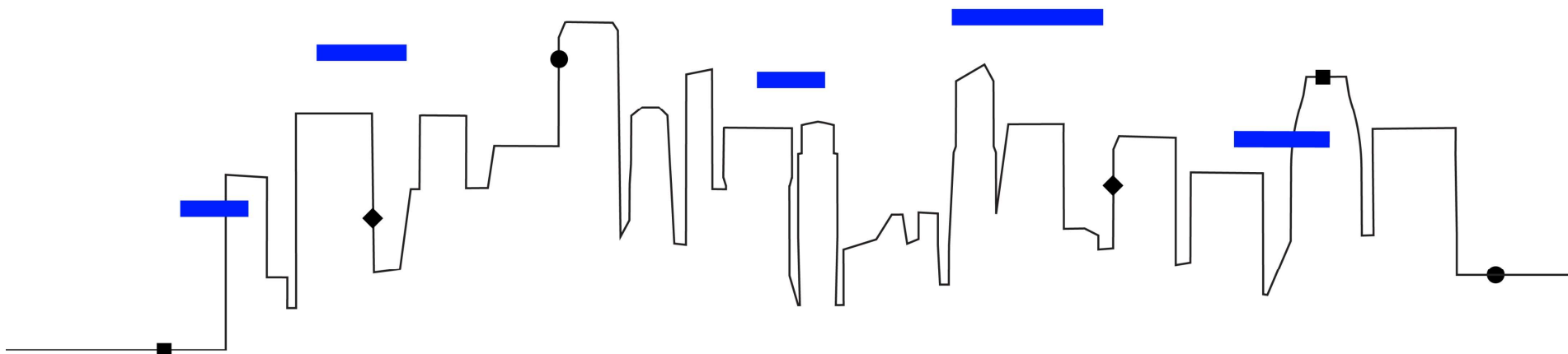


United States Municipals Review

FULL YEAR 2021 | UNDERWRITERS, FINANCIAL ADVISORS & CREDIT ENHANCERS



United States Municipal Review

Full Year 2021 | Underwriters, Financial Advisors & Credit Enhancers

Global Deals Intelligence

MUNICIPAL BOND ISSUANCE UP 1% TO ALL-TIME HIGH

US municipal bond issuance totaled US\$456.4 billion during full year 2021, a 1% increase compared to a year ago and the strongest annual period for municipal bonds since records began in 1980. By number of issues, 11,808 municipal bonds were brought to market during full year 2021, a slight decrease compared to year ago levels. Compared to the third quarter of this year, fourth quarter 2021 municipal bond proceeds decreased 8%, while marking the first time on record that seven consecutive quarters surpassed US\$100 billion in issuance.

TAXABLE MUNICIPAL BONDS DECLINE 18% FROM 2020 LEVELS

Taxable municipal bond offerings totaled US\$113.4 billion during full year 2021, a decrease of 18% compared to levels seen during full year 2020 and marking the slowest annual period for taxable bonds since 2019. Taxable offerings accounted for 25% of full year 2021 municipal bond issuance, down from full year 2020, when taxable bonds accounted for 31% of total US municipal bond issuance.

GREEN BOND ISSUANCE UP 7% TO RECORD US\$20.4 BILLION

Green bond issuance in the US municipal bond market totaled US\$20.4 billion during full year 2021, a 7% increase compared to last year and an all-time annual record. By number of issues, 205 green bonds were sold during full year 2021, a 17% increase compared to 2020 levels and an all-time record. Green bond offerings from issuers in California, New York and Massachusetts accounted for nearly 50% of full year 2021 issuance, down from 76% a year ago.

NEW MONEY OFFERINGS HIT ALL-TIME HIGH; REFUNDINGS FALL 23%

New money offerings totaled US\$302.8 billion during full year 2021, a 20% increase compared to a year ago and the strongest annual period for new money municipal bonds since records began in 1980. Refunding activity within the municipal bond market totaled US\$153.6 billion during full year 2021, a 23% decrease compared to 2020 levels and the slowest annual period for refunding issuance since 2018.

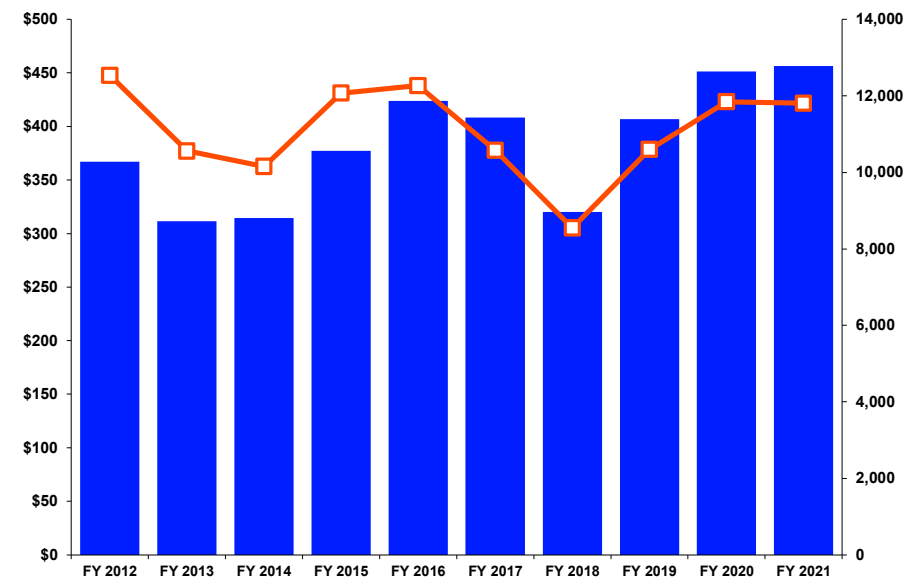
CALIFORNIA, TEXAS AND NEW YORK LEAD MUNI MARKET

Bond issuers in California, Texas and New York accounted for a combined 40% of the US municipal bond market during full year 2021, up slightly from year ago levels. Within the top 20 states for new municipal bonds, issuers in Tennessee, Indiana and Washington registered strong percentage gains compared to a year ago, while Ohio issuers registered declines of 39% compared to full year 2020.

