ($) 37%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	1	7,312	8.1	-2.8	65
BofA Securities Inc	2	3	7,021	7.8	-0.2	66
Goldman Sachs & Co	3	4	6,942	7.7	0.9	60
Wells Fargo & Co	4	5	4,968	5.5	-0.2	50
Citi	5	2	4,916	5.4	-3.3	51
Deutsche Bank	6	9	4,598	5.1	1.5	30
Morgan Stanley	7	8	4,522	5.0	0.4	41
RBC Capital Markets	8	12	3,984	4.4	1.8	39
Barclays	9	7	3,650	4.0	-0.8	40
BNP Paribas SA	10	15	2,474	2.7	0.6	32
Mizuho Financial Group	11	18	2,406	2.7	1.1	31
Mitsubishi UFJ Financial Group	12	14	2,093	2.3	0.1	28
BMO Capital Markets	13	21	1,969	2.2	0.9	19
UBS	14	6	1,911	2.1	-3.0	24
Truist Financial Corp	15	10	1,908	2.1	-0.7	30
HSBC Holdings PLC	16	17	1,902	2.1	0.3	23
Scotiabank	17	24	1,772	2.0	0.7	20
Credit Agricole CIB	18	29	1,700	1.9	1.2	20
Sumitomo Mitsui Finl Grp Inc	19	26	1,616	1.8	0.7	19
TD Securities Inc	20	23	1,533	1.7	0.4	19
Industry Total			**90,291**	**100.0**		**119**

U.S. Investment Grade Debt (F9) YoY Change ($) -2% QoQ Change ($) -19%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
BofA Securities Inc	1	2	75,781	10.4	-1.5	255
JP Morgan	2	1	71,338	9.8	-2.6	278
Citi	3	3	59,953	8.3	-1.8	209
Morgan Stanley	4	5	59,857	8.2	1.8	154
Goldman Sachs & Co	5	4	43,517	6.0	-2.8	143
Barclays	6	7	41,233	5.7	2.1	135
Wells Fargo & Co	7	6	36,187	5.0	-0.5	176
HSBC Holdings PLC	8	9	31,608	4.4	1.0	70
Mizuho Financial Group	9	14	28,290	3.9	1.4	125
BNP Paribas SA	10	11	26,023	3.6	0.7	108
RBC Capital Markets	11	12	24,985	3.4	0.5	104
Deutsche Bank	12	13	22,550	3.1	0.5	68
Mitsubishi UFJ Financial Group	13	10	20,283	2.8	-0.3	108
UBS	14	8	16,909	2.3	-1.2	46
Sumitomo Mitsui Finl Grp Inc	15	17	16,069	2.2	0.7	85
TD Securities Inc	16	15	15,796	2.2	0.3	90
US Bancorp	17	16	14,148	2.0	0.3	86
Credit Agricole CIB	18	19	12,377	1.7	0.5	57
Scotiabank	19	20	11,426	1.6	0.5	77
Truist Financial Corp	20	21	11,036	1.5	0.5	70
Industry Total			**726,451**	**100.0**		**494**

U.S. MBS (F11) YoY Change ($) -56% QoQ Change ($) -11%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	1	18,746	15.0	2.5	50
BofA Securities Inc	2	3	14,607	11.7	0.4	44
Goldman Sachs & Co	3	2	13,555	10.9	-0.8	46
Citi	4	4	13,453	10.8	0.0	43
Wells Fargo & Co	5	5	11,565	9.3	0.5	44
BMO Capital Markets	6	14	10,841	8.7	6.6	28
Morgan Stanley	7	6	10,318	8.3	-0.3	39
Barclays	8	9	7,616	6.1	1.9	46
Truist Financial Corp	9	10	4,144	3.3	-0.6	8
Santander Corp & Invest Bkg	10	-	3,960	3.2	3.2	11
Industry Total			**124,876**	**100.0**		**296**

U.S. ABS (F14) YoY Change ($) -32% QoQ Change ($) -2%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
BofA Securities Inc	1	3	15,316	10.9	3.3	60
JP Morgan	2	1	14,250	10.1	-0.7	66
Wells Fargo & Co	3	5	11,441	8.1	0.8	48
Barclays	4	2	9,564	6.8	-1.0	50
Citi	5	6	9,515	6.8	-0.3	46
RBC Capital Markets	6	7	9,383	6.7	0.6	47
Deutsche Bank	7	9	7,090	5.0	-0.1	39
Mizuho Financial Group	8	12	6,810	4.8	1.5	29
TD Securities Inc	9	16	5,183	3.7	2.1	24
Mitsubishi UFJ Financial Group	10	13	5,059	3.6	0.6	24
Industry Total			**140,848**	**100.0**		**232**

U.S. ABS ex Self & CDOs (F14b) YoY Change ($) -16% QoQ Change ($) 9%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	1	13,235	10.4	1.0	60
BofA Securities Inc	2	6	13,222	10.4	3.6	56
Wells Fargo & Co	3	4	9,127	7.2	0.1	43
Citi	4	3	8,981	7.1	-0.6	44
Barclays	5	2	8,847	7.0	-1.3	48
RBC Capital Markets	6	7	8,207	6.5	-0.2	44
Mizuho Financial Group	7	9	6,424	5.1	0.6	27
Deutsche Bank	8	8	5,177	4.1	-0.6	33
TD Securities Inc	9	15	5,082	4.0	1.8	23
Mitsubishi UFJ Financial Group	10	11	5,059	4.0	0.1	24
Industry Total			**126,830**	**100.0**		**199**

U.S. Securitizations (ex CMBS, Agency, CMO, Self-Funded & CDOs (F20a) YoY Change ($) -26% QoQ Change ($) 0%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	4	14,353	10.0	2.6	71
BofA Securities Inc	2	3	14,128	9.9	2.2	61
Barclays	3	2	11,263	7.9	-1.1	71
Wells Fargo & Co	4	7	10,186	7.1	0.9	50
Citi	5	5	9,620	6.7	-0.2	46
RBC Capital Markets	6	8	8,207	5.7	0.4	44
Mizuho Financial Group	7	11	6,702	4.7	1.2	29
Deutsche Bank	8	10	5,753	4.0	-0.9	38
ATLAS SP Partners	9	1	5,362	3.8	-5.4	34
Morgan Stanley	10	9	5,179	3.6	-1.5	32
Industry Total			**143,141**	**100.0**		**253**

*Indicates a Tie

US Residential MBS (F13b) YoY Change ($) -65% QoQ Change ($) -48%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
Barclays	1	4	2,705	13.9	4.0	24
Goldman Sachs & Co	2	1	2,479	12.7	-3.9	17
Morgan Stanley	3	3	2,182	11.2	1.1	17
Citi	4	5	1,960	10.1	0.4	3
JP Morgan	5	12	1,534	7.9	5.4	12
ATLAS SP Partners	6	2	1,521	7.8	-5.9	11
Nomura	7	7	1,224	6.3	0.1	12
Wells Fargo & Co	8	9	1,059	5.4	0.9	7
BofA Securities Inc	9	6	907	4.7	-4.0	5
Performance Trust Capital	10	8	686	3.5	-1.4	7
Industry Total			**19,485**	**100.0**		**61**

All Federal Credit Agency Debt (H1) YoY Change ($) 21% QoQ Change ($) -2%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
Wells Fargo & Co	1	1	8,159	11.4	1.2	129
Barclays	2	2	7,286	10.2	1.1	53
Nomura	3	6	6,843	9.6	4.6	45
TD Securities Inc	4	4	4,908	6.9	-0.8	53
Citi	5	3	4,494	6.3	-2.1	48
Daiwa Securities Group Inc	6	5	4,345	6.1	-0.3	73
RBC Capital Markets	7	12	3,799	5.3	2.3	93
Jefferies LLC	8	8	3,018	4.2	0.3	32
BofA Securities Inc	9	11	2,660	3.7	0.6	15
Academy Securities Inc	10	10	2,293	3.2	-0.4	57
Industry Total			**71,633**	**100.0**		**469**

International Debt & ESG Bonds Rankings

First Half 2023 | Debt Capital Markets | Managing Underwriters

All International Bonds (J01)

