

BLACKROCK MUNIASSETS FUND, INC.

Form N-Q

September 25, 2014

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM N-Q

**QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED
MANAGEMENT INVESTMENT COMPANY**

Investment Company Act file number: 811-07642

Name of Fund: BlackRock MuniAssets Fund, Inc. (MUA)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock MuniAssets Fund, Inc., 55 East 52nd Street, New York, NY 10055

Registrant's telephone number, including area code: (800) 882-0052, Option 4

Date of fiscal year end: 04/30/2015

Date of reporting period: 07/31/2014

Item 1 Schedule of Investments

Schedule of Investments July 31, 2014 (Unaudited)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Alabama 2.8%		
County of Jefferson Alabama, RB, Limited Obligation School, Series A:		
5.25%, 1/01/17	\$ 895	\$ 901,176
5.25%, 1/01/19	2,000	2,017,800
5.50%, 1/01/21	1,215	1,225,813
4.75%, 1/01/25	3,145	3,069,174
County of Jefferson Alabama Sewer, Refunding RB, Sub-Lien, Series D, 6.00%, 10/01/42	3,745	4,065,984
State of Alabama Docks Department, Refunding RB, 6.00%, 10/01/40	2,165	2,488,646
		13,768,593
Alaska 1.1%		
Northern Tobacco Securitization Corp., Refunding RB, Tobacco Settlement, Asset-Backed, Series A:		
4.63%, 6/01/23	1,435	1,338,439
5.00%, 6/01/32	1,500	1,152,645
5.00%, 6/01/46	4,000	2,968,240
		5,459,324
Arizona 2.2%		
City of Phoenix Arizona IDA, RB:		
Great Hearts Academies Veritas Project, 6.30%, 7/01/42	500	517,670
Great Hearts Academies Veritas Project, 6.40%, 7/01/47	425	440,568
Legacy Traditional Schools Project, Series A, 6.75%, 7/01/44 (a)	1,000	1,101,340
Series A, 6.50%, 7/01/34 (a)	570	620,365
City of Show Low Arizona, Special Assessment Bonds, Improvement District No. 5, 6.38%, 1/01/15	50	50,894
County of Maricopa Arizona IDA, RB, Arizona Charter School Project 1, Series A, 6.63%, 7/01/20	755	722,444
Phoenix IDA Arizona, Refunding RB, America West Airlines, Inc. Project, AMT, 6.30%, 10/01/14 (b)	5,750	5,804,338
	Par	
	(000)	Value
Municipal Bonds		
Arizona (concluded)		
University Medical Center Corp. Arizona, RB,		
6.25%, 7/01/29	\$ 820	\$ 947,854
6.50%, 7/01/39	500	578,440
		10,783,913
California 4.1%		
California Pollution Control Financing Authority, RB, County of San Diego California Water Authority Desalination Project Pipeline, 5.00%, 11/21/45 (a)		
	1,270	1,285,570
California School Finance Authority, RB:		
Alliance for College Ready Public School 2023 Union LLC Project, Series A, 6.40%, 7/01/48	1,570	1,753,486
Value Schools, 6.65%, 7/01/33	435	463,236
Value Schools, 6.90%, 7/01/43	975	1,045,278
California Statewide Communities Development Authority, Refunding RB, American Baptist Homes of the West, 6.25%, 10/01/39		
	2,175	2,332,013
California Statewide Financing Authority, RB, Tobacco Settlement, Series B, 6.00%, 5/01/43		
	1,650	1,649,818
City of Fontana California, Refunding RB, Special Tax Bonds, Community Facilities District No. 22-Sierra, Series H, 6.00%, 9/01/14 (b)		
	2,320	2,331,113
City of San Jose California Hotel Tax, RB, Convention Center Expansion & Renovation Project:		
6.50%, 5/01/36	900	1,065,168
6.50%, 5/01/42	2,220	2,623,019
City of Stockton California Public Financing Authority, RB, Delta Water Supply Project, Series A, 6.25%, 10/01/40		
	375	426,540
County of Riverside California Transportation Commission, RB, Senior Lien, Series A, 5.75%, 6/01/48		
	2,885	3,217,381

