

BLACKROCK MUNIASSETS FUND, INC.  
Form N-Q  
September 22, 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 52<sup>nd</sup> Street, New York, NY 10055

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

Date of fiscal year end: 04/30/2016

Date of reporting period: 07/31/2015

Item 1 Schedule of Investments

## Schedule of Investments July 31, 2015 (Unaudited)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
<b>Municipal Bonds</b>		
<b>Alabama 2.2%</b>		
County of Jefferson Alabama, RB, Limited Obligation School, Series A:		
5.25%, 1/01/17	\$ 895	\$ 901,713
5.25%, 1/01/19	2,000	2,015,000
5.50%, 1/01/21	1,215	1,224,112
County of Jefferson Alabama Sewer, Refunding RB, Sub-Lien, Series D, 6.00%, 10/01/42	3,745	4,183,427
State of Alabama Docks Department, Refunding RB, 6.00%, 10/01/40	2,165	2,512,959
		10,837,211
<b>Alaska 1.1%</b>		
Northern Tobacco Securitization Corp., Refunding RB, Tobacco Settlement, Asset-Backed, Series A:		
4.63%, 6/01/23	1,275	1,274,949
5.00%, 6/01/32	1,500	1,281,780
5.00%, 6/01/46	4,000	3,050,600
		5,607,329
<b>Arizona 1.4%</b>		
City of Phoenix Arizona IDA, RB:		
Great Hearts Academies Veritas Project, 6.30%, 7/01/42	500	528,875
Great Hearts Academies Veritas Project, 6.40%, 7/01/47	425	450,874
Legacy Traditional Schools Project, Series A, 6.50%, 7/01/34 (a)	570	631,742
Legacy Traditional Schools Project, Series A, 6.75%, 7/01/44 (a)	1,000	1,117,360
City of Phoenix Arizona IDA, Refunding RB (a):		
Basis Schools, Inc. Projects, Series A, 5.00%, 7/01/35	305	307,837
Basis Schools, Inc. Projects, Series A, 5.00%, 7/01/45	855	845,800
Legacy Traditional School Projects, 5.00%, 7/01/35	320	310,947
Legacy Traditional School Projects, 5.00%, 7/01/45	255	241,018
Salt Verde Financial Corp., RB, Senior, 5.00%, 12/01/37	1,650	1,809,638
	<b>Par</b>	
<b>Municipal Bonds</b>		
<b>Arizona (concluded)</b>		
University Medical Center Corp., RB, 6.50%, 7/01/19 (b)	\$ 500	\$ 600,235
		6,844,326
<b>California 4.9%</b>		
California Municipal Finance Authority, RB, Urban Discovery Academy Project (a):		
5.50%, 8/01/34	315	324,693
6.00%, 8/01/44	665	691,228
6.13%, 8/01/49	580	603,594
California School Finance Authority, RB:		
Alliance for College Ready Public School 2023 Union LLC Project, Series A, 6.40%, 7/01/48	1,570	1,776,800
Value Schools, 6.65%, 7/01/33	435	482,119
Value Schools, 6.90%, 7/01/43	975	1,092,673
California Statewide Communities Development Authority, Refunding RB:		
American Baptist Homes of the West, 6.25%, 10/01/39	2,175	2,395,154
Loma Linda University Medical Center, 5.50%, 12/01/54	2,390	2,557,180
California Statewide Financing Authority, RB, Asset-Backed, Tobacco Settlement, Series B, 6.00%, 5/01/43	1,650	1,649,819
City of San Jose California Hotel Tax, RB, Convention Center Expansion & Renovation Project:		
6.50%, 5/01/36	900	1,089,342
6.50%, 5/01/42	2,220	2,665,998
City of Stockton California Public Financing Authority, RB, Delta Water Supply Project, Series A, 6.25%, 10/01/40	375	448,271
County of Riverside California Transportation Commission, RB, Senior Lien, Series A, 5.75%, 6/01/48	2,885	3,257,857
Golden State Tobacco Securitization Corp., Refunding RB, Asset-Backed, Senior, Series A-1, 5.75%, 6/01/47	5,020	4,268,054

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BLACKROCK MUNIASSETS FUND, INC.