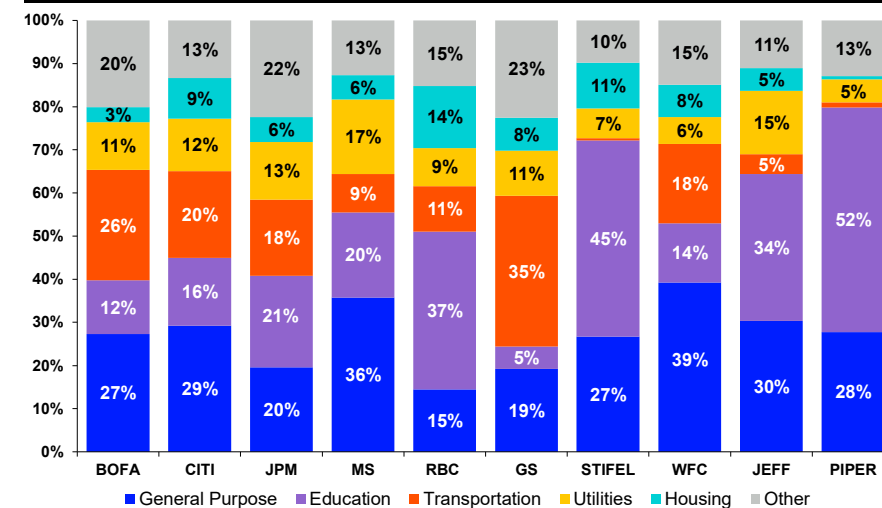
HOUSING & PUBLIC FACILITIES REGISTER GAINS; EDUCATION DECLINES 16%

Municipal bonds with Public Facilities and Environmental Facilities use of proceeds reached a combined US\$45.4 billion during the full year 2021, registering double-digit percentage increases compared to year-ago levels, with the number of Housing municipal bonds up 41% compared to year ago. New issuance with Education use of proceeds fell 16%, by par amount, and 11% by number of issues, compared to full year 2020.

United States Municipals Issuance



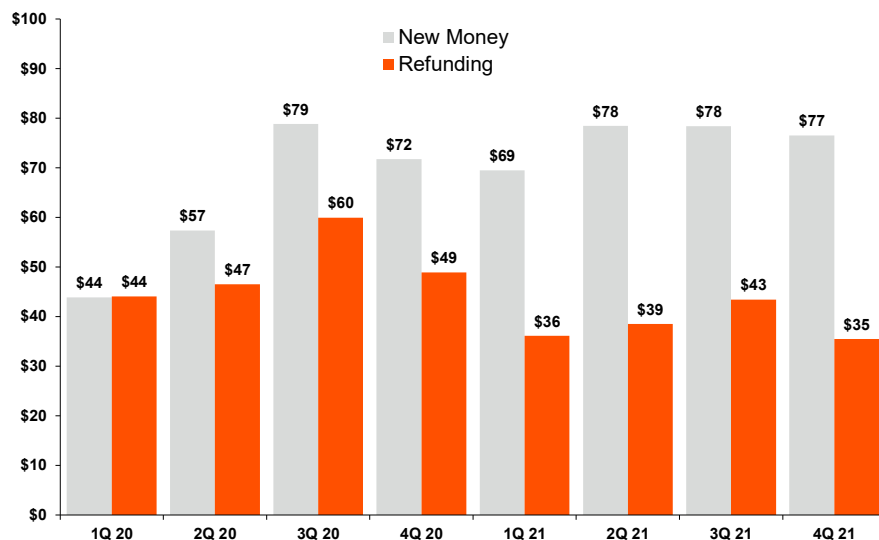
Top 10 Bookrunners by Proceeds - Use of Proceeds Composition



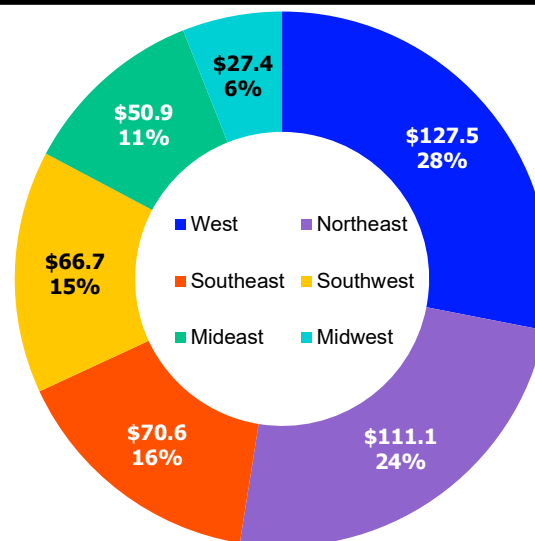
US Municipal Insights

Full Year 2021 | Underwriters, Financial Advisors & Credit Enhancers

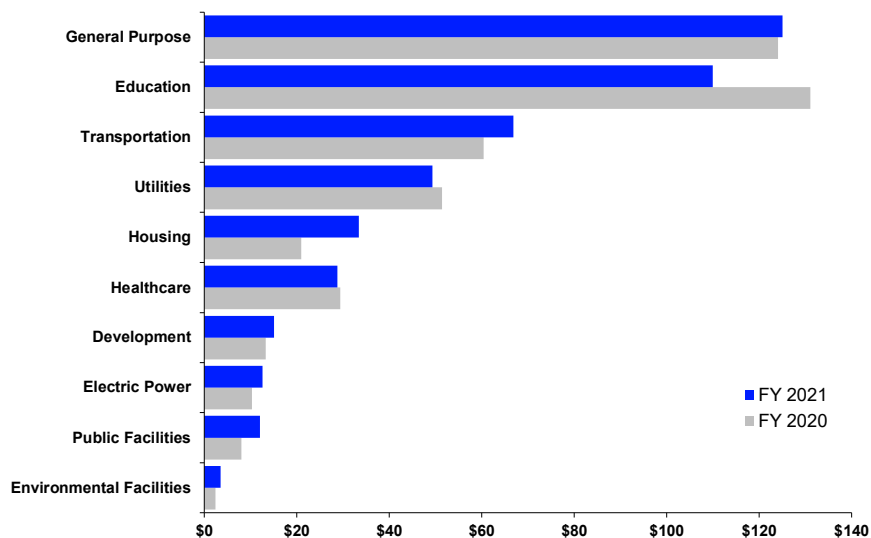
New Money vs. Refunding (US\$bil)



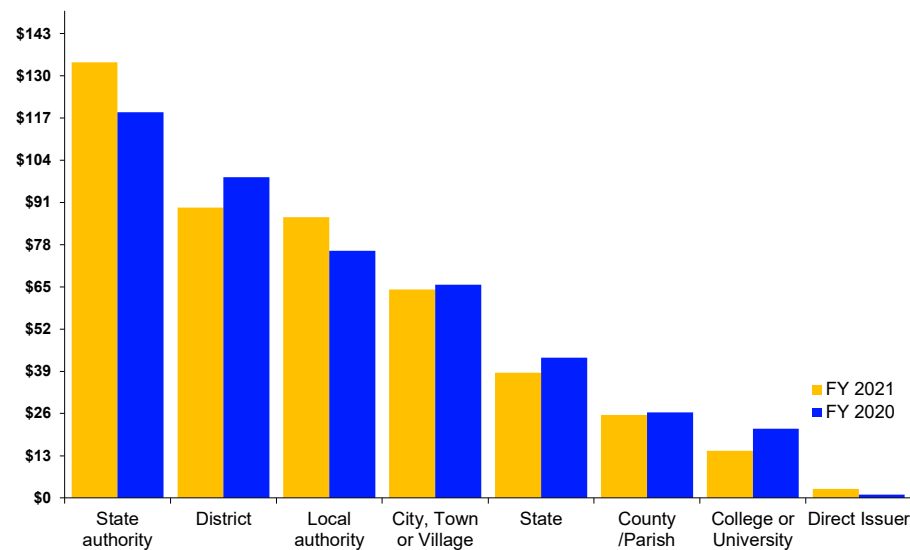
Regional Composition of Proceeds (US\$bil)



