

BLACKROCK MUNIASSETS FUND, INC.
Form N-Q
March 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: 04/30/2014

Date of reporting period: 01/31/2014

Item 1 Schedule of Investments

Schedule of Investments January 31, 2014 (Unaudited)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Alabama 3.3%		
Alabama State Docks Department, Refunding RB, 6.00%, 10/01/40	\$ 2,165	\$ 2,432,204
County of Jefferson Alabama, RB, Limited Obligation School, Series A:		
5.25%, 1/01/17	895	899,198
5.25%, 1/01/19	2,000	2,007,620
5.50%, 1/01/21	1,215	1,214,891
4.75%, 1/01/25	3,145	2,957,118
County of Jefferson Alabama Sewer, Refunding RB:		
Convertible CAB, Senior Lien, Series C (AGM), 0.00%, 10/01/38 (a)	615	345,950
Convertible CAB, Senior Lien, Series C (AGM), 0.00%, 10/01/42 (a)	535	297,059
Senior Lien, Series A (AGM), 5.00%, 10/01/44	10	9,739
Senior Lien, Series A (AGM), 5.25%, 10/01/48	1,605	1,579,689
Sub-Lien, Series D, 6.00%, 10/01/42	3,745	3,694,180
		15,437,648
Alaska 1.2%		
Northern Tobacco Securitization Corp., Refunding RB, Tobacco Settlement, Asset-Backed, Series A:		
4.63%, 6/01/23	1,610	1,513,159
5.00%, 6/01/32	1,500	1,147,950
5.00%, 6/01/46	4,000	2,757,400
		5,418,509
Arizona 1.9%		
City of Phoenix Arizona IDA, RB, Great Hearts Academies Veritas Project:		
6.30%, 7/01/42	500	488,090
6.40%, 7/01/47	425	415,127
City of Show Low Arizona, Special Assessment Bonds, Improvement District No. 5, 6.38%, 1/01/15	50	50,733
County of Maricopa Arizona IDA, RB, Arizona Charter School Project 1, Series A, 6.63%, 7/01/20	865	818,532
Phoenix IDA Arizona, Refunding RB, America West Airlines, Inc. Project, AMT, 6.30%, 4/01/23	5,750	5,750,805
	Par (000)	Value
Municipal Bonds		
Arizona (concluded)		
University Medical Center Corp., RB, 6.50%, 7/01/39	\$ 500	\$ 542,325
University Medical Center Corp. Arizona, RB, 6.25%, 7/01/29	820	890,315
		8,955,927
California 4.6%		
California Pollution Control Financing Authority, RB:		
County of San Diego California Water Authority Desalination Project Pipeline, 5.00%, 11/21/45	1,270	1,182,192
Poseidon Resources (Channel Side) LP Desalination Project, AMT, 5.00%, 7/01/37 (b)	1,065	966,679
California School Finance Authority, RB:		
Alliance for College Ready Public School - 2023 Union LLC Project, Series A, 6.40%, 7/01/48	1,570	1,595,167
Value Schools, 6.65%, 7/01/33	435	440,455
Value Schools, 6.90%, 7/01/43	975	985,062
California Statewide Communities Development Authority, Refunding RB, American Baptist Homes of the West, 6.25%, 10/01/39	2,175	2,276,986
City of Fontana California, Refunding RB, Special Tax Bonds, Community Facilities District No. 22-Sierra, Series H, 6.00%, 9/01/34	2,320	2,329,489
City of San Jose California Hotel Tax, RB, Convention Center Expansion & Renovation Project:		
6.50%, 5/01/36	900	1,038,483
6.50%, 5/01/42	2,220	2,546,562
City of Stockton California Public Financing Authority, RB, Delta Water Supply Project, Series A, 6.25%, 10/01/40	375	406,515
County of Riverside California Transportation Commission, RB, Senior Lien, Series A, 5.75%, 6/01/48	2,885	2,953,346