JULY 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
<b>Municipal Bonds</b>		
<b>California (concluded)</b>		
Tobacco Securitization Authority of Southern California, Refunding RB, Tobacco Settlement, Asset-Backed, Senior Series A-1, 4.75%, 6/01/25	\$ 1,490	\$ 1,479,853
		24,782,635
<b>Colorado 1.7%</b>		
Castle Oaks Metropolitan District No. 3, GO, 6.25%, 12/01/44	500	493,330
Foothills Metropolitan District, Special Assessment Bonds, 6.00%, 12/01/38	5,985	6,307,771
Regional Transportation District, RB, Denver Transit Partners Eagle P3 Project, 6.00%, 1/15/34	1,500	1,695,075
		8,496,176
<b>Connecticut 1.0%</b>		
Mohegan Tribal Finance Authority, RB, 7.00%, 2/01/45	755	683,509
Mohegan Tribe of Indians of Connecticut, RB, Series A, 6.75%, 2/01/45 (a)	1,420	1,414,590
Mohegan Tribe of Indians of Connecticut, Refunding RB, Public Improvement, Priority Distribution, 6.25%, 1/01/31	2,755	2,754,642
		4,852,741
<b>Delaware 0.2%</b>		
County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Power LLC Project, 6.00%, 10/01/40	1,000	1,138,410
<b>District of Columbia 0.4%</b>		
District of Columbia Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, 6.50%, 5/15/33	1,755	2,113,564
<b>Florida 10.1%</b>		
Boggy Creek Improvement District, Refunding RB, Special Assessment Bonds, 5.13%, 5/01/43	1,570	1,615,891
Capital Trust Agency, Inc., RB:		
1st Mortgage, Silver Creek St. Augustine Project, 8.25%, 1/01/44	515	512,590
	<b>Par</b>	
<b>Municipal Bonds</b>		
<b>Florida (continued)</b>		
Capital Trust Agency, Inc., RB (concluded):		
1st Mortgage, Silver Creek St. Augustine Project, 8.25%, 1/01/49	\$ 1,105	\$ 1,100,016
Faulk Senior Services, 6.75%, 12/01/44	355	321,037
Faulk Senior Services, 6.75%, 12/01/49	670	605,988
County of Collier Florida IDA, Refunding RB, Arlington of Naples Project, Series A, 8.13%, 5/15/44 (a)	2,510	2,958,261
County of Miami-Dade Florida IDA, RB, Series A:		
5.00%, 6/01/35	1,460	1,483,725
5.00%, 6/01/40	2,000	2,015,320
5.00%, 6/01/48	1,460	1,459,898
County of Palm Beach Florida Health Facilities Authority, RB, Acts Retirement Life Community, 5.50%, 11/15/33	3,500	3,813,950
Florida Development Finance Corp., RB, Renaissance Charter School, Series A:		
5.75%, 6/15/29	690	698,066
6.00%, 6/15/34	835	848,126
6.13%, 6/15/44	3,220	3,244,891
Greenway Improvement District, RB, Special Assessment Bonds, 5.13%, 5/01/43	1,970	2,027,583
Harbor Bay Community Development District Florida, Special Assessment Bonds, Series A, 7.00%, 5/01/33	410	411,333
Jacksonville Economic Development Commission, RB, Gerdau Ameristeel U.S. Inc., AMT, 5.30%, 5/01/37	4,500	4,503,600
Jacksonville Economic Development Commission, Refunding RB, Florida Proton Therapy Institute, Series A, 6.00%, 9/01/17	720	780,005
Lakewood Ranch Stewardship District, Refunding, Special Assessment Bonds, Lakewood Center & New Sector Projects, 8.00%, 5/01/40	1,485	1,848,587
Mid-Bay Bridge Authority, RB, Springing Lien, Series A, 7.25%, 10/01/21 (b)	4,550	5,976,288

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BLACKROCK MUNIASSETS FUND, INC.