Use of Proceeds (US\$bil)



Issuer Type Composition (US\$bil)



US Underwriters

Full Year 2021 | Underwriters, Financial Advisors & Credit Enhancers

Bookrunners (AT01)						
		YoY Change (\$)	1%	QoQ Change (\$)	-8%	
Bookrunner	Rank 2021	Rank 2020	Proce eds	Market Share	Mkt. Sh.	# of Deals
BofA Securities Inc	1	1	62,010	13.6	0.1	498
Citi	2	2	44,745	9.8	-0.6	337
J P Morgan Securities LLC	3	3	35,453	7.8	-2.0	347
Morgan Stanley	4	4	33,863	7.4	-0.3	333
RBC Capital Markets	5	5	27,431	6.0	-0.4	609
Goldman Sachs & Co LLC	6	8	26,910	5.9	1.8	153
Stifel Nicolaus & Co Inc	7	11	23,677	5.2	1.2	1,018
Wells Fargo & Co	8	6	22,142	4.9	-1.0	246
Jefferies LLC	9	9	19,538	4.3	0.2	123
Piper Sandler & Co	10	7	18,258	4.0	-0.4	940
Raymond James	11	10	18,171	4.0	0.0	681
Barclays	12	12	17,225	3.8	0.0	141
Robert W Baird & Co Inc	13	13	14,802	3.2	-0.3	1,115
Siebert Williams Shank & Co	14	14	8,058	1.8	-0.6	65
UBS Financial Services Inc	15	17	6,562	1.4	0.4	78
Industry Total			456,439	100.0		11,808

Long & Short Term (AT16)						
		YoY Change (\$)	-1%	QoQ Change (\$)	-8%	
Bookrunner	Rank 2021	Rank 2020	Proce eds	Market Share	Mkt. Sh.	# of Deals
BofA Securities Inc	1	1	71,075	14.6	1.8	566
Citi	2	3	45,411	9.3	-1.1	348
J P Morgan Securities LLC	3	2	40,815	8.4	-3.4	468
Morgan Stanley	4	4	35,837	7.4	-0.3	391
RBC Capital Markets	5	5	28,207	5.8	-0.2	634
Goldman Sachs & Co LLC	6	9	26,917	5.5	1.7	154
Stifel Nicolaus & Co Inc	7	11	24,129	5.0	1.3	1,059
Wells Fargo & Co	8	6	22,325	4.6	-1.2	256
Jefferies LLC	9	8	20,871	4.3	0.2	259
Piper Sandler & Co	10	7	20,228	4.2	-0.1	1,219
Raymond James	11	10	18,488	3.8	0.0	706
Barclays	12	12	17,793	3.7	0.1	149
Robert W Baird & Co Inc	13	13	15,099	3.1	-0.1	1,129
Siebert Williams Shank & Co	14	14	8,061	1.7	-0.5	66
UBS Financial Services Inc	15	17	7,856	1.6	0.6	83
Industry Total			487,257	100.0		13,672

Issuers (AT15)						
		YoY Change (\$)	1%	QoQ Change (\$)	-8%	
Issuer	Rank 2021	Rank 2020	Proce eds	Market Share	Mkt. Sh.	# of Deals
NYS Dorm Authority	1	4	7,863	1.7	0.5	29
California	2	1	6,886	1.5	-0.2	9
Golden State Tobacco Sec Corp	3	-	6,469	1.4	1.4	4
NYC Transitional Finance Auth	4	6	5,494	1.2	0.1	12
CSCDA Community Imp Auth	5	457	4,140	0.9	0.9	22
Connecticut	6	17	3,321	0.7	0.1	23
Triborough Bridge & Tunnel Auth	7	156	3,054	0.7	0.6	22
NYC Housing Dev Corp	8	22	2,981	0.7	0.2	19
Regents of the University of California	9	7	2,923	0.6	-0.4	5
Indiana Finance Authority	10	195	2,838	0.6	0.5	24
Wisconsin Public Finance Auth	11	45	2,742	0.6	0.3	89
New York City-New York	12	2	2,661	0.6	-0.9	6
Massachusetts	13	10	2,550	0.6	-0.2	10
Washington	14	25	2,542	0.6	0.1	16
NYC Municipal Water Fin Auth	15	16	2,534	0.6	0.0	9
Industry Total			456,439	100.0		11,808

Negotiated (AT03)						
		YoY Change (\$)	0%	QoQ Change (\$)	-7%	
Bookrunner	Rank 2021	Rank 2020	Proce eds	Market Share	Mkt. Sh.	# of Deals
BofA Securities Inc	1	1	44,280	12.4	-0.6	352
Citi	2	2	36,538	10.2	-0.3	239
RBC Capital Markets	3	3	26,706	7.5	-0.3	579
Goldman Sachs & Co LLC	4	4	26,566	7.4	2.4	152
Stifel Nicolaus & Co Inc	5	5	23,242	6.5	1.5	990
Morgan Stanley	6	6	22,666	6.4	-0.6	173
J P Morgan Securities LLC	7	7	22,473	6.3	-2.5	209
Jefferies LLC	8	8	17,853	5.0	0.3	109
Barclays	9	9	15,928	4.5	0.0	134
Piper Sandler & Co	10	10	15,843	4.4	-0.5	739
Raymond James	11	11	15,212	4.3	0.0	452
Wells Fargo & Co	12	12	14,587	4.1	-1.1	169
Siebert Williams Shank & Co	13	13	8,058	2.3	-0.7	65
Loop Capital Markets	14	14	6,154	1.7	0.5	55
Robert W Baird & Co Inc	15	15	5,378	1.5	0.0	366
Industry Total			356,934	100.0		7,530

