

BLACKROCK MUNIASSETS FUND, INC.

Form N-Q

March 26, 2013

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: 04/30/2013

Date of reporting period: 01/31/2013

Item 1 Schedule of Investments

Schedule of Investments January 31, 2013 (Unaudited)

BlackRock MuniAssets Fund, Inc. (MUA)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Alabama 1.3%		
Alabama State Docks Department, Refunding RB, 6.00%, 10/01/40	\$ 2,165	\$ 2,538,787
County of Jefferson Alabama, RB, Series A: 5.25%, 1/01/17	895	895,278
5.25%, 1/01/19	2,000	2,000,080
5.50%, 1/01/21	1,215	1,217,515
		6,651,660
Alaska 1.3%		
Northern Tobacco Securitization Corp., Refunding RB, Tobacco Settlement, Asset-Backed, Series A: 4.63%, 6/01/23	1,720	1,726,192
5.00%, 6/01/32	1,500	1,372,890
5.00%, 6/01/46	4,000	3,514,080
		6,613,162
Arizona 2.9%		
Maricopa County IDA Arizona, RB, Arizona Charter Schools Project, Series A, 6.63%, 7/01/20	1,320	1,083,192
Phoenix IDA Arizona, ERB, Great Hearts Academies - Veritas Project: 6.30%, 7/01/42	500	540,120
6.40%, 7/01/47	425	460,832
Phoenix IDA Arizona, Refunding RB, America West Airlines, Inc. Project, AMT, 6.30%, 4/01/23	7,750	7,326,850
Pima County IDA Arizona, ERB, Arizona Charter School Project: Series A, 6.75%, 7/01/31	490	491,818
Series E, 7.25%, 7/01/31	2,255	2,267,650
Show Low Improvement District, Special Assessment Bonds, District No. 5, 6.38%, 1/01/15	235	237,404
Tempe IDA, Refunding RB, Friendship Village of Tempe, Series A, 6.25%, 12/01/42	720	781,704
University Medical Center Corp. Arizona, RB: 6.25%, 7/01/29	820	950,610
6.50%, 7/01/39	500	579,295
		14,719,475
California 5.3%		
California Pollution Control Financing Authority, RB: 5.00%, 11/21/45	1,270	1,297,686
Poseidon Resources (Channel Side) LP Desalination, AMT, 5.00%, 7/01/37	1,065	1,115,470
Poseidon Resources (Channel Side) LP Desalination, AMT, 5.00%, 11/21/45	2,655	2,760,032
California Statewide Communities Development Authority, Refunding RB: American Baptist Homes of the West, 6.25%, 10/01/39	2,175	2,457,402
Eskaton Properties, Inc., 5.25%, 11/15/34	1,595	1,705,709
City of Fontana California, Special Tax Bonds, Refunding RB, Community Facilities District No. 22-Sierra, Series H, 6.00%, 9/01/34	2,320	2,359,718
City of San Jose California Hotel Tax, RB, Convention Center Expansion & Renovation Project:		

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6.50%, 5/01/36	900	1,110,123
6.50%, 5/01/42	2,220	2,705,958
Foothill Eastern Transportation Corridor Agency California, Refunding RB, CAB,		
6.06%, 1/15/33(a)	12,450	3,780,318
San Marcos County Unified School District, GO, CAB, Series B(a):		
4.85%, 8/01/40	5,000	1,338,550
5.03%, 8/01/51	12,050	1,783,039
Tobacco Securitization Authority of Southern California, Refunding RB, Series A1-SNR,		
5.00%, 6/01/37	4,860	4,414,824
		26,828,829
Colorado 1.4%		
Plaza Metropolitan District No. 1 Colorado Tax Allocation Bonds, Public Improvement Fee, Tax Increment,		
8.00%, 6/01/14(b)	4,850	5,382,530
Plaza Metropolitan District No. 1 Colorado Tax Allocation Bonds, Refunding, Public Improvement Fee, Tax		
Increment,		
5.00%, 12/01/40	575	594,832
Plaza Metropolitan District No. 1 Colorado Tax Allocation Bonds, Subordinate, City of Lakewood Colorado,		
8.13%, 12/01/25	1,025	1,025,020
		7,002,382
Connecticut 0.7%		
Connecticut State Development Authority, RB, AFCO Cargo BDL LLC Project, AMT,		
8.00%, 4/01/30(c)(d)	3,450	2,150,937
Mohegan Tribe of Indians of Connecticut, Refunding RB, Public Improvement, Priority Distribution,		
6.25%, 1/01/31	1,370	1,371,123
		3,522,060
Delaware 1.0%		
County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Project,		
6.00%, 10/01/40	1,000	1,130,790

BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2013

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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 (concluded)		
Delaware State EDA, RB, Exempt Facilities, Indian River Power, 5.38%, 10/01/45	\$ 3,625	\$ 3,879,439
		5,010,229
District of Columbia 0.9%		
District of Columbia, RB, Methodist Home District of Columbia, Series A:		
7.38%, 1/01/30	1,665	1,729,319
7.50%, 1/01/39	1,615	1,676,241
District of Columbia Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, 6.50%, 5/15/33	1,055	1,237,293
		4,642,853
Florida 9.9%		
Greater Orlando Aviation Authority Florida, RB, Special Purpose, JetBlue Airways Corp., AMT, 6.38%, 11/15/26	4,500	4,556,250
Harbor Bay Community Development District Florida, Special Assessment Bonds, Series A, 7.00%, 5/01/33	455	456,488
Hillsborough County IDA, RB, National Gypsum Co., AMT:		
Series A, 7.13%, 4/01/30	3,000	3,003,030
Series B, 7.13%, 4/01/30	1,560	1,560,749
Jacksonville Economic Development Commission, RB, Gerdau Ameristeel US Inc., AMT, 5.30%, 5/01/37	4,500	4,503,420
Jacksonville Economic Development Commission, Refunding RB, Florida Proton Therapy Institute, Series A, 6.00%, 9/01/17	1,095	1,212,888
Lakewood Ranch Stewardship District, Refunding, Special Assessment Bonds, Lakewood Center & New Sector Projects, 8.00%, 5/01/40	1,485	1,700,800
Mid-Bay Bridge Authority, RB, Series A, 7.25%, 10/01/40	4,550	5,815,765
Midtown Miami Community Development District, Special Assessment Bonds, Series A:		
6.00%, 5/01/24	1,240	1,258,786
6.25%, 5/01/37	4,605	4,688,581
Palm Beach County Health Facilities Authority, RB, Acts Retirement Life Community, 5.50%, 11/15/33	3,500	3,840,795
Santa Rosa Bay Bridge Authority, RB, 6.25%, 7/01/28(c)(d)	5,180	2,072,000
Sarasota County Health Facilities Authority, Refunding RB, Village On The Isle Project, 5.50%, 1/01/27	955	1,025,823
Sumter Landing Community Development District Florida, RB, Sub-Series B, 5.70%, 10/01/38	3,825	3,566,621
Tampa Palms Open Space & Transportation Community Development District, RB, Capital Improvement, Richmond Place Project, 7.50%, 5/01/18	1,510	1,511,872
Tolomato Community Development District, Special Assessment Bonds, 6.65%, 5/01/40(c)(d):	2,890	997,611
Tolomato Community Development District, CAB, Special Assessment Bonds, Refunding:		
6.97%, 5/01/39(e)	250	179,423
7.46%, 5/01/40(e)	585	337,071
8.11%, 5/01/40(e)	305	129,286
6.65%, 5/01/40	910	896,978

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Village Community Development District No. 9, Special Assessment Bonds:

6.75%, 5/01/31	1,920	2,219,117
7.00%, 5/01/41	3,135	3,644,061
5.50%, 5/01/42	1,380	1,485,432

