

BLACKROCK MUNIASSETS FUND, INC.
Form N-Q
March 25, 2015

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: 01/31/2015

Item 1 Schedule of Investments

Schedule of Investments January 31, 2015 (Unaudited)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Alabama 2.7%		
County of Jefferson Alabama, RB, Limited Obligation School, Series A:		
5.25%, 1/01/17	\$ 895	\$ 906,188
5.25%, 1/01/19	2,000	2,025,000
5.50%, 1/01/21	1,215	1,230,187
4.75%, 1/01/25	3,145	3,145,252
County of Jefferson Alabama Sewer, Refunding RB, Sub-Lien, Series D, 6.00%, 10/01/42	3,745	4,234,471
State of Alabama Docks Department, Refunding RB, 6.00%, 10/01/40	2,165	2,570,678
		14,111,776
Alaska 1.2%		
Northern Tobacco Securitization Corp., Refunding RB, Tobacco Settlement, Asset-Backed, Series A:		
4.63%, 6/01/23	1,435	1,435,373
5.00%, 6/01/32	1,500	1,337,355
5.00%, 6/01/46	4,000	3,279,360
		6,052,088
Arizona 1.0%		
City of Phoenix Arizona IDA, RB:		
Great Hearts Academies - Veritas Project, 6.30%, 7/01/42	500	537,735
Great Hearts Academies - Veritas Project, 6.40%, 7/01/47	425	458,924
Legacy Traditional Schools, Series A, 6.50%, 7/01/34 (a)	570	653,414
Legacy Traditional Schools, Series A, 6.75%, 7/01/44 (a)	1,000	1,159,070
County of Maricopa Arizona IDA, RB, Arizona Charter School Project 1, Series A, 6.63%, 7/01/20	720	703,519
University Medical Center Corp., RB:		
6.25%, 7/01/29	820	961,376
6.50%, 7/01/39	500	590,990
		5,065,028
California 4.9%		
California Municipal Finance Authority, Urban Discovery Academy Project (a):		
5.50%, 8/01/34	315	327,524
6.00%, 8/01/44	665	692,351
6.13%, 8/01/49	580	603,206
California School Finance Authority, RB:		
Alliance for College Ready Public School - 2023 Union LLC Project, Series A, 6.40%, 7/01/48	1,570	1,824,858
	Par	Value
	(000)	Value
Municipal Bonds		
California (concluded)		
California School Finance Authority, RB (concluded):		
Value Schools, 6.65%, 7/01/33	\$ 435	\$ 482,550
Value Schools, 6.90%, 7/01/43	975	1,091,035
California Statewide Communities Development Authority, Refunding RB:		
American Baptist Homes of the West, 6.25%, 10/01/39	2,175	2,510,472
Loma Linda University Medical Center, 5.50%, 12/01/54	2,390	2,706,054
California Statewide Financing Authority, RB, Tobacco Settlement, Series B, 6.00%, 5/01/43	1,650	1,650,396
City of San Jose California Hotel Tax, RB, Convention Center Expansion & Renovation Project:		
6.50%, 5/01/36	900	1,117,566
6.50%, 5/01/42	2,220	2,733,419
City of Stockton California Public Financing Authority, RB, Delta Water Supply Project, Series A,		
6.25%, 10/01/40	375	447,803
County of Riverside California Transportation Commission, RB, Senior Lien, Series A, 5.75%, 6/01/48	2,885	3,390,337
Golden State Tobacco Securitization Corp., Refunding RB, Asset-Backed, Senior, Series A-1,		
5.75%, 6/01/47	4,020	3,550,745
Tobacco Securitization Authority of Southern California, Refunding RB, Tobacco Settlement,		
Asset-Backed, Senior Series A-1, 4.75%, 6/01/25	2,000	2,000,280
		25,128,596
Colorado 1.6%		