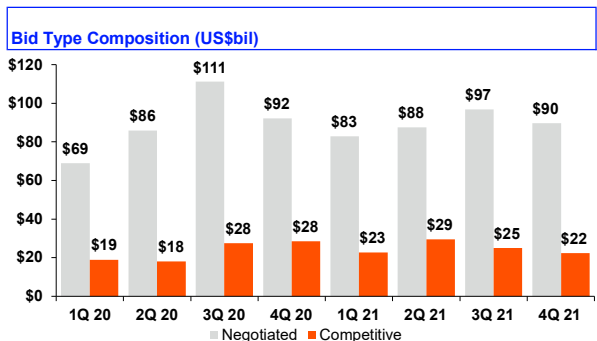
Competitive (AT04)						
		YoY Change (\$)	7%	QoQ Change (\$)	-11%	
Bookrunner	Rank 2021	Rank 2020	Proce eds	Market Share	Mkt. Sh.	# of Deals
BofA Securities Inc	1	1	17,730	17.8	2.3	146
J P Morgan Securities LLC	2	2	12,981	13.1	-0.4	138
Morgan Stanley	3	4	11,198	11.3	0.9	160
Robert W Baird & Co Inc	4	3	9,424	9.5	-1.7	749
Citi	5	5	8,207	8.3	-1.8	98
Wells Fargo & Co	6	6	7,555	7.6	-0.9	77
Raymond James	7	7	2,959	3.0	-0.1	229
FNHC Financial Capital Markets	8	9	2,699	2.7	0.3	218
Piper Sandler & Co	9	8	2,415	2.4	-0.1	201
Mesirow Financial Inc	10	10	2,046	2.1	0.0	31
Hilltop Securities	11	24	1,745	1.8	1.2	96
Jefferies LLC	12	12	1,685	1.7	0.2	14
Roosevelt & Cross Inc	13	16	1,574	1.6	0.3	229
Huntington Bancshares Inc	14	11	1,563	1.6	0.0	141
UBS Financial Services Inc	15	13	1,357	1.4	-0.1	23
Industry Total			99,506	100.0		4,278

Co-Manager (AT12)						
		YoY Change (\$)	-8%	QoQ Change (\$)	-8%	
Co-Manager	Rank 2021	Rank 2020	Proce eds	Market Share	Mkt. Sh.	# of Deals
J P Morgan Securities LLC	1	4	12,839	2.8	-0.3	332
Wells Fargo & Co	2	3	12,486	2.7	-0.4	358
BofA Securities Inc	3	1	12,159	2.7	-1.1	345
Academy Securities Inc	4	9	11,889	2.6	0.2	305
Stifel Nicolaus & Co Inc	5	10	11,537	2.5	0.1	605
Citi	6	5	11,436	2.5	-0.3	333
RBC Capital Markets	7	11	11,366	2.5	0.2	454
Siebert Williams Shank & Co	8	7	11,271	2.5	-0.2	343
Raymond James	9	2	11,071	2.4	-1.0	579
Ramirez & Co Inc	10	6	10,894	2.4	-0.4	826
Loop Capital Markets	11	8	10,122	2.2	-0.5	1015
Morgan Stanley	12	12	9,586	2.1	-0.1	487
Piper Sandler & Co	13	15	8,843	1.9	0.0	200
UBS Financial Services Inc	14	16	7,785	1.7	0.1	372
Estrada Hinojosa & Company Inc	15	17	7,459	1.6	0.1	261
Industry Total			276,186	100.0		3,681

US Taxable Municipal Debt (AT62)						
		YoY Change (\$)	-42%	QoQ Change (\$)	-15%	
Bookrunner	Rank 2021	Rank 2020	Proce eds	Market Share	Mkt. Sh.	# of Deals
BofA Securities Inc	1	1	6,934	14.0	0.2	47
Citi	2	2	5,256	10.6	-0.4	35
Morgan Stanley	3	3	4,694	9.5	-0.8	28
Wells Fargo & Co	4	5	3,972	8.0	1.2	41
JP Morgan	5	4	3,464	7.0	-2.2	28
RBC Capital Markets	6	8	3,194	6.4	0.5	69
Goldman Sachs & Co	7	6	3,137	6.3	0.1	20
Stifel/KBW	8	12	3,048	6.1	3.9	99
Jefferies LLC	9	9	1,702	3.4	-0.8	11
Raymond James Financial Inc	10	10	1,699	3.4	0.0	56
Industry Total			49,609	100.0		1,053

*Indicates a Tie

Minority Owned Firms (AT41)						
		YoY Change (\$)	-5%	QoQ Change (\$)	-8%	
Bookrunner	Rank 2021	Rank 2020	Proce eds	Market Share	Mkt. Sh.	# of Deals
Siebert Williams Shank & Co	1	1	5,005	3.4	-1.4	39
Loop Capital Markets	2	3	4,325	3.0	0.6	38
Ramirez & Co Inc	3	2	3,369	2.3	-0.6	27
Estrada Hinojosa & Company Inc	4	5	266	0.2	0.1	13
Academy Securities Inc	5	9	109	0.1	0.1	1
Duncan-Williams Inc	6	7	72	0.1	0.0	16
Stern Brothers & Co	7	8	71	0.1	0.0	2
Rice Financial Products Company	8	6	31	0.0	-0.1	1
Cabrera Capital Markets Inc	9	4	25	0.0	-0.2	2
Industry Total			146,499	100.0		1,869



Composite Amount US\$10mln & Under

Full Year 2021 | Underwriters, Financial Advisors & Credit Enhancers

Bookrunner Composite Amount Under \$10mln (AT02)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Robert W Baird & Co Inc	1	1	3,165	13.0	-0.6	667
Piper Sandler & Co	2	2	2,378	9.8	2.0	504
Stifel Nicolaus & Co Inc	3	3	1,971	8.1	0.3	373
Raymond James	4	4	1,463	6.0	-0.7	313
D A Davidson & Co	5	5	1,146	4.7	-0.9	306
RBC Capital Markets	6	6	1,128	4.6	-0.2	197
FHNC Financial Capital Markets	7	9	1,094	4.5	1.3	182
Samco Capital Markets	8	7	1,054	4.3	0.0	234
Roosevelt & Cross Inc	9	8	928	3.8	0.4	256
Northland Securities	10	10	835	3.4	0.6	244
Huntington Bancshares Inc	11	16	599	2.5	0.7	144
FMSbonds Inc	12	19	507	2.1	0.5	86
BOK Financial Securities Inc	13	12	492	2.0	0.0	154
Hilltop Securities	14	11	474	1.9	-0.8	102
PNC Financial Services Group Inc	15	15	414	1.7	-0.1	65
Industry Total			24,389	100.0		5,606

