

UNDERWRITERS AND FINANCIAL ADVISORS

UNITED STATES MUNICIPALS REVIEW

Full Year 2022

An LSEG Business

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United States Municipal Review

Full Year 2022 | Underwriters, Financial Advisors & Credit Enhancers

Global Deals Intelligence

MUNICIPAL BOND ISSUANCE FALLS 21% TO FOUR-YEAR LOW

US municipal bond issuance totaled US\$359.7 billion during full year 2022, a 21% decline compared to a year ago and the slowest annual period for municipal bonds in four years. By number of issues, nearly 7,900 municipal bonds were brought to market during full year 2022, a 33% decrease compared to year ago levels. Fourth quarter 2022 municipal bond proceeds totaled US\$67.7 billion, a decrease of 25% compared to the third quarter of 2022 and the slowest quarter for US municipal bond issuance since the first quarter of 2018.

GREEN BOND ISSUANCE DOWN 32%

Green bond issuance in the US municipal bond market totaled US\$14.4 billion during full year 2022, a 32% decrease compared to last year and the slowest full year period for green bond issuance since 2019. By number of issues, 96 green bonds were sold during full year 2022, a 54% decrease compared to 2021 levels and a four-year low. Green bond offerings from issuers in California, New York and Florida accounted for 66% of full year 2022 issuance.

NEW MONEY OFFERINGS FALL 4%; REFUNDINGS FALL TO 22-YEAR LOW

New money offerings totaled US\$290.2 billion during full year 2022, a 4% decrease compared to a year ago and the slowest opening period for new money municipal bonds since 2020. Refunding activity within the municipal bond market totaled US\$69.5 billion during full year 2022, a 55% decrease compared to 2021 levels and the slowest annual period for refunding issuance since 2000.

TAXABLE MUNICIPAL BONDS DECLINE 59% FROM 2021 LEVELS

Taxable municipal bond offerings totaled US\$47.0 billion during full year 2022, a decrease of 59% compared to levels seen during full year 2021 and marking the slowest annual period for taxable bonds since 2018. Taxable offerings accounted for 13% of full year 2022 municipal bond issuance, down from full year 2021, when taxable bonds accounted for 25% of total US municipal bond issuance.

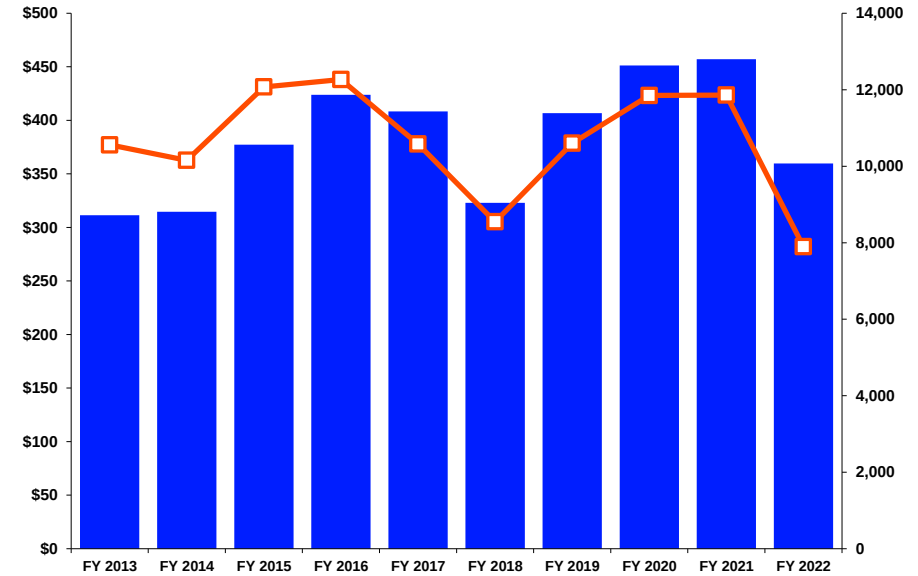
NEW YORK, TEXAS AND CALIFORNIA LEAD MUNI MARKET

Bond issuers in New York, Texas and California for a combined 39% of the US municipal bond market during full year 2022, on par with full year 2021 levels. Within the top 20 states for new municipal bonds, issuers in Louisiana, Minnesota and Michigan registered strong percentage gains compared to a year ago, while California, Ohio and Pennsylvania issuers registered average declines of 42% compared to full year 2021.

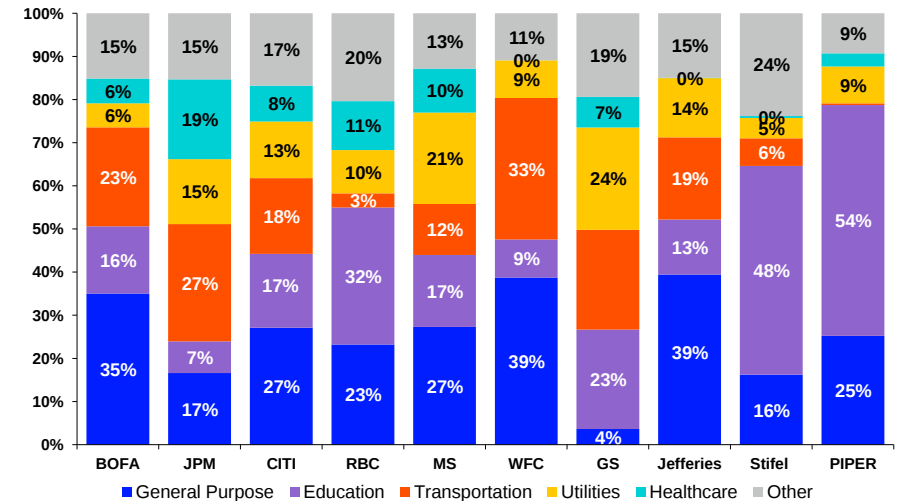
UTILITIES AND TRANSPORTATION BONDS GAIN SHARE

Municipal bonds with Utilities and Transportation use of proceeds registered market share gains compared to full year 2021, with an average increase of 1.2 market share points. All major use of proceeds categories registered year-over-year percentage declines, with Electric Power bonds leading the decliners with a 7% decline compared to a year ago. New issuance with Public Facilities and Development use of proceeds fell an average of 51%, by par amount, and 38% by number of issues, compared to full year 2021.