YoY Change ($) 5% QoQ Change ($) -18%

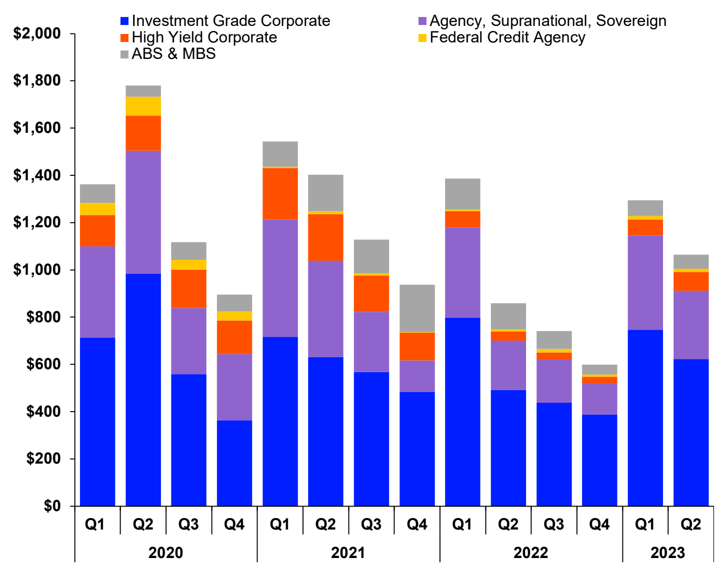
Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
JP Morgan	1	1	172,902	7.3	-1.4	726
BofA Securities Inc	2	3	156,583	6.6	-0.6	591
Citi	3	2	146,640	6.2	-1.0	556
BNP Paribas SA	4	6	130,430	5.5	0.7	547
Barclays	5	5	129,786	5.5	0.7	528
HSBC Holdings PLC	6	9	111,242	4.7	0.5	474
Morgan Stanley	7	8	106,829	4.5	0.2	363
Goldman Sachs & Co	8	4	104,738	4.4	-1.3	411
Deutsche Bank	9	7	104,686	4.4	0.1	407
Credit Agricole CIB	10	10	92,023	3.9	0.9	388
Societe Generale	11	11	64,554	2.7	-0.2	238
RBC Capital Markets	12	13	59,980	2.5	0.2	294
UBS	13	12	50,832	2.2	-0.7	237
Santander Corp & Invest Bkg	14	17	48,562	2.1	0.6	210
Wells Fargo & Co	15	14	48,197	2.0	-0.1	275
Mizuho Financial Group	16	21	45,318	1.9	0.6	256
TD Securities Inc	17	16	44,873	1.9	0.1	240
Nomura	18	18	39,520	1.7	0.2	171
UniCredit	19	15	38,778	1.6	-0.2	178
Natixis	20	22	36,753	1.6	0.3	175
Mitsubishi UFJ Financial Group	21	19	35,615	1.5	0.1	218
NatWest Markets	22	20	34,335	1.5	0.1	158
Commerzbank AG	23	24	32,515	1.4	0.4	145
ING	24	27	27,051	1.1	0.2	156
Sumitomo Mitsui Finl Grp Inc	25	28	25,255	1.1	0.3	174
Industry Total			**2,366,115**	**100.0**		**2,915**

All Bonds In Euros (N01)

YoY Change ($) 17% QoQ Change ($) -25%

Bookrunner	Rank 2023	Rank 2022	Proceeds €mil	Market Share	Mkt. Sh Chg	# of Deals
BNP Paribas SA	1	1	68,266	7.5	-0.5	289
Credit Agricole CIB	2	4	62,123	6.8	1.0	221
Deutsche Bank	3	3	52,802	5.8	-0.2	198
JP Morgan	4	2	51,562	5.7	-1.3	201
Societe Generale	5	5	48,540	5.3	-0.1	169
Barclays	6	6	47,402	5.2	0.0	185
HSBC Holdings PLC	7	7	40,299	4.4	-0.3	187
Citi	8	9	37,710	4.1	0.1	152
BofA Securities Inc	9	10	37,020	4.1	0.1	150
UniCredit	10	8	34,275	3.8	-0.9	172
Goldman Sachs & Co	11	11	31,476	3.5	-0.3	130
Natixis	12	13	30,772	3.4	0.4	139
Santander Corp & Invest Bkg	13	15	27,829	3.1	0.7	125
Morgan Stanley	14	12	27,441	3.0	0.0	93
Commerzbank AG	15	14	26,557	2.9	0.4	122
ING	16	18	20,191	2.2	0.3	125
NatWest Markets	17	17	19,895	2.2	0.2	84
BBVA	18	26	16,800	1.8	0.9	72
Nomura	19	23	16,037	1.8	0.4	39
UBS	20	16	14,002	1.5	-0.6	79
Landesbank Baden-Wurttemberg	21	19	12,927	1.4	-0.5	87
IMI - Intesa Sanpaolo	22	22	12,807	1.4	-0.1	74
DZ Bank	23	20	11,422	1.3	-0.5	70
Danske Bank	24	21	11,289	1.2	-0.4	50
Erste Group	25	27	10,913	1.2	0.3	69
Industry Total			**910,911**	**100.0**		**921**

International Bonds - Issue Type Composition (US$bil)



All Global ESG Bonds (GESG1)

YoY Change ($) 11% QoQ Change ($) 1%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
BNP Paribas SA	1	3	26,228	6.4	1.1	107
BofA Securities Inc	2	1	19,824	4.9	-0.9	74
Citi	3	5	19,770	4.9	0.6	79
Credit Agricole CIB	4	7	19,625	4.8	0.6	91
JP Morgan	5	2	18,755	4.6	-0.9	83
HSBC Holdings PLC	6	4	17,942	4.4	-0.8	92
Barclays	7	8	15,434	3.8	0.3	69
Deutsche Bank	8	6	14,400	3.5	-0.7	60
Nomura	9	15	12,328	3.0	1.0	62
Morgan Stanley	10	12	10,488	2.6	0.2	51
NatWest Markets	11	11	10,325	2.5	-0.1	36
Societe Generale	12	9	9,012	2.2	-0.8	38
Commerzbank AG	13	27	7,853	1.9	0.8	27
Mizuho Financial Group	14	17	7,557	1.9	0.1	60
Goldman Sachs & Co	15	10	7,233	1.8	-1.0	35
UBS	16	19	7,198	1.8	0.2	41
ING	17	18	6,751	1.7	0.1	43
RBC Capital Markets	18	22	6,360	1.6	0.2	39
Danske Bank	19	14	6,281	1.5	-0.5	41
TD Securities Inc	20	16	6,050	1.5	-0.4	36
Santander Corp & Invest Bkg	21	20	5,523	1.4	-0.1	40
BBVA	22	39	5,493	1.4	0.8	26
Natixis	23	13	5,448	1.3	-0.9	27
UniCredit	24	31	4,720	1.2	0.3	27
Sumitomo Mitsui Finl Grp Inc	25	24	4,667	1.1	-0.2	30
Industry Total			**407,831**	**100.0**		**718**

