BLACKROCK MUNIASSETS FUND, INC.

Form N-O October 26, 2007

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.

Fund Address: P.O. Box 9011

Princeton, NJ 08543-9011

Name and address of agent for service: Robert C. Doll, Jr., Chief Executive Officer, BlackRock MuniAssets Fund, Inc., 800 Scudders Mill Road, Plainsboro, NJ 08536. Mailing address: P.O. Box 9011, Princeton, NJ 08543-9011

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

Date of fiscal year end: 05/31/2008

Date of reporting period: 06/01/2007 - 08/31/2007

Item 1 - Schedule of Investments

State		Municipal Bonds
Alabama - 0.6%	\$ 1,820	Tuscaloosa, Alabama, Special Care Facilities Financing Auth Care Facility Revenue Bonds (Capstone Village, Inc. Project due 8/01/2036
Alaska - 0.4%	1,015	Alaska Industrial Development and Export Authority Revenue Alaska Cargoport), AMT, 7.80% due 5/01/2014
Arizona - 6.1%	2,500 1,325 1,615 4,800	Coconino County, Arizona, Pollution Control Corporation Rev (Tucson Electric Power - Navajo), AMT, Series A, 7.125% due Coconino County, Arizona, Pollution Control Corporation Rev (Tucson Electric Power - Navajo), Series B, 7% due 10/01/20 Maricopa County, Arizona, IDA, Education Revenue Bonds (Ari Project 1), Series A, 6.625% due 7/01/2020 Maricopa County, Arizona, IDA, M/F Housing Revenue Bonds (S Project), Series A, 6.75% due 5/01/2031 Phoenix, Arizona, IDA, Airport Facility, Revenue Refunding Airlines Inc. Project), AMT, 6.30% due 4/01/2023 Pima County, Arizona, IDA, Education Revenue Bonds (Arizona

		Project), Series E, 7.25% due 7/01/2031
	415	Pima County, Arizona, IDA, Education Revenue Refunding Bond
		Schools Project II), Series A, 6.75% due 7/01/2011 (b)
	675	Pima County, Arizona, IDA, Education Revenue Refunding Bond
		Schools Project II), Series A, 6.75% due 7/01/2031
	1,095	6.375% due 1/01/2015
California - 3.6%	1,900	California State, Various Purpose, GO, 5.25% due 11/01/2025
	1,300	California State, Various Purpose, GO, 5.50% due 11/01/2033
	1,320	Fontana, California, Special Tax, Refunding (Community Faci Number 22 - Sierra), 6% due 9/01/2034
	1,030	Golden State Tobacco Securitization Corporation of Californ Revenue Refunding Bonds, Senior Series A-1, 5.125% due 6/01
	4,295	due 3/01/2032 (a)
Colorado - 4.9%	650	Colorado Health Facilities Authority, Revenue Refunding Bon Communities Project), Series A, 5.75% due 1/01/2026
	2,000	

Portfolio Abbreviations

To simplify the listings of BlackRock MuniAssets Fund Inc.'s portfolio holdings in the Schedule of Investments, we have abbreviated the names of many of the securities according to the list below.

AMT	Alternative Minimum Tax (subject to)
EDA	Economic Development Authority
EDR	Economic Development Revenue Bonds
GO	General Obligation Bonds
HFA	Housing Finance Agency
IDA	Industrial Development Authority
IDR	Industrial Development Revenue Bonds
M/F	Multi-Family
PCR	Pollution Control Revenue Bonds
VRDN	Variable Rate Demand Notes

BlackRock MuniAssets Fund, Inc. Schedule of Investments as of August 31, 2007 (Unaudited) (in Thousands)

State A	Face mount	Municipal Bonds
\$	1,430	Elk Valley, Colorado, Public Improvement Revenue Bonds (Pub Series A, 7.10% due 9/01/2014
	2 , 095	Elk Valley, Colorado, Public Improvement Revenue Bonds (Pub Series A, 7.30% due 9/01/2022

Series B, 7.45% due 9/01/2031 1,760 North Range Metropolitan District Number 1, Colorado, GO, 7 due 12/15/2011 (b)

395 Elk Valley, Colorado, Public Improvement Revenue Bonds (Pub

- 2,850 Plaza Metropolitan District Number 1, Colorado, Tax Allocat
 - (Public Improvement Fees), 8% due 12/01/2025 525 Plaza Metropolitan District Number 1, Colorado, Tax Allocat