United States Municipals Issuance



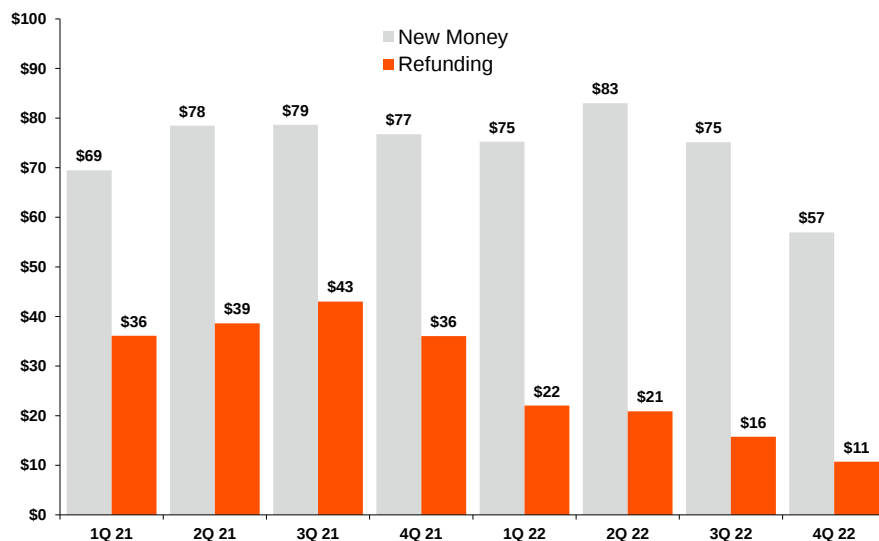
Top 10 Bookrunners by Proceeds - Use of Proceeds Composition



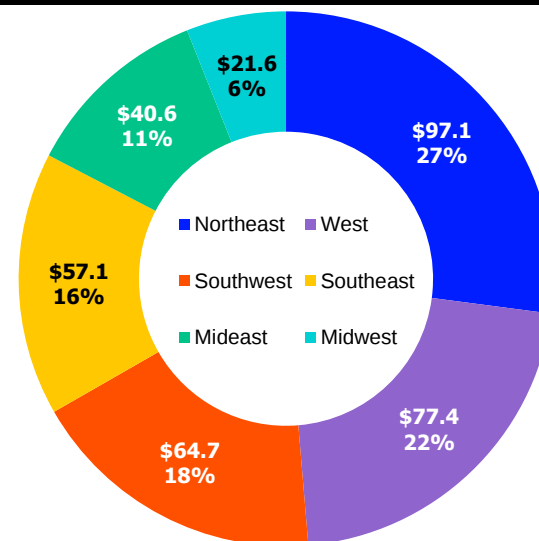
US Municipal Insights

Full Year 2022 | Underwriters, Financial Advisors & Credit Enhancers

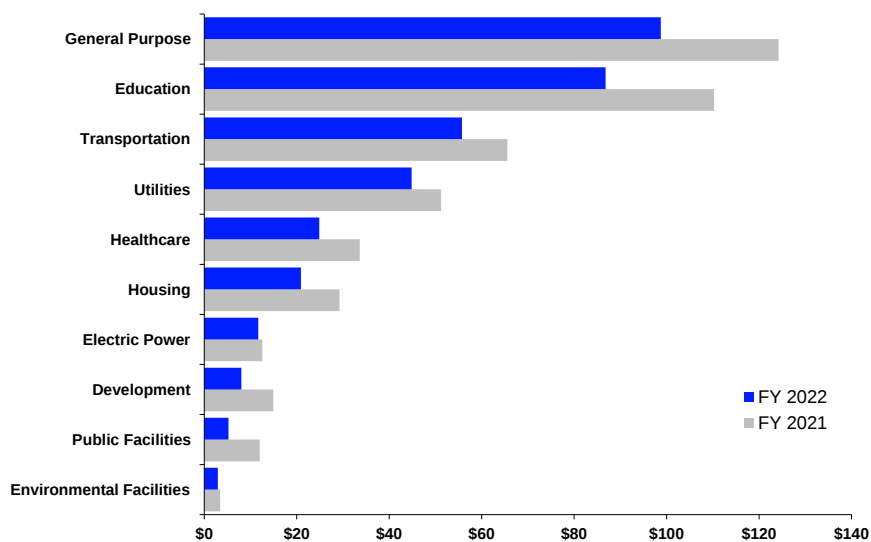
New Money vs. Refunding (US\$bil)



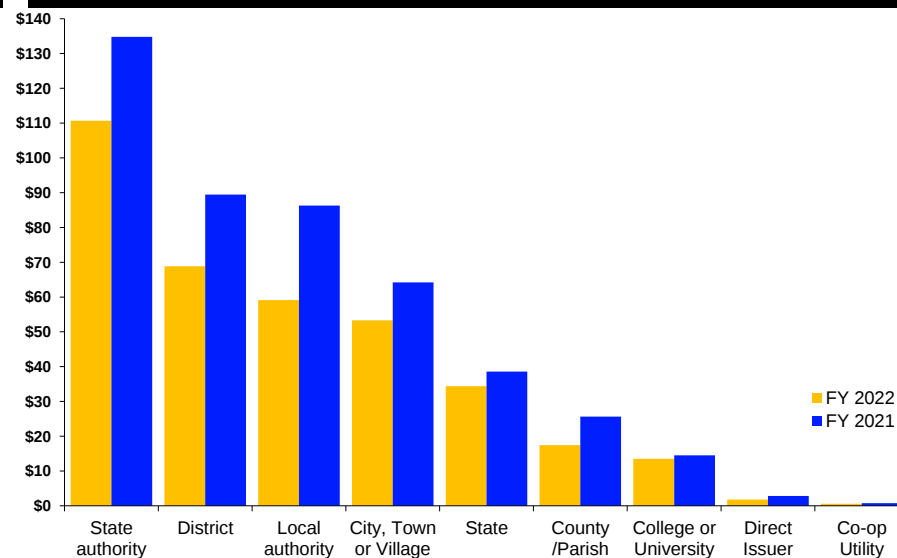
Regional Composition of Proceeds (US\$bil)



Use of Proceeds (US\$bil)



Issuer Type Composition (US\$bil)



US Underwriters

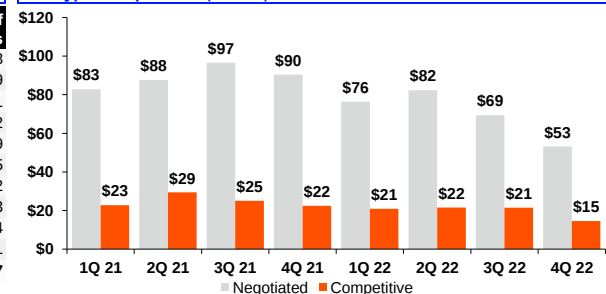
Full Year 2022 | Underwriters, Financial Advisors & Credit Enhancers