*Indicates a Tie

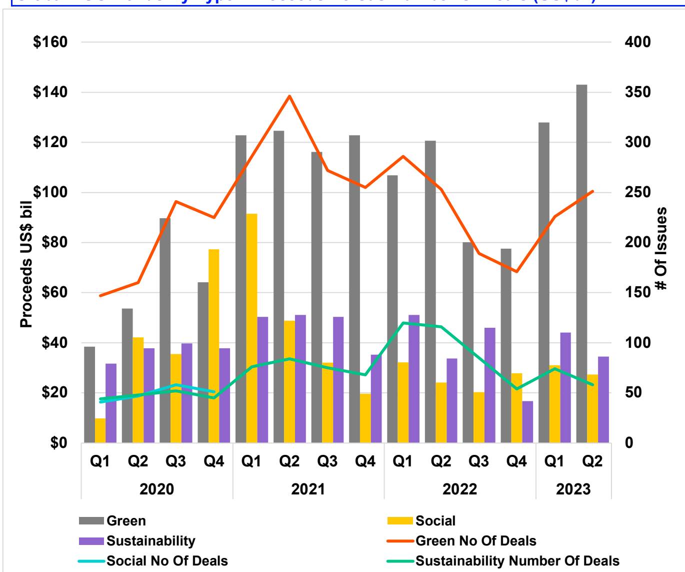
All Global Green Bonds (GR01)**

YoY Change ($) 19% QoQ Change ($) 12%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
BNP Paribas SA	1	2	18,114	6.7	1.3	75
BofA Securities Inc	2	1	13,860	5.1	-0.6	55
Credit Agricole CIB	3	5	12,999	4.8	0.7	57
JP Morgan	4	3	11,609	4.3	-0.5	56
Citi	5	7	9,871	3.6	-0.2	49
Deutsche Bank	6	6	9,377	3.5	-0.4	43
Barclays	7	8	9,008	3.3	0.1	47
HSBC Holdings PLC	8	4	8,604	3.2	-1.4	52
Morgan Stanley	9	17	6,271	2.3	0.6	32
NatWest Markets	10	10	6,201	2.3	-0.1	21
Danske Bank	11	9	6,107	2.3	-0.4	38
Commerzbank AG	12	26	6,072	2.2	1.1	21
UBS	13	15	5,680	2.1	0.3	30
ING	14	16	5,331	2.0	0.2	35
Nomura	15	27	4,813	1.8	0.7	23
Societe Generale	16	11	4,624	1.7	-0.6	25
BBVA	17	1	4,250	1.6	0.9	17
Goldman Sachs & Co	18	12	4,217	1.6	-0.6	25
Bank of China Ltd	19	14	4,119	1.5	-0.4	32
SEB	20	22	3,993	1.5	0.2	34
ICBC	21	31	3,759	1.4	0.4	28
UniCredit	22	23	3,695	1.4	0.2	19
Nordea	23	28	3,684	1.4	0.4	27
Santander Corp & Invest Bkg	24	21	3,551	1.3	-0.1	29
Mizuho Financial Group	25	30	3,547	1.3	0.3	35
Industry Total			**270,912**	**100.0**		**477**

**Totals are compiled in partnership with Climate Bonds Initiative; www.climatebonds.net

Global ESG Bonds By Type - Proceeds Versus Number Of Deals (US$bil)



High Yield Corporate Debt Rankings

First Half 2023 | Debt Capital Markets | Managing Underwriters

Global High Yield Debt (B4)

YoY Change ($) 30% QoQ Change ($) 38%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
Goldman Sachs & Co	1	2	9,868	8.3	0.7	81
JP Morgan	2	1	9,433	7.9	-1.5	84
BofA Securities Inc	3	4	8,398	7.0	0.3	78
Deutsche Bank	4	7	6,454	5.4	0.9	49
Citi	5	3	6,198	5.2	-2.0	63
Wells Fargo & Co	6	9	5,107	4.3	0.0	52
Morgan Stanley	7	8	4,969	4.2	-0.1	43
BNP Paribas SA	8	11	4,850	4.1	1.3	56
RBC Capital Markets	9	10	4,650	3.9	1.0	47
Barclays	10	6	4,649	3.9	-0.6	51
UBS	11	5	2,943	2.5	-3.1	31
Mizuho Financial Group	12	19	2,838	2.4	1.0	37
Credit Agricole CIB	13	20	2,814	2.4	1.1	33
HSBC Holdings PLC	14	12	2,500	2.1	-0.2	28
BMO Capital Markets	15	21	2,392	2.0	0.8	24
Mitsubishi UFJ Financial Group	16	15	2,334	2.0	0.1	30
Scotiabank	17	23	2,121	1.8	0.7	25
Sumitomo Mitsui Finl Grp Inc	18	27	2,019	1.7	0.7	24
Truist Financial Corp	19	14	1,936	1.6	-0.5	30
UniCredit	20	29	1,913	1.6	0.7	19
TD Securities Inc	21	22	1,817	1.5	0.3	23
Fifth Third Bancorp	22	18	1,503	1.3	-0.3	19
ING	23	35	1,467	1.2	0.6	18
DNB ASA	24	36	1,451	1.2	0.6	20
Natixis	25	38	1,201	1.0	0.4	15
Industry Total			**119,464**	**100.0**		**189**

Global High Yield Debt USD Denominated (B5)

YoY Change ($) 29% QoQ Change ($) 35%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
JP Morgan	1	1	7,312	8.0	-2.7	65
BofA Securities Inc	2	3	7,021	7.7	-0.2	66
Goldman Sachs & Co	3	4	6,954	7.6	0.7	61
Wells Fargo & Co	4	5	4,968	5.4	-0.2	50
Citi	5	2	4,916	5.4	-3.1	51
Deutsche Bank	6	9	4,610	5.0	1.5	31
Morgan Stanley	7	8	4,522	4.9	0.4	41
RBC Capital Markets	8	12	3,984	4.4	1.9	39
Barclays	9	7	3,650	4.0	-0.7	40
UBS	10	6	2,591	2.8	-2.3	26
BNP Paribas SA	11	15	2,474	2.7	0.7	32
Mizuho Financial Group	12	18	2,406	2.6	1.0	31
Mitsubishi UFJ Financial Group	13	14	2,093	2.3	0.2	28
BMO Capital Markets	14	21	1,969	2.2	0.9	19
HSBC Holdings PLC	15	17	1,914	2.1	0.2	24
Truist Financial Corp	16	10	1,908	2.1	-0.6	30
Scotiabank	17	24	1,772	1.9	0.7	20
Credit Agricole CIB	18	29	1,700	1.9	1.2	20
Sumitomo Mitsui Finl Grp Inc	19	26	1,616	1.8	0.7	19
TD Securities Inc	20	23	1,533	1.7	0.5	19
Fifth Third Bancorp	21	16	1,475	1.6	-0.4	19
US Bancorp	22	27	1,163	1.3	0.4	14
KKR & Co Inc	23	37	1,055	1.2	0.8	9
DNB ASA	24	35	973	1.1	0.7	10
PNC Financial Services Group	25	13	959	1.1	-1.3	14
Industry Total			**91,518**	**100.0**		**124**

Top High Yield Corporate Deals

Issue Date	Issuer	Domicile Nation	Proceeds US$mil	Coupon %	Macro Sector
5/19/23	Venture Global LNG Inc	United States	4,000.0	8.125	Energy and Power
4/4/23	Cloud Software Group Inc	United States	3,031.7	9.000	High Technology
5/4/23	Emerald Debt Merger Sub LLC	United States	2,776.0	6.625	Financials
1/30/23	Mauser Pkg Solutions Hldg Co	United States	2,750.0	7.875	Materials
1/3/23	Ford Motor Credit Co	United States	2,746.9	6.950	Financials
6/22/23	Civitas Resources Inc	United States	2,700.0	8.375	Energy and Power
2/3/23	Uniti Group LP	United States	2,600.0	10.500	Telecommunications
5/24/23	Diamond Escrow Issuer LLC	United States	2,377.1	9.750	Materials
1/23/23	Caesars Entertainment Inc	United States	2,000.0	7.000	Media and Entertainment
6/5/23	Ford Motor Credit Co	United States	1,750.0	6.950	Financials
1/17/23	DISH Network Corp	United States	1,530.0	11.750	Media and Entertainment
4/3/23	Ford Motor Credit Co	United States	1,499.8	6.800	Financials
4/21/23	Allwyn Ent Financing (Uk) Plc	Czech Republic	1,430.6	7.250	Media and Entertainment

Global High Yield Debt Non-USD Denominated (B6)

YoY Change ($) 39% QoQ Change ($) 45%

Bookrunner	Rank 2023	Rank 2022	Proceeds €mil	Market Share	Mkt. Sh Chg	# of Deals
Goldman Sachs & Co	1	1	2,681	10.4	0.2	25
BNP Paribas SA	2	4	2,188	8.5	3.1	27
JP Morgan	3	5	1,953	7.6	2.6	22
Deutsche Bank	4	2	1,695	6.6	-1.3	20
UniCredit	5	8	1,419	5.5	1.6	17
BofA Securities Inc	6	13	1,271	4.9	2.1	14
Citi	7	12	1,174	4.6	1.6	15
Credit Agricole CIB	8	11	1,025	4.0	0.7	14
Barclays	9	7	920	3.6	-0.3	13
Commerzbank AG	10	43	678	2.6	2.1	8
RBC Capital Markets	11	6	616	2.4	-1.6	9
HSBC Holdings PLC	12	9	546	2.1	-1.6	8
ING	13	20	527	2.1	0.5	9
Santander Corp & Invest Bkg	14	29	474	1.8	0.9	7
NatWest Markets	15	15	465	1.8	-0.7	5
DNB ASA	16	23	441	1.7	0.4	10
Morgan Stanley	17	10	411	1.6	-1.8	4
Nordea	18	17	409	1.6	-0.7	8
Societe Generale	19	18	398	1.6	-0.5	7
Mizuho Financial Group	20	36*	398	1.5	0.9	8
BMO Capital Markets	21	32*	391	1.5	0.6	6
Pareto AS	22	38	382	1.5	0.9	6
Sumitomo Mitsui Finl Grp Inc	23	36*	371	1.4	0.8	6
IMI - Intesa Sanpaolo	24	14	331	1.3	-1.2	5
UBS	25	3	325	1.3	-5.9	5
Industry Total			**25,741**	**100.0**		**70**