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
California (concluded)		
County of San Marcos California Unified School District, GO, CAB, Election of 2010, Series B (c):		
0.00%, 8/01/40	\$ 5,000	\$ 1,246,900
0.00%, 8/01/51	12,050	1,555,293
Tobacco Securitization Authority of Southern California, Refunding RB, Tobacco Settlement, Asset-Backed, Senior Series A-1, 4.75%, 6/01/25	2,205	2,108,112
		21,631,241
Colorado 1.5%		
Plaza Metropolitan District No. 1, Tax Allocation Bonds, Public Improvement Fee, Tax Increment, 8.00%, 6/01/14 (d)	4,850	5,025,230
Plaza Metropolitan District No. 1 Colorado, Refunding, Tax Allocation Bonds, Public Improvement Fee, Tax Increment, 5.00%, 12/01/40	575	544,974
Regional Transportation District, RB, Denver Transit Partners Eagle P3 Project, 6.00%, 1/15/34	1,500	1,563,375
		7,133,579
Connecticut 0.3%		
Mohegan Tribe of Indians of Connecticut, Refunding RB, Public Improvement, Priority Distribution, 6.25%, 1/01/31	1,370	1,369,890
Delaware 0.9%		
County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Power LLC Project, 6.00%, 10/01/40	1,000	1,049,280
Delaware State EDA, RB, Exempt Facilities, Indian River Power LLC Project, 5.38%, 10/01/45	3,145	3,086,094
		4,135,374
District of Columbia 0.9%		
District of Columbia, RB, Methodist Home District of Columbia, Series A:		
7.38%, 1/01/30	1,665	1,665,499
7.50%, 1/01/39	1,615	1,607,636
Municipal Bonds		
District of Columbia (concluded)		
District of Columbia Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, 6.50%, 5/15/33	\$ 1,055	\$ 1,111,580
		4,384,715
Florida 10.6%		
Boggy Creek Improvement District, Refunding RB, Special Assessment Bonds, 5.13%, 5/01/43 (b)	4,165	3,670,156
County of Collier Florida IDA, Refunding RB, Arlington of Naples Project, Series A, 8.13%, 5/15/44 (b)	2,510	2,532,992
County of Hillsborough Florida IDA, RB, National Gypsum Co. AMT:		
Series A, 7.13%, 4/01/30	3,000	3,001,110
Series B, 7.13%, 4/01/30	1,560	1,560,234
County of Palm Beach Health Facilities Authority, RB, Acts Retirement Life Community, 5.50%, 11/15/33	3,500	3,559,115
County of Sarasota Health Facilities Authority, Refunding RB, Village On The Isle Project, 5.50%, 1/01/27	955	984,414
Greenway Improvement District, Special Assessment Bonds, 5.13%, 5/01/43	4,165	3,670,156
Harbor Bay Community Development District Florida, Special Assessment Bonds, Series A, 7.00%, 5/01/33	455	456,142
Jacksonville Economic Development Commission, RB, Gerdau Ameristeel US, Inc., AMT, 5.30%, 5/01/37	4,500	4,149,675
Jacksonville Economic Development Commission, Refunding RB, Florida Proton Therapy Institute, Series A, 6.00%, 9/01/17	905	1,000,459
Lakewood Ranch Stewardship District, Refunding, Special Assessment Bonds, Lakewood Center & New Sector Projects, 8.00%, 5/01/40	1,485	1,815,695
Mid-Bay Bridge Authority, RB, Springing Lien, Series A, 7.25%, 10/01/40	4,550	5,039,171