50,662,847

Georgia 2.4%

City of Atlanta Georgia, Tax Allocation Bonds, Princeton Lakes Project,		
5.50%, 1/01/31	1,035	1,053,050
Clayton County Development Authority, Refunding RB, Delta Air Lines Inc. Project, Series A,		
8.75%, 6/01/29	3,365	4,219,373
County of Clayton Georgia, Tax Allocation Bonds, Ellenwood Project,		
7.50%, 7/01/33	2,765	2,878,393
DeKalb County Hospital Authority Georgia, Refunding RB, Dekalb Medical Center, Inc. Project,		
6.13%, 9/01/40	1,000	1,174,930
Gainesville & Hall County Development Authority, Refunding RB, Acts Retirement Life Community, Series A-2:		
6.38%, 11/15/29	700	809,956
6.63%, 11/15/39	880	1,014,948
Private Colleges & Universities Authority, Refunding RB, Mercer University Project, Series A,		
5.00%, 10/01/32	855	938,722

12,089,372

Guam 0.6%

Guam Government Waterworks Authority, Refunding RB, Water & Wastewater Systems,		
6.00%, 7/01/25	1,265	1,319,117

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Guam (concluded)		
Territory of Guam, GO, Series A:		
6.00%, 11/15/19	\$ 615	\$ 676,894
7.00%, 11/15/39	1,115	1,257,307
		3,253,318
Illinois 5.3%		
City of Chicago Illinois, Refunding RB, American Airlines Inc. Project,		
5.50%, 12/01/30(c)(d)	7,000	6,545,210
Illinois Finance Authority, Refunding RB:		
CAB, Clare Water Tower, Series B, 8.00%, 5/15/50(a)(c)(d)	1,491	15
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	4,434,600
Lutheran Home & Services Obligated Group, 5.63%, 5/15/42	2,395	2,496,812
Primary Health Care Centers Program, 6.60%, 7/01/24	1,175	1,190,780
Roosevelt University Project, 6.50%, 4/01/44	4,170	4,748,337
Metropolitan Pier & Exposition Authority, Refunding RB, McCormick Place Expansion Project, Series B (AGM),		
4.89%, 6/15/46(a)	9,860	1,966,380
Railsplitter Tobacco Settlement Authority, RB:		
5.50%, 6/01/23	1,400	1,665,524
6.00%, 6/01/28	710	852,646
Village of Lincolnshire Illinois, Special Tax Bonds, Sedgebrook Project,		
6.25%, 3/01/34	1,800	1,830,996
Village of Wheeling Illinois, Tax Allocation Bonds, North Milwaukee/Lake-Cook TIF Project,		
6.00%, 1/01/25	1,465	1,473,321
		27,204,652
Iowa 0.7%		
Iowa Finance Authority, Refunding RB, Sunrise Retirement Community Project:		
5.50%, 9/01/37	1,355	1,340,529
5.75%, 9/01/43	2,115	2,124,158
		3,464,687
Kentucky 0.6%		
Kentucky Economic Development Finance Authority, RB, Owensboro Medical Health System, Series A,		
6.38%, 6/01/40	1,580	1,882,728
Kentucky Economic Development Finance Authority, Refunding RB, Owensboro Medical Health System, Series B,		
6.38%, 3/01/40	1,135	1,352,466
		3,235,194
Louisiana 1.5%		
Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Projects,		
6.75%, 11/01/32	5,000	5,684,000
Louisiana Public Facilities Authority, RB, Belle Chasse Educational Foundation Project,		
6.75%, 5/01/41	1,855	2,191,720

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7,875,720

Maine 0.7%

Maine Health & Higher Educational Facilities Authority, RB, Maine General Medical Center, 6.75%, 7/01/41	2,955	3,587,311
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Maryland 2.6%