	1,170	(Public Improvement Fees), 8.125% due $12/01/2025$ Southlands Metropolitan District Number 1, Colorado, GO, 7. due $12/01/2014$ (b)
Connecticut - 3.5%	680	Connecticut State Development Authority, Airport Facility R (Learjet Inc. Project), AMT, 7.95% due 4/01/2026
	3,490	Connecticut State Development Authority, IDR (AFCO Cargo BD 8% due 4/01/2030
	5,500	
Florida - 10.0%	1,130	Capital Projects Finance Authority, Florida, Continuing Car Bonds (Glenridge on Palmer Ranch), Series A, 8% due 6/01/20
	1,160	Halifax Hospital Medical Center, Florida, Hospital Revenue Series A, 5% due 6/01/2038
	490	Harbor Bay, Florida, Community Development District, Capita Assessment Revenue Bonds, Series A, 7% due 5/01/2033
	1,195	Highlands County, Florida, Health Facilities Authority, Hos (Adventist Health System), Series C, 5.25% due 11/15/2036
	2,000	Hillsborough County, Florida, IDA, Exempt Facilities Revenu Gypsum Company), AMT, Series A, 7.125% due 4/01/2030
	4,300	Hillsborough County, Florida, IDA, Hospital Revenue Bonds (Project), 5% due 10/01/2036
	1,000	Jacksonville, Florida, Economic Development Commission, Hea Revenue Refunding Bonds (Florida Proton Therapy Institute), 6% due 9/01/2017
	1,300	Jacksonville, Florida, Economic Development Commission, IDR US, Inc.), AMT, 5.30% due 5/01/2037
	2,620	Lee County, Florida, IDA, IDR (Lee Charter Foundation), Ser due 6/15/2037
	3,255	Midtown Miami, Florida, Community Development District, Spe Revenue Bonds, Series A, 6.25% due 5/01/2037
	1,180	·

State	Face Amount	Municipal Bonds
	\$ 2,295	Orlando, Florida, Urban Community Development District, Cap Special Assessment Bonds, Series A, 6.95% due 5/01/2033
	3,040	•
	860	1 2 1
	795	
	900	Waterchase, Florida, Community Development District, Capita Bonds, Series A, 6.70% due 5/01/2011 (b)
Georgia - 3.8%	3,000	Atlanta, Georgia, Tax Allocation Bonds (Atlantic Station Pr 12/01/2011 (b)
	740	Atlanta, Georgia, Tax Allocation Bonds (Princeton Lakes Pro 1/01/2031
	1,165	Brunswick and Glynn County, Georgia, Development Authority,

7.125% due 1/01/2025 (g) Brunswick and Glynn County, Georgia, Development Authority, Revenue Bonds (Coastal Community Retirement Corporation Pro 7.25% due 1/01/2035 (g) Official County, Georgia, Development Authority, PCR (General Refunding, VRDN, 7.50% due 4/01/2010 (e) Gainesville, Georgia, Redevelopment Authority, Educational Refunding Bonds (Riverside Military Academy), 5.125% due 3/435 Rockdale County, Georgia, Development Authority Revenue Bon Project), AMT, Series A, 6.125% due 1/01/2034
OOO Idaho Health Facilities Authority, Revenue Refunding Bonds Corporation), Series A, 7.75% due 11/15/2016
Caseyville, Illinois, Senior Tax Increment Revenue Bonds (F 7% due 12/30/2022 140 Chicago, Illinois, O'Hare International Airport, Special Fa Refunding Bonds (American Airlines Inc. Project), 5.50% due 500 Illinois State Finance Authority Revenue Bonds (Clare At Wa Series A, 6.125% due 5/15/2038 600 Illinois State Finance Authority Revenue Bonds (Landing At Project), Series A, 6% due 5/15/2037 685 Illinois State Finance Authority Revenue Bonds (Primary Hea Program), 6.60% due 7/01/2024 070 Lincolnshire, Illinois, Special Service Area Number 1, Spec (Sedgebrook Project), 6.25% due 3/01/2034 600 Lombard, Illinois, Public Facilities Corporation, First Tie (Conference Center and Hotel), Series A-1, 7.125% due 1/01/165 Naperville, Illinois, IDR (General Motors Corporation), Ref due 12/01/2012 (e) 825 Village of Wheeling, Illinois, Revenue Bonds (North Milwauk Increment Financing (TIF) Redevelopment Project), 6% due 1/