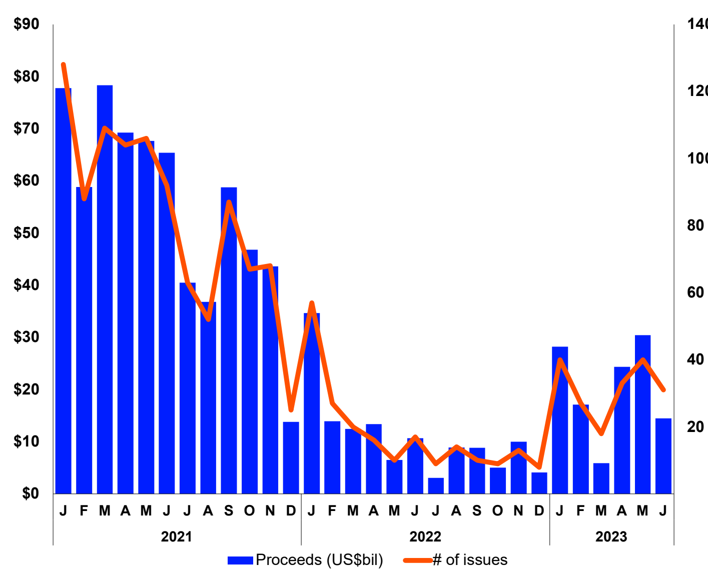
*Indicates a Tie

Global High Yield Debt EURO Denominated (B06b)

YoY Change ($) 57% QoQ Change ($) 57%

Bookrunner	Rank 2023	Rank 2022	Proceeds €mil	Market Share	Mkt. Sh Chg	# of Deals
Goldman Sachs & Co	1	1	2,495	11.1	0.5	24
BNP Paribas SA	2	4	2,188	9.7	3.2	27
JP Morgan	3	5	1,844	8.2	2.3	21
Deutsche Bank	4	2	1,695	7.5	-1.8	20
UniCredit	5	6	1,419	6.3	1.3	17
Citi	6	9	1,082	4.8	0.9	15
BofA Securities Inc	7	10	1,080	4.8	1.7	13
Credit Agricole CIB	8	8	1,025	4.6	0.4	14
Barclays	9	14	733	3.3	0.9	12
Commerzbank AG	10	33	678	3.0	2.4	8
ING	11	19	527	2.3	0.8	9
Santander Corp & Invest Bkg	12	30*	474	2.1	1.4	7
HSBC Holdings PLC	13	11	451	2.0	-0.9	7
Morgan Stanley	14	7	411	1.8	-2.6	4
Societe Generale	15	16	398	1.8	-0.5	7
Mizuho Financial Group	16	42*	398	1.8	1.5	8
Nordea	17	13	378	1.7	-0.8	6
Sumitomo Mitsui Finl Grp Inc	18	42*	371	1.7	1.4	6
Pareto AS	19	29	366	1.6	0.9	5
IMI - Intesa Sanpaolo	20	12	331	1.5	-1.3	5
UBS	21	3	325	1.4	-6.8	5
Natixis	22	15	312	1.4	-1.0	6
Banca Akros SpA/Oaklins Italy	23	23	288	1.3	0.1	3
DNB ASA	24	26	271	1.2	0.1	5
Mitsubishi UFJ Financial Group	25	22	222	1.0	-0.3	4
Industry Total			**22,522**	**100.0**		**56**

Global High Yield Corporate Debt Issuance



Emerging Markets Rankings

First Half 2023 | Debt Capital Markets | Managing Underwriters

All International Emerging Market Bonds (L1)

YoY Change ($) 11% QoQ Change ($) -29%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	2	24,276	9.2	1.3	90
Citi	2	1	24,085	9.1	-0.1	95
HSBC Holdings PLC	3	3	19,043	7.2	0.5	114
BNP Paribas SA	4	4	18,302	6.9	2.5	64
Standard Chartered PLC	5	5	13,008	4.9	0.8	72
BofA Securities Inc	6	6	10,073	3.8	0.4	37
Goldman Sachs & Co	7	9	9,880	3.7	0.9	26
Credit Agricole CIB	8	10	8,649	3.3	0.7	56
Societe Generale	9	11	6,731	2.5	-0.1	29
Deutsche Bank	10	7	6,416	2.4	-0.9	22
Santander Corp & Invest Bkg	11	15	5,625	2.1	0.5	19
Morgan Stanley	12	21	5,186	2.0	0.7	23
Barclays	13	8	4,659	1.8	-1.0	24
ING	14	25	4,489	1.7	0.5	18
UBS	15	13	4,421	1.7	-0.5	24
Mizuho Financial Group	16	12	4,194	1.6	-0.9	34
Mitsubishi UFJ Financial Group	17	20	4,075	1.5	0.2	31
Sumitomo Mitsui Finl Grp Inc	18	19	3,927	1.5	0.1	36
ICBC	19	23	3,896	1.5	0.3	44
Scotiabank	20	26	3,746	1.4	0.4	12
Industry Total			**264,937**	**100.0**		**431**

EMEA Emerging Market Bonds (L2)

YoY Change ($) 44% QoQ Change ($) -52%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
Citi	1	1	8,115	12.1	-1.7	23
JP Morgan	2	2	8,110	12.0	-0.1	24
BNP Paribas SA	3	5	6,559	9.7	2.4	19
Deutsche Bank	4	3	5,016	7.5	-2.2	12
ING	5	8	3,671	5.5	0.4	12
Goldman Sachs & Co	6	4	3,578	5.3	-2.7	9
Erste Group	7	7	3,533	5.2	0.1	20
HSBC Holdings PLC	8	6	2,903	4.3	-1.8	6
Societe Generale	9	9	2,821	4.2	0.4	10
UniCredit	10	17	2,408	3.6	2.3	9
Raiffeisen Bank International	11	21	1,942	2.9	2.1	9
Standard Chartered PLC	12	20	1,905	2.8	2.0	6
IMI - Intesa Sanpaolo	13	29	1,682	2.5	2.0	7
Commerzbank AG	14	12	1,562	2.3	0.4	7
Raiffeisen Landesbanken Hdg	15	-	1,280	1.9	1.9	2
BofA Securities Inc	16	44	1,199	1.8	1.5	4
Barclays	17	10	1,108	1.6	-0.7	5
Morgan Stanley	18	22	857	1.3	0.6	4
ICBC	19	39	747	1.1	0.8	2
Gazprombank	20	-	664	1.0	1.0	4
Industry Total			**67,363**	**100.0**		**64**

Latin America Emerging Market Bonds (L3)

YoY Change ($) 0% QoQ Change ($) -8%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
JP Morgan	1	2	6,079	15.6	0.5	14
Santander Corp & Invest Bkg	2	4	4,501	11.5	3.7	14
Citi	3	1	3,878	9.9	-6.1	14
Scotiabank	4	6	3,580	9.2	3.0	11
BNP Paribas SA	5	10	2,759	7.1	4.2	8
BofA Securities Inc	6	3	2,519	6.4	-3.2	8
BBVA	7	7	2,303	5.9	1.5	5
HSBC Holdings PLC	8	9	1,927	4.9	1.5	7
Sumitomo Mitsui Finl Grp Inc	9	21	1,355	3.5	2.4	6
Goldman Sachs & Co	10	8	1,312	3.4	-0.1	3
Itau Unibanco	11	15	1,293	3.3	1.2	6
Morgan Stanley	12	13	1,239	3.2	0.9	4
Credit Agricole CIB	13	12	913	2.3	-0.2	4
Mizuho Financial Group	14	14	807	2.1	-0.1	4
Barclays	15	5	645	1.7	-5.1	3
Societe Generale	16	18	610	1.6	-0.2	2
UBS	17	11	482	1.2	-1.4	4
Mitsubishi UFJ Financial Group	18	-	439	1.1	1.1	3
BMO Capital Markets	19	16*	312	0.8	-1.2	2
Jefferies LLC	20	-	267	0.7	0.7	1
Industry Total			**39,098**	**100.0**		**33**