Maryland EDC, RB, Transportation Facilities Project, Series A, 5.75%, 6/01/35	3,615	4,126,848
Maryland EDC, Refunding RB, CNX Marine Terminals Inc., 5.75%, 9/01/25	4,785	5,344,510
Maryland Health & Higher Educational Facilities Authority, RB, Washington Christian Academy, 5.50%, 7/01/38(c)(d)	1,000	399,910
Maryland Health & Higher Educational Facilities Authority, Refunding RB, Doctor s Community Hospital, 5.75%, 7/01/38	3,110	3,369,032

13,240,300

Massachusetts 0.6%

Massachusetts Development Finance Agency, RB, Foxborough Regional Charter School, Series A, 7.00%, 7/01/42	1,025	1,214,112
Massachusetts Development Finance Agency, Refunding RB: Eastern Nazarene College, 5.63%, 4/01/19	35	35,017
Eastern Nazarene College, 5.63%, 4/01/29	80	80,000
Tufts Medical Center, Series I, 6.75%, 1/01/36	1,490	1,817,651

3,146,780

BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2013

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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		
Michigan 2.3%		
City of Detroit Michigan, GO, Limited Tax:		
Series A-1, 5.00%, 4/01/16	\$ 650	\$ 580,801
Series A-2, 8.00%, 4/01/14	3,185	3,026,482
Royal Oak Hospital Finance Authority Michigan, Refunding RB, William Beaumont Hospital, 8.25%, 9/01/39	6,310	8,068,345
		11,675,628
Minnesota 0.4%		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series A, 6.75%, 11/15/32		
	1,785	2,169,935
Missouri 0.6%		
Kirkwood IDA Missouri, RB, Aberdeen Heights, Series A, 8.25%, 5/15/39		
	2,315	2,773,509
New Jersey 5.8%		
New Jersey EDA, RB:		
Continental Airlines Inc. Project, AMT, 6.25%, 9/15/29	2,025	2,063,617
Continental Airlines Inc. Project, AMT, 9.00%, 6/01/33(f)	1,250	1,282,962
Kapkowski Road Landfill Project, Series 1998B-MB, AMT, 6.50%, 4/01/31	2,250	2,670,840
Patterson Charter School for Science and Technology, Inc. Project, Series A, 6.10%, 7/01/44	1,085	1,186,502
New Jersey EDA, Refunding RB, Newark Airport Marriott Hotel, 7.00%, 10/01/14	4,000	4,019,720
New Jersey Educational Facilities Authority, Refunding RB, University of Medicine & Dentistry, Series B: 7.13%, 12/01/23	670	856,394
7.50%, 12/01/32	3,575	4,480,047
New Jersey Health Care Facilities Financing Authority, RB, Pascack Valley Hospital Association, 6.63%, 7/01/36(c)(d)	3,870	39
New Jersey Health Care Facilities Financing Authority, Refunding RB:		
Barnabas Health, Series A, 5.63%, 7/01/37	2,650	2,993,466
St. Joseph's Healthcare System, 6.63%, 7/01/38	4,090	4,739,574
New Jersey Transportation Trust Fund Authority, RB, Transportation System, Series C (AMBAC), 4.57%, 12/15/35(a)	6,210	2,209,270
Tobacco Settlement Financing Corp. New Jersey, Refunding RB, Series 1-A:		
4.50%, 6/01/23	1,390	1,386,511
4.63%, 6/01/26	2,000	1,940,780
		29,829,722
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	3,047,784
New York 5.0%		
Chautauqua County Industrial Development Agency, RB, NRG Dunkirk Power Project, 5.88%, 4/01/42		
	3,695	4,171,840
Dutchess County Industrial Development Agency New York, RB, St. Francis Hospital, Series B, 7.50%, 3/01/29	1,000	1,026,130
Dutchess County Industrial Development Agency New York, Refunding RB, St. Francis Hospital, Series A, 7.50%, 3/01/29	1,400	1,436,582