Bookrunners (AT01)							Long & Short Term (AT16)							Issuers (AT15)						
YoY Change (\$) -21% QoQ Change (\$) -25%							YoY Change (\$) -22% QoQ Change (\$) -28%							YoY Change (\$) -21% QoQ Change (\$) -25%						
Bookrunner	Rank 2022	Rank 2021	Proceeds	Market Share	Mkt. Sh.	# of Deals	Bookrunner	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals	Issuer	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
BofA Securities Inc	1	1	44,740	12.4	-1.1	301	BofA Securities Inc	1	1	47,459	12.4	-2.2	338	NYC Transitional Finance Auth	1	4	7,519	2.1	0.9	19
J P Morgan Securities LLC	2	3	38,251	10.6	2.8	267	J P Morgan Securities LLC	2	3	41,782	10.9	2.5	368	Triborough Bridge & Tunnel Auth	2	7	6,795	1.9	1.2	12
Morgan Stanley	3	4	27,489	7.6	0.2	232	Citi	3	2	29,267	7.7	-1.6	199	California	3	2	6,619	1.8	0.3	11
Citi	4	2	27,177	7.6	-2.2	190	Morgan Stanley	4	4	28,714	7.5	0.1	254	Massachusetts	4	13	5,719	1.6	1.0	8
RBC Capital Markets	5	5	23,983	6.7	0.6	392	RBC Capital Markets	5	5	24,109	6.3	0.4	396	NYS Dorm Authority	5	1	5,596	1.6	-0.1	16
Wells Fargo & Co	6	8	20,437	5.7	0.9	189	Wells Fargo & Co	6	8	21,169	5.5	0.9	196	New York City-New York	6	12	5,061	1.4	0.8	11
Goldman Sachs & Co LLC	7	6	16,613	4.6	-1.3	97	Jefferies LLC	7	9	18,877	4.9	0.6	259	Regents of the University of California	7	9	4,086	1.1	0.5	5
Jefferies LLC	8	9	16,339	4.5	0.2	108	Goldman Sachs & Co LLC	8	6	16,619	4.4	-1.1	99	Louisiana Gov Env Fac & CDA (LCDA)	8	152	4,011	1.1	1.0	8
Stifel Nicolaus & Co Inc	9	7	16,235	4.5	-0.7	741	Stifel Nicolaus & Co Inc	9	7	16,578	4.3	-0.7	769	Black Belt Energy Gas Dt	9	21	3,365	0.9	0.4	9
Barclays	10	12	14,915	4.2	0.5	107	Barclays	10	12	15,306	4.0	0.4	110	Denver City and Co-Colorado	10	345	3,364	0.9	0.8	8
Piper Sandler & Co	11	10	13,732	3.8	-0.2	520	Piper Sandler & Co	11	10	15,171	4.0	-0.2	757	Washington	11	14	3,167	0.9	0.3	15
Raymond James	12	11	12,866	3.6	-0.4	453	Raymond James	12	11	12,980	3.4	-0.4	467	Connecticut	12	6	3,119	0.9	0.2	18
Robert W Baird & Co Inc	13	13	9,761	2.7	-0.5	712	Robert W Baird & Co Inc	13	13	10,444	2.7	-0.4	729	Oklahoma Dev Finance Auth	13	638	2,921	0.8	0.8	6
Siebert Williams Shank & Co	14	14	9,525	2.7	0.9	38	Siebert Williams Shank & Co	14	15	9,534	2.5	0.8	39	NYS Thruway Authority	14	16	2,902	0.8	0.2	8
Ramirez & Co Inc	15	18	6,993	1.9	0.8	49	Ramirez & Co Inc	15	18	6,999	1.8	0.7	50	Wisconsin Public Finance Auth	15	11	2,719	0.8	0.2	49
Industry Total			359,725	100.0		7,896	Industry Total			382,281	100.0		9,564	Industry Total			359,725	100.0		7,896

Negotiated (AT03)							Competitive (AT04)							Co-Manager (AT12)						
YoY Change (\$) -21% QoQ Change (\$) -23%							YoY Change (\$) -21% QoQ Change (\$) -32%							YoY Change (\$) -17% QoQ Change (\$) -32%						
Bookrunner	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals	Bookrunner	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals	Co-Manager	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
J P Morgan Securities LLC	1	7	28,889	10.3	4.0	153	BofA Securities Inc	1	1	16,300	20.8	3.0	104	Siebert Williams Shank & Co	1	7	11,328	3.2	0.7	271
BofA Securities Inc	2	1	28,440	10.1	-2.3	197	J P Morgan Securities LLC	2	2	9,362	11.9	-1.1	114	Ramirez & Co Inc	2	9	10,902	3.0	0.6	661
RBC Capital Markets	3	3	23,020	8.2	0.6	345	Morgan Stanley	3	3	7,475	9.5	-1.7	101	Loop Capital Markets	3	11	10,428	2.9	0.7	757
Citi	4	2	21,142	7.5	-2.7	122	Citi	4	5	6,035	7.7	-0.6	68	Raymond James	4	8	10,061	2.8	0.4	413
Morgan Stanley	5	6	20,014	7.1	0.8	131	Robert W Baird & Co Inc	5	4	5,725	7.3	-2.2	510	Academy Securities Inc	5	4	9,795	2.7	0.1	222
Stifel Nicolaus & Co Inc	6	5	16,002	5.7	-0.8	701	Wells Fargo & Co	6	6	5,396	6.9	-0.7	53	RBC Capital Markets	6	10	9,112	2.5	0.1	270
Goldman Sachs & Co LLC	7	4	15,972	5.7	-1.7	94	Jefferies LLC	7	12	3,779	4.8	3.1	38	BofA Securities Inc	7	3	8,953	2.5	-0.2	256
Wells Fargo & Co	8	12	15,041	5.4	1.3	136	Piper Sandler & Co	8	9	2,073	2.6	0.2	147	Stifel Nicolaus & Co Inc	8	5	8,741	2.4	-0.1	426
Barclays	9	10	13,857	4.9	0.5	98	Raymond James	9	7	2,073	2.6	-0.4	142	J P Morgan Securities LLC	9	1	8,727	2.4	-0.4	217
Jefferies LLC	10	8	12,560	4.5	-0.5	70	Mesirow Financial Inc	10	10	1,578	2.0	-0.1	36	Citi	10	6	8,568	2.4	-0.1	245
Piper Sandler & Co	11	9	11,659	4.2	-0.3	373	FHNC Financial Capital Markets	11	8	1,521	1.9	-0.8	106	Morgan Stanley	11	12	8,313	2.3	0.2	340
Raymond James	12	11	10,793	3.8	-0.5	311	Hilltop Securities	12	11	1,436	1.8	0.0	97	Wells Fargo & Co	12	2	7,732	2.2	-0.5	266
Siebert Williams Shank & Co	13	13	9,525	3.4	1.1	38	Huntington Bancshares Inc	13	14	1,391	1.8	0.2	97	Estrada Hinojosa & Company Inc	13	15	7,147	2.0	0.4	328
Ramirez & Co Inc	14	17	6,993	2.5	1.1	49	Janney Montgomery Scott LLC	14	18	1,346	1.7	0.5	66	Piper Sandler & Co	14	13	6,837	1.9	0.0	151
Loop Capital Markets	15	14	5,399	1.9	0.2	41	Roosevelt & Cross Inc	15	13	1,295	1.7	0.1	191	Jefferies LLC	15	18	6,832	1.9	0.6	197
Industry Total			281,259	100.0		4,573	Industry Total			78,466	100.0		3,323	Industry Total			230,413	100.0		2,729