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## Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
<b>Municipal Bonds</b>		
<b>Florida (concluded)</b>		
Midtown Miami Community Development District, Refunding, Special Assessment Bonds:		
Series A, 5.00%, 5/01/37	\$ 845	\$ 884,149
Series B, 5.00%, 5/01/37	495	517,933
Palm Beach County Health Facilities Authority, Refunding RB, Series A, 7.25%, 6/01/34	500	567,480
Santa Rosa Bay Bridge Authority, RB, 6.25%, 7/01/28 (c)(d)	4,458	1,827,912
Tampa Palms Open Space and Transportation Community Development District, RB, Capital Improvement, Richmond Place Project, 7.50%, 5/01/18	835	836,019
Tolomato Community Development District, Refunding, Special Assessment Bonds:		
Convertible CAB, Series A2, 0.00%, 5/01/39 (e)	250	183,388
Convertible CAB, Series A3, 0.00%, 5/01/40 (e)	585	349,742
Convertible CAB, Series A4, 0.00%, 5/01/40 (e)	305	135,008
Series 2, 0.00%, 5/01/40 (e)	805	419,646
Series A1, 6.65%, 5/01/40	910	922,376
Tolomato Community Development District:		
Series 1, 0.00%, 5/01/40 (e)	1,305	804,363
Series 1, 6.65%, 5/01/40 (c)(d)	50	50,987
Series 3, 6.61%, 5/01/40 (c)(d)	875	9
Series 3, 6.65%, 5/01/40 (c)(d)	710	7
Village Community Development District No. 9, Special Assessment Bonds:		
6.75%, 5/01/31	1,660	2,029,616
7.00%, 5/01/41	2,735	3,360,084
5.50%, 5/01/42	1,260	1,440,369
		50,554,243
<b>Georgia 1.9%</b>		
City of Atlanta Georgia, Tax Allocation Bonds, Princeton Lakes Project, 5.50%, 1/01/31	1,035	1,039,233
County of Clayton Georgia, Tax Allocation Bonds, Ellenwood Project, 7.50%, 7/01/33	2,615	2,717,613
	<b>Par</b>	
<b>Municipal Bonds</b>		
	<b>(000)</b>	<b>Value</b>
<b>Georgia (concluded)</b>		
County of Clayton Georgia Development Authority, Refunding RB, Delta Air Lines, Inc. Project, Series A, 8.75%, 6/01/29		
	\$ 3,365	\$ 4,146,555
County of Gainesville & Hall Georgia Development Authority, Refunding RB, Acts Retirement Life Community, Series A-2:		
6.38%, 11/15/29	700	791,063
6.63%, 11/15/39	880	995,130
		9,689,594
<b>Guam 1.3%</b>		
Guam Government Waterworks Authority, RB, Water & Wastewater System:		
5.25%, 7/01/33	1,450	1,617,721
5.50%, 7/01/43	2,415	2,730,351
Territory of Guam, GO, Series A:		
6.00%, 11/15/19	615	671,857
7.00%, 11/15/39	1,115	1,308,430
		6,328,359
<b>Illinois 4.9%</b>		
City of Chicago Illinois, GO, Series A, 5.50%, 1/01/39	3,600	3,498,300
City of Chicago Illinois Board of Education, GO, Series A, 5.25%, 12/01/41	3,450	3,014,886
Illinois Finance Authority, Refunding RB:		
CAB, Clare Water Tower, Series B, 0.00%, 5/15/50 (c)(d)(f)	1,214	12

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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	4,276,040
Lutheran Home & Services Obligated Group, 5.63%, 5/15/42	2,395	2,510,607
Primary Health Care Centers Program, 6.60%, 7/01/24	1,085	1,094,244
Rogers Park Montessori School Project, Series 2014, 6.00%, 2/01/34	365	377,509
Rogers Park Montessori School Project, Series 2014, 6.13%, 2/01/45	860	880,287

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## Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
<b>Municipal Bonds</b>		
<b>Illinois (concluded)</b>		
Illinois Finance Authority, Refunding RB (concluded):		
Roosevelt University Project, 6.50%, 4/01/44	\$ 4,170	\$ 4,462,108
Railsplitter Tobacco Settlement Authority, RB:		
5.50%, 6/01/23	180	207,913
6.00%, 6/01/28	710	835,606
Village of Lincolnshire Illinois, Special Tax Bonds, Sedgebrook Project, 6.25%, 3/01/34	1,794	1,819,529
Village of Wheeling Illinois, Tax Allocation Bonds, North Milwaukee/Lake-Cook TIF Project, 6.00%, 1/01/25	1,345	1,345,444
		24,322,516
<b>Indiana 1.1%</b>		
City of Valparaiso Indiana, RB, Exempt Facilities, Pratt Paper LLC Project, AMT:		
6.75%, 1/01/34	825	993,597
7.00%, 1/01/44	2,000	2,421,940
Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges East End Crossing Project, Series A, AMT:		
5.00%, 7/01/44	470	489,618
5.00%, 7/01/48	1,555	1,611,166
		5,516,321
<b>Iowa 3.4%</b>		
Iowa Finance Authority, Refunding RB:		
Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.50%, 12/01/22	4,090	4,327,466
Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.25%, 12/01/25	2,190	2,379,501
Sunrise Retirement Community Project, 5.50%, 9/01/37	1,355	1,367,574
Sunrise Retirement Community Project, 5.75%, 9/01/43	2,115	2,159,859
Iowa Tobacco Settlement Authority, Refunding RB:		
Asset-Backed, CAB, Series B, 5.60%, 6/01/34	1,200	1,126,860
Asset-Backed, Series C, 5.63%, 6/01/46	1,565	1,364,868
	<b>Par</b>	
<b>Municipal Bonds</b>		
<b>(000)</b>		
<b>Iowa (concluded)</b>		
Iowa Tobacco Settlement Authority, Refunding RB (concluded):		
Series C, 5.38%, 6/01/38	\$ 4,900	\$ 4,211,991
		16,938,119
<b>Kentucky 0.9%</b>		
Kentucky Public Transportation Infrastructure Authority, RB, Downtown Crossing, First Tier, Series A, 5.75%, 7/01/49	4,000	4,471,560
<b>Louisiana 3.0%</b>		
Juban Crossing Economic Development District, Refunding RB, General Infrastructure Project, Series C, 7.00%, 9/15/44 (a)	1,055	1,064,495
Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, 6.75%, 11/01/32	5,000	5,504,650
Louisiana Public Facilities Authority, RB, Belle Chasse Educational Foundation Project, 6.75%, 5/01/41	1,855	2,064,226
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A, 5.25%, 5/15/35	5,570	6,153,680
		14,787,051
<b>Maine 0.7%</b>		
Maine Health & Higher Educational Facilities Authority, RB, Maine General Medical Center, 6.75%, 7/01/41	2,955	3,347,660
<b>Maryland 2.1%</b>		