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, Special Assessment Bonds, Series A:		
6.00%, 5/01/24	\$ 1,165	\$ 1,166,934
6.25%, 5/01/37	4,605	4,606,059
Santa Rosa Bay Bridge Authority, RB, 6.25%, 7/01/28 (e)(f)	4,739	1,942,156
Tampa Palms Open Space and Transportation Community Development District, RB, Capital Improvement, Richmond Place Project, 7.50%, 5/01/18	1,300	1,300,624
Tolomato Community Development District, Refunding, Special Assessment Bonds:		
Series A-1, 6.65%, 5/01/40	910	907,188
CAB, Series A-2, 0.00%, 5/01/39 (a)	250	183,510
CAB, Series A-3, 0.00%, 5/01/40 (a)	585	349,935
CAB, Series A-4, 0.00%, 5/01/40 (a)	305	135,069
Tolomato Community Development District (e)(f):		
Series 1, 6.65%, 5/01/40	50	49,577
Series 2, 6.65%, 5/01/40	2,110	1,182,866
Series 3, 6.65%, 5/01/40	710	7
Village Community Development District No. 9, Special Assessment Bonds:		
6.75%, 5/01/31	1,810	2,003,942
7.00%, 5/01/41	2,950	3,272,642
5.50%, 5/01/42	1,330	1,342,076
		49,881,904
Georgia 2.0%		
City of Atlanta Georgia, Tax Allocation Bonds, Princeton Lakes Project, 5.50%, 1/01/31	1,035	1,037,929
County of Clayton Georgia, Tax Allocation Bonds, Ellenwood Project, 7.50%, 7/01/33	2,755	2,784,396
County of Clayton Georgia Development Authority, Refunding RB, Delta Air Lines, Inc. Project, Series A, 8.75%, 6/01/29	3,365	3,972,382
County of Gainesville & Hall Georgia Development Authority, Refunding RB, Acts Retirement Life Community, Series A-2: 6.38%, 11/15/29	700	755,818
	Par	
	(000)	Value
Municipal Bonds		
Georgia (concluded)		
County of Gainesville & Hall Georgia Development Authority, Refunding RB, Acts Retirement Life Community, Series A-2 (concluded): 6.63%, 11/15/39	\$ 880	\$ 938,740
		9,489,265
Guam 1.5%		
Guam Government Waterworks Authority, RB, Water & Wastewater System:		
5.25%, 7/01/33	1,450	1,457,424
5.50%, 7/01/43	2,415	2,430,746
Guam Government Waterworks Authority, Refunding RB, Water & Wastewater System, 6.00%, 7/01/25	1,265	1,281,217
Territory of Guam, GO, Series A:		
6.00%, 11/15/19	615	651,703
7.00%, 11/15/39	1,115	1,175,221
		6,996,311
Illinois 3.7%		
Illinois Finance Authority, Refunding RB:		
CAB, Clare Water Tower, Series B, 0.00%, 5/15/50 (c)(e)(f)	1,214	12
Clare Water Tower, Series A-7, 6.13%, 5/15/41 (e)(f)	3,129	31
Friendship Village of Schaumburg, 7.25%, 2/15/45	4,000	4,059,160
Lutheran Home & Services Obligated Group, 5.63%, 5/15/42	2,395	2,186,923
Primary Health Care Centers Program, 6.60%, 7/01/24	1,175	1,140,890
Roosevelt University Project, 6.50%, 4/01/44	4,170	4,266,452

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Railsplitter Tobacco Settlement Authority, RB:

5.50%, 6/01/23	1,400	1,566,782
6.00%, 6/01/28	710	787,532
Village of Lincolnshire Illinois, Special Tax Bonds, Sedgebrook Project, 6.25%, 3/01/34	1,800	1,821,204

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		
Illinois (concluded)		
Village of Wheeling Illinois, Tax Allocation Bonds, North Milwaukee/Lake-Cook TIF Project, 6.00%, 1/01/25	\$ 1,420	\$ 1,382,285
		17,211,271
Indiana 1.0%		
City of Valparaiso Indiana, RB, Exempt Facilities, Pratt Paper LLC Project, AMT:		
6.75%, 1/01/34	825	856,325
7.00%, 1/01/44	2,000	2,089,940
Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges East End Crossing Project, Series A, AMT:		
5.00%, 7/01/44	470	442,717
5.00%, 7/01/48	1,555	1,448,980
		4,837,962
Iowa 2.7%		
Iowa Finance Authority, Refunding RB:		
Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.50%, 12/01/22	4,090	3,942,842
Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.25%, 12/01/25	2,190	2,032,780
Sunrise Retirement Community Project, 5.50%, 9/01/37	1,355	1,169,243
Sunrise Retirement Community Project, 5.75%, 9/01/43	2,115	1,823,912
Iowa Tobacco Settlement Authority, Refunding RB, Series C, 5.38%, 6/01/38	4,900	3,794,217
		12,762,994
Kentucky 0.9%		
Kentucky Public Transportation Infrastructure Authority, RB, Downtown Crossing, First Tier, Series A, 5.75%, 7/01/49		
	4,000	4,122,920
Louisiana 2.7%		
Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, 6.75%, 11/01/32		
	5,000	5,334,050
Par		
(000)		
Value		
Municipal Bonds		
Louisiana (concluded)		
Louisiana Public Facilities Authority, RB, Belle Chasse Educational Foundation Project, 6.75%, 5/01/41	\$ 1,855	\$ 2,005,700
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A, 5.25%, 5/15/35	5,570	5,544,824
		12,884,574
Maine 0.7%		
Maine Health & Higher Educational Facilities Authority, RB, Maine General Medical Center, 6.75%, 7/01/41		
	2,955	3,094,919
Maryland 2.5%		
County of Frederick Maryland, RB, Jefferson Technology Park Project, Series B, 7.13%, 7/01/43		
	2,840	2,909,637
Maryland EDC, RB, Transportation Facilities Project, Series A, 5.75%, 6/01/35	3,615	3,690,156
Maryland EDC, Refunding RB, CNX Marine Terminals, Inc., 5.75%, 9/01/25	4,785	5,016,785
		11,616,578
Massachusetts 1.0%		
Massachusetts Development Finance Agency, RB, Series A:		
Foxborough Regional Charter School, 7.00%, 7/01/42	1,025	1,119,843
North Hill Communities Issue, 6.50%, 11/15/43	2,020	1,945,260
Massachusetts Development Finance Agency, Refunding RB:		
Eastern Nazarene College, 5.63%, 4/01/19	30	30,006
Eastern Nazarene College, 5.63%, 4/01/29	80	80,015
Tufts Medical Center, Series I, 6.75%, 1/01/36	1,490	1,695,844