US Taxable Municipal Debt (AT62)							Minority Owned Firms (AT41)							Bid Type Composition (US\$bil)						
YoY Change (\$) -49% QoQ Change (\$) -57%							YoY Change (\$) -10% QoQ Change (\$) -27%													
Bookrunner	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals	Bookrunner	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals							
BofA Securities Inc	1	1	3,359	13.3	-0.5	17	Siebert Williams Shank & Co	1	1	9,525	5.5	1.3	38							
RBC Capital Markets	2	5	2,776	11.0	4.2	38	Ramirez & Co Inc	2	3	6,993	4.0	1.4	49							
Citi	3	2	2,470	9.8	-0.8	19	Loop Capital Markets	3	2	5,399	3.1	-0.1	41							
Barclays	4	11	2,184	8.6	5.6	12	Estrada Hinojosa & Company Inc	4	5	626	0.4	0.2	12							
Wells Fargo & Co	5	4	1,898	7.5	-0.5	15	Cabrera Capital Markets Inc	5	6	547	0.3	0.2	9							
Jefferies LLC	6	9	1,760	7.0	3.6	6	Academy Securities Inc	6	4	246	0.1	-0.1	5							
Goldman Sachs & Co	7	7	1,701	6.7	0.4	14	Stern Brothers & Co	7	8	114	0.1	0.1	2							
Raymond James Financial Inc	8	10	1,599	6.3	2.9	26	Rice Financial Products Company	8	9	51	0.0	0.0	3							
JP Morgan	9	6	1,480	5.9	-0.8	15	Duncan-Williams Inc	9	7	12	0.0	0.0	4							
Morgan Stanley	10	3	1,066	4.2	-5.3	11	American Veterans Group PBC	10	-	4	0.0	0.0	1							
Industry Total			25,317	100.0		583	Industry Total			174,054	100.0		1,827							

*Indicates a Tie



Composite Amount US\$10mln & Under

Full Year 2022 | Underwriters, Financial Advisors & Credit Enhancers

Bookrunner Composite Amount Under \$10mln (AT02)

	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Robert W Baird & Co Inc	1	1	1,701	12.0	-0.9	372
Stifel Nicolaus & Co Inc	2	3	1,434	10.1	2.0	273
Piper Sandler & Co	3	2	1,175	8.3	-1.5	239
Raymond James	4	4	931	6.6	0.6	168
Samco Capital Markets	5	8	674	4.8	0.5	143
Northland Securities	6	10	663	4.7	1.3	170
D A Davidson & Co	7	5	642	4.5	-0.2	173
Roosevelt & Cross Inc	8	9	579	4.1	0.3	160
FMSbonds Inc	9	12	471	3.3	1.2	84
BOK Financial Securities Inc	10	13	399	2.8	0.8	137
RBC Capital Markets	11	6	399	2.8	-1.8	68
FHNC Financial Capital Markets	12	7	374	2.6	-1.9	64
Baker Group LP	13	16	350	2.5	0.9	90
Hilltop Securities	14	14	348	2.5	0.5	73
Huntington Bancshares Inc	15	11	320	2.3	-0.2	63
Industry Total			14,180	100.0		3,351

Co-Manager Composite Amount Under \$10mln (AT12a)

	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Truist Financial Corp	1	20	212	1.5	1.1	66
Cantor Fitzgerald LP	2	1	208	1.5	0.0	64
Stifel Nicolaus & Co Inc	3	6	203	1.4	0.7	129
United Bankers Bank	4	3	177	1.3	0.5	108
BOK Financial Securities Inc	5	46	173	1.2	1.0	35
D A Davidson & Co	6	2	157	1.1	0.3	85
R Seelaus & Company Inc	7	9	117	0.8	0.2	208
Ramirez & Co Inc	8	5	117	0.8	0.1	206
CINCaP Investment Group	9	7	116	0.8	0.2	210
Crews & Associates Inc	10	10	112	0.8	0.2	372
Intercoastal Capital Markets	11	11	107	0.8	0.2	198
Sierra Pacific Securities	12	8	103	0.7	0.1	371
Estrada Hinojosa & Company Inc	13	36	95	0.7	0.4	127
Edward D Jones & Co LP	14	14	85	0.6	0.1	225
Loop Capital Markets	15	16	85	0.6	0.1	309
Industry Total			3,961	100.0		789

Financial Advisor Composite Amt Under \$10mln (AT07a)

	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	909	8.8	-1.3	157
Ehlers & Associates	2	2	718	7.0	0.2	200
Hilltop Securities	3	4	715	6.9	1.1	137
Robert W Baird & Co Inc	4	5	672	6.5	1.1	146
Baker Tilly Municipal Advisors	5	3	520	5.1	-1.0	124
Piper Sandler & Co	6	9	435	4.2	1.5	72
Masterson Advisors LLC	7	6	421	4.1	0.7	91
Specialized Public Finance Inc	8	7	339	3.3	0.5	63
Phoenix Advisors LLC	9	8	316	3.1	0.4	55
Stephen H McDonald & Associates Inc	10	20	310	3.0	1.9	168
Fiscal Advisors & Marketing Inc	11	12	211	2.1	0.0	102
GMS Group LLC	12	16	200	1.9	0.2	37
Speer Financial Inc	13	13	187	1.8	-0.1	68
PMA Securities Inc	14	10	183	1.8	-0.5	37
Samco Capital Markets	15	18	172	1.7	0.3	28
Industry Total			10,305	100.0		2,437

Negotiated Composite Amt Under \$10mln (AT21)