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Foothills Metropolitan District, Special Assessment Bonds, 6.00%, 12/01/38	5,985	6,340,090
Regional Transportation District, RB, Denver Transit Partners Eagle P3 Project, 6.00%, 1/15/34	1,500	1,734,795
		8,074,885
Connecticut 0.5%		
Mohegan Tribe of Indians of Connecticut, Refunding RB, Public Improvement, Priority Distribution, 6.25%, 1/01/31	2,755	2,755,358

BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2015

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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		
Delaware 0.2%		
County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Power LLC Project, 6.00%, 10/01/40	\$ 1,000	\$ 1,151,460
District of Columbia 0.9%		
District of Columbia, RB, Methodist Home District of Columbia, Series A:		
7.38%, 1/01/30	1,665	1,666,798
7.50%, 1/01/39	1,615	1,616,405
District of Columbia Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, 6.50%, 5/15/33	1,055	1,356,213
		4,639,416
Florida 9.1%		
Boggy Creek Improvement District, Refunding RB, Special Assessment Bonds, 5.13%, 5/01/43	1,600	1,683,968
Capital Trust Agency Inc, RB, Faulk Senior Services, 6.75%, 12/01/44	355	363,456
Capital Trust Agency, Inc., RB:		
1st Mortgage, Silver Creek St. Augustine Project, 8.25%, 1/01/44	515	555,474
Capital Trust Agency, Inc., RB (concluded):		
1st Mortgage, Silver Creek St. Augustine Project, 8.25%, 1/01/49	1,105	1,191,289
Faulk Senior Services, 6.75%, 12/01/49	670	678,656
County of Collier Florida IDA, Refunding RB, Arlington of Naples Project, Series A, 8.13%, 5/15/44 (a)	2,510	2,930,224
County of Palm Beach Florida Health Facilities Authority, RB, Acts Retirement Life Community, 5.50%, 11/15/33	3,500	3,953,915
Florida Development Finance Corp., RB, Renaissance Charter School, Series A:		
5.75%, 6/15/29	690	703,973
6.00%, 6/15/34	835	852,326
6.13%, 6/15/44	3,220	3,262,085
Greeneway Improvement District, RB, Special Assessment Bonds, 5.13%, 5/01/43	2,000	2,104,960
Harbor Bay Community Development District Florida, Special Assessment Bonds, Series A, 7.00%, 5/01/33	410	411,443
	Par (000)	Value
Municipal Bonds		
Florida (concluded)		
Jacksonville Economic Development Commission, RB, Gerdau Ameristeel U.S. Inc., AMT, 5.30%, 5/01/37	\$ 4,500	\$ 4,507,245
Jacksonville Economic Development Commission, Refunding RB, Florida Proton Therapy Institute, Series A, 6.00%, 9/01/17	720	799,351
Lakewood Ranch Stewardship District, Refunding, Special Assessment Bonds, Lakewood Center & New Sector Projects, 8.00%, 5/01/40	1,485	1,907,304
Mid-Bay Bridge Authority, RB, Springing Lien, Series A, 7.25%, 10/01/40	4,550	5,657,834
Midtown Miami Community Development District, Refunding, Special Assessment Bonds:		
Series A, 5.00%, 5/01/37	850	919,122
Series B, 5.00%, 5/01/37	500	540,660
Palm Beach County Health Facilities Authority, Refunding RB, Series A, 7.25%, 6/01/34	500	576,365
Santa Rosa Bay Bridge Authority, RB, 6.25%, 7/01/28 (b)(c)	4,539	1,904,526
Tampa Palms Open Space and Transportation Community Development District, RB, Capital Improvement, Richmond Place Project, 7.50%, 5/01/18	1,075	1,076,602
Tolomato Community Development District, Refunding, Special Assessment Bonds:		
Series A2, 0.00%, 5/01/39 (d)	250	183,103
Series A3, 0.00%, 5/01/40 (d)	585	349,110
Series A4, 0.00%, 5/01/40 (d)	305	134,737
Series A1, 6.65%, 5/01/40	910	931,713
Tolomato Community Development District, Convertible CAB (b)(c):		
Series 1, 6.65%, 5/01/40	50	51,614
Series 2, 6.65%, 5/01/40	2,110	1,254,712
Series 3, 6.65%, 5/01/40	710	7
Village Community Development District No. 9, Special Assessment Bonds:		
6.75%, 5/01/31	1,660	2,046,481
7.00%, 5/01/41	2,830	3,507,276
5.50%, 5/01/42	1,295	1,521,146
		46,560,677