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

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Cantor Fitzgerald LP	1	1	362	1.5	-1.1	80
D A Davidson & Co	2	9	202	0.8	0.2	130
United Bankers Bank	3	17	199	0.8	0.3	136
RBC Capital Markets	4	3	193	0.8	-0.1	77
Ramirez & Co Inc	5	5	179	0.7	0.0	254
Stifel Nicolaus & Co Inc	6	2	172	0.7	-0.2	166
CINCaP Investment Group	7	-	151	0.6	0.6	223
Sierra Pacific Securities	8	4	149	0.6	-0.1	516
R Seelaus & Company Inc	9	8	148	0.6	0.0	225
Crews & Associates Inc	10	6	147	0.6	-0.1	496
Intercoastal Capital Markets	11	10	141	0.6	0.0	217
Raymond James	12	29	140	0.6	0.3	69
Oppenheimer & Co	13	7	134	0.6	0.0	273
Edward D Jones & Co LP	14	19	132	0.5	0.0	326
UMB Bank NA	15	18	127	0.5	0.0	156
Industry Total			5,709	100.0		1,154

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

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	1,720	10.1	0.4	301
Ehlers & Associates	2	3	1,158	6.8	0.9	302
Baker Tilly Municipal Advisors	3	2	1,023	6.0	-0.5	223
Hilltop Securities	4	4	982	5.8	0.1	194
Robert W Baird & Co Inc	5	5	930	5.5	0.6	216
Masterson Advisors LLC	6	6	576	3.4	-0.5	139
Specialized Public Finance Inc	7	10	481	2.8	0.1	109
Phoenix Advisors LLC	8	8	461	2.7	-0.1	83
Piper Sandler & Co	9	7	458	2.7	-0.3	83
PMA Securities Inc	10	11	387	2.3	0.0	79
Cumberland Securities Co Inc	11	20	375	2.2	0.9	53
Fiscal Advisors & Marketing Inc	12	14	360	2.1	0.2	149
Speer Financial Inc	13	15	331	1.9	0.0	99
Rathmann & Associates	14	17	297	1.7	0.1	64
Capital Markets Advisors LLC	15	16	293	1.7	-0.1	59
Industry Total			17,068	100.0		3,927

Negotiated Composite Amt Under \$10mln (AT21)

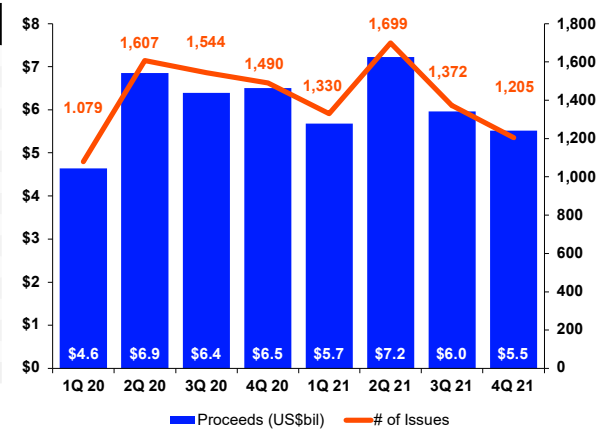
	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Stifel Nicolaus & Co Inc	1	1	1,880	14.1	0.7	352
Piper Sandler & Co	2	3	1,612	12.1	3.4	369
D A Davidson & Co	3	2	1,096	8.2	-1.6	295
RBC Capital Markets	4	4	1,042	7.8	-0.2	176
Robert W Baird & Co Inc	5	6	924	6.9	0.6	203
Raymond James	6	5	755	5.7	-0.7	160
Samco Capital Markets	7	8	487	3.6	0.1	120
FMSbonds Inc	8	10	463	3.5	0.7	77
PNC Financial Services Group Inc	9	9	353	2.6	-0.6	54
LJ Hart & Company	10	7	337	2.5	-1.0	90
Hilltop Securities	11	11	293	2.2	-0.5	59
Roosevelt & Cross Inc	12	14	274	2.1	0.0	84
Northland Securities	13	13	268	2.0	-0.2	80
Colliers Securities	14	17	251	1.9	0.3	61
Huntington Bancshares Inc	15	19	250	1.9	0.5	55
Industry Total			13,352	100.0		2,951

*Indicates a Tie

Competitive Composite Amt Under \$10mln (AT20)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Robert W Baird & Co Inc	1	1	2,241	20.3	-1.9	464
FHNC Financial Capital Markets	2	4	961	8.7	2.1	155
Piper Sandler & Co	3	3	766	6.9	0.1	135
Raymond James	4	2	708	6.4	-0.7	153
Roosevelt & Cross Inc	5	6	653	5.9	0.8	172
Samco Capital Markets	6	5	567	5.1	-0.2	114
Northland Securities	7	8	567	5.1	1.5	164
BOK Financial Securities Inc	8	10	420	3.8	0.5	137
Huntington Bancshares Inc	9	14	349	3.2	1.0	89
Baker Group LP	10	9	339	3.1	-0.4	110
Bank of New York Mellon Corp	11	7	308	2.8	-1.1	67
Country Club Bank	12	15	282	2.6	0.6	75
Fidelity Capital Markets	13	17	245	2.2	0.5	57
UMB Bank NA	14	11	227	2.1	-1.0	63
CINCaP Investment Group	15	-	226	2.1	2.1	64
Industry Total			11,037	100.0		2,655

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



US Financial Advisors

Full Year 2021 | Underwriters, Financial Advisors & Credit Enhancers

Financial Advisors (AT07) YoY Change (\$) -2% QoQ Change (\$) -7%

Financial Advisor	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	64,227	17.0	-1.0	994
Public Resources Advisory Group	2	2	44,508	11.8	0.6	202
Hilltop Securities	3	3	30,898	8.2	0.1	616
Frasca & Associates	4	6	13,435	3.6	0.7	52
Acacia Financial Group Inc	5	4	11,758	3.1	-1.4	154
KNN Public Finance	6	7	11,429	3.0	0.4	75
Piper Sandler & Co	7	8	10,605	2.8	0.7	217
Lamont Financial Services Corp	8	19	7,597	2.0	0.9	40
Swap Financial Group LLC	9	13	7,158	1.9	0.4	17
RBC Capital Markets	10	15	6,727	1.8	0.5	136
Baker Tilly Municipal Advisors	11	11	6,444	1.7	0.0	379
Estrada Hinojosa & Company Inc	12	5	5,649	1.5	-1.4	95
Fieldman Rolapp & Associates	13	22	5,541	1.5	0.5	125
Ponder & Co	14	16	5,131	1.4	0.1	51
Kaufman Hall & Associates Inc	15	12	5,069	1.3	-0.3	36
Industry Total			377,183	100.0		8,569

Financial Advisors Long & Short Term (AT18) YoY Change (\$) -5% QoQ Change (\$) -7%