Asia Pacific Emerging Market Bonds (L4)

YoY Change ($) -19% QoQ Change ($) -18%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
HSBC Holdings PLC	1	1	10,850	9.9	3.1	77
Credit Agricole CIB	2	6	6,488	5.9	2.2	45
Citi	3	3	6,189	5.7	-0.5	37
Standard Chartered PLC	4	2	6,109	5.6	-0.8	45
JP Morgan	5	4	5,562	5.1	0.3	32
BofA Securities Inc	6	10	5,255	4.8	2.2	21
BNP Paribas SA	7	5	4,662	4.3	0.2	27
UBS	8	9	3,839	3.5	0.6	19
Bank of Communications Co Ltd	9	11	3,490	3.2	0.7	59
Bank of China Ltd	10	8	3,037	2.8	-0.4	45
Industry Total			**109,334**	**100.0**		**284**

Middle East Emerging Market Bonds (L5)

YoY Change ($) 134% QoQ Change ($) -32%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
Citi	1	2	5,843	12.2	4.0	20
Standard Chartered PLC	2	3	4,870	10.2	2.4	19
JP Morgan	3	4	4,595	9.6	2.0	18
BNP Paribas SA	4	16	4,289	8.9	6.8	9
Goldman Sachs & Co	5	9	3,908	8.1	4.4	8
HSBC Holdings PLC	6	1	3,330	6.9	-5.1	23
First Abu Dhabi Bank PJSC	7	6	2,122	4.4	-0.9	17
Saudi National Bank SJSC	8	19	1,752	3.7	1.9	2
Emirates NBD PJSC	9	7	1,399	2.9	-1.0	14
Sumitomo Mitsui Finl Grp Inc	10	21	1,129	2.4	0.7	6
Industry Total			**48,001**	**100.0**		**43**

All Global Debt, by Brazilian Issuers (BR1)

YoY Change ($) -38% QoQ Change ($) 180%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
Itau Unibanco	1	1	1,868	16.8	-3.2	18
Banco Bradesco SA	2	2	1,087	9.8	-4.2	8
UBS	3	5	1,081	9.7	3.8	14
BNP Paribas SA	4	18	1,017	9.1	7.7	3
BofA Securities Inc	5	11	926	8.3	5.1	2
Morgan Stanley	6	12	901	8.1	5.3	3
Citi	7	14	594	5.3	3.6	6
Santander Corp & Invest Bkg	8	6	576	5.2	0.0	10
Industry Total			**11,125**	**100.0**		**46**

Domestic Brazilian Debt, in Reals (BR2)

YoY Change ($) -22% QoQ Change ($) -20%

Bookrunner	Rank 2023	Rank 2022	Proceeds R$mil	Market Share	Mkt. Sh. Chg	# of Deals
Itau Unibanco	1	1	13,292	25.0	-13.4	31
UBS	2	6	12,638	23.8	19.2	16
Banco Bradesco SA	3	2	7,780	14.7	-4.6	14
Santander Corp & Invest Bkg	4	5	7,290	13.7	7.7	17
Banco BTG Pactual SA	5	3	2,100	4.0	-11.8	5
Banco Votorantim	6	10	1,235	2.3	1.5	6
Allianz AG	7	-	600	1.1	1.1	2
Banco Safra SA	8	7	566	1.1	-0.9	3
BNP Paribas SA	9	9	550	1.0	-0.2	1
XP Investimentos	10	4	450	0.9	-7.3	2
Industry Total			**53,116**	**100.0**		**86**

*Indicates a Tie

Global Debt, Mexican Issuers (MX1)

YoY Change ($) 15% QoQ Change ($) -60%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
BBVA	1	1	2,327	16.2	-1.2	21
JP Morgan	2	6*	1,975	13.8	9.5	5
BNP Paribas SA	3	-	1,446	10.1	10.1	3
BofA Securities Inc	4	3*	1,197	8.3	-6.6	2
Casa de Bolsa Inverlat	5	5	1,115	7.8	2.7	19
Santander Corp & Invest Bkg	6	2	818	5.7	-10.7	12
Citi	7	8	705	4.9	1.1	6
Mizuho Financial Group	8	-	617	4.3	4.3	2
HSBC Holdings PLC	9	10*	529	3.7	1.7	4
Goldman Sachs & Co	10	-	499	3.5	3.5	2
Industry Total			**14,361**	**100.0**		**48**

Domestic Mexican Debt (MX3)

YoY Change ($) 50% QoQ Change ($) -33%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh. Chg	# of Deals
Casa de Bolsa Inverlat	1	1	1,270	33.1	8.2	21
BBVA	2	2	601	15.6	-1.5	17
Santander Corp & Invest Bkg	3	4	539	14.0	0.0	11
Grupo Financiero Banorte-Ixe	4	6	398	10.4	4.4	15
Corporacion Actinver Sab de CV	5	11	378	9.9	7.8	15
Casas de Bolsa Bital, S.A.	6	3	225	5.9	-8.2	2
Citi	7	5	118	3.1	-4.0	4
Grupo Financiero Inbursa SA	8	12	86	2.2	0.2	1
HSBC Holdings PLC	9	-	58	1.5	1.5	2
Casa de Bolsa Finamex SAD de C	10	-	54	1.4	1.4	1
Industry Total			**3,842**	**100.0**		**42**

Asia-Pacific Rankings

First Half 2023 | Debt Capital Markets | Managing Underwriters

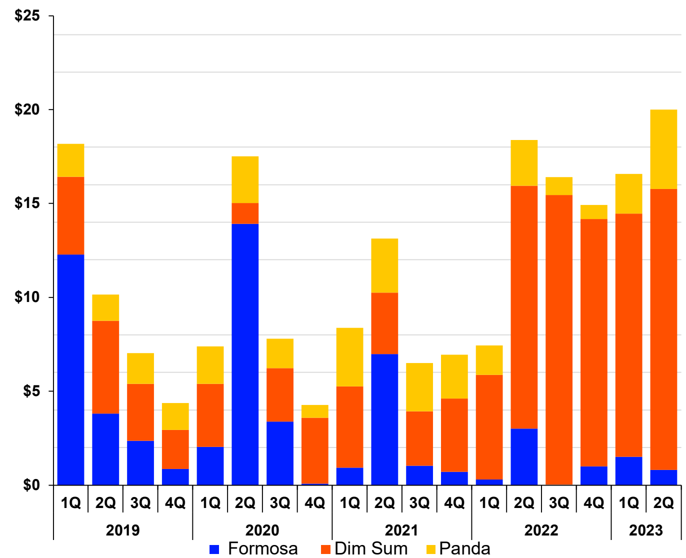
Asian G3 Bonds (ex-Japan & Australia) (AR2) YoY Change ($) -34% QoQ Change ($) -34%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
HSBC Holdings PLC	1	3	9,905	11.2	5.3	50
Citi	2	1	6,956	7.8	0.9	35
JP Morgan	3	4	6,534	7.4	1.6	32
BofA Securities Inc	4	5	6,109	6.9	2.8	21
BNP Paribas SA	5	6	6,099	6.9	2.9	30
Credit Agricole CIB	6	8	5,374	6.1	2.8	31
Standard Chartered PLC	7	2	5,281	6.0	-0.2	34
Morgan Stanley	8	14	3,682	4.2	2.0	14
UBS	9	11	3,033	3.4	0.9	14
Mitsubishi UFJ Financial Group	10	20	2,448	2.8	1.3	20
Deutsche Bank	11	7	1,994	2.2	-1.1	6
Barclays	12	28	1,880	2.1	0.9	9
TD Securities Inc	13	32	1,869	2.1	1.2	2
Societe Generale	14	18	1,805	2.0	0.2	11
DBS Group Holdings	15	13	1,680	1.9	-0.3	12
Nomura	16	24	1,593	1.8	0.4	2
RBC Capital Markets	17	33	1,372	1.5	0.6	1
BMO Capital Markets	18	53	1,370	1.5	1.2	2
Mizuho Financial Group	19	9	1,272	1.4	-1.7	14
Bank of China Ltd	20	10	1,177	1.3	-1.3	22
ANZ Banking Group	21	35	1,121	1.3	0.5	7
ICBC	22	21	935	1.1	-0.4	14
CITIC	23	12	860	1.0	-1.4	32
China International Capital Co	24	17	718	0.8	-1.3	24
Goldman Sachs & Co	25	15	713	0.8	-1.3	3
Industry Total			**88,805**	**100.0**		**120**