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BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2015

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Georgia 2.0%		
City of Atlanta Georgia, Tax Allocation Bonds, Princeton Lakes Project, 5.50%, 1/01/31	\$ 1,035	\$ 1,047,161
County of Clayton Georgia, Tax Allocation Bonds, Ellenwood Project, 7.50%, 7/01/33	2,745	2,924,139
County of Clayton Georgia Development Authority, Refunding RB, Delta Air Lines, Inc. Project, Series A, 8.75%, 6/01/29	3,365	4,230,916
County of Gainesville & Hall Georgia Development Authority, Refunding RB, Acts Retirement Life Community, Series A-2:		
6.38%, 11/15/29	700	821,394
6.63%, 11/15/39	880	1,030,119
		10,053,729
Guam 1.3%		
Guam Government Waterworks Authority, RB, Water & Wastewater System:		
5.25%, 7/01/33	1,450	1,679,419
5.50%, 7/01/43	2,415	2,853,323
Territory of Guam, GO, Series A:		
6.00%, 11/15/19	615	686,272
7.00%, 11/15/39	1,115	1,316,815
		6,535,829
Illinois 4.3%		
City of Chicago Illinois Board of Education, GO, Series A, 5.25%, 12/01/41	3,450	3,690,603
Illinois Finance Authority, Refunding RB:		
CAB, Clare Water Tower, Series B, 0.00%, 5/15/50 (b)(c)(e)	1,214	12
Clare Water Tower, Series A-7, 6.13%, 5/15/41 (b)(c)	3,129	31
Friendship Village of Schaumburg, 7.25%, 2/15/45	4,000	4,346,560
Lutheran Home & Services Obligated Group, 5.63%, 5/15/42	2,395	2,554,220
Primary Health Care Centers Program, 6.60%, 7/01/24	1,175	1,186,503
Rogers Park Montessori School Project, Series 2014, 6.00%, 2/01/34	365	384,977
	Par	
Municipal Bonds		
Illinois (concluded)		
Rogers Park Montessori School Project, Series 2014, 6.13%, 2/01/45	\$ 860	\$ 896,524
Roosevelt University Project, 6.50%, 4/01/44	4,170	4,639,751
Railsplitter Tobacco Settlement Authority, RB:		
5.50%, 6/01/23	180	215,350
6.00%, 6/01/28	710	850,303
Village of Lincolnshire Illinois, Special Tax Bonds, Sedgebrook Project, 6.25%, 3/01/34	1,794	1,832,051
Village of Wheeling Illinois, Tax Allocation Bonds, North Milwaukee/Lake-Cook TIF Project, 6.00%, 1/01/25	1,345	1,345,780
		21,942,665
Indiana 1.1%		
City of Valparaiso Indiana, RB, Exempt Facilities, Pratt Paper LLC Project, AMT:		
6.75%, 1/01/34	825	1,021,870
7.00%, 1/01/44	2,000	2,492,280
Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges East End Crossing Project, Series A, AMT:		
5.00%, 7/01/44	470	514,556
5.00%, 7/01/48	1,555	1,700,050
		5,728,756
Iowa 3.4%		
Iowa Finance Authority, Refunding RB:		
Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.50%, 12/01/22	4,090	4,350,819

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Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.25%, 12/01/25	2,190	2,419,424
Sunrise Retirement Community Project, 5.50%, 9/01/37	1,355	1,390,393
Sunrise Retirement Community Project, 5.75%, 9/01/43	2,115	2,192,261
Iowa Tobacco Settlement Authority, Refunding RB:		
Asset-Backed, CAB, Series B, 5.60%, 6/01/34	1,200	1,140,792
Asset-Backed, Series C, 5.63%, 6/01/46	1,565	1,415,277
Series C, 5.38%, 6/01/38	4,900	4,349,289
		17,258,255