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Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
California (concluded)		
Tobacco Securitization Authority of Southern California, Refunding RB, Tobacco Settlement, Asset-Backed, Senior Series A-1, 4.75%, 6/01/25	\$ 2,000	\$ 1,934,240
		20,126,862
Colorado 0.5%		
Plaza Metropolitan District No. 1 Colorado, Refunding, Tax Allocation Bonds, Public Improvement Fee, Tax Increment, 5.00%, 12/01/40	575	581,998
Regional Transportation District, RB, Denver Transit Partners Eagle P3 Project, 6.00%, 1/15/34	1,500	1,667,205
		2,249,203
Connecticut 0.3%		
Mohegan Tribe of Indians of Connecticut, Refunding RB, Public Improvement, Priority Distribution, 6.25%, 1/01/31	1,370	1,370,973
Delaware 0.8%		
County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Power LLC Project, 6.00%, 10/01/40	1,000	1,100,930
Delaware State EDA, RB, Exempt Facilities, Indian River Power LLC Project, 5.38%, 10/01/45	2,620	2,756,502
		3,857,432
District of Columbia 1.1%		
District of Columbia, RB, Methodist Home District of Columbia, Series A:		
7.38%, 1/01/30	1,665	1,669,212
7.50%, 1/01/39	1,615	1,618,505
District of Columbia Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, 6.50%, 5/15/33	1,055	1,167,115
	Par	
Municipal Bonds		
District of Columbia (concluded)		
Metropolitan Washington Airports Authority, Refunding RB, Dulles Metrorail and Capital Improvement Project Series A, 5.00%, 10/01/53	\$ 1,000	\$ 1,028,710
		5,483,542
Florida 9.0%		
Boggy Creek Improvement District, Refunding RB, Special Assessment Bonds, 5.13%, 5/01/43	1,600	1,617,760
Capital Trust Agency Inc, RB:First Mortgage Silver Creek St. Augustine Project Series A, 8.25%, 1/01/44	515	514,938
8.25%, 1/01/49	1,105	1,098,624
County of Collier Florida IDA, Refunding RB, Arlington of Naples Project, Series A, 8.13%, 5/15/44 (a)	2,510	2,692,552
County of Hillsborough Florida IDA, RB, National Gypsum Co., AMT:		
Series A, 7.13%, 4/01/30	3,000	3,006,210
Series B, 7.13%, 4/01/30	1,560	1,561,576
County of Palm Beach Florida Health Facilities Authority, RB, Acts Retirement Life Community, 5.50%, 11/15/33	3,500	3,697,470
Greenway Improvement District, RB, Special Assessment Bonds, 5.13%, 5/01/43	2,000	2,022,200
Harbor Bay Community Development District Florida, Special Assessment Bonds, Series A, 7.00%, 5/01/33	410	411,267
Jacksonville Economic Development Commission, RB, Gerdau Ameristeel U.S. Inc., AMT, 5.30%, 5/01/37	4,500	4,499,730
Jacksonville Economic Development Commission, Refunding RB, Florida Proton Therapy Institute, Series A, 6.00%, 9/01/17	905	1,014,433
Lakewood Ranch Stewardship District, Refunding, Special Assessment Bonds, Lakewood Center & New Sector Projects, 8.00%, 5/01/40	1,485	1,885,579
Mid-Bay Bridge Authority, RB, Springing Lien, Series A, 7.25%, 10/01/40	4,550	5,453,766

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BLACKROCK MUNIASSETS FUND, INC.