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Metropolitan Transportation Authority, RB, Series 2008C, 6.50%, 11/15/28	2,000	2,544,920
New York City Industrial Development Agency, RB: American Airlines Inc., JFK International Airport, AMT, 8.00%, 8/01/28(c)(d)(f)	1,765	2,035,151
British Airways Plc Project, AMT, 7.63%, 12/01/32 Series C, 6.80%, 6/01/28	4,130	4,233,622
Special Needs Facilities Pooled Program, Series C-1, 6.50%, 7/01/24	860	871,145
Special Needs Facilities Pooled Program, Series C-1, 6.63%, 7/01/29	610	615,557
New York Liberty Development Corp., Refunding RB, Second Priority, Bank of America Tower at One Bryant Park Project, Class 3, 6.38%, 7/15/49	1,100	1,104,136
Niagara Area Development Corp., Refunding RB, Covanta Energy Project, Series A, AMT, 5.25%, 11/01/42	1,270	1,509,179
Port Authority of New York & New Jersey, RB, JFK International Air Terminal, 6.00%, 12/01/36	1,835	1,893,133
	1,340	1,592,965

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BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2013

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
New York (concluded)		
Yonkers Industrial Development Agency New York, RB, Sarah Lawrence College Project, Series A, 6.00%, 6/01/41	\$ 2,090	\$ 2,369,161
		25,403,521
North Carolina 1.5%		
North Carolina Medical Care Commission, Refunding RB First Mortgage, Series A:		
Deerfield, 6.13%, 11/01/38	4,565	5,024,102
Whitestone, 7.75%, 3/01/31	1,000	1,153,990
Whitestone, 7.75%, 3/01/41	1,420	1,623,159
		7,801,251
Ohio 3.0%		
Buckeye Tobacco Settlement Financing Authority, RB, Asset-Backed, Senior Series A-2:		
5.13%, 6/01/24	1,350	1,247,481
5.75%, 6/01/34	6,745	6,001,364
6.00%, 6/01/42	3,040	2,764,424
State of Ohio, RB, Ford Motor Co. Project, AMT, 5.75%, 4/01/35	4,880	5,071,735
		15,085,004
Oklahoma 0.3%		
Oklahoma Development Finance Authority, Refunding RB, Inverness Village Community, 6.00%, 1/01/32		
	1,305	1,421,406
Pennsylvania 6.8%		
Allegheny County Hospital Development Authority, Refunding RB, Health System, West Penn, Series A, 5.38%, 11/15/40		
	3,330	2,830,433
Allentown Neighborhood Improvement Zone Development Authority, Refunding RB:		
5.00%, 5/01/35	1,815	1,961,362
5.00%, 5/01/42	4,170	4,466,195
Bucks County IDA, RB, Ann's Choice, Inc. Facility, Series A:		
6.13%, 1/01/25	1,360	1,370,622
6.25%, 1/01/35	1,550	1,557,347
Cumberland County Municipal Authority, Refunding RB, Diakon Lutheran, 6.38%, 1/01/39		
	6,165	6,915,589
Lancaster County Hospital Authority, Refunding RB, Brethren Village Project, Series A, 6.25%, 7/01/26		
	1,160	1,255,874
Lehigh County General Purpose Authority, Refunding RB, Bible Fellowship Church Homes, 5.13%, 7/01/32		
	2,905	2,874,236
Montgomery County IDA Pennsylvania, MRB, Whitemarsh Continuing Care, 6.13%, 2/01/28		
	2,330	2,375,085
Pennsylvania Economic Development Financing Authority, RB, National Gypsum Co., Series A, AMT, 6.25%, 11/01/27		
	1,250	1,249,875
Philadelphia Authority for Industrial Development, RB, Commercial Development, AMT, 7.75%, 12/01/17		
	8,000	8,012,320
		34,868,938

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Puerto Rico 1.5%

Puerto Rico Public Buildings Authority, Refunding RB, Government Facilities, Series U, 5.25%, 7/01/42	3,790	3,778,554
Puerto Rico Sales Tax Financing Corp., RB, First Sub-Series A, 6.50%, 8/01/44	2,650	3,008,068
Puerto Rico Sales Tax Financing Corp., Refunding RB, CAB, First Sub-Series C, 5.95%, 8/01/38(a)	4,445	996,658
		7,783,280