Financial Advisor	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	65,874	16.3	-0.5	1,017
Public Resources Advisory Group	2	2	48,335	11.9	0.8	207
Hilltop Securities	3	3	32,239	8.0	0.3	782
Frasca & Associates	4	7	13,435	3.3	0.7	52
Acacia Financial Group Inc	5	4	12,302	3.0	-1.6	189
KNN Public Finance	6	8	12,075	3.0	0.5	91
Piper Sandler & Co	7	9	11,141	2.8	0.8	223
Lamont Financial Services Corp	8	25	7,597	1.9	0.9	40
RBC Capital Markets	9	14	7,487	1.9	0.5	138
Swap Financial Group LLC	10	16	7,158	1.8	0.5	17
Baker Tilly Municipal Advisors	11	12	6,580	1.6	0.1	394
Montague DeRose & Associates LLC	12	10	6,522	1.6	-0.2	47
Fieldman Rolapp & Associates	13	23	6,292	1.6	0.6	133
Estrada Hinojosa & Company Inc	14	6	5,649	1.4	-1.2	95
Ponder & Co	15	19	5,131	1.3	0.2	51
Industry Total			405,225	100.0		10,104

Financial Advisors Number of Issues (AT07d) YoY Change (\$) -2% QoQ Change (\$) -11%

Financial Advisor	Rank 2021	Rank 2020	# of Deals	Market Share	Mkt. Sh.	Proceeds US\$mil
PFM Financial Advisors LLC	1	1	994	11.6	0.2	64,227
Hilltop Securities	2	2	616	7.2	-0.9	30,898
Baker Tilly Municipal Advisors	3	3	379	4.4	-0.6	6,444
Ehlers & Associates	4	4	363	4.2	0.4	2,699
Robert W Baird & Co Inc	5	5	283	3.3	0.2	3,131
Piper Sandler & Co	6*	6	217	2.5	-0.4	10,605
Specialized Public Finance Inc	6*	8	217	2.5	0.3	4,400
Public Resources Advisory Group	8	11	202	2.4	0.6	44,508
Masterson Advisors LLC	9	7	197	2.3	-0.1	3,141
Fiscal Advisors & Marketing Inc	10	13	185	2.2	0.4	1,227
Phoenix Advisors LLC	11	9	162	1.9	-0.2	2,342
Acacia Financial Group Inc	12	14	154	1.8	0.1	11,758
Speer Financial Inc	13	17*	148	1.7	0.1	1,368
RBC Capital Markets	14	16	136	1.6	0.0	6,727
Capital Markets Advisors LLC	15	15	131	1.5	-0.2	2,408
Industry Total			8,569			377,183

Financial Advisors Negotiated (AT07b) YoY Change (\$) -5% QoQ Change (\$) -6%

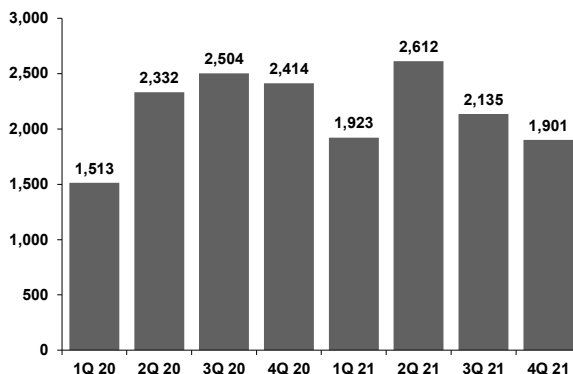
Financial Advisor	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	52,066	18.5	-0.8	625
Public Resources Advisory Group	2	2	27,373	9.7	-0.4	97
Hilltop Securities	3	3	24,007	8.5	-0.1	351
Frasca & Associates	4	5	12,138	4.3	0.7	41
KNN Public Finance	5	7	10,079	3.6	0.3	64
Acacia Financial Group Inc	6	4	7,684	2.7	-2.0	116
Lamont Financial Services Corp	7	15	7,372	2.6	1.3	39
Swap Financial Group LLC	8	10	7,158	2.6	0.7	17
RBC Capital Markets	9	14	5,977	2.1	0.6	104
Piper Sandler & Co	10	22	5,114	1.8	0.9	64
Kaufman Hall & Associates Inc	11	8	5,069	1.8	-0.2	36
CSG Advisors Incorporated	12	13	5,001	1.8	0.3	108
Estrada Hinojosa & Company Inc	13	6	4,997	1.8	-1.8	78
Ponder & Co	14	11	4,881	1.7	0.0	49
Fieldman Rolapp & Associates	15	19	4,619	1.6	0.5	110
Industry Total			281,015	100.0		4,365

*Indicates a Tie

Financial Advisors Competitive (AT07c) YoY Change (\$) 7% QoQ Change (\$) -12%

Financial Advisor	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Public Resources Advisory Group	1	1	17,136	17.8	2.8	105
PFM Financial Advisors LLC	2	2	12,161	12.7	-1.2	369
Hilltop Securities	3	3	6,892	7.2	0.9	265
Piper Sandler & Co	4	4	5,491	5.7	-0.4	153
Acacia Financial Group Inc	5	7	4,074	4.2	0.3	38
Davenport & Company LLC	6	5	3,804	4.0	-1.6	87
Baker Tilly Municipal Advisors	7	6	3,383	3.5	-1.2	279
Ehlers & Associates	8	8	2,329	2.4	-0.9	340
Stephens Inc	9	12	1,892	2.0	0.5	69
Robert W Baird & Co Inc	10	9	1,760	1.8	-0.7	241
Montague DeRose & Associates LLC	11	16	1,663	1.7	0.6	20
Capital Markets Advisors LLC	12	10	1,617	1.7	-0.1	110
Phoenix Advisors LLC	13	11	1,552	1.6	0.0	102
KNN Public Finance	14	37	1,350	1.4	0.9	11
Specialized Public Finance Inc	15	21	1,344	1.4	0.5	93
Industry Total			96,167	100.0		4,204

Financial Advisor - Number of Issues



US Green Bonds

Full Year 2021 | Underwriters, Financial Advisors & Credit Enhancers

Bookrunner Green Bonds (AT70)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Goldman Sachs & Co LLC	1	6	3,708	18.2	11.3	19
Citi	2	3	2,661	13.0	-1.2	14
J P Morgan Securities LLC	3	5	2,573	12.6	2.0	12
BofA Securities Inc	4	1	2,536	12.4	-3.2	21
Morgan Stanley	5	7	2,199	10.8	5.7	12
Wells Fargo & Co	6	2	1,134	5.6	-9.1	10
RBC Capital Markets	7	10	921	4.5	1.5	16
Barclays	8	9	703	3.4	-1.0	3
UBS Financial Services Inc	9	15	645	3.2	2.5	5
Piper Sandler & Co	10	12	585	2.9	1.5	15
Ziegler	11	-	512	2.5	2.5	9
Ramirez & Co Inc	12	13	461	2.3	1.1	2
Stifel Nicolaus & Co Inc	13	11	397	2.0	0.2	14
Raymond James	14	8	283	1.4	-3.4	13
Loop Capital Markets	15	-	184	0.9	0.9	3
Industry Total			20,416	100.0		205