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		4,870,968
Michigan 2.8%		
City of Detroit Michigan, GO, Taxable Capital Improvement Limited Tax (e)(f):		
Series A-1, 5.00%, 4/01/16	650	207,987
Series A-2, 8.00%, 4/01/14	3,185	1,019,137

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BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2014

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Michigan (concluded)		
City of Detroit Michigan Sewage Disposal System, Refunding RB, Senior Lien, Series A:		
5.00%, 7/01/32	\$ 1,610	\$ 1,470,429
5.25%, 7/01/39	2,785	2,570,026
Royal Oak Hospital Finance Authority, Refunding RB, William Beaumont Hospital, 8.25%, 9/01/39	6,310	7,666,145
		12,933,724
Minnesota 0.4%		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series A, 6.75%, 11/15/32	1,785	2,069,868
Missouri 0.5%		
Kirkwood IDA Missouri, RB, Aberdeen Heights, Series A, 8.25%, 5/15/39	2,315	2,575,877
New Jersey 5.3%		
New Jersey EDA, RB:		
Kapkowski Road Landfill Project, Series B, AMT, 6.50%, 4/01/31	2,250	2,503,012
Patterson Charter School for Science and Technology, Inc. Project, Series A, 6.10%, 7/01/44	1,085	1,087,051
Team Academy Charter School Project, 6.00%, 10/01/43	1,530	1,538,767
The Goethals Bridge Replacement Project, AMT, 5.38%, 1/01/43	2,155	2,168,900
New Jersey EDA, Refunding RB, Newark Airport Marriott Hotel, 7.00%, 10/01/14	4,000	4,070,000
New Jersey Educational Facilities Authority, Refunding RB, University of Medicine & Dentistry, Series B, 7.50%, 6/01/19 (d)	3,575	4,700,446
New Jersey Health Care Facilities Financing Authority, Refunding RB:		
St. Barnabas Health Care System, Series A, 5.63%, 7/01/37	2,650	2,763,128
St. Joseph s Healthcare System, 6.63%, 7/01/38	4,090	4,160,716
	Par	
	(000)	Value
Municipal Bonds		
New Jersey (concluded)		
Tobacco Settlement Financing Corp. New Jersey, Refunding RB, Series 1A, 4.63%, 6/01/26	\$ 2,000	\$ 1,727,920
		24,719,940
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	2,407,987
New York 4.8%		
City of New York New York Industrial Development Agency, RB, AMT:		
American Airlines, Inc., JFK International Airport, 8.00%, 8/01/28 (g)	1,765	1,936,752
British Airways PLC Project, 7.63%, 12/01/32	4,130	4,149,948
City of Yonkers New York Industrial Development Agency, RB, Sarah Lawrence College Project, Series A, 6.00%, 6/01/41	2,090	2,231,932
County of Chautauqua New York Industrial Development Agency, RB, NRG Dunkirk Power Project, 5.88%, 4/01/42	3,695	3,768,789
County of Dutchess New York Industrial Development Agency, Refunding RB, St. Francis Hospital, Series A, 7.50%, 3/01/29	1,400	1,102,052
Dutchess County Industrial Development Agency New York, RB, St. Francis Hospital, Series B, 7.50%, 3/01/29	1,000	787,180
Metropolitan Transportation Authority, RB, Series C, 6.50%, 11/15/28	2,000	2,348,500
New York City Industrial Development Agency, RB, Special Needs Facilities Pooled Program, Series C-1: 6.50%, 7/01/24	610	590,455
6.63%, 7/01/29	1,100	1,031,778
New York Liberty Development Corp., Refunding RB, 2nd Priority, Bank of America Tower at One Bryant Park Project, Class 3, 6.38%, 7/15/49	1,270	1,358,278