BlackRock MuniAssets Fund, Inc. Schedule of Investments as of August 31, 2007 (Unaudited) (in Thousands)

Revenue Bonds (Coastal Community Retirement Corporation Pro

State		Municipal Bonds
Indiana - 1.9%	1,200	Indiana Health and Educational Facilities Financing Authori Bonds (Community Foundation of Northwest Indiana), 5.50% du Vanderburgh County, Indiana, Redevelopment Commission, Rede Tax Allocation Bonds, 5.25% due 2/01/2031 Vigo County, Indiana, Hospital Authority Revenue Bonds (Uni 5.70% due 9/01/2037 Vigo County, Indiana, Hospital Authority Revenue Bonds (Uni 5.75% due 9/01/2042
Iowa - 0.9%	·	Iowa Finance Authority, Health Care Facilities, Revenue Ref (Care Initiatives Project), 9.25% due 7/01/2011 (b)
Kansas - 0.6%		Wyandotte County, Kansas, Kansas City Unified Government Re Bonds (General Motors Corporation Project), 6% due 6/01/202

Kentucky - 1.0%	2,850	Kenton County, Kentucky, Airport Board, Special Facilities (Mesaba Aviation Inc. Project), AMT, Series A, 6.70% due 7/
Louisiana - 0.7%	1,870	Louisiana Public Facilities Authority, Hospital Revenue Bon Missionaries of Our Lady Health System, Inc.), Series A, 5.
Maine - 0.4%	1,160	Maine Finance Authority, Solid Waste Recycling Facilities R Northern Paper Project-Bowater), AMT, 7.75% due 10/01/2022
Maryland - 2.1%	880 1,855 1,500 1,250 590	(Columbia Vantage House Corporation), Series B, 5.25% due 4 Maryland State Economic Development Corporation Revenue Ref (Baltimore Association for Retarded Citizens-Health and Men Series A, 7.75% due 3/01/2025 Maryland State Energy Financing Administration, Limited Obl (Cogeneration-AES Warrior Run), AMT, 7.40% due 9/01/2019 Maryland State Health and Higher Educational Facilities Aut (King Farm Presbyterian Community), Series A, 5.30% due 1/0
Massachusetts - 1.1%	1,150 1,945	(Jordan Hospital), Series E, 6.75% due 10/01/2033
Michigan - 1.2%	1,635 1,740	Macomb County, Michigan, Hospital Finance Authority, Hospit (Mount Clemens General Hospital), Series B, 5.875% due 11/1 Monroe County, Michigan, Hospital Financing Authority, Hosp Bonds (Mercy Memorial Hospital Corporation), 5.50% due 6/01
Mississippi - 0.6%	1,780	Mississippi Business Finance Corporation Revenue Bonds (Nor System), 4.55% due 12/01/2028
Missouri - 1.2%	1,040	Branson, Missouri, Regional Airport Transportation Developm Revenue Bonds, AMT, Series B, 6% due 7/01/2037

State	Face Amount	Municipal Bonds
		Fenton, Missouri, Tax Increment Revenue Refunding and Impro (Gravois Bluffs), 7% due 10/01/2011 (b) Kansas City, Missouri, IDA, First Mortgage Health Facilitie (Bishop Spencer Place), Series A, 6.50% due 1/01/2035
Nevada - 0.2%	645	Clark County, Nevada, Improvement District Number 142, Spec 6.375% due 8/01/2023
New Hampshire - 1.5%	·	New Hampshire Health and Education Facilities Authority, Ho (Catholic Medical Center), 5% due 7/01/2036 New Hampshire State Business Financing Authority, Solid Was Bonds (Waste Management Inc. Project), AMT, 5.20% due 5/01/