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		
Kentucky 0.9%		
Kentucky Public Transportation Infrastructure Authority, RB, Downtown Crossing, First Tier, Series A, 5.75%, 7/01/49	\$ 4,000	\$ 4,709,120
Louisiana 2.7%		
Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, 6.75%, 11/01/32	5,000	5,747,600
Louisiana Public Facilities Authority, RB, Belle Chasse Educational Foundation Project, 6.75%, 5/01/41	1,855	2,114,793
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A, 5.25%, 5/15/35	5,570	6,285,188
		14,147,581
Maine 0.7%		
Maine Health & Higher Educational Facilities Authority, RB, Maine General Medical Center, 6.75%, 7/01/41	2,955	3,410,956
Maryland 2.4%		
County of Frederick Maryland, RB, Jefferson Technology Park Project, Series B, 7.13%, 7/01/43	2,840	3,221,838
Maryland EDC, RB, Transportation Facilities Project, Series A, 5.75%, 6/01/35	3,615	3,945,085
Maryland EDC, Refunding RB, CNX Marine Terminals, Inc., 5.75%, 9/01/25	4,785	5,382,886
		12,549,809
Massachusetts 1.0%		
Massachusetts Development Finance Agency, RB, Series A:		
Foxborough Regional Charter School, 7.00%, 7/01/42	1,025	1,177,213
North Hill Communities Issue, 6.50%, 11/15/43 (a)	2,020	2,181,034
Massachusetts Development Finance Agency, Refunding RB, Tufts Medical Center, Series I, 6.75%, 1/01/36	1,490	1,803,526
		5,161,773
Municipal Bonds		
Michigan 2.5%		
City of Detroit Michigan, GO, Financial Recovery (f):		
Series B-1, 4.00%, 4/01/44	\$ 315	\$ 187,728
Series B-2, 4.00%, 4/01/44	100	61,681
City of Detroit Michigan Sewage Disposal System, Refunding RB, Senior Lien, Series A, 5.25%, 7/01/39	2,785	3,066,563
Michigan Finance Authority, RB, Detroit Water & Sewage Disposal System, Senior Lien, Series 2014 C-2, AMT, 5.00%, 7/01/44	415	441,676
Michigan Finance Authority, Refunding RB, Detroit Water & Sewage Department Project, Senior Lien, Series C-1, 5.00%, 7/01/44	920	995,090
Royal Oak Hospital Finance Authority Michigan, Refunding RB, William Beaumont Hospital, Series V, 8.25%, 9/01/18 (g)	6,310	7,968,457
		12,721,195
Minnesota 0.6%		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series A, 6.75%, 11/15/32	1,785	2,133,039
Woodbury Housing & Redevelopment Authority, RB, St. Therese of Woodbury, 5.13%, 12/01/44	940	975,429
		3,108,468
Missouri 1.0%		
Kirkwood IDA Missouri, RB, Aberdeen Heights, Series A, 8.25%, 5/15/39	2,315	2,694,637
Lees Summit Industrial Development Authority, RB, John Knox Obligated Group, 5.25%, 8/15/39	2,235	2,326,858
		5,021,495
New Jersey 4.4%		
New Jersey EDA, RB:		
AMT, ACR Energy Partners, Series A, 10.50%, 6/01/32 (a)(b)(c)	1,940	871,060
Kapkowski Road Landfill Project, Series B, AMT, 6.50%, 4/01/31	2,250	2,793,307
Team Academy Charter School Project, 6.00%, 10/01/43	1,530	1,761,902
The Goethals Bridge Replacement Project, AMT, 5.38%, 1/01/43	2,155	2,421,811

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BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2015