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
New York (concluded)		
Niagara Area Development Corp., Refunding RB, Solid Waste Disposal Facility, Covanta Energy Project, Series A, AMT, 5.25%, 11/01/42	\$ 1,835	\$ 1,663,611
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	1,452,922
		22,422,197
North Carolina 1.6%		
North Carolina Medical Care Commission, Refunding RB, First Mortgage Series A:		
Deerfield Project, 6.13%, 11/01/38	4,565	4,734,453
Whitestone Project, 7.75%, 3/01/31	1,000	1,074,370
Retirement Facilities, Whitestone Project, 7.75%, 3/01/41	1,420	1,506,165
		7,314,988
North Dakota 0.5%		
City of Williston North Dakota, RB, Eagle Crest Apartments LLC Project, 7.75%, 9/01/38	2,155	2,150,087
Ohio 2.7%		
Buckeye Tobacco Settlement Financing Authority, RB, Asset-Backed Bonds, Series A-2:		
5.75%, 6/01/34	6,745	5,224,272
6.00%, 6/01/42	3,040	2,395,520
State of Ohio, RB, Ford Motor Co. Project, AMT, 5.75%, 4/01/35	4,880	4,918,894
		12,538,686
Oklahoma 0.3%		
Oklahoma Development Finance Authority, Refunding RB, Inverness Village Community, 6.00%, 1/01/32	1,305	1,289,418
Pennsylvania 5.8%		
Allentown Neighborhood Improvement Zone Development Authority, Refunding RB, Series A:		
5.00%, 5/01/35	1,815	1,725,938
5.00%, 5/01/42	4,170	3,838,861
	Par	
	(000)	Value
Municipal Bonds		
Pennsylvania (concluded)		
City of Philadelphia Pennsylvania Industrial Development, RB, Commercial Development, AMT, 7.75%, 12/01/17	\$ 8,000	\$ 8,019,920
County of Cumberland Pennsylvania Municipal Authority, Refunding RB, Diakon Lutheran, 6.38%, 1/01/39	6,165	6,543,901
County of Lehigh Pennsylvania General Purpose Authority, Refunding RB, Bible Fellowship Church Homes, 5.13%, 7/01/32	2,805	2,461,780
County of Northampton Pennsylvania IDA, Tax Allocation Bonds, 7.00%, 7/01/32	2,110	2,086,832
Lancaster County Hospital Authority, Refunding RB, Brethren Village Project, Series A, 6.25%, 7/01/26	1,160	1,178,409
Pennsylvania Economic Development Financing Authority, RB, National Gypsum Co., Series A, AMT, 6.25%, 11/01/27	1,250	1,244,150
		27,099,791
Rhode Island 0.7%		
Central Falls Detention Facility Corp., Refunding RB, 7.25%, 7/15/35	4,190	3,155,363
Texas 13.0%		
Brazos River Authority, Refunding RB, Texas Utility Co., Series A, AMT, 7.70%, 4/01/33 (e)(f)	5,080	139,700
Central Texas Regional Mobility Authority, Refunding RB:		
CAB, 0.00%, 1/01/28 (c)	1,000	462,700
CAB, 0.00%, 1/01/29 (c)	2,000	868,060
CAB, 0.00%, 1/01/30 (c)	1,170	473,604
CAB, 0.00%, 1/01/31 (c)	2,000	756,180
CAB, 0.00%, 1/01/32 (c)	3,500	1,234,380
CAB, 0.00%, 1/01/33 (c)	3,690	1,210,468

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CAB, 0.00%, 1/01/34 (c)	4,000	1,227,520
Senior Lien, 5.75%, 1/01/25	675	721,805
Senior Lien, 6.25%, 1/01/46	2,210	2,312,566
Sub-Lien, 5.00%, 1/01/33	375	351,765
Sub-Lien, 5.00%, 1/01/42	330	296,205
City of Houston Texas, RB, Special Facilities Continental Airlines Inc. AMT:		
Series A, 6.63%, 7/15/38	2,890	2,988,433
Series E, 6.75%, 7/01/21	4,550	4,550,045