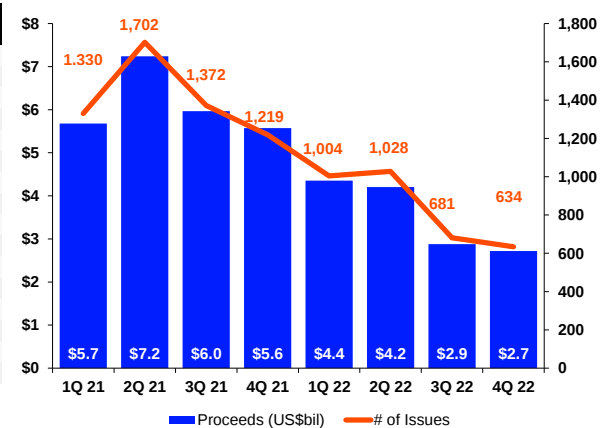
	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Stifel Nicolaus & Co Inc	1	1	1,252	18.8	4.7	238
D A Davidson & Co	2	3	625	9.4	1.2	167
Piper Sandler & Co	3	2	624	9.4	-2.7	145
Raymond James	4	6	553	8.3	2.7	93
FMSbonds Inc	5	8	391	5.9	2.4	69
Robert W Baird & Co Inc	6	5	321	4.8	-2.1	73
RBC Capital Markets	7	4	310	4.7	-3.1	47
LJ Hart & Company	8	10	304	4.6	2.1	89
Colliers Securities	9	14	171	2.6	0.7	38
PNC Financial Services Group Inc	10	9	129	1.9	-0.7	18
Huntington Bancshares Inc	11	15	122	1.8	-0.1	22
Northland Securities	12	13	113	1.7	-0.3	29
KeyBanc Capital Markets	13	26	109	1.6	0.8	18
Bernardi Securities Inc	14	19	107	1.6	0.3	35
Roosevelt & Cross Inc	15	12	104	1.6	-0.5	24
Industry Total			6,673	100.0		1,448

*Indicates a Tie

Competitive Composite Amt Under \$10mln (AT20)

	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Robert W Baird & Co Inc	1	1	1,379	18.4	-1.9	299
Samco Capital Markets	2	6	591	7.9	2.8	123
Piper Sandler & Co	3	3	551	7.3	0.4	94
Northland Securities	4	7	550	7.3	2.2	141
Roosevelt & Cross Inc	5	5	475	6.3	0.4	136
Raymond James	6	4	378	5.0	-1.4	75
BOK Financial Securities Inc	7	8	349	4.7	0.9	128
FHNC Financial Capital Markets	8	2	326	4.3	-4.4	56
Baker Group LP	9	10	314	4.2	1.1	79
Fidelity Capital Markets	10	13	270	3.6	1.4	67
Hilltop Securities	11	18	254	3.4	1.8	48
Country Club Bank	12	12	203	2.7	0.1	70
Huntington Bancshares Inc	13	9	198	2.6	-0.6	41
Stifel Nicolaus & Co Inc	14	22	182	2.4	1.6	35
Janney Montgomery Scott LLC	15	17	116	1.5	-0.2	13
Industry Total			7,508	100.0		1,903

Municipal Issuance - Composite Amount US\$10mil & Under



US Financial Advisors

Full Year 2022 | Underwriters, Financial Advisors & Credit Enhancers

Financial Advisors (AT07) YoY Change (\$) **-19%** QoQ Change (\$) **-32%**

Financial Advisor	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	50,069	16.4	-0.6	635
Public Resources Advisory Group	2	2	35,226	11.6	-0.2	157
Hilltop Securities	3	3	22,670	7.4	-0.8	482
Frasca & Associates	4	4	17,216	5.7	2.1	73
Acacia Financial Group Inc	5	5	10,318	3.4	0.3	104
Estrada Hinojosa & Company Inc	6	12	8,293	2.7	1.2	62
Piper Sandler & Co	7	7	6,975	2.3	-0.5	185
Ponder & Co	8	14	5,396	1.8	0.4	33
CSG Advisors Incorporated	9	16	5,094	1.7	0.4	92
Municipal Capital Markets Group Inc	10	24	4,996	1.6	0.7	18
Stifel Nicolaus & Co Inc	11	20	4,763	1.6	0.4	62
Baker Tilly Municipal Advisors	12	11	4,634	1.5	-0.2	255
Caine Mitter & Associates Inc	13	21	4,505	1.5	0.4	74
KNN Public Finance	14	6	4,496	1.5	-1.5	54
Swap Financial Group LLC	15	9	4,086	1.3	-0.6	5
Industry Total			304,569	100.0		5,935

Financial Advisors Long & Short Term (AT18) YoY Change (\$) **-20%** QoQ Change (\$) **-34%**

Financial Advisor	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	51,137	15.7	-0.5	649
Public Resources Advisory Group	2	2	35,409	10.9	-1.0	159
Hilltop Securities	3	3	23,890	7.4	-0.6	639
Frasca & Associates	4	4	18,166	5.6	2.3	76
Acacia Financial Group Inc	5	5	10,732	3.3	0.2	136
Estrada Hinojosa & Company Inc	6	14	8,293	2.6	1.2	62
Piper Sandler & Co	7	7	7,134	2.2	-0.5	188
Ponder & Co	8	15	5,396	1.7	0.4	33
Montague DeRose & Associates LLC	9	12	5,307	1.6	0.0	30
CSG Advisors Incorporated	10	16	5,094	1.6	0.3	92
Municipal Capital Markets Group Inc	11	26	4,996	1.5	0.6	18
KNN Public Finance	12	6	4,928	1.5	-1.5	64
Fiscal Advisors & Marketing Inc	13	20	4,918	1.5	0.4	503
Stifel Nicolaus & Co Inc	14	22	4,842	1.5	0.4	65
Baker Tilly Municipal Advisors	15	11	4,779	1.5	-0.2	262
Industry Total			324,801	100.0		7,333

Financial Advisors Number of Issues (AT07d) YoY Change (\$) **-31%** QoQ Change (\$) **-17%**

Financial Advisor	Rank 2022	Rank 2021	# of Deals	Market Share	Mkt. Sh.	Proceeds US\$mil
PFM Financial Advisors LLC	1	1	635	10.7	-0.9	50,069
Hilltop Securities	2	2	482	8.1	0.9	22,670
Ehlers & Associates	3	4	267	4.5	0.3	2,441
Baker Tilly Municipal Advisors	4	3	255	4.3	-0.1	4,634
Robert W Baird & Co Inc	5	5	251	4.2	0.9	3,567
Piper Sandler & Co	6	6*	185	3.1	0.6	6,975
Stephen H McDonald & Associates Inc	7	22	183	3.1	1.8	611
Public Resources Advisory Group	8	8	157	2.7	0.3	35,226
Fiscal Advisors & Marketing Inc	9	10	150	2.5	0.3	1,741
Masterson Advisors LLC	10	9	145	2.4	0.1	3,337
Specialized Public Finance Inc	11	6*	143	2.4	-0.1	3,667
Phoenix Advisors LLC	12	11	119	2.0	0.1	2,282
Acacia Financial Group Inc	13	12	104	1.8	0.0	10,318
RBC Capital Markets	14	14	97	1.6	0.0	3,949
Speer Financial Inc	15	13	93	1.6	-0.1	900
Industry Total			5,935	100.0		304,569