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Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Florida (concluded)		
Midtown Miami Community Development District, Refunding, Special Assessment Bonds: Series A, 5.00%, 5/01/37	\$ 850	\$ 856,528
Midtown Miami Community Development District, Refunding, Special Assessment Bonds (concluded): Series B, 5.00%, 5/01/37	500	504,550
Palm Beach County Health Facilities Authority, Refunding RB, Series A, 7.25%, 6/01/34	500	551,860
Santa Rosa Bay Bridge Authority, RB, 6.25%, 7/01/28 (c)(d)	4,739	1,990,112
Tampa Palms Open Space and Transportation Community Development District, RB, Capital Improvement, Richmond Place Project, 7.50%, 5/01/18	1,075	1,076,139
Tolomato Community Development District, Refunding, CAB, Special Assessment Bonds:		
0.00%, 5/01/39 (e)	250	183,085
0.00%, 5/01/40 (e)	585	349,070
6.65%, 5/01/40	910	924,587
Convertible Series A-4, 0.00%, 5/01/40 (e)	305	134,715
Tolomato Community Development District, Series A-1 (c)(d):		
Series 1, 6.65%, 5/01/40	50	50,991
Series 2, 6.65%, 5/01/40	2,110	1,235,405
Series 3, 6.65%, 5/01/40	710	7
Village Community Development District No. 9, Special Assessment Bonds:		
6.75%, 5/01/31	1,765	2,125,907
7.00%, 5/01/41	2,865	3,493,810
5.50%, 5/01/42	1,320	1,419,766
		44,372,637
Georgia 2.0%		
City of Atlanta Georgia, Tax Allocation Bonds, Princeton Lakes Project, 5.50%, 1/01/31	1,035	1,046,458
County of Clayton Georgia, Tax Allocation Bonds, Ellenwood Project, 7.50%, 7/01/33	2,745	2,859,576
County of Clayton Georgia Development Authority, Refunding RB, Delta Air Lines, Inc. Project, Series A, 8.75%, 6/01/29	3,365	4,180,070
	Par	
Municipal Bonds		
Georgia (concluded)		
County of Gainesville & Hall Georgia Development Authority, Refunding RB, Acts Retirement Life Community, Series A-2: 6.38%, 11/15/29	\$ 700	\$ 783,090
County of Gainesville & Hall Georgia Development Authority, Refunding RB, Acts Retirement Life Community, Series A-2 (concluded): 6.63%, 11/15/39	880	970,552
		9,839,746
Guam 1.5%		
Guam Government Waterworks Authority, RB, Water & Wastewater System:		
5.25%, 7/01/33	1,450	1,579,094
5.50%, 7/01/43	2,415	2,646,405
Guam Government Waterworks Authority, Refunding RB, Water & Wastewater System, 6.00%, 7/01/15 (b)	1,265	1,329,502
Territory of Guam, GO, Series A:		
6.00%, 11/15/19	615	672,761
7.00%, 11/15/39	1,115	1,230,458
		7,458,220
Illinois 4.4%		
City of Chicago Illinois Board of Education, GO, Series A, 5.25%, 12/01/41	3,450	3,495,816
Illinois Finance Authority, Refunding RB:		
CAB, Clare Water Tower, Series B, 0.00%, 5/15/50 (c)(d)(f)	1,214	12
Clare Water Tower, Series A-7, 6.13%, 5/15/41 (c)(d)	3,129	31
Friendship Village of Schaumburg, 7.25%, 2/15/45	4,000	4,184,720
Lutheran Home & Services Obligated Group, 5.63%, 5/15/42	2,395	2,416,172

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Primary Health Care Centers Program, 6.60%, 7/01/24	1,175	1,186,327
Roosevelt University Project, 6.50%, 4/01/44	4,170	4,441,592
Railsplitter Tobacco Settlement Authority, RB:		
5.50%, 6/01/23	1,400	1,628,620
6.00%, 6/01/28	710	826,383

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Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Illinois (concluded)		
Village of Lincolnshire Illinois, Special Tax Bonds, Sedgebrook Project, 6.25%, 3/01/34	\$ 1,800	\$ 1,837,386
Village of Wheeling Illinois, Tax Allocation Bonds, North Milwaukee/Lake-Cook TIF Project, 6.00%, 1/01/25	1,420	1,421,690
		21,438,749
Indiana 1.1%		
City of Valparaiso Indiana, RB, Exempt Facilities, Pratt Paper LLC Project, AMT:		
6.75%, 1/01/34	825	917,590
7.00%, 1/01/44	2,000	2,229,760
Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges East End Crossing Project, Series A, AMT:		
5.00%, 7/01/44	470	485,688
5.00%, 7/01/48	1,555	1,603,454
		5,236,492
Iowa 3.3%		
Iowa Finance Authority, Refunding RB:		
Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.50%, 12/01/22	4,090	4,264,643
Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.25%, 12/01/25	2,190	2,308,107
Sunrise Retirement Community Project, 5.50%, 9/01/37	1,355	1,291,979
Sunrise Retirement Community Project, 5.75%, 9/01/43	2,115	2,060,983
Iowa Tobacco Settlement Authority, Refunding RB:		
Asset-Backed, Series C, 5.63%, 6/01/46	1,565	1,293,347
Series B, 5.60%, 6/01/34	1,200	1,047,624
Series C, 5.38%, 6/01/38	4,900	3,997,273
		16,263,956
Kentucky 0.9%		
Kentucky Public Transportation Infrastructure Authority, RB, Downtown Crossing, First Tier, Series A, 5.75%, 7/01/49	4,000	4,470,000
	Par	
Municipal Bonds		
	(000)	Value
Louisiana 2.7%		
Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, 6.75%, 11/01/32	\$ 5,000	\$ 5,562,250
Louisiana Public Facilities Authority, RB, Belle Chasse Educational Foundation Project, 6.75%, 5/01/41	1,855	2,051,148
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A, 5.25%, 5/15/35	5,570	5,919,127
		13,532,525
Maine 0.7%		
Maine Health & Higher Educational Facilities Authority, RB, Maine General Medical Center, 6.75%, 7/01/41	2,955	3,228,840
Maryland 2.5%		
County of Frederick Maryland, RB, Jefferson Technology Park Project, Series B, 7.13%, 7/01/43	2,840	3,095,202
Maryland EDC, RB, Transportation Facilities Project, Series A, 5.75%, 6/01/35	3,615	3,841,480
Maryland EDC, Refunding RB, CNX Marine Terminals, Inc., 5.75%, 9/01/25	4,785	5,223,593
		12,160,275
Massachusetts 1.0%		
Massachusetts Development Finance Agency, RB, Series A:		
Foxborough Regional Charter School, 7.00%, 7/01/42	1,025	1,148,861
North Hill Communities Issue, 6.50%, 11/15/43	2,020	2,070,661
Massachusetts Development Finance Agency, Refunding RB:		