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
New Jersey (concluded)		
New Jersey EDA, Refunding RB, Series A, 6.00%, 8/01/49 (a)	\$ 500	\$ 521,810
New Jersey Health Care Facilities Financing Authority, Refunding RB: 4.25%, 7/01/44	1,555	1,614,930
New Jersey Health Care Facilities Financing Authority, Refunding RB (concluded):		
St. Barnabas Health Care System, Series A, 5.63%, 7/01/37	2,650	3,073,496
St. Joseph's Healthcare System, 6.63%, 7/01/38	4,090	4,618,755
Tobacco Settlement Financing Corp. New Jersey, Refunding RB, Series 1A:		
4.63%, 6/01/26	2,000	1,917,180
5.00%, 6/01/29	3,735	3,274,288
		22,868,539
New Mexico 0.6%		
New Mexico Hospital Equipment Loan Council, Refunding RB, Gerald Champion Regional Medical Center Project, 5.50%, 7/01/42	2,970	2,986,008
New York 8.7%		
Build NYC Resource Corp., Refunding RB, Pratt Paper, Inc. Project, AMT, 5.00%, 1/01/35 (a)	695	751,427
City of New York New York Industrial Development Agency, ARB, AMT:		
American Airlines, Inc., JFK International Airport, 8.00%, 8/01/28 (f)	1,765	1,939,806
British Airways PLC Project, 7.63%, 12/01/32	4,130	4,153,706
City of New York New York Industrial Development Agency, RB, Special Needs Facilities Pooled Program, Series C-1:		
6.50%, 7/01/24	610	611,470
6.63%, 7/01/29	1,100	1,101,463
County of Chautauqua New York Industrial Development Agency, RB, NRG Dunkirk Power Project, 5.88%, 4/01/42	3,695	4,166,778
County of Dutchess New York Industrial Development Agency, Refunding RB, Bard College Civic Facility, 5.00%, 8/01/46	5,000	5,057,350
County of Westchester New York Healthcare Corp., RB, Senior Lien, Series A, 5.00%, 11/01/44	1,452	1,669,416
	Par (000)	Value
Municipal Bonds		
New York (concluded)		
Metropolitan Transportation Authority, RB, Series C, 6.50%, 11/15/28	\$ 2,000	\$ 2,416,560
New York Counties Tobacco Trust IV, RB, 6.25%, 6/01/41 (a)	3,400	3,391,806
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	1,451,000
3 World Trade Center Project, Class 1, 5.00%, 11/15/44 (a)	6,670	7,133,098
3 World Trade Center Project, Class 2, 5.15%, 11/15/34 (a)	455	509,550
3 World Trade Center Project, Class 2, 5.38%, 11/15/40 (a)	1,080	1,218,877
3 World Trade Center Project, Class 3, 7.25%, 11/15/44 (a)	3,130	3,838,789
Niagara Area Development Corp., Refunding RB, Solid Waste Disposal Facility, Covanta Energy Project, Series A, AMT, 5.25%, 11/01/42 (a)		
	1,335	1,395,622
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	1,597,173
Westchester Tobacco Asset Securitization, Refunding RB, 5.13%, 6/01/45	2,500	2,369,275
		44,773,166
North Carolina 1.5%		
North Carolina Medical Care Commission, Refunding RB, 1st Mortgage, Series A:		
Deerfield Project, 6.13%, 11/01/38	4,565	5,166,302
Retirement Facilities Whitestone Project, 7.75%, 3/01/31	1,000	1,161,190