Financial Advisors Negotiated (AT07b) YoY Change (\$) **-19%** QoQ Change (\$) **-32%**

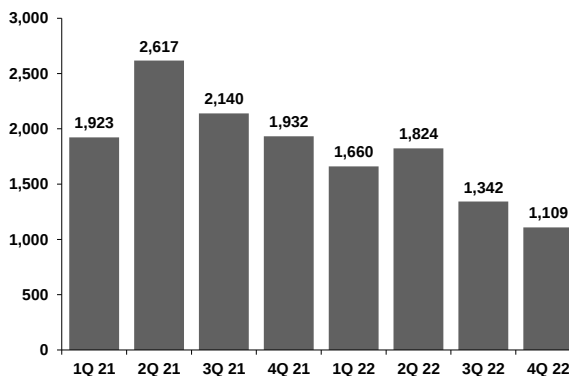
Financial Advisor	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	39,146	17.2	-1.3	377
Public Resources Advisory Group	2	2	24,747	10.9	1.1	87
Hilltop Securities	3	3	17,988	7.9	-0.7	270
Frasca & Associates	4	4	16,194	7.1	2.8	62
Estrada Hinojosa & Company Inc	5	11	8,180	3.6	1.8	59
Acacia Financial Group Inc	6	6	6,813	3.0	0.2	67
Ponder & Co	7	14	5,396	2.4	0.7	33
CSG Advisors Incorporated	8	13	5,094	2.2	0.4	92
Municipal Capital Markets Group Inc	9	19	4,996	2.2	1.0	18
Caine Mitter & Associates Inc	10	16	4,505	2.0	0.5	74
Swap Financial Group LLC	11	8	4,086	1.8	-0.7	5
Stifel Nicolaus & Co Inc	12	20	4,076	1.8	0.6	33
RBC Capital Markets	13	9	3,660	1.6	-0.6	69
Kaufman Hall & Associates Inc	14	12	3,629	1.6	-0.2	22
KNN Public Finance	15	5	3,573	1.6	-2.0	46
Industry Total			228,009	100.0		2,657

*Indicates a Tie

Financial Advisors Competitive (AT07c) YoY Change (\$) **-20%** QoQ Change (\$) **-33%**

Financial Advisor	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	2	10,923	14.3	1.7	258
Public Resources Advisory Group	2	1	10,479	13.7	-4.1	70
Hilltop Securities	3	3	4,682	6.1	-1.1	212
Piper Sandler & Co	4	4	4,640	6.1	0.4	144
Acacia Financial Group Inc	5	5	3,505	4.6	0.4	37
Robert W Baird & Co Inc	6	10	2,771	3.6	1.8	234
Davenport & Company LLC	7	6	2,587	3.4	-0.6	60
Baker Tilly Municipal Advisors	8	7	2,512	3.3	-0.2	199
Ehlers & Associates	9	8	2,403	3.1	0.7	257
Backstrom McCauley Berry & Co	10	43	2,149	2.8	2.5	13
Montague DeRose & Associates LLC	11	11	1,752	2.3	0.6	14
Phoenix Advisors LLC	12	13	1,644	2.2	0.6	102
First Tryon Securities LLC	13	26	1,350	1.8	0.9	20
Specialized Public Finance Inc	14	15	1,271	1.7	0.3	89
Capital Markets Advisors LLC	15	12	1,225	1.6	-0.1	65
Industry Total			76,560	100.0		3,278

Financial Advisor - Number of Issues



US Green Bonds

Full Year 2022 | Underwriters, Financial Advisors & Credit Enhancers

Bookrunner Green Bonds (AT70)

YoY Change (\$) -32% QoQ Change (\$) -43%

Bookrunner	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
J P Morgan Securities LLC	1	4	3,596	25.1	12.9	17
BofA Securities Inc	2	2	2,802	19.5	4.9	13
Goldman Sachs & Co LLC	3	1	2,694	18.8	1.2	14
Morgan Stanley	4	5	1,213	8.5	-2.0	8
Stifel Nicolaus & Co Inc	5	13	1,187	8.3	6.4	7
Citi	6	3	568	4.0	-8.7	4
Barclays	7	8	486	3.4	0.1	2
Jefferies LLC	8	17	352	2.5	1.9	2
Wells Fargo & Co	9	6	342	2.4	-3.0	4
UBS Financial Services Inc	10	9	243	1.7	-1.4	3
Robert W Baird & Co Inc	11	18	151	1.1	0.5	2
Ramirez & Co Inc	12	12	114	0.8	-1.4	2
Piper Sandler & Co	13	10	82	0.6	-2.2	5
Academy Securities Inc	14	-	81	0.6	0.6	2
RBC Capital Markets	15	7	70	0.5	-4.2	2
Industry Total			14,353	100.0		96

Co-Manager Green Bonds (AT71)

YoY Change (\$) -17% QoQ Change (\$) -24%

Co-Manager	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Ramirez & Co Inc	1	11	1,286	9.0	6.4	23
Academy Securities Inc	2	5	1,278	8.9	4.9	14
RBC Capital Markets	3	1	1,086	7.6	0.5	14
Siebert Williams Shank & Co	4	3	968	6.7	2.4	20
Jefferies LLC	5	17	690	4.8	3.6	9
Citi	6	13	597	4.2	2.3	16
Estrada Hinojosa & Company Inc	7	15	504	3.5	2.1	4
Loop Capital Markets	8	2	477	3.3	-1.8	14
BofA Securities Inc	9	9	450	3.1	0.0	13
J P Morgan Securities LLC	10	8	434	3.0	-0.3	8
Barclays	11	14	406	2.8	1.2	12
Sumitomo Mitsui Financial Group Inc	12	-	403	2.8	2.8	2
Morgan Stanley	13	7	361	2.5	-1.1	13
Piper Sandler & Co	14	19	332	2.3	1.2	7
Raymond James	15	18	293	2.0	0.9	8
Industry Total			11,677	100.0		60

Financial Advisor Green Bonds (AT72)