9,000	Camden County, New Jersey, Pollution Control Financing Auth Resource Recovery, Revenue Refunding Bonds, AMT, Series A,
565	Camden County, New Jersey, Pollution Control Financing Auth
555	Resource Recovery, Revenue Refunding Bonds, AMT, Series B,
3.065	<u> </u>
•	
2,000	10/01/2014
1,665	
±, ~	Facility), Series A, 7.25% due 11/15/2011 (b)
5,800	_
-, -	Series A, 8.125% due 11/15/2010 (b)
2,000	,
	Project), AMT, 6.25% due 9/15/2019
3,330	
	Project), AMT, 6.25% due 9/15/2029
1,250	New Jersey EDA, Special Facility Revenue Bonds (Continental
	Project), AMT, 9% due 6/01/2033
2,000	New Jersey Health Care Facilities Financing Authority Reven
	Valley Hospital Association), 6.625% due 7/01/2036
3,450	New Jersey State Transportation Trust Fund Authority, Trans
	Revenue Bonds, Series C, 5.05% due 12/15/2035 (a)(g)
1,425	3 1
	Bonds, 7% due 6/01/2013 (b)
1,800	J 1
	Bonds, 5.75% due 6/01/2032
1,845	Tobacco Settlement Financing Corporation of New Jersey, Rev
	Series 1A, 5% due 6/01/2041
2,500	Farmington, New Mexico, PCR, Refunding (Tucson Electric Pow
	Project), Series A, 6.95% due 10/01/2020
	565 3,065 2,500 1,665 5,800 2,000 3,330 1,250 2,000 3,450 1,425 1,800 1,845

BlackRock MuniAssets Fund, Inc. Schedule of Investments as of August 31, 2007 (Unaudited) (in Thousands)

	Face	
State	Amount	Municipal Bonds
New York - 4.5%	\$ 1,400	Dutchess County, New York, IDA, Civic Facility Revenue Refu Francis Hospital), Series A, 7.50% due 3/01/2029
	2,610	Erie County, New York, IDA, Revenue Bonds (Orchard Park CCR Series A, 6% due 11/15/2036
	510	New York City, New York, City IDA, Civic Facility Revenue B due 6/01/2028
	1,515	
	2,400	
	870	
	1,470	
	1,575	Westchester County, New York, IDA, Continuing Care Retireme Bonds (Kendal on Hudson Project), Series A, 6.50% due 1/01/
North Carolina - 0.7%	350	North Carolina Medical Care Commission, Health Care Facilit

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	1,500	Revenue Refunding Bonds (Salemtowne Project), 5.10% due 10/ North Carolina Medical Care Commission, Retirement Faciliti Revenue Bonds (Givens Estates Project), Series A, 6.50% due
Oklahoma - 0.5%	1,475	Oklahoma State Development Finance Authority, Revenue Refun Health System), 5% due 2/15/2042
Pennsylvania - 7.9%	3,015	Allegheny County, Pennsylvania, Hospital Development Author Revenue Refunding Bonds (West Penn Allegheny Health System) 5.375% due 11/15/2040
	200	Bucks County, Pennsylvania, IDA, Retirement Community Reveninc.), Series A, 6.125% due 1/01/2025
	1,550	Bucks County, Pennsylvania, IDA, Retirement Community Reveninc.), Series A, 6.25% due 1/01/2035
	2,250	Hampton Township, Pennsylvania, School District, GO, Refund due 8/15/2031 (c)
	900	Harrisburg, Pennsylvania, Authority, University Revenue Bor University of Science), Series B, 6% due 9/01/2036
	2,330	
	3 , 250	Pennsylvania Economic Development Financing Authority, Exem Bonds (National Gypsum Company), AMT, Series A, 6.25% due 1
	2 , 270	
	6,440	
Rhode Island - 1.0%	2,495	Central Falls, Rhode Island, Detention Facility Corporation Revenue Refunding Bonds, 7.25% due 7/15/2035

State		Municipal Bonds
South Carolina - 1.4%	•	Connector 2000 Association, Inc., South Carolina, Toll Road Appreciation Revenue Bonds, Senior-Series B, 6.50% due 1/01 Connector 2000 Association, Inc., South Carolina, Toll Road Appreciation Revenue Bonds, Senior-Series B, 7.969% due 1/0 South Carolina Jobs, EDA, EDR (Westminster Presbyterian Cen 11/15/2010 (b)
Tennessee - 1.4%	6,785 355 2,500	Knox County, Tennessee, Health, Educational and Housing Fac Hospital Facilities Revenue Refunding Bonds (Covenant Healt due 1/01/2040 (g) Shelby County, Tennessee, Health, Educational and Housing F Revenue Bonds (Germantown Village), 6.25% due 12/01/2034
Texas - 5.0%	1,000 2,550	Austin, Texas, Convention Center Revenue Bonds (Convention First Tier, Series A, 6.70% due 1/01/2011 (b)