Asian G3 High Yield Bonds (ex Japan & Australia) (AR10) YoY Change ($) -50% QoQ Change ($) -42%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
UBS	1	11*	680	63.1	59.2	2
BNP Paribas SA	2*	-	33	3.1	3.1	1
DBS Group Holdings	2*	3*	33	3.1	-5.7	1
Standard Chartered PLC	2*	23*	33	3.1	2.6	1
Deutsche Bank	2*	1	33	3.1	-9.8	1
Barclays	2*	2	33	3.1	-6.2	1
Mizuho Financial Group	2*	23*	33	3.1	2.6	1
HSBC Holdings PLC	2*	11*	33	3.1	-0.8	1
JP Morgan	2*	3*	33	3.1	-5.7	1
Societe Generale	2*	-	33	3.1	3.1	1
Sumitomo Mitsui Finl Grp Inc	2*	-	33	3.1	3.1	1
Natixis	2*	-	33	3.1	3.1	1
Mitsubishi UFJ Financial Group	2*	-	33	3.1	3.1	1
Industry Total			**1,078**	**100.0**		**3**

Dim Sum, Panda and Formosa Bond Issuance (ex self-funded) (US$mil)

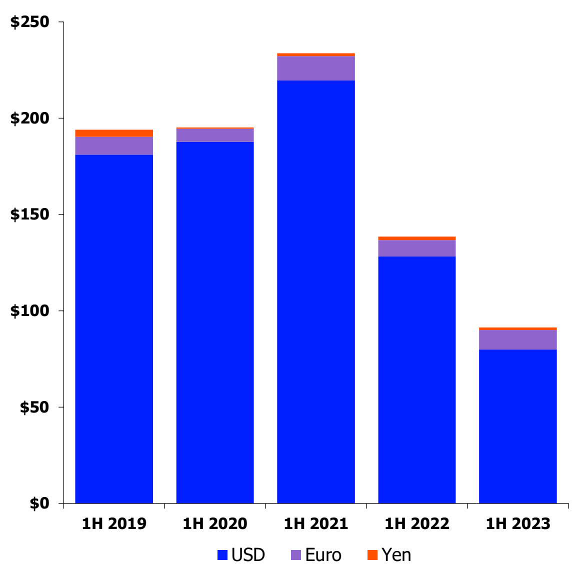


All Asian Currencies (ex Japan & Australia) (AS1) YoY Change ($) -13% QoQ Change ($) 6%

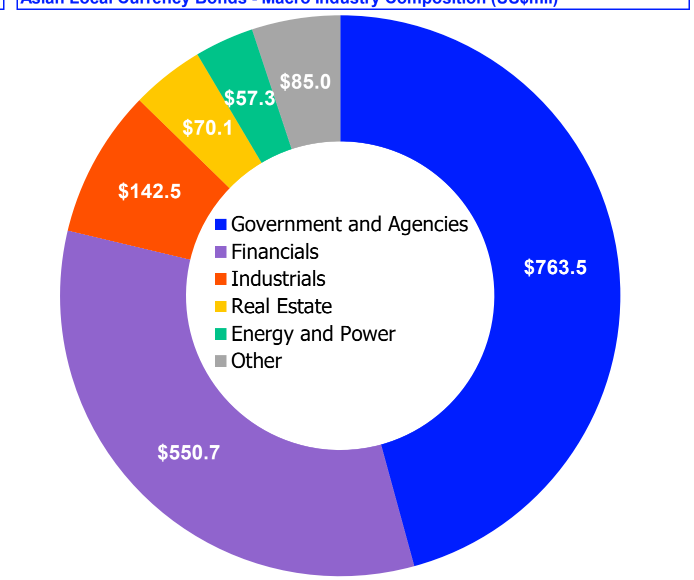
Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
CITIC	1	1	107,077	6.4	-0.3	1,684
Bank of China Ltd	2	2	83,853	5.0	-1.0	1,253
China Securities Co Ltd	3	7	78,722	4.7	0.3	1,281
ICBC	4	3	74,676	4.5	-1.5	1,154
China Construction Bank	5	4	67,577	4.1	-1.5	1,151
Huatai Securities Co Ltd	6	8	66,325	4.0	0.3	1,098
Agricultural Bank of China	7	5	65,561	3.9	-1.2	1,097
China International Capital Co	8	9	60,935	3.7	0.5	1,042
Bank of Communications Co Ltd	9	6	57,674	3.5	-1.1	1,010
Guotai Junan Securities	10	10	47,672	2.9	0.1	807
Industrial Bank Co Ltd	11	11	42,893	2.6	-0.1	871
China Merchants Bank	12	12	30,710	1.8	-0.4	595
Orient Securities Co Ltd	13	13	26,932	1.6	0.1	425
Shenwan Hongyuan Securities Co	14	23	24,471	1.5	0.6	398
China Dvlp Bank Sec Co Ltd	15	19	23,642	1.4	0.2	442
Haitong Securities Co Ltd	16	15	22,860	1.4	0.0	400
Everbright Securities Co Ltd	17	16	21,750	1.3	-0.1	411
China Galaxy Securities Co	18	18	21,513	1.3	0.1	413
Shanghai Pudong Development Bk	19	14	21,009	1.3	-0.2	480
Postal Savings Bank Of China	20	17	20,481	1.2	-0.1	337
China Merchants Securities Co	21	24	17,869	1.1	0.2	218
China Minsheng Banking Corp	22	21	17,100	1.0	-0.2	335
Ping An Securities Ltd	23	35	15,811	1.0	0.4	205
HSBC Holdings PLC	24	25	15,477	0.9	0.0	255
GF Securities	25	30	13,959	0.8	0.1	158
Industry Total			**1,669,163**	**100.0**		**8,246**

*Indicates a Tie

Asian G3 Bond Volume - Currency (US$mil)



Asian Local Currency Bonds - Macro Industry Composition (US$mil)



Australia & China Rankings

First Half 2023 | Debt Capital Markets | Managing Underwriters

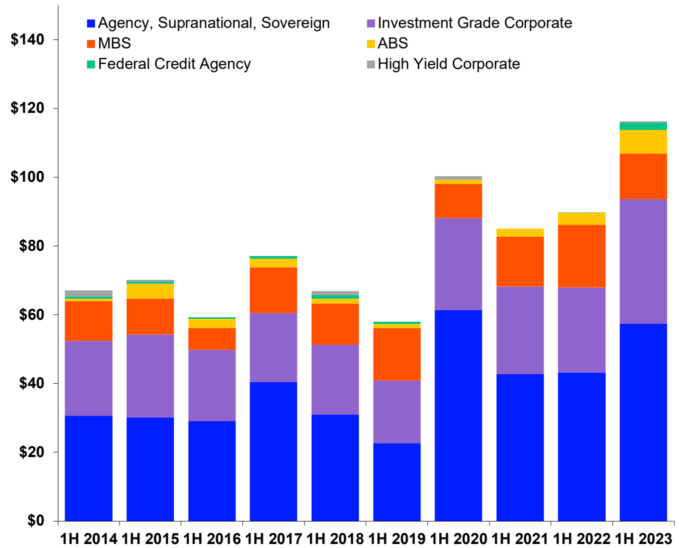
All Australian Debt (ex self-funded) (AJ3a) YoY Change ($) 29% QoQ Change ($) 30%

Bookrunner	Rank 2023	Rank 2022	Proceeds AU$mil	Market Share	Mkt. Sh Chg	# of Deals
National Australia Bank	1	1	17,363	15.0	-4.3	69
ANZ Banking Group	2	3	16,328	14.1	2.1	62
Commonwealth Bank of Australia	3	2	14,454	12.5	-2.4	58
Westpac Banking	4	4	12,499	10.8	0.4	70
Deutsche Bank	5	5	8,891	7.7	0.0	27
UBS	6	6	7,993	6.9	-0.3	34
RBC Capital Markets	7	7	6,943	6.0	2.5	42
Nomura	8	10	6,786	5.9	3.2	42
TD Securities Inc	9	8	4,735	4.1	0.8	36
JP Morgan	10	9	3,101	2.7	-0.4	21
Barclays	11	16	1,914	1.7	0.7	14
BofA Securities Inc	12	13	1,876	1.6	0.3	8
Citi	13	11	1,377	1.2	-0.3	10
HSBC Holdings PLC	14	23	1,200	1.0	0.4	8
Standard Chartered PLC	15	17	1,018	0.9	0.0	8
Daiwa Securities Group Inc	16	15	905	0.8	-0.2	16
Mizuho Financial Group	17	21	900	0.8	0.2	7
Macquarie Group	18	18	806	0.7	-0.2	6
Natixis	19	34	690	0.6	0.4	5
United Overseas Bank Ltd	20	14	688	0.6	-0.7	4
Industry Total			**115,753**	**100.0**		**214**