Co-Manager Green Bonds (AT71)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
RBC Capital Markets	1	14	1,308	6.4	4.5	18
Loop Capital Markets	2	3	1,074	5.3	0.4	25
Siebert Williams Shank & Co	3	6	898	4.4	0.0	22
Goldman Sachs & Co LLC	4	10	854	4.2	0.5	9
Academy Securities Inc	5	4	845	4.1	-0.6	17
UBS Financial Services Inc	6	18	822	4.0	2.6	12
BofA Securities Inc	7	2	653	3.2	-2.1	11
Wells Fargo & Co	8	5	619	3.0	-1.7	14
Morgan Stanley	9	12	590	2.9	0.1	15
Ramirez & Co Inc	10	1	537	2.6	-3.4	20
Stifel Nicolaus & Co Inc	11	11	524	2.6	-0.5	12
J P Morgan Securities LLC	12	8	508	2.5	-1.6	16
Citi	13	7	405	2.0	-2.2	14
Barclays	14	9	346	1.7	-2.3	13
Estrada Hinojosa & Company Inc	15	15	304	1.5	-0.3	6
Industry Total			13,477	100.0		80

Financial Advisor Green Bonds (AT72)

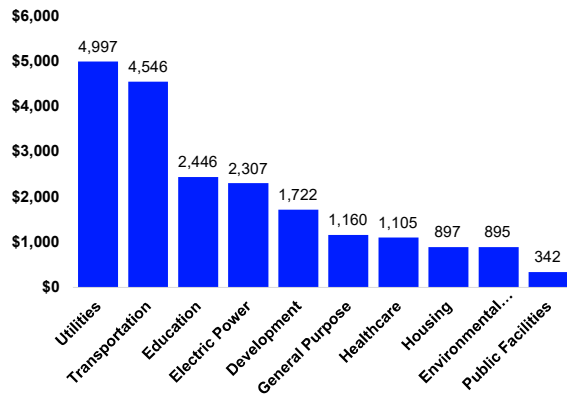
	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
PFM Financial Advisors LLC	1	1	4,456	28.9	1.8	28
Hilltop Securities	2	30	1,709	12.4	9.7	5
KNN Public Finance	3	9	1,396	9.9	6.0	3
Piper Sandler & Co	4	11	952	6.5	4.3	2
Swap Financial Group LLC	5	-	877	4.4	4.4	2
Public Resources Advisory Group	6	2	640	4.3	-17.9	5
Municipal Capital Markets Group Inc	7	-	603	3.8	3.8	2
Frasca & Associates	8	-	580	2.5	2.5	2
Montague DeRose & Associates LLC	9	3	578	2.2	-13.3	6
Zions Bank	10	16	523	2.0	2.1	3
Phoenix Capital Partners LLP	11	-	442	1.8	1.8	2
Backstrom McCarley Berry & Co	12	10	370	1.7	0.4	4
Melio & Company LLC	13	-	338	1.7	1.7	1
CSG Advisors Incorporated	14	12	331	1.7	0.8	4
Kaufman Hall & Associates Inc	15	-	315	1.5	1.5	1
Industry Total			17,238			139

Issuer Green Bonds (AT73)

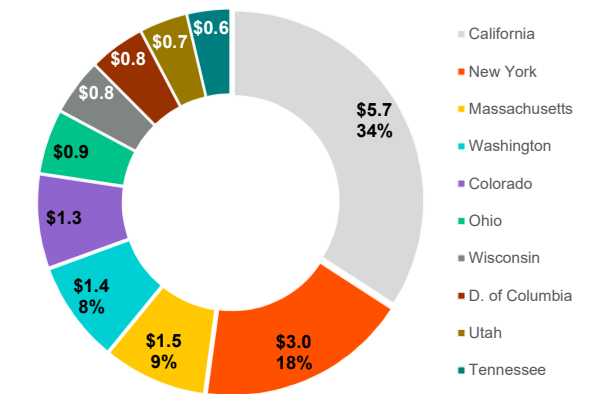
	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
California Comm Choice Fin Auth	1	-	1,837	9.0	9.0	4
New York Liberty Dev Corp	2	-	1,237	6.1	6.1	7
San Diego USD	3	-	928	4.6	4.6	2
Central Puget Sound Reg Tran Au	4	-	869	4.3	4.3	1
Colorado Reg Transportation Dt	5	-	834	4.1	4.1	2
Washington Metro Area Transit Au	6	-	784	3.8	3.8	1
Massachusetts Wtr Resources Auth	7	-	748	3.7	3.7	2
Nashville-Davidson Co Metro Govt	8	-	610	3.0	3.0	2
Ohio State University	9	-	600	2.9	2.9	1
Metropolitan Transportation Authority	10	1	495	2.4	-18.4	4
San Francisco City/Co Public Util Comm	11	9	479	2.4	-0.2	2
California St Public Works Board	12	-	468	2.3	2.3	1
Hudson Yards Infrastructure Corp	13	-	454	2.2	2.2	1
Utah Transit Au (UTA)	14	-	448	2.2	2.2	1
San Diego Co Water Auth	15	11	418	2.1	0.0	2
Industry Total			20,416	100.0		156

*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 2021 | Underwriters, Financial Advisors & Credit Enhancers

Private Placement Agent / Purchaser (AT24)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Piper Sandler & Co	1	4	2,385	15.2	8.7	190
Truist Financial Corp	2	5	1,988	12.6	6.3	36
Citi	3	1	1,666	10.6	-4.1	61
Wells Fargo & Co	4	7	1,138	7.2	3.3	14
Robert W Baird & Co Inc	5	9	722	4.6	1.6	115
J P Morgan Securities LLC	6	2	543	3.5	-8.4	23
BoFA Securities Inc	7	3	530	3.4	-3.7	21
PNC Financial Services Group Inc	8	14	433	2.8	1.1	14
TD Securities (USA) LLC	9	11	397	2.5	-0.2	12
D A Davidson & Co	10	8	381	2.4	-0.7	34
KeyBanc Capital Markets	11	12	367	2.3	-0.3	26
Ramirez & Co Inc	12	78*	367	2.3	2.2	3
RBC Capital Markets	13*	13	311	2.0	-0.3	13
Hilltop Securities	13*	21	311	2.0	0.9	42
US Bancorp	15	19	291	1.9	0.7	5
Industry Total			15,749	100.0		885