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
North Carolina (concluded)		
North Carolina Medical Care Commission, Refunding RB, 1st Mortgage, Series A (concluded):		
Retirement Facilities Whitestone Project, 7.75%, 3/01/41	\$ 1,420	\$ 1,626,652
		7,954,144
North Dakota 0.4%		
City of Williston North Dakota, RB, Eagle Crest Apartments LLC Project, 7.75%, 9/01/38	2,155	2,289,192
Ohio 2.6%		
Buckeye Tobacco Settlement Financing Authority, RB, Asset-Backed Bonds, Series A-2:		
5.75%, 6/01/34	6,745	5,682,325
6.00%, 6/01/42	3,040	2,590,323
State of Ohio, RB, Ford Motor Co. Project, AMT, 5.75%, 4/01/35	4,880	4,899,813
		13,172,461
Oklahoma 0.3%		
Oklahoma Development Finance Authority, Refunding RB, Inverness Village Community, 6.00%, 1/01/32	1,305	1,394,640
Oregon 0.6%		
Hospital Facilities Authority of Multnomah County Oregon, Refunding RB, Mirabella at South Waterfront:		
5.40%, 10/01/44	1,245	1,342,521
5.50%, 10/01/49	1,765	1,897,816
		3,240,337
Pennsylvania 4.3%		
Allentown Neighborhood Improvement Zone Development Authority, Refunding RB, Series A, 5.00%, 5/01/42	4,170	4,626,574
City of Philadelphia Pennsylvania Hospitals & Higher Education Facilities Authority, RB, Temple University Health System, Series A, 5.63%, 7/01/36	2,000	2,166,740
County of Cumberland Pennsylvania Municipal Authority, Refunding RB, Diakon Lutheran, 6.38%, 1/01/39	6,165	6,916,699
Municipal Bonds		
Pennsylvania (concluded)		
County of Lancaster Pennsylvania Hospital Authority, Refunding RB, Brethren Village Project, Series A, 6.25%, 7/01/26	\$ 1,160	\$ 1,227,129
County of Lehigh Pennsylvania General Purpose Authority, Refunding RB, Bible Fellowship Church Homes, 5.13%, 7/01/32	2,000	2,108,660
County of Northampton Pennsylvania IDA, Route 33 Project, Tax Allocation Bonds, 7.00%, 7/01/32	2,110	2,337,521
Pennsylvania Economic Development Financing Authority, Refunding RB, National Gypson Co., AMT, 5.50%, 11/01/44	2,710	2,803,847
		22,187,170
Puerto Rico 1.0%		
Commonwealth of Puerto Rico, GO, Refunding, Series A, 8.00%, 7/01/35	6,000	5,017,320
Rhode Island 0.6%		
Central Falls Detention Facility Corp., Refunding RB, 7.25%, 7/15/35 (b)(c)	4,190	1,695,777
Tobacco Settlement Financing Corp, RB, Asset-Backed, Series A, 6.25%, 6/01/42	1,590	1,597,187
		3,292,964
Texas 11.3%		
Brazos River Authority, Refunding RB, Texas Utility Co., Series A, AMT, 7.70%, 4/01/33 (b)(c)	5,080	254,000
Central Texas Regional Mobility Authority, Refunding RB:		
CAB, 0.00%, 1/01/28 (e)	1,000	597,970
CAB, 0.00%, 1/01/29 (e)	2,000	1,149,280
CAB, 0.00%, 1/01/30 (e)	1,170	643,266
CAB, 0.00%, 1/01/33 (e)	3,690	1,739,835
CAB, 0.00%, 1/01/34 (e)	4,000	1,772,040
Senior Lien, 6.25%, 1/01/46	2,210	2,603,402
City of Houston Texas Airport System, RB, Special Facilities, Continental Airlines, Inc., AMT, Series A, 6.63%, 7/15/38	2,890	3,411,616

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City of Houston Texas Airport System, Refunding ARB, United Airlines, Inc. Terminal E Project, AMT, 5.00%, 7/01/29	910	991,245
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BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2015