YoY Change (\$) -31% QoQ Change (\$) -41%

Financial Advisor	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	2,535	20.6	-4.6	19
Public Resources Advisory Group	2	7	1,444	11.7	8.1	10
Frasca & Associates	3	9	1,353	11.0	7.7	3
KNN Public Finance	4	3	970	7.9	0.1	5
Sycamore Advisors LLC	5	19	800	6.5	5.2	7
Sperry Capital Inc	6	20	687	5.6	4.6	1
Agentis Capital	7	6	644	5.2	0.7	2
Prager & Co LLC	8	-	608	4.9	4.9	1
Stifel Nicolaus & Co Inc	9	45	478	3.9	3.8	1
Wedbush Morgan Securities	10	-	473	3.8	3.8	1
Backstrom McCarley Berry & Co	11	13	366	3.0	0.9	2
Ford & Associates	12	-	283	2.3	2.3	1
Robert W Baird & Co Inc	13	36	275	2.2	1.9	2
Montague DeRose & Associates LLC	14	10	258	2.1	-1.1	4
RBC Capital Markets	15	31	147	1.2	0.8	2
Industry Total			12,317	100.0		73

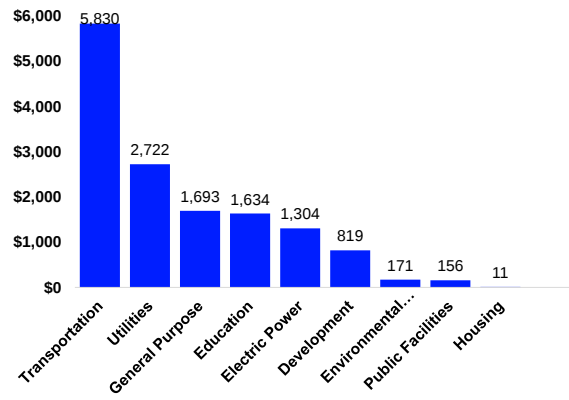
Issuer Green Bonds (AT73)

YoY Change (\$) -32% QoQ Change (\$) -43%

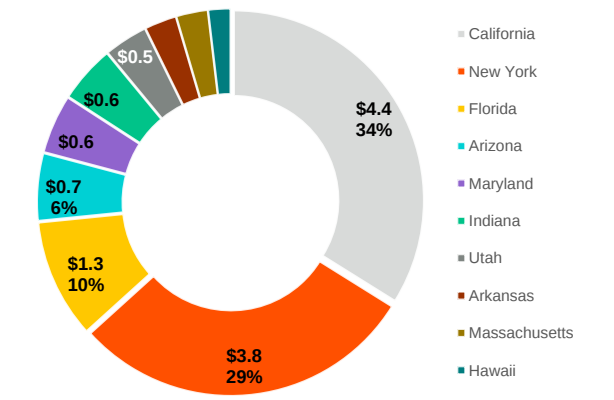
Issuer	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Triborough Bridge & Tunnel Auth	1	-	1,449	10.1	10.1	5
Los Angeles Dept of Airports	2	-	1,353	9.4	9.4	3
Florida Development Fin Corp	3	-	770	5.4	5.4	1
NYS Thruway Authority	4	-	732	5.1	5.1	2
San Fran Bay Area Rapid Trans Dt	5	-	687	4.8	4.8	1
Maryland Eco Dev Corp (MEDCO)	6	-	644	4.5	4.5	2
NYS Power Authority	7	-	608	4.2	4.2	1
San Diego USD	8	3	590	4.1	-0.3	2
Indiana Finance Authority	9	4	480	3.3	-1.1	3
Utah State Board of Regents	10	124	478	3.3	3.3	1
Gilbert Water Res Muni Pty Corp	11	-	473	3.3	3.3	1
California Comm Choice Fin Auth	12	1	460	3.2	-5.5	3
New York Liberty Dev Corp	13	2	458	3.2	-2.7	2
NYS Environmental Facs Corp	14	37	327	2.3	1.6	1
California St Public Works Board	15	13	295	2.1	-0.1	1
Industry Total			14,353	100.0		96

*Indicates a Tie

Use of Proceeds Composition (US\$mil) Green Bonds



Top 10 States (US\$mil) Green Bonds



US Private Deals & Credit Enhancers

Full Year 2022 | Underwriters, Financial Advisors & Credit Enhancers

Private Placement Agent / Purchaser (AT24)

Placement Agent or Purchaser	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
BoFA Securities Inc	1	9	2,573	12.4	9.5	33
Piper Sandler & Co	2	1	2,440	11.8	-4.2	174
Wells Fargo & Co	3	5	1,856	8.9	1.6	17
Citi	4	2	1,687	8.1	-2.0	61
Stifel Nicolaus & Co Inc	5	4	1,539	7.4	-0.6	156
Truist Financial Corp	6	3	1,333	6.4	-3.3	30
Bank of New York Mellon Corp	7	54	902	4.3	4.1	22
PNC Financial Services Group Inc	8	11	860	4.1	1.8	18
J P Morgan Securities LLC	9	7	757	3.7	0.1	18
Robert W Baird & Co Inc	10	6	726	3.5	-0.1	136
TD Securities (USA) LLC	11	10	561	2.7	0.3	16
KeyBanc Capital Markets	12	13	451	2.2	0.3	24
Hilltop Securities	13	16	444	2.1	0.5	37
Capital One Financial Corp	14	19	284	1.4	0.3	7
RBC Capital Markets	15	8	278	1.3	-1.9	8
Industry Total			20,766	100.0		1,025

Private Issuers (AT44)

Issuer	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
NYC Municipal Water Fin Auth	1	9	745	3.6	2.0	1
NYS Housing Fin-Mortgage Agcy	2	-	662	3.2	3.2	6
Washington Health Care Facs Au	3	94	652	3.1	2.9	6
Maricopa Co-Arizona	4	-	644	3.1	3.1	2
California Municipal Fin Auth	5	5	634	3.1	1.1	24
Missouri Hlth & Ed Facs Authority	6	30	438	2.1	1.4	7
Tarrant Co Cult Ed Fac Fin Corp	7	-	313	1.5	1.5	2
Michigan Finance Authority	8	62	311	1.5	1.1	4
Washington St Hsg Fin Commission	9	2	285	1.4	-1.5	9
Highlands Co Health Facs Auth	10	-	244	1.2	1.2	1
Colorado Hsg & Fin Auth (CHFA)	11	108*	231	1.1	0.9	13
Wisconsin Public Finance Auth	12	39	230	1.1	0.6	12
North Carolina Medical Care Commiss	13	13	207	1.0	-0.2	2
University of Alabama BOT	14	-	204	1.0	1.0	1
Maryland Dept Hsg & Com Dev (DHCD)	15	112*	203	1.0	0.8	11
Industry Total			20,766	100.0		1,025