All Australian International Bonds (AJ7) YoY Change ($) 2% QoQ Change ($) -44%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
HSBC Holdings PLC	1	2	4,198	8.9	-1.0	23
BofA Securities Inc	2	3	3,572	7.6	-1.5	16
BNP Paribas SA	3	10	3,206	6.8	3.3	12
National Australia Bank	4	5	3,079	6.5	0.7	10
Citi	5	1	3,008	6.4	-4.5	14
Barclays	6	11	2,804	5.9	2.7	11
JP Morgan	7	4	2,743	5.8	-2.6	16
UBS	8	7	2,563	5.4	-0.1	10
Westpac Banking	9	15	2,195	4.7	1.7	7
RBC Capital Markets	10	8	1,968	4.2	-1.1	9
Deutsche Bank	11	16	1,845	3.9	2.0	7
ANZ Banking Group	12	17	1,755	3.7	1.9	7
Goldman Sachs & Co	13	14	1,696	3.6	0.6	8
Morgan Stanley	14	13	1,400	3.0	0.0	5
Societe Generale	15	6	1,399	3.0	-2.6	6
TD Securities Inc	16	12	1,304	2.8	-0.4	6
Wells Fargo & Co	17	-	1,267	2.7	2.7	7
Commonwealth Bank of Australia	18	9	969	2.1	-2.2	6
Mitsubishi UFJ Financial Group	19	20	795	1.7	0.3	3
Santander Corp & Invest Bkg	20	-	765	1.6	1.6	2
Industry Total			**47,247**	**100.0**		**64**

All Australian Debt - Issue Type Composition (AU$mil)



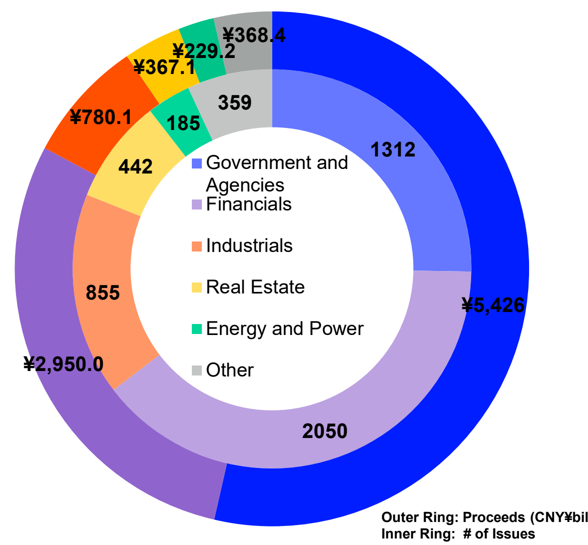
China G3 Currency Bonds (AR5) YoY Change ($) -65% QoQ Change ($) -39%

Bookrunner	Rank 2023	Rank 2022	Proceeds US$mil	Market Share	Mkt. Sh Chg	# of Deals
HSBC Holdings PLC	1	17	1,034	6.6	3.9	6
JP Morgan	2	44	962	6.1	5.6	4
Credit Agricole CIB	3	10	756	4.8	1.8	10
ICBC	4	8	693	4.4	1.3	10
CITIC	5	1	647	4.1	-1.6	28
Citi	6	15	626	4.0	1.1	8
Industrial Bank Co Ltd	7	2	563	3.6	-1.8	23
Barclays	8	87	549	3.5	3.4	3
Bank of Communications Co Ltd	9	7	538	3.4	0.2	17
BNP Paribas SA	10	19	531	3.4	1.4	3
Bank of China Ltd	11	4	516	3.3	-1.2	15
TD Securities Inc	12*	41	498	3.2	2.5	1
BMO Capital Markets	12*	-	498	3.2	3.2	1
China International Capital Co	14	3	469	3.0	-2.1	19
Agricultural Bank of China	15	14	467	3.0	0.1	12
China Construction Bank	16	6	413	2.6	-0.6	11
China Minsheng Banking Corp	17	16	403	2.6	-0.2	13
Deutsche Bank	18	20	401	2.5	0.7	1
Huaxia Bank Co Ltd	19	27	331	2.1	0.8	15
China Merchants Bank	20	9	292	1.9	-1.2	10
Industry Total			**15,748**	**100.0**		**42**

Chinese Yuan Bonds (ex-Self Funded) (AS24) YoY Change ($) -10% QoQ Change ($) 10%

Bookrunner	Rank 2023	Rank 2022	Proceeds CN¥mil	Market Share	Mkt. Sh Chg	# of Deals
CITIC	1	1	741,310	7.3	0.0	1,684
Bank of China Ltd	2	3	578,977	5.7	-0.8	1,250
China Securities Co Ltd	3	7	545,379	5.4	0.5	1,281
ICBC	4	2	516,330	5.1	-1.5	1,154
China Construction Bank	5	4	467,040	4.6	-1.6	1,151
Huatai Securities Co Ltd	6	8	459,509	4.5	0.4	1,098
Agricultural Bank of China	7	5	452,857	4.5	-1.2	1,097
China International Capital Co	8	9	422,129	4.2	0.7	1,042
Bank of Communications Co Ltd	9	6	398,711	3.9	-1.2	1,010
Guotai Junan Securities	10	10	330,433	3.3	0.2	806
Industrial Bank Co Ltd	11	11	296,852	2.9	-0.1	871
China Merchants Bank	12	12	212,951	2.1	-0.4	595
Orient Securities Co Ltd	13	13	185,895	1.8	0.1	425
Shenwan Hongyuan Securities Co	14	23	169,439	1.7	0.7	398
China Dvlp Bank Sec Co Ltd	15	19	163,467	1.6	0.2	442
Haitong Securities Co Ltd	16	16	158,622	1.6	0.0	400
Everbright Securities Co Ltd	17	15	150,537	1.5	-0.1	411
China Galaxy Securities Co	18	18	148,688	1.5	0.1	413
Shanghai Pudong Development Bk	19	14	145,410	1.4	-0.3	480
Postal Savings Bank Of China	20	17	141,770	1.4	0.0	337
Industry Total			**10,121,085**	**100.0**		**5,203**

Chinese Yuan Bonds - Macro Industry Composition



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Japan Rankings

First Half 2023 | Debt Capital Markets | Managing Underwriters

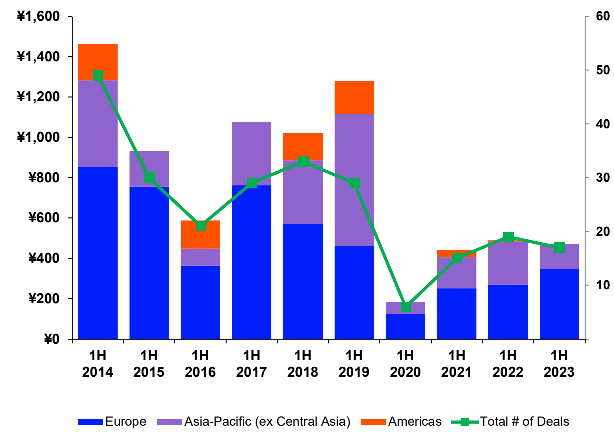
Samurai Bonds (AP01) YoY Change (¥) -4% QoQ Change (¥) 100%

Lead Manager	Rank 2023	Rank 2022	Proceeds JPY¥bil	Market Share	Mkt. Sh. Chg	# of Deals
Daiwa Securities Group Inc	1	5	106	22.5	11.2	12
Nomura	2	3*	93	19.9	0.7	8
Mizuho Financial Group	3	3*	91	19.3	0.1	16
Mitsubishi UFJ Morgan Stanley	4	1	84	17.9	-9.5	15
Sumitomo Mitsui Finl Grp Inc	5	2	64	13.5	-9.5	14
Credit Agricole CIB	6	-	26	5.6	5.6	6
BNP Paribas SA	7	-	7	1.4	1.4	1
Industry Total			**471**	**100.0**		**17**