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County of Frederick Maryland, RB, Jefferson Technology Park Project, Series B, 7.13%, 7/01/43	2,840	3,184,861
Maryland EDC, RB, Transportation Facilities Project, Series A, 5.75%, 6/01/35	3,615	3,948,737

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BLACKROCK MUNIASSETS FUND, INC.

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## Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
<b>Municipal Bonds</b>		
<b>Maryland (concluded)</b>		
Maryland EDC, Refunding RB, CNX Marine Terminals, Inc., 5.75%, 9/01/25	\$ 3,085	\$ 3,255,909
		10,389,507
<b>Massachusetts 2.9%</b>		
Massachusetts Development Finance Agency, RB:		
Boston Medical Center, Series D, 4.00%, 7/01/45	3,235	3,125,269
Boston Medical Center, Series D, 5.00%, 7/01/44	5,905	6,240,522
Foxborough Regional Charter School, Series A, 7.00%, 7/01/42	1,025	1,148,830
North Hill Communities Issue, Series A, 6.50%, 11/15/43 (a)	2,020	2,180,691
Massachusetts Development Finance Agency, Refunding RB, Tufts Medical Center, Series I, 6.75%, 1/01/36	1,490	1,742,212
		14,437,524
<b>Michigan 0.9%</b>		
City of Detroit Michigan, GO, Financial Recovery (e)(g):		
Series B-1, 4.00%, 4/01/44	315	187,302
Series B-2, 4.00%, 4/01/44	100	60,351
City of Detroit Michigan Sewage Disposal System, Refunding RB, Senior Lien, Series A, 5.25%, 7/01/39	2,785	2,970,899
Michigan Finance Authority, RB, Detroit Water & Sewage Disposal System, Senior Lien, Series 2014 C-2, AMT, 5.00%, 7/01/44	415	425,960
Michigan Finance Authority, Refunding RB, Detroit Water & Sewage Department Project, Senior Lien, Series C-1, 5.00%, 7/01/44	920	953,129
		4,597,641
<b>Minnesota 0.6%</b>		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series A, 6.75%, 11/15/32	1,785	2,055,749
	<b>Par</b>	
<b>Municipal Bonds</b>		
<b>Minnesota (concluded)</b>		
Woodbury Housing & Redevelopment Authority, RB, St. Therese of Woodbury, 5.13%, 12/01/44	\$ 940	\$ 946,345
		3,002,094
<b>Missouri 1.0%</b>		
Kirkwood IDA Missouri, RB, Aberdeen Heights, Series A, 8.25%, 5/15/39	2,315	2,633,752
Lees Summit Industrial Development Authority, RB, John Knox Obligated Group, 5.25%, 8/15/39	2,235	2,278,449
		4,912,201
<b>New Jersey 4.0%</b>		
Casino Reinvestment Development Authority, Refunding RB, 5.25%, 11/01/39	1,065	1,111,700
New Jersey EDA, RB:		
Kapkowski Road Landfill Project, Series B, AMT, 6.50%, 4/01/31	2,250	2,686,995
Private Activity Bond, The Goethals Bridge Replacement Project, AMT, 5.38%, 1/01/43	2,155	2,308,263
Team Academy Charter School Project, 6.00%, 10/01/43	1,530	1,714,135
New Jersey EDA, Refunding RB, Series A, 6.00%, 8/01/49 (a)	500	511,340
New Jersey Health Care Facilities Financing Authority, Refunding RB:		
St. Barnabas Health Care System, 4.25%, 7/01/44	1,030	1,033,008
St. Barnabas Health Care System, Series A, 5.63%, 7/01/37	2,650	2,965,032
St. Joseph's Healthcare System, 6.63%, 7/01/38	4,090	4,555,524

## Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
<b>Municipal Bonds</b>		
<b>New Jersey (concluded)</b>		
Tobacco Settlement Financing Corp., New Jersey, Refunding RB, Series 1A, 5.00%, 6/01/29	\$ 3,735	\$ 3,143,339
		20,029,336
<b>New Mexico 0.6%</b>		
New Mexico Hospital Equipment Loan Council, Refunding RB, Gerald Champion Regional Medical Center Project, 5.50%, 7/01/42	2,970	2,997,710
<b>New York 10.0%</b>		
City of New York New York Industrial Development Agency, ARB, AMT:		
American Airlines, Inc., JFK International Airport, 8.00%, 8/01/28 (g)	1,765	1,889,715
British Airways PLC Project, 7.63%, 12/01/32	4,130	4,192,074
City of New York New York Industrial Development Agency, RB, Special Needs Facilities Pooled Program, Series C-1:		
6.50%, 7/01/24	610	611,147
6.63%, 7/01/29	1,100	1,102,178
Counties of New York Tobacco Trust IV, Refunding RB, Settlement Pass-Through Turbo, Series A, 6.25%, 6/01/41 (a)	5,400	5,529,600
County of Chautauqua New York Industrial Development Agency, RB, NRG Dunkirk Power Project, 5.88%, 4/01/42	3,695	4,089,072
County of Dutchess New York Industrial Development Agency, Refunding RB, Bard College Civic Facility, 5.00%, 8/01/46	5,000	4,882,200
County of Westchester New York Healthcare Corp., RB, Senior Lien, Series A, 5.00%, 11/01/44	1,375	1,498,076
County of Westchester New York Local Development Corp., Refunding RB, Kendal On Hudson Project, 5.00%, 1/01/34	1,000	1,060,300
Erie Tobacco Asset Securitization Corp., Refunding RB, Asset-Backed, Series A, 5.00%, 6/01/45	3,250	3,007,030
	<b>Par</b>	
<b>Municipal Bonds</b>		
<b>New York (concluded)</b>		
Metropolitan Transportation Authority, RB, Series C, 6.50%, 11/15/28	\$ 2,000	\$ 2,349,300
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	1,431,963
3 World Trade Center Project, Class 1, 5.00%, 11/15/44 (a)	6,670	6,709,420
3 World Trade Center Project, Class 2, 5.15%, 11/15/34 (a)	455	470,929
3 World Trade Center Project, Class 2, 5.38%, 11/15/40 (a)	1,080	1,134,281
3 World Trade Center Project, Class 3, 7.25%, 11/15/44 (a)	1,565	1,852,068
Niagara Area Development Corp., Refunding RB, Solid Waste Disposal Facility, Covanta Energy Project, Series A, AMT, 5.25%, 11/01/42 (a)	1,335	1,365,198
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	1,559,666
TSASC, Inc., Refunding RB, Series 1, 5.00%, 6/01/34	1,135	1,026,868
Westchester Tobacco Asset Securitization, Refunding RB, 5.13%, 6/01/45	4,800	4,528,512
		50,289,597
<b>North Carolina 1.6%</b>		
North Carolina Medical Care Commission, Refunding RB, 1st Mortgage, Series A:		
Deerfield Project, 6.13%, 11/01/38	4,565	5,001,870
Retirement Facilities Whitestone Project, 7.75%, 3/01/31	1,000	1,147,940

## Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
<b>Municipal Bonds</b>		
<b>North Carolina (concluded)</b>		
North Carolina Medical Care Commission, Refunding RB, 1st Mortgage, Series A (concluded):		
Retirement Facilities Whitestone Project, 7.75%, 3/01/41	\$ 1,420	\$ 1,627,448
		7,777,258
<b>North Dakota 0.1%</b>		
City of Williston North Dakota, RB, Eagle Crest Apartments LLC Project, 7.75%, 9/01/38	445	463,904
<b>Ohio 1.7%</b>		
Buckeye Tobacco Settlement Financing Authority, RB, Asset-Backed Bonds, Series A-2:		
5.75%, 6/01/34	6,745	5,356,811
6.00%, 6/01/42	3,040	2,445,832
State of Ohio, RB, Portsmouth Bypass Project, AMT, 5.00%, 6/30/53	845	891,619
		8,694,262
<b>Oklahoma 0.6%</b>		
Oklahoma Development Finance Authority, Refunding RB, Inverness Village Community, 6.00%, 1/01/32	1,305	1,367,797
Tulsa Airports Improvement Trust, Refunding RB, American Airlines Inc., AMT, 5.00%, 6/01/35 (g)	1,340	1,448,888
		2,816,685
<b>Oregon 0.4%</b>		
Hospital Facilities Authority of Multnomah County Oregon, Refunding RB, Mirabella at South Waterfront, 5.50%, 10/01/49		
	1,765	1,925,350
<b>Pennsylvania 4.3%</b>		
Allentown Neighborhood Improvement Zone Development Authority, Refunding RB, Series A, 5.00%, 5/01/42		
	4,170	4,316,951
City of Philadelphia Pennsylvania Hospitals & Higher Education Facilities Authority, RB, Temple University Health System, Series A, 5.63%, 7/01/36		
	2,000	2,103,260
	<b>Par</b>	
<b>Municipal Bonds</b>		
<b>Pennsylvania (concluded)</b>		
County of Cumberland Pennsylvania Municipal Authority, Refunding RB, Diakon Lutheran:		
6.38%, 1/01/19 (b)	\$ 5,550	\$ 6,522,859
6.38%, 1/01/39	615	707,158
County of Lancaster Pennsylvania Hospital Authority, Refunding RB, Brethren Village Project, Series A, 6.25%, 7/01/26		
	1,160	1,208,198
County of Lehigh Pennsylvania General Purpose Authority, Refunding RB, Bible Fellowship Church Homes, 5.13%, 7/01/32		
	1,800	1,860,480
County of Northampton Pennsylvania IDA, Route 33 Project, Tax Allocation Bond, 7.00%, 7/01/32		
	2,110	2,284,223
Pennsylvania Economic Development Financing Authority, Refunding RB, National Gypson Co., AMT, 5.50%, 11/01/44		
	2,710	2,763,089
		21,766,218
<b>Rhode Island 1.4%</b>		
Central Falls Detention Facility Corp., Refunding RB, 7.25%, 7/15/35 (c)(d)		
	4,190	1,041,383
Tobacco Settlement Financing Corp., Refunding RB:		
Series A, 5.00%, 6/01/40	980	1,002,099
Series B, 4.50%, 6/01/45	5,055	4,957,034
		7,000,516
<b>Texas 10.6%</b>		
Brazos River Authority, Refunding RB, Texas Utility Co., Series A, AMT, 7.70%, 4/01/33 (c)(d)		
	5,080	304,800
Central Texas Regional Mobility Authority, Refunding RB:		
CAB, 0.00%, 1/01/28 (f)	1,000	580,390