Rhode Island 0.7%

Central Falls Detention Facility Corp., Refunding RB, 7.25%, 7/15/35	4,245	3,677,104
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Tennessee 0.1%

Shelby County Health Educational & Housing Facilities Board Tennessee, RB, Village at Germantown, 6.25%, 12/01/16(b)	575	654,770
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Texas 13.6%

Bexar County Health Facilities Development Corp., RB, Army Retirement Residence Project, 6.20%, 7/01/45	5,040	5,655,989
Brazos River Authority, Refunding RB, Texas Utility Co., Series A, AMT, 7.70%, 4/01/33	5,080	838,301
Central Texas Regional Mobility Authority, Refunding RB, Senior Lien: 5.75%, 1/01/25	675	782,386
6.25%, 1/01/46	2,210	2,606,894
Central Texas Regional Mobility Authority, Refunding RB, CAB(a): 4.70%, 1/01/28	1,000	500,090
4.75%, 1/01/29	2,000	947,520
4.87%, 1/01/30	1,170	518,673
4.97%, 1/01/31	2,000	829,480
5.11%, 1/01/32	3,500	1,348,760
5.23%, 1/01/33	3,690	1,319,655
5.28%, 1/01/34	4,000	1,344,760

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Texas (continued)		
City of Houston Texas, RB, Special Facilities, AMT:		
Continental Airlines Inc. Terminal Improvement Projects, 6.63%, 7/15/38	\$ 2,890	\$ 3,212,639
Continental Airlines, Series E, 6.75%, 7/01/21	4,550	4,566,835
Clifton Higher Education Finance Corp., ERB, Idea Public Schools:		
5.50%, 8/01/31	955	1,077,622
5.75%, 8/01/41	720	817,056
Clifton Higher Education Finance Corp., Refunding RB, Uplift Education, Series A:		
4.35%, 12/01/42	985	985,729
4.40%, 12/01/47	810	810,599
Harris County Health Facilities Development Corp., Refunding RB, Memorial Hermann Healthcare System, Series B:		
7.13%, 12/01/31	1,500	1,915,245
7.25%, 12/01/35	1,110	1,382,871
Harris County-Houston Sports Authority, Refunding RB, CAB, Senior Lien, Series A (NPFGC),		
5.36%, 11/15/38(a)	10,000	2,554,100
Houston Higher Education Finance Corp., RB, Cosmos Foundation, Inc. Series A,		
6.88%, 5/15/41	595	756,638
La Vernia Higher Education Finance Corp., RB, KIPP, Inc., Series A,		
6.38%, 8/15/44	860	1,007,215
Love Field Airport Modernization Corp., RB, Southwest Airlines Co. Project,		
5.25%, 11/01/40	1,500	1,635,270
Matagorda County Navigation District No. 1 Texas, Refunding RB, Central Power & Light Co. Project, Series A,		
6.30%, 11/01/29	2,090	2,465,050
North Texas Education Finance Corporation, ERB, Uplift Education, Series A:		
5.13%, 12/01/42	745	803,386
5.25%, 12/01/47	1,600	1,734,960
North Texas Tollway Authority, RB, CAB, Special Projects System, Series B,		
5.12%, 9/01/37(a)	2,110	609,157
North Texas Tollway Authority, Refunding RB, Toll Second Tier, Series F,		
6.13%, 1/01/31	4,425	4,893,121
Red River Health Facilities Development Corp., First MRB:		
Eden Home Inc. Project, 7.25%, 12/15/42	2,895	3,063,720
Wichita Falls Retirement Foundation Project, 5.13%, 1/01/41	900	900,153
Tarrant County Cultural Education Facilities Finance Corp., RB, Series A, Series A:		
CC Young Memorial Home, 8.00%, 2/15/38	1,745	2,001,114
Senior Living Center Project, 8.25%, 11/15/44	4,200	4,685,352
Texas Municipal Gas Acquisition & Supply Corp. III, RB,		
5.00%, 12/15/29	1,945	2,122,326
Texas Private Activity Bond Surface Transportation Corp., RB, Senior Lien:		
LBJ Infrastructure Group LLC, LBJ Freeway Managed Lanes Project, 7.00%, 6/30/40	4,455	5,420,131
NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	3,000	3,588,600
		69,701,397
Vermont 0.2%		
Vermont EDA, Refunding MRB, Wake Robin Corp. Project, Series A,		
5.40%, 5/01/33	770	813,197
Virginia 4.0%		
Fairfax County EDA, RB, Vinson Hall LLC, Series A:		
5.00%, 12/01/42	1,330	1,337,648