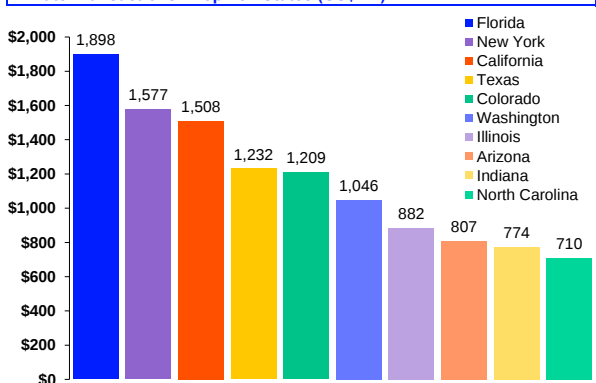
Private Financial Advisor (AT25)

Financial Advisor	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Ponder & Co	1	5	2,004	21.9	15.5	26
Kaufman Hall & Associates Inc	2	4	1,794	19.6	13.1	21
Piper Sandler & Co	3	10	720	7.9	4.9	16
PFM Financial Advisors LLC	4	1	705	7.7	-2.2	36
Government Consultants Inc	5	6	381	4.2	-2.1	23
Hilltop Securities	6	8	362	4.0	-0.2	20
Echo Financial Products LLC	7	11	357	3.9	0.9	4
Caine Mitter & Associates Inc	8	21	248	2.7	1.6	6
North Slope Capital Advisors	9	3	181	2.0	-7.2	11
Public Resources Advisory Group	10	16	170	1.9	0.1	6
First Tryon Securities LLC	11	2	167	1.8	-7.7	8
CSG Advisors Incorporated	12	58*	161	1.8	1.7	6
Stifel Nicolaus & Co Inc	13	12	143	1.6	-0.6	6
Baker Tilly Municipal Advisors	14	18	135	1.5	-0.1	17
Crowe LLP	15	-	103	1.1	1.1	10
Industry Total			9,168	100.0		358

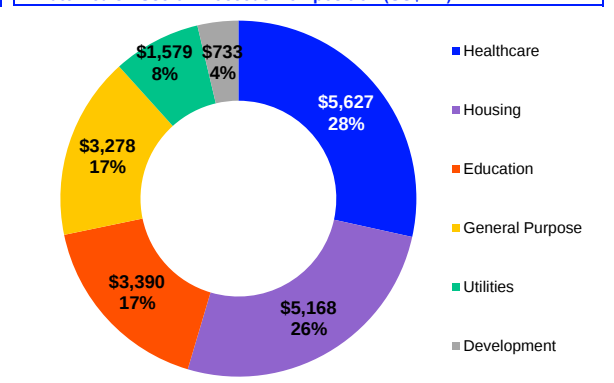
Public & Private Issuers (AT46)

Issuer	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
NYC Transitional Finance Auth	1	4	7,519	2.0	0.8	19
Triborough Bridge & Tunnel Auth	2	7	6,795	1.8	1.2	12
California	3	2	6,619	1.7	0.3	11
Massachusetts	4	15	5,719	1.5	1.0	8
NYS Dorm Authority	5	1	5,596	1.5	-0.2	16
New York City-New York	6	14	5,061	1.3	0.7	11
Louisiana Gov Env Fac & CDA (LCDA)	7	118	4,117	1.1	0.9	14
Regents of the University of California	8	9	4,086	1.1	0.5	5
Black Belt Energy Gas Dt	9	21	3,365	0.9	0.4	9
Denver City and Co-Colorado	10	337*	3,364	0.9	0.8	8
Washington	11	16	3,167	0.8	0.3	15
Connecticut	12	6	3,119	0.8	0.1	18
NYC Municipal Water Fin Auth	13	10	3,074	0.8	0.2	10
Oklahoma Dev Finance Auth	14	584	2,971	0.8	0.8	7
Wisconsin Public Finance Auth	15	12	2,949	0.8	0.2	61
Industry Total			380,491	100.0		8,921

Private Transactions - Top Ten States (US\$mil)



Private Deals - Use of Proceeds Composition (US\$mil)



Bond Insurers (AT10)

Insurer	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
AGM formerly FSA Inc	1	1	16,976	58.9	5.4	647
Build America Mutual (BAM)	2	2	11,848	41.1	5.9	772
Industry Total			28,824	100.0		1,419

*Indicates a Tie

Credit Enhancers (AT80)

Credit Enhancers Types	Rank 2022	Rank 2021	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Bond insurance	1	1	28,844	46.0	-27.8	1,420
Guaranteed	2	2	26,464	42.2	20.3	812
LOC Foreign Bank	3	5	927	1.5	1.5	6
Mortgage backed	4	4	891	1.4	-1.5	44
LOC Domestic Bank	5	3	693	1.1	0.3	8
Standby Purch Agreement	6	6	596	1.0	0.3	10
Guaranteed investment contract	7	0	84	0.1	0.1	1
Industry Total			62,698	100.0		2,281

Top Issuers by Insured Amount

Top Issuers by Insured Amt	2022	US\$mil	Share	US\$mil	Deals
Metro Washington Airports Auth	1	754.8	2.6	754.8	2
Montgomery Co Hghr Ed & Health Auth	2	672.8	2.3	672.8	1
NYS Dorm Authority	3	666.9	2.3	759.1	1
NYS Power Authority	4	608.3	2.1	608.3	1
Pennsylvania Econ Dev Fin Auth	5	572.0	2.0	1,759.1	1
Los Angeles Dept of Airports	6	546.0	1.9	546.0	1
Duval Co School Board	7	508.7	1.8	561.5	1
Alameda Corridor Transport Auth	8	459.9	1.6	613.5	3
SC Pub Svc Au (Santee Cooper)	9	422.7	1.5	621.5	2
Louisville-Jefferson Co Metro Gov	10	411.0	1.4	411.0	2
Top 10 Total		5,623.1	19.5	7,307.6	15

United States Municipals Criteria

FULL YEAR 2022 | U.S. Underwriters, Financial Advisors & Credit Enhancers

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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Rankings and volume totals include all municipal new issues underwritten during the period from January 1, 2022 to Dec 31, 2022, of which Refinitiv was made aware. All current data and previous year's data are as of 9:00am EDT on Jan 3, 2023. Except where indicated, the rankings quoted above do not include short-term, preliminary, private placement or rank-ineligible issues. Bookrunners receive full credit or true allocation credit if joint, on each issue of which they provide underwriting services. Co-managers receive equal credit for each issue on which they provide co-manager services. Financial advisors receive full credit, equal if joint, on each deal on which they provide advisory services.

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