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1		Brazos River Authority, Texas, Revenue Refunding Bonds (Rel Project), Series B, 7.75% due 12/01/2018 HFDC of Central Texas, Inc., Retirement Facilities Revenue 5.625% due 11/01/2026
1	1,400	Houston, Texas, Health Facilities Development Corporation, Revenue Bonds (Buckingham Senior Living Community), Series due $2/15/2014$ (b)
	500 3,190	Kerrville, Texas, Health Facilities Development Corporation Bonds (Sid Peterson Memorial Hospital Project), 5.375% due Matagorda County, Texas, Navigation District Number 1, Reve
	3,190	(Reliant Energy Inc.), Series C, 8% due 5/01/2029
1	1,860	Port Corpus Christi, Texas, Individual Development Corporat Facilities Revenue Bonds (Citgo Petroleum Corporation Proje 8.25% due 11/01/2031
U.S. Virgin Islands - 1.1%	3,000	Virgin Islands Government Refinery Facilities, Revenue Refu Coker Project), AMT, 6.50% due 7/01/2021
		Carbon County, Utah, Solid Waste Disposal, Revenue Refundin Environmental), AMT, Series A, 7.45% due 7/01/2017
		Dulles Town Center, Virginia, Community Development Authori Tax (Dulles Town Center Project), 6.25% due 3/01/2026
	450	Refunding Bonds (Goodwin House, Inc.), 5.125% due 10/01/203 Fairfax County, Virginia, EDA, Residential Care Facilities,
	440	Refunding Bonds (Goodwin House, Inc.), 5.125% due 10/01/204 Farms of New Kent, Virginia, Community Development Authori Bonds, Series C, 5.80% due 3/01/2036
	540	·

State	Face Amount	Municipal Bonds
	48,400	Lexington, Virginia, IDA, Residential Care Facility, Mortga Bonds (Kendal at Lexington), Series A, 5.50% due 1/01/2037 Pocahontas Parkway Association, Virginia, Toll Road Revenue Appreciation, Senior-Series B, 5.95% due 8/15/2008 (b) (g) Suffolk, Virginia, IDA, Retirement Facilities, Revenue Refu Prince Center), 5.30% due 9/01/2031 Tobacco Settlement Financing Corporation of Virginia, Reven
		Senior Series B-1, 5% due 6/01/2047
Washington - 0.6%	1,750	Washington State Housing Financing Commission, Nonprofit Re at First Hill Project), Series A, 5.625% due 1/01/2038
Wisconsin - 0.7%	1 , 855	Wisconsin State Health and Educational Facilities Authority Castle Place Project), Series A, 7% due 12/01/2031
		Total Municipal Bonds (Cost - \$268,951) - 99.3%

Shares		
Hold	Short-Torm	Sogurition

Held Short-Term Securities

3,200 Merrill Lynch Institutional Tax-Exempt Fund, 3.75% (d)(f)

Total Short-Term Securities (Cost - \$3,200) - 1.1%

Total Investments (Cost - \$272,151*) - 100.4%

Liabilities in Excess of Other Assets - (0.4%)

Net Assets - 100.0%

* The cost and unrealized appreciation (depreciation) of investments as of August 31, 2007 as computed for the federal income tax purposes, were as follows:

	====	
Net unrealized appreciation	\$	8,149
Gross unrealized appreciation Gross unrealized depreciation	==== \$	13,651 (5,502)
Aggregate cost	Ş	272,151

- (a) AMBAC Insured.
- (b) Prerefunded.
- (c) FSA Insured.
- (d) Investments in companies considered to be an affiliate of the Fund, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, were as follows:

Affiliate	Net	Divi	dend
	Activity	In	come
Merrill Lynch Institutional Tax-Exempt Fund	(6,210)	\$	54

- (e) Security may have a maturity of more than one year at time of issuance, but has variable rate and demand features that qualify it as a short-term security. The rate disclosed is that currently in effect. This rate changes periodically based upon prevailing market rates.
- (f) Represents the current yield as of August 31, 2007.
- (g) Represents a zero coupon bond; the interest rate shown reflects the effective yield at the time of purchase.

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 and 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/ Robert C. Doll, Jr.

Robert C. Doll, Jr., Chief Executive Officer (principal executive officer) of BlackRock MuniAssets Fund, Inc.

Date: October 22, 2007

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/ Robert C. Doll, Jr.

Robert C. Doll, Jr., Chief Executive Officer (principal executive officer) of BlackRock MuniAssets Fund, Inc.

Date: October 22, 2007

By: /s/ Donald C. Burke

Donald C. Burke,

Chief Financial Officer (principal financial officer) of BlackRock MuniAssets Fund, Inc.

Date: October 22, 2007