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CAB, 0.00%, 1/01/29 (f)	2,000	1,106,660
CAB, 0.00%, 1/01/30 (f)	1,170	616,836
CAB, 0.00%, 1/01/33 (f)	3,690	1,654,190
CAB, 0.00%, 1/01/34 (f)	4,000	1,687,960
Senior Lien, 6.25%, 1/01/46	2,210	2,544,483
Central Texas Turnpike System, Refunding RB, Series C, 5.00%, 8/15/42	620	663,233

BLACKROCK MUNIASSETS FUND, INC.

JULY 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
<b>Municipal Bonds</b>		
<b>Texas (continued)</b>		
City of Houston Texas Airport System, Refunding ARB, AMT:		
Special Facilities, Continental Airlines, Inc., Series A, 6.63%, 7/15/38	\$ 2,890	\$ 3,337,227
United Airlines, Inc. Terminal E Project, 5.00%, 7/01/29	910	950,559
Clifton Higher Education Finance Corp., ERB, Idea Public Schools:		
5.50%, 8/15/31	955	1,053,222
5.75%, 8/15/41	720	803,333
County of Bexar Texas Health Facilities Development Corp., RB, Army Retirement Residence Project, 6.20%, 7/01/45	5,040	5,661,684
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	558,586
County of Matagorda Texas Navigation District No. 1, Refunding RB, Central Power & Light Co., Project, Series A, 6.30%, 11/01/29	2,090	2,372,714
County of Tarrant Texas Cultural Education Facilities Finance Corp., RB, Series A:		
CC Young Memorial Home, 8.00%, 2/15/38	1,745	1,970,279
Senior Living Center Project, 8.25%, 11/15/44	4,200	4,185,342
County of Tarrant Texas Cultural Education Facilities Finance Corp., Refunding RB, Trinity Terrace Project, 5.00%, 10/01/49	865	903,129
County of Travis Texas Health Facilities Development Corp., Refunding RB, 7.13%, 1/01/46	3,080	3,316,729
La Vernia Higher Education Finance Corp., RB, Kipp, Inc., Series A, 6.38%, 8/15/19 (b)	860	1,030,159
Mesquite Health Facility Development Corp., Refunding RB, 5.13%, 2/15/42	810	824,839
New Hope Cultural Education Facilities Corp., RB, Stephenville LLC Tarleton State University Project:		
5.88%, 4/01/36	1,210	1,355,067
6.00%, 4/01/45	1,845	2,076,086
	<b>Par</b>	
	<b>(000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>Texas (concluded)</b>		
North Texas Education Finance Corp., ERB, Uplift Education, Series A, 5.25%, 12/01/47	\$ 1,600	\$ 1,702,720
North Texas Tollway Authority, Refunding RB, Series A, 5.00%, 1/01/35	240	262,613
Red River Health Facilities Development Corp., First MRB, Project:		
Eden Home, Inc., 7.25%, 12/15/42	2,895	2,697,185
Wichita Falls Retirement Foundation, 5.13%, 1/01/41	900	918,819
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	4,499,385
NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	3,000	3,515,370
		53,153,599
<b>Utah 0.6%</b>		
State of Utah Charter School Finance Authority, Refunding RB, 6.75%, 10/15/43	2,950	3,102,220
<b>Vermont 0.2%</b>		
Vermont EDA, Refunding, MRB, Wake Robin Corp. Project, 5.40%, 5/01/33	770	802,802
<b>Virginia 3.1%</b>		
County of Fairfax Virginia EDA, Refunding RB, Goodwin House, Inc., 5.13%, 10/01/42	2,500	2,598,250
Lower Magnolia Green Community Development Authority, Special Assessment Bonds (a):		
5.00%, 3/01/35	510	504,329
5.00%, 3/01/45	520	505,123
Mosaic District Community Development Authority, Special Assessment, Series A:		
6.63%, 3/01/26	1,485	1,691,801
6.88%, 3/01/36	1,300	1,479,387

## Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
<b>Municipal Bonds</b>		
<b>Virginia (concluded)</b>		
Virginia College Building Authority, RB, Marymount University Project, Series B, 5.00%, 7/01/45		
(a)	\$ 535	\$ 524,396
Virginia College Building Authority, Refunding RB, Marymount University Project, Series A:		
Series A, 5.00%, 7/01/35	130	130,601
5.00%, 7/01/45	375	367,567
Virginia Small Business Financing Authority, RB, Senior Lien, Elizabeth River Crossings OpCo LLC Project, AMT, 6.00%, 1/01/37	6,805	7,772,263
		15,573,717
<b>Washington 0.6%</b>		
County of King Washington Public Hospital District No. 4, GO, Refunding, Snoqualmie Valley Hospital, 7.00%, 12/01/40	1,455	1,588,918
Greater Wenatchee Regional Events Center Public Facilities District, Refunding RB, Series A, 5.50%, 9/01/42	1,495	1,560,347
		3,149,265
<b>Wisconsin 0.3%</b>		
Wisconsin Health & Educational Facilities Authority, Refunding RB, St. Johns Communities, Inc., Series A:		
7.25%, 9/15/29	425	491,836
7.63%, 9/15/39	855	997,819
		1,489,655
<b>Total Municipal Bonds 87.8%</b>		438,998,876

**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	12,432,245
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**Municipal Bonds Transferred to****Par****Tender Option Bond Trusts (h)****(000)****Value****Florida 3.3%**

County of Miami-Dade Florida, Refunding RB, Miami International Airport, Series A, AMT (AGC), 5.25%, 10/01/33	\$ 15,000	\$ 16,465,200
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**Illinois 4.1%**

City of Chicago Illinois, GARB, O Hare International Airport, 3rd Lien, Series A (NPFGC), 5.00%, 1/01/33 (i)	6,510	6,613,249
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Illinois Finance Authority, RB, The Carle Foundation, Series A (AGM), 6.00%, 8/15/41	7,180	8,452,655
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State of Illinois Toll Highway Authority, RB, Senior Series A, 5.00%, 1/01/40	5,056	5,601,545
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20,667,449

**New York 13.6%**

City of New York New York Housing Development Corp., RB, M/F Housing, Series D-1, Class B, 4.25%, 11/01/45	8,996	9,093,360
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City of New York New York Municipal Water Finance Authority, Refunding RB, Water & Sewer System, 2nd General Resolution:		
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Fiscal 2013, Series CC, 5.00%, 6/15/47	14,181	15,694,743
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Series HH, 5.00%, 6/15/31 (i)	8,609	9,853,585
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Hudson Yards Infrastructure Corp., RB, Fiscal 2012, Series A, 5.75%, 2/15/47 (i)	4,520	5,146,413
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New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Consolidated Bonds, 5.25%, 12/15/43	18,105	20,790,515
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New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 (i)	6,600	7,608,348
		68,186,964
<b>Washington 1.8%</b>		
City of Bellingham Washington, RB, Water & Sewer, 5.00%, 8/01/40	7,966	8,815,489
<b>Total Municipal Bonds Transferred to Tender Option Bond Trusts 25.3%</b>		126,567,347
<b>Total Long-Term Investments (Cost \$537,005,558) 113.1%</b>		565,566,223

BLACKROCK MUNIASSETS FUND, INC.

JULY 31, 2015

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## Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

(Percentages shown are based on Net Assets)

	Shares	Value
<b>Short-Term Securities</b>		
FBI Institutional Tax-Exempt Fund, 0.02% (j)(k)	1,450,835	\$ 1,450,835
<b>Total Short-Term Securities</b>		1,450,835
(Cost \$1,450,835) 0.3%		
		Value
<b>Total Investments</b>		\$ 567,017,058
(Cost \$538,456,393*) 113.4%		
<b>Other Assets Less Liabilities</b> 0.7%		3,645,149
<b>Liability for TOB Trust Certificates, Including Interest</b>		
<b>Expense and Fees Payable</b> (14.1)%		(70,459,183)
<b>Net Assets Applicable to Common Shares</b> 100.0%		\$ 500,203,024

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

Tax cost	\$ 467,704,221
Gross unrealized appreciation	\$ 46,022,080
Gross unrealized depreciation	(17,141,532)
Net unrealized appreciation	\$ 28,880,548

## Notes to Schedule of Investments

- (a) Security exempt from registration pursuant to Rule 144A under the Securities Act of 1933, as amended. These securities may be resold in transactions exempt from registration to qualified institutional investors.
- (b) U.S. Government securities, held in escrow, are used to pay interest on this security, as well as to retire the bond in full at the date indicated, typically at a premium to par.
- (c) Non-income producing security.
- (d) Issuer filed for bankruptcy and/or is in default of 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 is as of report date.
- (f) Zero-coupon bond.
- (g) Variable rate security. Rate shown is as of report date.