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5.00%, 12/01/47	1,735	1,737,759
Fairfax County EDA, Refunding RB, Goodwin House Inc.,		
5.13%, 10/01/42	2,500	2,590,500
Lexington IDA, Refunding MRB, Kendal at Lexington, Series A,		
5.38%, 1/01/28	40	40,925
Mosaic District Community Development Authority, RB, Special Assessment Bonds, Series A:		
6.63%, 3/01/26	1,485	1,728,496
6.88%, 3/01/36	1,300	1,506,271
Route 460 Funding Corp. of Virginia Toll Road, RB, Senior Lien, CAB, Series B(a):		
5.21%, 7/01/42	3,485	768,024
5.22%, 7/01/43	3,610	753,010
5.24%, 7/01/44	3,690	727,705
5.24%, 7/01/45	2,905	542,828

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BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2013

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 Crossing Project, AMT:		
5.25%, 1/01/32	\$ 810	\$ 887,436
6.00%, 1/01/37	5,705	6,558,924
5.50%, 1/01/42	1,175	1,283,194
		20,462,720
Washington 0.6%		
Greater Wenatchee Regional Events Center Public Facilities District, Refunding RB, Series A, 5.50%, 9/01/42		
	1,495	1,583,175
King County, Washington Public Hospital District No. 4, GO, Refunding, Snoqualmie Valley Hospital, 7.00%, 12/01/40		
	1,455	1,616,694
		3,199,869
Wisconsin 0.3%		
Wisconsin Health & Educational Facilities Authority, Refunding RB, St. John's Communities Inc., Series A:		
7.25%, 9/15/29	425	487,343
7.63%, 9/15/39	855	988,739
		1,476,082
Total Municipal Bonds 87.0%		444,595,948
Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts (g)		
Colorado 2.5%		
Colorado Health Facilities Authority, Refunding RB, Sisters of Leavenworth, Series A, 5.00%, 1/01/40		
	11,475	12,546,077
District of Columbia 1.6%		
District of Columbia Water & Sewer Authority, Refunding RB, Series A, 6.00%, 10/01/35(h)		
	6,681	8,109,610
Florida 3.2%		
County of Miami-Dade Florida, Refunding RB, Miami International Airport, Series A, AMT (AGC), 5.25%, 10/01/33		
	15,000	16,273,800
Illinois 3.0%		
City of Chicago Illinois, RB, General Airport, Third Lien, Series A (NPFGC), 5.00%, 1/01/33		
	6,510	7,062,504
Illinois Finance Authority, RB, Carle Foundation, Series A (AGM), 6.00%, 8/15/41		
	7,180	8,500,761
		15,563,265
Michigan 0.9%		
Detroit Water and Sewerage Department, Refunding RB, Senior Lien, Series A:		