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Texas (continued)		
Clifton Higher Education Finance Corp., ERB, Idea Public Schools:		
5.50%, 8/15/31	\$ 955	\$ 1,080,697
5.75%, 8/15/41	720	823,925
County of Bexar Texas Health Facilities Development Corp., RB, Army Retirement Residence Project, 6.20%, 7/01/45	5,040	5,887,678
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	556,463
County of Harris Texas-Houston Sports Authority, Refunding RB, CAB, Senior Lien, Series A (NPFGC), 0.00%, 11/15/38 (e)	10,000	3,257,400
County of Matagorda Texas Navigation District No. 1, Refunding RB, Central Power & Light Co. Project, Series A, 6.30%, 11/01/29	2,090	2,427,096
County of Tarrant Texas Cultural Education Facilities Finance Corp., RB, Series A:		
CC Young Memorial Home, 8.00%, 2/15/38	1,745	2,020,256
Senior Living Center Project, 8.25%, 11/15/44	4,200	4,202,436
County of Tarrant Texas Cultural Education Facilities Finance Corp., Refunding RB, Trinity Terrace Project:		
5.00%, 10/01/44	435	477,256
5.00%, 10/01/49	865	938,862
County of Travis Texas Health Facilities Development Corp., Refunding RB, 7.13%, 1/01/46	3,080	3,382,702
La Vernia Higher Education Finance Corp., RB, Kipp, Inc., Series A, 6.38%, 8/15/44	860	990,256
Mesquite Health Facility Development Corp., Refunding RB, 5.13%, 2/15/42	810	850,937
New Hope Cultural Education Facilities Corp., RB, Stephenville LLC Tarleton State University Project:		
5.88%, 4/01/36	1,210	1,417,285
6.00%, 4/01/45	1,845	2,161,584
North Texas Education Finance Corp., ERB, Uplift Education, Series A, 5.25%, 12/01/47	1,600	1,776,432
	Par	
	(000)	Value
Municipal Bonds		
Texas (concluded)		
North Texas Tollway Authority, RB, CAB, Special Project System, Series B, 0.00%, 9/01/37 (e)	\$ 2,110	\$ 741,834
Red River Health Facilities Development Corp., First MRB, Project:		
Eden Home, Inc., 7.25%, 12/15/42	2,895	2,746,023
Wichita Falls Retirement Foundation, 5.13%, 1/01/41	900	932,958
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	4,624,035
NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	3,000	3,598,980
		58,057,749
Utah 0.6%		
State of Utah Charter School Finance Authority, Refunding RB, 6.75%, 10/15/43	2,950	3,148,682
Vermont 0.2%		
Vermont EDA, Refunding, MRB, Wake Robin Corp. Project, 5.40%, 5/01/33	770	817,509
Virginia 2.7%		
County of Fairfax Virginia EDA, Refunding RB, Goodwin House, Inc., 5.13%, 10/01/42	2,500	2,608,400
Mosaic District Community Development Authority, Special Assessment, Series A:		
6.63%, 3/01/26	1,485	1,734,688
6.88%, 3/01/36	1,300	1,516,489

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Virginia (concluded)		
Virginia Small Business Financing Authority, RB, Senior Lien, Elizabeth River Crossings OpCo LLC Project, AMT, 6.00%, 1/01/37	\$ 6,805	\$ 7,959,332
		13,818,909
Washington 0.6%		
County of King Washington Public Hospital District No. 4, GO, Refunding, Snoqualmie Valley Hospital, 7.00%, 12/01/40	1,455	1,618,950
Greater Wenatchee Regional Events Center Public Facilities District, Refunding RB, Series A, 5.50%, 9/01/42	1,495	1,592,100
		3,211,050
Wisconsin 0.4%		
Public Finance Authority, RB, Rose Villa Project, Series A:		
5.75%, 11/15/44	430	457,950
6.00%, 11/15/49	270	291,557
Wisconsin Health & Educational Facilities Authority, Refunding RB, St. Johns Communities, Inc., Series A:		
7.25%, 9/15/29	425	504,841
7.63%, 9/15/39	855	1,024,948
		2,279,296
Total Municipal Bonds 86.8%		446,398,051
Municipal Bonds Transferred to Tender Option Bond 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	12,879,655
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	7,942,446
Florida 3.3%		
County of Miami-Dade Florida, Refunding RB, Miami International Airport, Series A, AMT (AGC), 5.25%, 10/01/33	15,000	16,833,450
	Par	
Municipal Bonds Transferred to Tender Option Bond Trusts (h)		
	(000)	Value
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	\$ 6,792,534
Illinois Finance Authority, RB, The Carle Foundation, Series A (AGM), 6.00%, 8/15/41	7,180	8,511,603
		15,304,137
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	14,181	16,426,289
Series EE, 5.50%, 6/15/43	7,605	9,123,034
Series HH, 5.00%, 6/15/31 (i)	8,609	10,089,901
Hudson Yards Infrastructure Corp., RB, Fiscal 2012, Series A, 5.75%, 2/15/47 (i)	4,520	5,313,789
New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Consolidated, 5.25%, 12/15/43	18,105	21,306,507
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 (i)	6,600	7,877,364