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par (000)
Municipal Bonds	
Texas (continued)	
Clifton Higher Education Finance Corp., ERB, Idea Public Schools: 5.50%, 8/15/31	\$ 955
5.75%, 8/15/41	720
Clifton Higher Education Finance Corp., Refunding RB, Uplift Education, Series A, 4.40%, 12/01/47	810
County of Bexar Texas Health Facilities Development Corp., RB, Army Retirement Residence Project, 6.20%, 7/01/45	5,040
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
County of Harris Texas-Houston Sports Authority, Refunding RB, CAB, Senior Lien, Series A (NPFGC), 0.00%, 11/15/38 (c)	10,000
County of Matagorda Texas Navigation District No. 1, Refunding RB, Central Power & Light Co. Project, Series A, 6.30%, 11/01/29	2,090
County of Tarrant Texas Cultural Education Facilities Finance Corp., RB, Series A: CC Young Memorial Home, 8.00%, 2/15/38	1,745
Senior Living Center Project, 8.25%, 11/15/44	4,200
County of Travis Texas Health Facilities Development Corp., Refunding RB, 7.13%, 1/01/46	3,080
La Vernia Higher Education Finance Corp., RB, Kipp, Inc., Series A, 6.38%, 8/15/44	860
New Hope Cultural Education Facilities Corp., RB, Stephenville Tarleton St.: 5.88%, 4/01/36	1,210
6.00%, 4/01/45	1,845
North Texas Education Finance Corp., ERB, Uplift Education, Series A, 5.25%, 12/01/47	1,600
North Texas Tollway Authority, RB, CAB, Special Project System, Series B, 0.00%, 9/01/37 (c)	2,110
North Texas Tollway Authority, Refunding RB, 2nd Tier System, Series F, 6.13%, 1/01/31	4,425
	Par (000)
Municipal Bonds	
Texas (concluded)	
Red River Health Facilities Development Corp., First MRB Project: Eden Home, Inc., 7.25%, 12/15/42	\$ 2,895
Wichita Falls Retirement Foundation, 5.13%, 1/01/41	900
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
NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	3,000
Utah 0.6%	
State of Utah Charter School Finance Authority, Refunding RB, 6.75%, 10/15/43	2,950
Vermont 0.2%	
Vermont EDA, Refunding, MRB, Wake Robin Corp. Project, 5.40%, 5/01/33	770
Virginia 3.3%	
County of Fairfax Virginia EDA, Refunding RB: Goodwin House, Inc., 5.13%, 10/01/42	2,500
Vinson Hall LLC, Series A, 5.00%, 12/01/42	1,330
Vinson Hall LLC, Series A, 5.00%, 12/01/47	1,735
Mosaic District Community Development Authority, Special Assessment Bonds, Series A: 6.63%, 3/01/26	1,485
6.88%, 3/01/36	1,300
Virginia Small Business Financing Authority, RB, Senior Lien, Elizabeth River Crossings OpCo LLC Project, AMT, 6.00%, 1/01/37	6,805

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Washington 0.6%		
County of King Washington Public Hospital District No. 4, GO, Refunding, Snoqualmie Valley Hospital, 7.00%, 12/01/40	\$ 1,455	\$ 1,483,751
Greater Wenatchee Regional Events Center Public Facilities District, Refunding RB, Series A, 5.50%, 9/01/42	1,495	1,436,710
		2,920,461
Wisconsin 0.3%		
Wisconsin Health & Educational Facilities Authority, Refunding RB, St. Johns Communities, Inc., Series A:		
7.25%, 9/15/29	425	454,776
7.63%, 9/15/39	855	918,073
		1,372,849
Total Municipal Bonds 87.8%		411,306,593
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	11,692,107
District of Columbia 1.6%		
District of Columbia Water & Sewer Authority, Refunding RB, Senior Lien, Series A, 6.00%, 10/01/35 (i)	6,679	7,508,280
Florida 3.4%		
County of Miami-Dade Florida, Refunding RB, Miami International Airport, Series A, AMT (AGC), 5.25%, 10/01/33	15,000	15,911,100
Illinois 3.0%		
City of Chicago Illinois, GARB, O Hare International Airport, 3rd Lien, Series A (NPFGC), 5.00%, 1/01/33 (i)	6,510	6,582,001
Illinois Finance Authority, RB, The Carle Foundation, Series A (AGM), 6.00%, 8/15/41	7,180	7,804,588
		14,386,589
Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts (h)		
New York 13.6%		
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	\$ 14,180	\$ 14,803,069
Series EE, 5.50%, 6/15/43	7,605	8,217,735
Series HH, 5.00%, 6/15/31 (i)	8,609	9,353,832
Hudson Yards Infrastructure Corp., RB, Fiscal 2012, Series A, 5.75%, 2/15/47 (i)	4,520	4,883,869
New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Consolidated, 5.25%, 12/15/43	18,105	19,254,849
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 (i)	6,600	7,118,496
		63,631,850
Washington 1.8%		
City of Bellingham Washington, RB, Water & Sewer, 5.00%, 8/01/40	7,966	8,446,399
Total Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts 25.9%		121,576,325
Total Long-Term Investments (Cost \$530,277,507) 113.7%		532,882,918