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Eastern Nazarene College, 5.63%, 4/01/19	25	25,049
Eastern Nazarene College, 5.63%, 4/01/29	80	80,158
Massachusetts Development Finance Agency, Refunding RB: Tufts Medical Center, Series I, 6.75%, 1/01/36	1,490	1,742,764
		5,067,493

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Michigan 2.7%		
City of Detroit Michigan, GO, Taxable Capital Improvement, Limited Tax (c)(d):		
Series A-1, 5.00%, 4/01/16	\$ 650	\$ 182,000
Series A-2, 8.00%, 4/01/14	3,185	891,800
City of Detroit Michigan Sewage Disposal System, Refunding RB, Senior Lien, Series A:		
5.00%, 7/01/32	1,610	1,563,551
5.25%, 7/01/39	2,785	2,728,019
Royal Oak Hospital Finance Authority, Refunding RB, William Beaumont Hospital, Series V, 8.25%, 9/01/18 (b)	6,310	8,138,575
		13,503,945
Minnesota 0.4%		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series A, 6.75%, 11/15/32	1,785	2,111,280
Missouri 1.0%		
Kirkwood IDA Missouri, RB, Aberdeen Heights, Series A, 8.25%, 5/15/39	2,315	2,641,438
Lees Summit IDA, RB, John Knox Village Obligated Group Series 5.25%, 8/15/39	2,235	2,189,205
		4,830,643
New Jersey 4.3%		
New Jersey EDA, RB:		
AMT, Series A, 10.50%, 6/01/32	1,940	1,425,978
Kapkowski Road Landfill Project, Series B, AMT, 6.50%, 4/01/31	2,250	2,615,872
Patterson Charter School for Science and Technology, Inc. Project, Series A:, 6.10%, 7/01/44	1,085	1,134,769
Team Academy Charter School Project, 6.00%, 10/01/43	1,530	1,668,312
New Jersey EDA, RB (concluded):		
The Goethals Bridge Replacement Project, 5.38%, 1/01/43	2,155	2,286,132
	Par	
Municipal Bonds		
New Jersey (concluded)		
New Jersey Health Care Facilities Financing Authority, Refunding RB:		
St. Barnabas Health Care System, Series A, 5.63%, 7/01/37	\$ 2,650	\$ 2,877,847
St. Joseph's Healthcare System, 6.63%, 7/01/38	4,090	4,421,576
Tobacco Settlement Financing Corp. New Jersey, Refunding RB, Series 1A:		
4.63%, 6/01/26	2,000	1,727,840
5.00%, 6/01/29	3,735	3,120,929
		21,279,255
New Mexico 0.5%		
New Mexico Hospital Equipment Loan Council, Refunding RB, Gerald Champion Regional Medical Center Project, 5.50%, 7/01/42	2,970	2,562,338
New York 5.2%		
City of New York New York Industrial Development Agency, ARB, AMT:		
American Airlines, Inc., JFK International Airport, 8.00%, 8/01/28 (g)	1,765	1,950,431
British Airways PLC Project, 7.63%, 12/01/32	4,130	4,151,476
City of New York New York Industrial Development Agency, RB, Special Needs Facilities Pooled Program, Series C-1:		
6.50%, 7/01/24	610	609,915
6.63%, 7/01/29	1,100	1,075,404
County of Chautauqua New York Industrial Development Agency, RB, NRG Dunkirk Power Project, 5.88%, 4/01/42	3,695	4,009,371
County of Westchester New York Healthcare Corp., RB, Senior Lien, Series A, 5.00%, 11/01/44	2,062	2,189,486
Dutchess County Industrial Development Agency, Refunding RB, 5.00%, 8/01/46	5,000	4,952,700
Metropolitan Transportation Authority, RB, Series C, 6.50%, 11/15/28	2,000	2,384,780