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- (h) Represent bonds transferred to a TOB Trust in exchange of cash and residual certificates received by the Fund. These bonds serve as collateral in a secured borrowing.
- (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 agreement, which expire from February 15, 2019 to December 1, 2033, is 16,357,042.
- (j) During the period ended July 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:

	Shares Held at April 30,	Net	Shares Held at July 31,	Income
Affiliate	2015	Activity	2015	2015
FFI Institutional Tax-Exempt Fund	961,095	489,740	1,450,835	\$ 201

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

### Portfolio Abbreviations

<b>AGC</b>	Assured Guarantee Corp.
<b>AGM</b>	Assured Guaranty Municipal Corp.
<b>AMT</b>	Alternative Minimum Tax (subject to)
<b>ARB</b>	Airport Revenue Bonds
<b>CAB</b>	Capital Appreciation Bonds
<b>EDA</b>	Economic Development Authority

## Schedule of Investments (continued)

BlackRock MuniAssets Fund, Inc. (MUA)

<b>EDC</b>	Economic Development Corp.
<b>ERB</b>	Education Revenue Bonds
<b>GARB</b>	General Airport Revenue Bonds
<b>GO</b>	General Obligation Bonds
<b>IDA</b>	Industrial Development Authority
<b>M/F</b>	Multi-Family
<b>MRB</b>	Mortgage Revenue Bonds
<b>NPFGC</b>	National Public Finance Guarantee Corp.
<b>RB</b>	Revenue Bonds

## Financial Futures Contracts

				Notional	Unrealized
Contracts Short	Issue	Exchange	Expiration	Value	Depreciation
(197)	10-Year U.S. Treasury Note	Chicago Board of Trade	September 2015	\$ 25,105,188	\$ (51,116)

## Fair Value Hierarchy as of July 31, 2015

Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs to valuation techniques are categorized into a fair value 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 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. The significant unobservable inputs used by the Global Valuation Committee in determining the price for Fair Valued Investments are typically categorized as level 3.

Changes in valuation techniques may result in transfers into or out of an assigned level within the hierarchy. In accordance with the Fund's policy, transfers between different levels of the fair value 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 investments and derivative financial instruments 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, refer to the Fund's most recent financial statements as contained in its annual report.

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

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	Level 1	Level 2	Level 3	Total
<b>Assets:</b>				
Investments:				
Long-Term Investments <sup>1</sup>		\$ 565,566,223		\$ 565,566,223
Short-Term Securities	\$ 1,450,835			1,450,835
<b>Total</b>	\$ 1,450,835	\$ 565,566,223		\$ 567,017,058

<sup>1</sup> See above Schedule of Investments for values in each state or political sub-division.

BLACKROCK MUNIASSETS FUND, INC.

JULY 31, 2015

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## Schedule of Investments (concluded)

BlackRock MuniAssets Fund, Inc. (MUA)

	Level 1	Level 2	Level 3	Total
Derivative Financial Instruments <sup>2</sup>				
<b>Liabilities:</b>				
Interest rate contracts	\$ (51,116)			\$ (51,116)

<sup>2</sup> Derivative financial instruments are financial futures contracts, which are valued at the unrealized appreciation (depreciation) on the instrument.

The Fund may hold assets and/or liabilities in which the fair value approximates the carrying amount for financial reporting purposes. As of July 31, 2015, such assets and/or liabilities are categorized within the disclosure hierarchy as follows:

	Level 1	Level 2	Level 3	Total
<b>Assets:</b>				
Cash pledged for financial futures contracts	\$ 265,950			\$ 265,950
<b>Liabilities:</b>				
TOB Trust Certificates		\$ (70,432,289)		(70,432,289)
<b>Total</b>	\$ 265,950	\$ (70,432,289)		\$ (70,166,339)

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

Item 2 Controls and Procedures

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

Item 3 Exhibits

Certifications Attached hereto

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

BlackRock MuniAssets Fund, Inc.

By: /s/ John M. Perlowski  
John M. Perlowski  
Chief Executive Officer (principal executive officer) of  
BlackRock MuniAssets Fund, Inc.

Date: September 22, 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: September 22, 2015

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

Date: September 22, 2015