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Short-Term Securities	Shares	
FFI Institutional Tax-Exempt Fund, 0.03% (j)(k)	1,506,739	1,506,739
Total Short-Term Securities		
(Cost \$1,506,739) 0.3%		1,506,739

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

Total Investments (Cost \$531,784,246*)	114.0%	534,389,657
Other Assets Less Liabilities	1.2%	5,384,277
Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable	(15.2%)	(71,164,679)
Net Assets Applicable to Common Shares	100.0%	\$ 468,609,255

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

Tax cost	\$ 460,758,122
Gross unrealized appreciation	\$ 28,052,316
Gross unrealized depreciation	(25,564,258)
Net unrealized appreciation	\$ 2,488,058

Notes to Schedule of Investments

- (a) 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.
- (b) 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.
- (c) Zero-coupon bond.
- (d) US 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.
- (e) Non-income producing security.
- (f) Issuer filed for bankruptcy and/or is in default of principal and/or interest payments.
- (g) Variable rate security. Rate shown is as of report date.
- (h)

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Represent bonds transferred to a TOB. In exchange for which the Fund acquired 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 1, 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 January 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, 2013	Net Activity	Shares Held at January 31, 2014	Income
FPI Institutional Tax-Exempt Fund	9,209,652	(7,702,913)	1,506,739	\$ 799

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

Portfolio Abbreviations

To simplify the listings of portfolio holdings in the Schedule of Investments, the names and descriptions of many of the securities have been abbreviated according to the following list:

AGC	Assured Guarantee Corp.
AGM	Assured Guaranty Municipal Corp.
AMT	Alternative Minimum Tax (subject to)

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

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 January 31, 2014 were as follows:

Contracts Sold	Issue	Exchange	Expiration	Notional Value	Unrealized Depreciation
(439)	10-Year US Treasury Note	Chicago Board of Trade	March 2014	\$ 55,204,250	\$ (581,933)

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 semi-annual report.

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

Schedule of Investments (concluded)

BlackRock MuniAssets Fund, Inc. (MUA)

	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 532,882,918		\$ 532,882,918
Short-Term Securities	\$ 1,506,739			1,506,739
Total	\$ 1,506,739	\$ 532,882,918		\$ 534,389,657

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				
Liabilities:				
Interest rate contracts	\$ (581,933)			\$ (581,933)

² Derivative financial instruments are financial futures contracts, which are valued at the unrealized appreciation/depreciation on the instrument. The carrying amount for certain of the Fund's assets and/or liabilities approximates fair value for financial reporting purposes. As of January 31, 2014, such assets and/or liabilities are categorized within the disclosure hierarchy as follows:

	Level 1	Level 2	Level 3	Total
Assets:				
Cash	\$ 92,848			\$ 92,848
Cash pledged for financial futures contracts	732,000			732,000
Liabilities:				
TOB trust certificates		\$ (71,143,477)		(71,143,477)
Total	\$ 824,848	\$ (71,143,477)		\$ (70,318,629)

There were no transfers between levels during the period ended January 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: March 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: March 25, 2014

By: /s/ NEAL J. ANDREWS
Neal J. Andrews

Chief Financial Officer (principal
financial officer) of

BlackRock MuniAssets Fund, Inc.

Date: March 25, 2014