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Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
New York (concluded)		
New York Liberty Development Corp., Refunding RB, 2nd Priority, Bank of America Tower at 1 Bryant Park Project, Class 3, 6.38%, 7/15/49	\$ 1,270	\$ 1,398,206
Niagara Area Development Corp., Refunding RB, Solid Waste Disposal Facility, Covanta Energy Project, Series A, AMT, 5.25%, 11/01/42	1,335	1,350,179
Port Authority of New York & New Jersey, ARB, Special Project, JFK International Air Terminal LLC Project, Series 8, 6.00%, 12/01/36	1,340	1,545,596
		25,617,544
North Carolina 1.6%		
North Carolina Medical Care Commission, Refunding RB, First Mortgage, Series A: Deerfield Project, 6.13%, 11/01/38	4,565	4,973,887
Retirement Facilities Whitestone Project, 7.75%, 3/01/31	1,000	1,123,680
Retirement Facilities Whitestone Project, 7.75%, 3/01/41	1,420	1,574,553
		7,672,120
North Dakota 0.5%		
City of Williston North Dakota, RB, Eagle Crest Apartments LLC Project, 7.75%, 9/01/38	2,155	2,229,929
Ohio 2.6%		
Buckeye Tobacco Settlement Financing Authority, RB, Asset-Backed Bonds, Series A-2: 5.75%, 6/01/34	6,745	5,353,844
6.00%, 6/01/42	3,040	2,398,712
State of Ohio, RB, Ford Motor Co. Project, AMT, 5.75%, 4/01/35	4,880	4,985,798
		12,738,354
Oklahoma 0.3%		
Oklahoma Development Finance Authority, Refunding RB, Inverness Village Community, 6.00%, 1/01/32	1,305	1,333,880
	Par	
Municipal Bonds		
	(000)	Value
Pennsylvania 4.5%		
Allentown Neighborhood Improvement Zone Development Authority, Refunding RB, Series A: 5.00%, 5/01/35	\$ 1,815	\$ 1,874,895
5.00%, 5/01/42	4,170	4,280,130
City of Philadelphia, Pennsylvania Hospitals & Higher Education Facilities Authority, RB, Series A, 5.63%, 7/01/36	2,000	2,031,140
County of Cumberland Pennsylvania Municipal Authority, Refunding RB, Diakon Lutheran, 6.38%, 1/01/39	6,165	6,656,350
County of Lancaster Pennsylvania Hospital Authority, Refunding RB, Brethren Village Project, Series A, 6.25%, 7/01/26	1,160	1,217,606
County of Lehigh Pennsylvania General Purpose Authority, Refunding RB, Bible Fellowship Church Homes, 5.13%, 7/01/32	2,705	2,671,323
County of Northampton Pennsylvania IDA, Route 33 Project, Tax Allocation Bonds, 7.00%, 7/01/32	2,110	2,253,923
Pennsylvania Economic Development Financing Authority, RB, National Gypsum Co., Series A, AMT, 6.25%, 11/01/27	1,250	1,250,462
		22,235,829
Puerto Rico 1.1%		
Commonwealth of Puerto Rico, GO, Refunding Series A, 8.00%, 7/01/35	6,000	5,400,060
Rhode Island 0.8%		
Central Falls Detention Facility Corp., Refunding RB, 7.25%, 7/15/35 (c)(d)	4,190	2,499,712
Tobacco Settlement Financing Corp., RB, Series 2002-A, Class C, 6.25%, 6/01/42	1,590	1,589,873
		4,089,585
South Carolina 0.8%		