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5.00%, 7/01/32	1,613	1,745,834
5.25%, 7/01/39	2,786	3,034,448
		4,780,282
New York 11.3%		
Hudson New York Yards Infrastructure Corp., RB, Series A, 5.75%, 2/15/47	4,520	5,393,289
New York City Municipal Water Finance Authority, Refunding RB, Water & Sewer System, Second General Resolution: Series EE, 5.50%, 6/15/43	7,605	8,998,920
Series HH, 5.00%, 6/15/31(h)	8,609	10,246,919
New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Construction, 5.25%, 12/15/43	18,105	20,830,243
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51	6,600	7,830,108
New York State Dormitory Authority, ERB, Series F, 5.00%, 3/15/35	4,004	4,324,213
		57,623,692
Washington 1.8%		
City of Bellingham Washington, RB, Water & Sewer, 5.00%, 8/01/40	7,966	9,026,097
Total Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts 24.3%		123,922,823
Total Long-Term Investments (Cost \$525,097,398) 111.3%		568,518,771
Short-Term Securities	Shares	
FFI Institutional Tax-Exempt Fund, 0.01%(i)(j)	2,730,260	2,730,260
Total Short-Term Securities (Cost \$2,730,260) 0.5%		2,730,260
Total Investments (Cost \$527,827,658*) 111.8%		571,249,031
Other Assets Less Liabilities 0.8%		3,914,335
Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable (12.6)%		(64,187,829)
Net Assets 100.0%		\$ 510,975,537

* As of January 31, 2013, gross unrealized appreciation and gross unrealized depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 463,209,085
Gross unrealized appreciation	\$ 61,361,719
Gross unrealized depreciation	(17,470,562)
Net unrealized appreciation	\$ 43,891,157

Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

Notes to Schedule of Investments

- (a) Represents a zero-coupon bond. Rate shown reflects the current yield as of report date.
- (b) 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.
- (c) Non-income producing security.
- (d) Issuer filed for bankruptcy and/or is in default of principal and/or interest payments.
- (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 reflects the current yield as of report date.
- (f) Variable rate security. Rate shown is as of report date.
- (g) Securities represent bonds transferred to a TOB in exchange for which the Fund acquired residual interest certificates. These securities serve as collateral in a financing transaction.
- (h) 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 is \$9,080,016.
- (i) Investments in issuers considered to be an affiliate of the Fund during the period ended January 31, 2013, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Affiliate	Shares Held at		Shares Held at	
	April 30, 2012	Net Activity	January 31, 2013	Income
FFI Institutional Tax-Exempt Fund	3,404,970	(674,710)	2,730,260	\$ 358

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

Portfolio Abbreviations

AGC Assured Guaranty Corp.

ERB Education Revenue Bonds

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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:

AGM	Assured Guaranty Municipal Corp.	GO	General Obligation Bonds
AMBAC	American Municipal Bond Assurance Corp.	IDA	Industrial Development Authority
AMT	Alternative Minimum Tax (subject to)	MRB	Mortgage Revenue Bonds
CAB	Capital Appreciation Bonds	NPFGC	National Public Finance Guarantee Corp.
EDA	Economic Development Authority	RB	Revenue Bonds
EDC	Economic Development Corp.		

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BLACKROCK MUNIASSETS FUND, INC.

JANUARY 31, 2013

Schedule of Investments (concluded)**BlackRock MuniAssets Fund, Inc. (MUA)**

Fair Value Measurements Various inputs are used in determining the fair value of investments. 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 and 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)

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 level in the fair value hierarchy within which the fair value measurement falls in its entirety 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 is based on the pricing transparency of the investment 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 other significant accounting policies, please refer to the Fund's most recent financial statements as contained in its semi-annual report.

The following table summarizes the Fund's investments categorized in the disclosure hierarchy as of January 31, 2013:

	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 568,518,771		\$ 568,518,771
Short-Term Securities	\$ 2,730,260			2,730,260
Total	\$ 2,730,260	\$ 568,518,771		\$ 571,249,031

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

Certain of the Fund's liabilities are held at carrying amount, which approximates fair value for financial reporting purposes. As of January 31, 2013, TOB trust certificates of \$64,148,789 are categorized as Level 2 within the disclosure hierarchy.

There were no transfers between levels during the period ended January 31, 2013.

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

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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 26, 2013

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 26, 2013

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

Date: March 26, 2013