All Bonds Targeted in Japan (AP04) YoY Change (¥) 12% QoQ Change (¥) 40%

Lead Manager	Rank 2023	Rank 2022	Proceeds JPY¥bil	Market Share	Mkt. Sh. Chg	# of Deals
Mizuho Financial Group	1	1	2,560	23.5	-2.3	343
Mitsubishi UFJ Morgan Stanley	2	4	1,849	17.0	0.9	216
Daiwa Securities Group Inc	3	3	1,767	16.3	0.1	239
Nomura	4	2	1,692	15.6	-5.3	253
Sumitomo Mitsui Finl Grp Inc	5	5	1,566	14.4	7.4	224
Mitsubishi UFJ Financial Group	6	6	337	3.1	0.1	17
Sumitomo Mitsui Trust Holdings	7	8	281	2.6	0.7	14
Goldman Sachs & Co	8	10	163	1.5	0.3	11
Okasan Securities Group Inc	9	17	114	1.1	0.7	33
Tokai Tokyo Financial Holdings	10	7	103	0.9	-1.0	33
Norinchukin Bank	11	13	84	0.8	0.3	7
SBI Holdings Inc	12	12	80	0.7	0.1	8
Shinkin Central Bank	13	11	64	0.6	-0.4	28
Barclays	14	9	46	0.4	-1.0	7
BofA Securities Inc	15	15	44	0.4	0.0	12
Industry Total			**10,872**	**100.0**		**537**

Samurai Bonds Issuance - Domicile Region



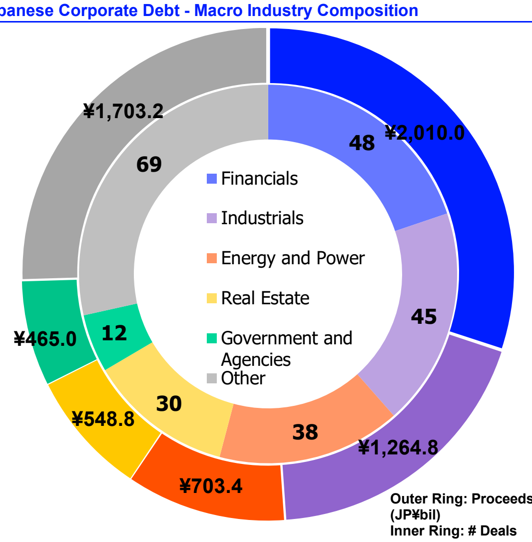
Japanese Securitizations (AP02) YoY Change (¥) -16% QoQ Change (¥) -49%

Lead Manager	Rank 2023	Rank 2022	Proceeds JPY¥bil	Market Share	Mkt. Sh. Chg	# of Deals
Mizuho Financial Group	1	1	533	28.3	-1.7	77
Mitsubishi UFJ Financial Group	2	2	337	17.9	4.7	17
Sumitomo Mitsui Trust Holdings	3	5	281	14.9	6.8	14
Sumitomo Mitsui Finl Grp Inc	4	7	154	8.2	2.2	17
Daiwa Securities Group Inc	5	6	145	7.7	1.4	5
Mitsubishi UFJ Morgan Stanley	6	3	125	6.6	-3.5	4
Norinchukin Bank	7	10	84	4.5	2.3	7
Goldman Sachs & Co	8	9	83	4.4	1.8	3
Nomura	9	4	48	2.5	-7.1	1
Barclays	10	8	38	2.0	-2.6	2
BNP Paribas SA	11	12	25	1.4	-0.4	11
BofA Securities Inc	12	14	19	1.0	-0.5	1
SBI Holdings Inc	13	-	9	0.5	0.5	2
ORIX Corp	14	15	5	0.2	0.0	1
Industry Total			**1,885**	**100.0**		**138**

Japanese Corporate Debt (AP03) YoY Change (¥) 26% QoQ Change (¥) 41%

Lead Manager	Rank 2023	Rank 2022	Proceeds JPY¥bil	Market Share	Mkt. Sh. Chg	# of Deals
Mizuho Financial Group	1	1	1,638	24.5	-3.2	183
Mitsubishi UFJ Morgan Stanley	2	4	1,356	20.3	3.6	135
Daiwa Securities Group Inc	3	3	1,172	17.5	-2.6	146
Nomura	4	2	1,117	16.7	-7.6	165
Sumitomo Mitsui Finl Grp Inc	5	5	1,072	16.0	10.6	145
Okasan Securities Group Inc	6	10	76	1.1	0.7	24
SBI Holdings Inc	7	8	69	1.0	0.0	5
Shinkin Central Bank	8	7	59	0.9	-0.7	26
Tokai Tokyo Financial Holdings	9	6	50	0.7	-1.4	22
Rakuten Securities Inc	10	9	40	0.6	0.0	1
BofA Securities Inc	11	11	26	0.4	0.2	11
Citi	12	12	7	0.1	0.0	2
Barclays	13	-	5	0.1	0.1	2
Goldman Sachs & Co	14	13	5	0.1	0.0	1
Aozora Bank Ltd	15	-	4	0.1	0.1	1
Industry Total			**6,695**	**100.0**		**242**

Japanese Corporate Debt - Macro Industry Composition



*Indicates a Tie

Debt Capital Markets Criteria

First Half 2023 | Managing Underwriters

If you would like to participate in the submission process, receive quarterly press releases, or have questions about our full league table criteria please contact:

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Database coverage includes all US public, Euro public and Rule 144a fee-eligible global debt transactions (including Global bonds, Euro/144a transactions, Yankee Bonds, Eurobonds, Foreign Bonds and preferred stock) as well as MBS, ABS & Taxable Munis.

Transactions must be received within 5 business days of pricing for league table accreditation. (Rule 144a transactions sold exclusively in the US market, MBS, ABS transactions in all markets and all Federal Credit Agency transactions must be received within 5 business days of settlement.) Transactions not received by the applicable deadline are entered into the database but classified as rank ineligible and are not included in league tables for the current calendar year.

All league tables are based on deal proceeds (total issue amount multiplied by the issue price) unless otherwise stated; and current data and previous year's data is as of 9:00am EST on June 30, 2023.

Full credit is given to the bookrunner, equal if joint books. In cases of underwriter consolidation, credit is given to the surviving/parent firm. Non-US dollar denominated transactions are converted to the US dollar equivalent at the time of announcement.

Long-term league tables exclude deals with a minimum life of less than 1.5 years (or 18 months), except for Asian local currency denominated bonds and all securitized tranches, which require a minimum life of more than 360 days. Minimum life is defined as the difference between the settlement date and the earliest maturity date or first call/put option.

US marketplace league tables include US dollar denominated domestic, Yankee, Global and Euro/144a bond and preferred stock transactions. Global bond league tables include domestic, foreign, Global, Euromarket and Euro/144a bond and preferred stock transactions issued in any currency.
League table volumes for Mitsubishi UFJ Financial Group and Morgan Stanley, included herein, reflect changes after the commencement of their jointly established securities firms in Japan: (1) Mitsubishi UFJ Morgan Stanley Securities and (2) Morgan Stanley MUFG Securities. Credit for the newly established joint ventures rolls up to Morgan Stanley. For Japanese involvement league tables Morgan Stanley will be represented as "Mitsubishi UFJ Morgan Stanley."

League table volumes for Huaxin Securities and Morgan Stanley, included herein, reflect changes after the commencement of their jointly established securities firm in China: Morgan Stanley Huaxin Securities. Credit for the newly established joint ventures rolls up to Morgan Stanley. For Chinese involvement league tables Morgan Stanley will be represented as "Morgan Stanley Huaxin Securities".

As concluded following our 2014 DCM Roundtable in Tokyo, Refinitiv will begin publishing domestic Japanese rankings on an "Anbun Hoshiki" (Proportional) basis beginning with Japanese Fiscal Year 2014 - 2015 after April 1st, 2014. Please note that the Samurai Bonds ranking (AP1) will be consistent with all other international bonds rankings and will remain on the "Equal-to-Each" allocation basis.
Following our mid-year League Table Inquiry, all 2014 US mortgage-related securitizations have been classified as mortgage backed regardless of risk category or deal structure.