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State of South Carolina Public Service Authority, RB, Santee Cooper, Series A, 5.50%, 12/01/54	3,775	4,179,604
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Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Texas 12.3%		
Brazos River Authority, Refunding RB, Texas Utility Co., Series A, AMT, 7.70%, 4/01/33 (c)(d)	\$ 5,080	\$ 469,900
Central Texas Regional Mobility Authority, Refunding RB:		
CAB, 0.00%, 1/01/28 (f)	1,000	536,180
CAB, 0.00%, 1/01/29 (f)	2,000	1,013,640
CAB, 0.00%, 1/01/30 (f)	1,170	560,582
CAB, 0.00%, 1/01/33 (f)	3,690	1,475,410
CAB, 0.00%, 1/01/34 (f)	4,000	1,495,960
Senior Lien, 5.75%, 1/01/25	675	744,910
Senior Lien, 6.25%, 1/01/46	2,210	2,480,239
Sub-Lien, 5.00%, 1/01/42	330	338,765
City of Houston Texas Airport System, RB, Special Facilities, Continental Airlines, Inc., AMT, Series A, 6.63%, 7/15/38	2,890	3,215,847
City of Houston Texas Airport System, Refunding ARB, United Airlines, Inc. Terminal E Project, AMT:		
4.75%, 7/01/24	1,140	1,172,764
5.00%, 7/01/29	910	918,399
Clifton Higher Education Finance Corp., ERB, Idea Public Schools:		
5.50%, 8/15/31	955	1,037,837
5.75%, 8/15/41	720	789,221
Clifton Higher Education Finance Corp., Refunding RB, Uplift Education, Series A, 4.40%, 12/01/47	810	726,667
County of Bexar Texas Health Facilities Development Corp., RB, Army Retirement Residence Project, 6.20%, 7/01/45	5,040	5,496,876
County of Harris Texas Cultural Education Facilities Finance Corp., RB, 1st Mortgage, Brazos Presbyterian Homes, Inc. Project, Series B, 7.00%, 1/01/48	475	527,188
County of Harris Texas-Houston Sports Authority, Refunding RB, CAB, Senior Lien, Series A (NPFGC), 0.00%, 11/15/38 (f)	10,000	2,521,500
County of Matagorda Texas Navigation District No. 1, Refunding RB, Central Power & Light Co. Project, Series A, 6.30%, 11/01/29	2,090	2,384,335
County of Tarrant Texas Cultural Education Facilities Finance Corp., RB, Series A:		
CC Young Memorial Home, 8.00%, 2/15/38	1,745	1,928,068
	Par	
	(000)	Value
Municipal Bonds		
Texas (continued)		
County of Tarrant Texas Cultural Education Facilities Finance Corp., RB, Series A (concluded):		
Senior Living Center Project, 8.25%, 11/15/44	\$ 4,200	\$ 3,610,362
County of Travis Texas Health Facilities Development Corp., Refunding RB, 7.13%, 1/01/46	3,080	3,295,015
Decatur Hospital Authority, Refunding RB, Wise Regional Health System Series A,		
5.00%, 9/01/34	225	226,053
5.25%, 9/01/44	735	741,269
La Vernia Higher Education Finance Corp., RB, Kipp, Inc., Series A, 6.38%, 8/15/44	860	960,672
New Hope Cultural Education Facilities Corp., RB, Stephenville LLC Tarleton State University Project:		
5.88%, 4/01/36	1,210	1,343,814
6.00%, 4/01/45	1,845	2,052,876
North Texas Education Finance Corp., ERB, Uplift Education, Series A, 5.25%, 12/01/47	1,600	1,697,904
North Texas Tollway Authority, RB, CAB, Special Project System, Series B, 0.00%, 9/01/37 (f)	2,110	629,835
North Texas Tollway Authority, Refunding RB, 2nd Tier System, Series F, 6.13%, 1/01/31	4,425	4,693,376
Red River Health Facilities Development Corp., First MRB, Project:		
Eden Home, Inc., 7.25%, 12/15/42	2,895	2,738,930
Wichita Falls Retirement Foundation, 5.13%, 1/01/41	900	841,068
Texas Private Activity Bond Surface Transportation Corp., RB, Senior Lien:		
LBJ Infrastructure Group LLC, LBJ Freeway Managed Lanes Project, 7.00%, 6/30/40	3,775	4,483,228

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BLACKROCK MUNIASSETS FUND, INC.

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Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Texas (concluded)		
Texas Private Activity Bond Surface Transportation Corp., RB, Senior Lien (concluded):		
NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	\$ 3,000	\$ 3,521,730
		60,670,420
Utah 0.6%		
State of Utah Charter School Finance Authority, Revenue Improvement and Refunding RB, Entheos Academy Series A 6.75%, 10/15/43	2,950	3,119,861
Vermont 0.2%		
Vermont EDA, Refunding, MRB, Wake Robin Corp. Project, 5.40%, 5/01/33	770	787,240
Virginia 3.0%		
County of Fairfax Virginia EDA, Refunding RB:		
Goodwin House, Inc., 5.13%, 10/01/42	2,500	2,561,800
Vinson Hall LLC, Series A, 5.00%, 12/01/42	1,330	1,337,794
Mosaic District Community Development Authority, Special Assessment, Series A:		
6.63%, 3/01/26	1,485	1,686,529
6.88%, 3/01/36	1,300	1,486,901
Virginia Small Business Financing Authority, RB, Senior Lien, Elizabeth River Crossings OpCo LLC Project, AMT, 6.00%, 1/01/37	6,805	7,588,528
		14,661,552
Washington 0.6%		
County of King Washington Public Hospital District No. 4, GO, Refunding, Snoqualmie Valley Hospital, 7.00%, 12/01/40	1,455	1,542,795
Greater Wenatchee Regional Events Center Public Facilities District, Refunding RB, Series A, 5.50%, 9/01/42	1,495	1,534,139
		3,076,934
	Par	
	(000)	Value
Municipal Bonds		
Wisconsin 0.4%		
Public Finance Authority, RB, Rose Villa Project Series A:		
5.75%, 11/15/44	\$ 430	\$ 427,820
6.00%, 11/15/49	270	273,283
Wisconsin Health & Educational Facilities Authority, Refunding RB, St. Johns Communities, Inc., Series A:		
7.25%, 9/15/29	425	478,839
7.63%, 9/15/39	855	984,644
		2,164,586
Total Municipal Bonds 85.4%		420,433,734
Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts (h)		
Colorado 2.5%		
Colorado Health Facilities Authority, Refunding RB, Sisters of Leavenworth Health System, Series A, 5.00%, 1/01/40	11,475	12,258,857
District of Columbia 1.5%		
District of Columbia Water & Sewer Authority, Refunding RB, Senior Lien, Series A, 6.00%, 10/01/35 (i)	6,679	7,681,242
Florida 3.4%		
County of Miami-Dade Florida, Refunding RB, Miami International Airport, Series A, AMT (AGC), 5.25%, 10/01/33	15,000	16,576,650
Illinois 3.0%		