Private Issuers (AT44)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Wake Co-North Carolina	1	-	756	4.8	4.8	2
Washington St Hsg Fin Commission	2	5	476	3.0	-0.1	12
California Statewide CDA (CSCDA)	3	4	428	2.7	-0.8	11
Wisconsin Hth & Ed Fac Auth (WHEFA)	4	31	364	2.3	1.8	8
California Municipal Fin Auth	5	8	361	2.3	0.2	13
Chesapeake Bay Bridge-Tunnel	6	-	339	2.2	2.2	1
NYC Municipal Water Fin Auth	7	-	337	2.1	2.1	2
Massachusetts Dev Finance Agcy	8	1	308	2.0	-3.5	10
Colorado St Univ Sys Bd of Gov	9	-	258	1.6	1.6	3
Polk Co (Fisher) ISD #600	10	-	250	1.6	1.6	1
Philadelphia Auth for Indus Dev	11	-	242	1.5	1.5	1
Orange Co School Board	12	-	240	1.5	1.5	2
Univ of Colorado Bd of Regents	13	-	228	1.5	1.5	1
Dallas-Fort Worth Intl Airport	14	-	225	1.4	1.4	1
California Housing Finance Agcy	15	2	219	1.4	-3.0	6
Industry Total			15,749	100.0		885

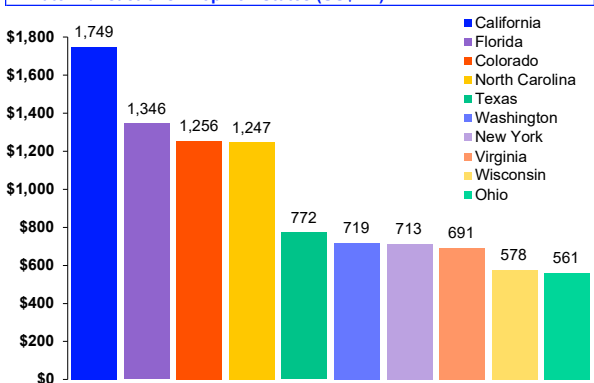
Private Financial Advisor (AT25)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
First Tryon Securities LLC	1	14	799	11.1	9.4	6
North Slope Capital Advisors	2	-	769	10.7	10.7	12
PFM Financial Advisors LLC	3	1	638	8.9	-8.6	47
Kaufman Hall & Associates Inc	4	11	543	7.6	5.1	10
Ponder & Co	5	2	537	7.5	-8.6	12
Wye River Group Incorporated	6	5	417	5.8	1.4	12
Government Consultants Inc	7	16	411	5.7	4.0	28
Prager & Co LLC	8	-	321	4.5	4.5	3
Echo Financial Products LLC	9	4	250	3.5	-1.6	2
Piper Sandler & Co	10	3	198	2.8	-3.1	10
Lamont Financial Services Corp	11*	-	168	2.4	2.4	2
Frasca & Associates	11*	-	168	2.4	2.4	2
Dunlap & Associates	13	24	158	2.2	1.3	10
Janney Montgomery Scott LLC	14	-	149	2.1	2.1	3
Stifel Nicolaus & Co Inc	15	10	147	2.1	-0.7	5
Industry Total			7,173	100.0		289

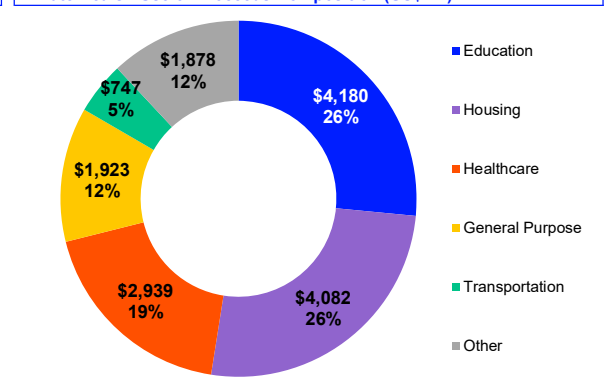
Public & Private Issuers (AT46)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
NYS Dorm Authority	1	4	7,942	1.7	0.5	31
California	2	1	6,886	1.5	-0.1	9
Golden State Tobacco Sec Corp	3	-	6,469	1.4	1.4	4
NYC Transitional Finance Auth	4	6	5,494	1.2	0.1	12
CSCDA Community Imp Auth	5	473	4,140	0.9	0.9	22
Connecticut	6	19	3,321	0.7	0.2	23
Triborough Bridge & Tunnel Auth	7	165	3,054	0.7	0.6	22
NYC Housing Dev Corp	8	26	2,981	0.6	0.1	19
Regents of the University of California	9	7	2,923	0.6	-0.4	5
NYC Municipal Water Fin Auth	10	17	2,871	0.6	0.0	11
Indiana Finance Authority	11	176	2,838	0.6	0.5	24
Wisconsin Public Finance Auth	12	32	2,742	0.6	0.2	89
New York City-New York	13	2	2,661	0.6	-0.8	6
Massachusetts	14	10	2,550	0.5	-0.3	10
Washington	15	28	2,542	0.5	0.1	16
Industry Total			472,188	100.0		12,693

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



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



Bond Insurers (AT10)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
AGM formerly FSA Inc	1	1	22,352	60.1	3.1	1,076
Build America Mutual (BAM)	2	2	14,841	39.9	-2.5	1,122
Industry Total			37,193	100.0		2,198

*Indicates a Tie

Credit Enhancers (AT80)

	Rank 2021	Rank 2020	Proceeds US\$mil	Market Share	Mkt. Sh.	# of Deals
Credit Enhancers Types						
Bond insurance	1	1	37,193	67.7	11.2	2,198
Guaranteed	2	2	11,044	20.1	-17.7	581
Mortgage backed	3	5	1,440	2.6	1.0	57
LOC Domestic Bank	4	4	420	0.8	-1.1	8
Standby Purch Agreement	5	3	291	0.5	-1.0	5
Industry Total			54,961	100.0		2,834

Top Issuers by Insured Amount

	Rank 2021	Rank 2020	US\$mil	Share	US\$mil	Deals
Miami-Dade Co-Florida	1	-	800.3	2.2	1,242.8	3
Central Florida Expressway Au	2	-	664.5	1.8	746.6	2
Tucson City-Arizona	3	-	658.1	1.8	658.1	1
San Joaquin Hills Trans Corridor Agcy	4	-	605.1	1.6	605.1	1
NYC Industrial Dev Agency	5	-	551.5	1.5	551.5	2
California Municipal Fin Auth	6	-	414.7	1.1	414.7	2
Anaheim Public Financing Auth	7	-	389.0	1.1	389.0	2
New Orleans City-Louisiana	8	-	372.5	1.0	372.5	2
Kansas Development Fin Auth	9	-	325.7	0.9	569.8	2
NYS Dorm Authority	10	-	323.0	0.9	383.4	4
Top 10 Total			5,104.4	13.9	5,933.5	21

United States Municipals Criteria

First Half 2021 | 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, 2021 to December 31, 2021, of which Refinitiv was made aware. All current data and previous year's data are as of 10:00am EDT on January 3, 2022. 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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