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		70,136,884
Washington 1.8%		
City of Bellingham Washington, RB, Water & Sewer, 5.00%, 8/01/40	7,966	9,149,034
Total Municipal Bonds Transferred to Tender Option Bond Trusts 25.7%		132,245,606
Total Long-Term Investments (Cost \$530,905,707) 112.5%		578,643,657

Short-Term Securities	Shares	
FFI Institutional Tax-Exempt Fund, 0.03% (j)(k)	525,656	525,656
Total Short-Term Securities (Cost \$525,656) 0.1%		525,656

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Value
Total Investments	
(Cost \$531,431,363*) 112.6%	\$ 579,169,313
Other Assets Less Liabilities 1.2%	6,324,838
Liability for TOB Trust Certificates, Including Interest	
Expense and Fees Payable (13.8%)	(71,165,941)
Net Assets Applicable to Common Shares 100.0%	\$ 514,328,210

* As of January 31, 2015, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 460,131,316
Gross unrealized appreciation	\$ 65,007,477
Gross unrealized depreciation	(17,113,985)
Net unrealized appreciation	\$ 47,893,492

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

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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 May 31, 2015 to November 15, 2019 is 21,577,964.
- (j) Represents the current yield as of report date.
- (k) During the period ended January 31, 2015, investments in issuers considered to be an affiliate of the Fund 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 January 31, 2015	Income
FII Institutional Tax-Exempt Fund	259,703	265,953	525,656	\$ 1,478

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

BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2015

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Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

As of January 31, 2015, financial futures contracts outstanding were as follows:

Contracts

Short	Issue	Exchange	Expiration	Notional Value	Unrealized Depreciation
(565)	10-Year U.S. Treasury Note	Chicago Board of Trade	March 2015	\$ 73,944,375	\$ (2,029,841)

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. 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. 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. The three levels of the fair value hierarchy are as follows:

Level 1 unadjusted quoted prices 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)

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. 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.

As of January 31, 2015, the following tables summarize the Fund's investments and derivative financial instruments categorized in the disclosure hierarchy:

	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 578,643,657		\$ 578,643,657
Short-Term Securities	\$ 525,656			525,656
Total	\$ 525,656	\$ 578,643,657		\$ 579,169,313

¹ See above Schedule of Investments for values in each state or political subdivision.

	Level 1	Level 2	Level 3	Total
Derivative Financial Instruments²				
Liabilities:				

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Interest rate contracts	\$ (2,029,841)	\$ (2,029,841)
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² Derivative financial instruments are financial futures contracts, which are valued at the unrealized appreciation/depreciation on the instrument.

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Schedule of Investments (concluded)

BlackRock MuniAssets Fund, Inc. (MUA)

The Fund may hold assets and/or liabilities in which the fair value approximates the carrying amount for financial reporting purposes. As of January 31, 2015, 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	\$ 767,000			\$ 767,000
Liabilities:				
TOB trust certificates		\$ (71,144,505)		(71,144,505)
Total	\$ 767,000	\$ (71,144,505)		\$ (70,377,505)

During the period ended January 31, 2015, there were no transfers between levels.

BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2015

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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, 2015

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, 2015

By: /s/ Neal J. Andrews
Neal J. Andrews
Chief Financial Officer (principal financial officer) of
BlackRock MuniAssets Fund, Inc.

Date: March 25, 2015