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City of Chicago Illinois, GARB, O Hare International Airport, 3rd Lien, Series A (NPFGC), 5.00%, 1/01/33 (i)	6,510	6,772,027
Illinois Finance Authority, RB, The Carle Foundation, Series A (AGM), 6.00%, 8/15/41	7,180	8,171,199
		14,943,226
New York 13.5%		
City of New York New York Municipal Water Finance Authority, Refunding RB, Water & Sewer System, 2nd General Resolution:		
Fiscal 2013, Series CC, 5.00%, 6/15/47	14,181	15,407,315
Series EE, 5.50%, 6/15/43	7,605	8,967,664
Series HH, 5.00%, 6/15/31 (i)	8,609	9,612,448

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts (h)		
New York (concluded)		
Hudson Yards Infrastructure Corp., RB, Senior Bond, Fiscal 2012, Series A, 5.75%, 2/15/47 (i)	\$ 4,520	\$ 5,141,667
New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Consolidated, 5.25%, 12/15/43	18,105	19,949,537
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 (i)	6,600	7,398,864
		66,477,495
Washington 1.8%		
City of Bellingham Washington, RB, Water & Sewer, 5.00%, 8/01/40	7,966	8,687,053
Total Municipal Bonds Transferred to		
Tender Option Bond (TOB) Trusts 25.7%		126,624,523
Total Long-Term Investments		
(Cost \$523,719,265) 111.1%		547,058,257
Short-Term Securities	Shares	Value
FFI Institutional Tax-Exempt Fund, 0.03% (j)(k)	12,437,792	\$ 12,437,792
Total Short-Term Securities		
(Cost \$12,437,792) 2.5%		12,437,792
Total Investments (Cost \$536,157,057*) 113.6%		559,496,049
Liabilities in Excess of Other Assets (28.1%)		(138,227,006)
Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable 14.5%		71,166,180
Net Assets Applicable to Common Shares 100.0%		\$ 492,435,223

* As of July 31, 2014, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 464,857,009
Gross unrealized appreciation	\$ 43,514,794
Gross unrealized depreciation	(20,020,259)
Net unrealized appreciation	\$ 23,494,535

Notes to Schedule of Investments

- (a) Security exempt from registration pursuant to Rule 144A under the Securities Act of 1933, as amended. These securities may be resold in transactions exempt from registration to qualified institutional investors.
- (b) U.S. government securities, held in escrow, are used to pay interest on this security, as well as to retire the bond in full at the date indicated, typically at a premium to par.
- (c) Issuer filed for bankruptcy and/or is in default of principal and/or interest payments.

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- (d) Non-income producing security.
- (e) Represents a step-up bond that pays an initial coupon rate for the first period and then a higher coupon rate for the following periods. Rate shown is as of report date.
- (f) Zero-coupon bond.
- (g) Variable rate security. Rate shown is as of report date.
- (h) Represent bonds transferred to a TOB. In exchange for which the Fund received cash and residual interest certificates. These bonds serve as collateral in a financing transaction.
- (i) All or a portion of security is subject to a recourse agreement, which may require the Fund to pay the liquidity provider in the event there is a shortfall between the TOB trust certificates and proceeds received from the sale of the security contributed to the TOB trust. In the case of a shortfall, the aggregate maximum potential amount the Fund could ultimately be required to pay under the agreements, which expire from January 01, 2015 to November 15, 2019 is \$21,570,076.
- (j) Investments in issuers considered to be an affiliate of the Fund during the period ended July 31, 2014, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Affiliate	Shares Held at April 30, 2014	Net Activity	Shares Held at July 31, 2014	Income
FBI Institutional Tax-Exempt Fund	259,703	12,178,089	12,437,792	\$ 779

BLACKROCK MUNIASSETS FUND, INC.

JULY 31, 2014

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Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(k) Represents the current yield as of report date.

Portfolio Abbreviations

AGC	Assured Guarantee Corp.
AGM	Assured Guaranty Municipal Corp.
AMT	Alternative Minimum Tax (subject to)
ARB	Airport Revenue Bonds
CAB	Capital Appreciation Bonds
EDA	Economic Development Authority
EDC	Economic Development Corp.
ERB	Education Revenue Bonds
GARB	General Airport Revenue Bonds
GO	General Obligation Bonds
IDA	Industrial Development Authority
MRB	Mortgage Revenue Bonds
NPFGC	National Public Finance Guarantee Corp.
RB	Revenue Bonds

Financial futures contracts outstanding as of July 31, 2014 were as follows:

Contracts

Purchased/ Sold	Issue	Exchange	Expiration	Notional Value	Unrealized Appreciation
(375)	10-Year U.S. Treasury Note	Chicago Board of Trade	September 2014	\$ 46,728,516	\$ 403,772

Fair Value Measurements Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs to valuation techniques are categorized into a disclosure hierarchy consisting of three broad levels for financial reporting purposes as follows:

Level 1 unadjusted price quotations in active markets/exchanges for identical assets or liabilities that the Fund has the ability to access

Level 2 other observable inputs (including, but not limited to, quoted prices for similar assets or liabilities in markets that are active, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the assets or liabilities (such as interest rates, yield curves, volatilities, prepayment speeds, loss severities, credit risks and default rates) or other market-corroborated inputs)

Level 3 unobservable inputs based on the best information available in the circumstances, to the extent observable inputs are not available (including the Fund's own assumptions used in determining the fair value of investments and derivative financial instruments)

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Accordingly, the degree of judgment exercised in determining fair value is greatest for instruments categorized in Level 3. The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the fair value hierarchy classification is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

Changes in valuation techniques may result in transfers into or out of an assigned level within the disclosure hierarchy. In accordance with the Fund's policy, transfers between different levels of the fair value disclosure hierarchy are deemed to have occurred as of the beginning of the reporting period. The categorization of a value determined for investments and derivative financial instruments is based on the pricing transparency of the investment and derivative financial instrument and is not necessarily an indication of the risks associated with investing in those securities. For information about the Fund's policy regarding valuation of investments and derivative financial instruments, please refer to the Fund's most recent financial statements as contained in its annual report.

Schedule of Investments (concluded)

BlackRock MuniAssets Fund, Inc. (MUA)

The following tables summarize the Fund's investments and derivative financial instruments categorized in the disclosure hierarchy as of July 31, 2014:

	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 547,058,257		\$ 547,058,257
Short-Term Securities	\$ 12,437,792			12,437,792
Total	\$ 12,437,792	\$ 547,058,257		\$ 559,496,049

¹ See above Schedule of Investments for values in each state or Political Subdivision.

	Level 1	Level 2	Level 3	Total
Derivative Financial Instruments ²				
Assets:				
Interest rate contracts	\$ 403,772			\$ 403,772

² Derivative financial instruments are financial futures contracts, which are valued at the unrealized appreciation/depreciation on the instrument.

The Fund may hold assets and/or liabilities in which the fair value approximates the carrying amount for financial reporting purposes. As of July 31, 2014, such assets and/or liabilities are categorized within the disclosure hierarchy as follows:

	Level 1	Level 2	Level 3	Total
Assets:				
Cash pledged for financial futures contracts	\$ 512,000			\$ 512,000
Liabilities:				
Bank overdraft		\$ (258,031)		(258,031)
TOB trust certificates		(71,144,505)		(71,144,505)
Total	\$ 512,000	\$ (71,402,536)		\$ (70,890,536)

There were no transfers between levels during the period ended July 31, 2014.

Item 2 Controls and Procedures

- 2(a) The registrant's principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the "1940 Act")) are effective as of a date within 90 days of the filing of this report based on the evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act and Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended.
- 2(b) There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3 Exhibits

Certifications Attached hereto

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BlackRock MuniAssets Fund, Inc.

By: /s/ John M. Perlowski
John M. Perlowski
Chief Executive Officer (principal executive officer) of

BlackRock MuniAssets Fund, Inc.

Date: September 25, 2014

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: /s/ John M. Perlowski
John M. Perlowski
Chief Executive Officer (principal executive officer) of

BlackRock MuniAssets Fund, Inc.

Date: September 25, 2014

By: /s/ Neal J. Andrews
Neal J. Andrews
Chief Financial Officer (principal financial officer) of

BlackRock MuniAssets Fund, Inc.

Date: September 25, 2014