

BLACKROCK MUNIHOLDINGS FUND, INC.

Form N-Q

September 26, 2016

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: 811-08081

Name of Fund: BlackRock MuniHoldings Fund, Inc. (MHD)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock MuniHoldings 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: 04/30/2017

Date of reporting period: 07/31/2016

Item 1 Schedule of Investments

Schedule of Investments July 31, 2016 (Unaudited)

BlackRock MuniHoldings Fund, Inc. (MHD)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Alabama 3.7%		
County of Jefferson Alabama, RB, Limited Obligation School, Series A, 5.00%, 1/01/24	\$ 4,550	\$ 4,576,527
County of Jefferson Alabama Sewer, Refunding RB:		
Senior Lien, Series A (AGM), 5.00%, 10/01/44	570	651,464
Senior Lien, Series A (AGM), 5.25%, 10/01/48	1,090	1,254,819
Sub-Lien, Series D, 6.00%, 10/01/42	1,000	1,212,850
Sub-Lien, Series D, 7.00%, 10/01/51	1,545	1,997,561
		9,693,221
Alaska 0.6%		
Northern Tobacco Securitization Corp., Refunding RB, Tobacco Settlement, Asset-Backed, Series A, 5.00%, 6/01/46	1,660	1,630,834
Arizona 2.1%		
Salt Verde Financial Corp., RB, Senior:		
5.00%, 12/01/32	2,000	2,504,720
5.00%, 12/01/37	2,360	3,030,216
		5,534,936
California 11.5%		
California Health Facilities Financing Authority, RB:		
St. Joseph Health System, Series A, 5.75%, 7/01/39	1,530	1,739,717
Sutter Health, Series B, 6.00%, 8/15/42	2,200	2,632,036
California Health Facilities Financing Authority, Refunding RB, St. Joseph Health System, Series A, 5.00%, 7/01/33	875	1,050,779
California Municipal Finance Authority, RB, Senior, Caritas Affordable Housing, Inc. Projects, S/F Housing, Series A:		
5.25%, 8/15/39	105	123,828
5.25%, 8/15/49	265	310,429
California Pollution Control Financing Authority, RB, Poseidon Resources (Channel Side) LP Desalination Project, AMT, 5.00%, 11/21/45 (a)	1,025	1,153,801
	Par	
	(000)	Value
Municipal Bonds		
California (continued)		
California Statewide Communities Development Authority, RB, Series A:		
John Muir Health, 5.13%, 7/01/39	\$ 1,510	\$ 1,682,442
Loma Linda University Medical Center, 5.00%, 12/01/41 (a)	380	436,981
Loma Linda University Medical Center, 5.00%, 12/01/46 (a)	460	526,889
California Statewide Communities Development Authority, Refunding RB, John Muir Health, Series A, 4.00%, 8/15/51	1,650	1,790,200
City of Los Angeles California Department of Airports, Refunding ARB, Los Angeles International Airport, Series A, 5.25%, 5/15/39	555	621,744
City of Stockton California Public Financing Authority, RB, Delta Water Supply Project, Series A, 6.25%, 10/01/38	255	322,106
Montebello Unified School District, GO, CAB (NPFGC), 0.00%, 8/01/22 (b)	2,405	2,144,274
San Diego Unified School District California, GO, CAB, Election of 2008, Series A, 0.00%, 7/01/29 (b)	3,475	2,476,111
State of California, GO, Various Purposes, 6.50%, 4/01/33	8,370	9,661,993
State of California Public Works Board, LRB, Various Capital Projects:		
Series I, 5.00%, 11/01/38	550	662,552
Sub-Series I-1, 6.38%, 11/01/34	820	966,165
Tobacco Securitization Authority of Southern California, Refunding RB, Tobacco Settlement, Asset-Backed, Senior Series A-1, 4.75%, 6/01/25	1,400	1,422,414
		29,724,461
Colorado 2.3%		
Colorado Educational & Cultural Facilities Authority, RB, Charter School, Colorado Springs, 5.50%, 7/01/40	1,455	1,586,357

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County of Adams Colorado, COP, Refunding, 4.00%, 12/01/40

545

608,847

BLACKROCK MUNIHOLDINGS FUND, INC.

JULY 31, 2016

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Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

	Par	
	(000)	Value
Municipal Bonds		
Colorado (continued)		
Regional Transportation District, COP, Refunding, Series A, 5.38%, 6/01/31	\$ 710	\$ 814,895
Regional Transportation District, RB, Denver Transit Partners Eagle P3 Project, 6.00%, 1/15/34	1,425	1,653,998
University of Colorado, RB, Series A, 5.38%, 6/01/19 (c)	1,250	1,414,975
		6,079,072
Connecticut 1.1%		
Connecticut State Health & Educational Facility Authority, Refunding RB, Wesleyan University, Series G, 5.00%, 7/01/20 (c)	2,515	2,926,303
Delaware 1.8%		
County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Power LLC Project, 6.00%, 10/01/40	790	889,674
Delaware Transportation Authority, RB, 5.00%, 6/01/55	840	990,268
State of Delaware EDA, RB, Exempt Facilities, Indian River Power LLC Project, 5.38%, 10/01/45	2,430	2,664,641
		4,544,583
District of Columbia 4.2%		
District of Columbia, Tax Allocation Bonds, City Market at O Street Project, 5.13%, 6/01/41	1,520	1,746,586
Metropolitan Washington Airports Authority, Refunding RB, Dulles Toll Road:		
1st Senior Lien, Series A, 5.00%, 10/01/39	505	562,247
1st Senior Lien, Series A, 5.25%, 10/01/44	1,470	1,642,549
CAB, 2nd Senior Lien, Series B (AGC), 0.00%, 10/01/35 (b)	13,485	7,000,333
		10,951,715
Florida 5.0%		
City of Clearwater Florida Water & Sewer Revenue, RB, Series A, 5.25%, 12/01/39	2,375	2,677,813
County of Broward Florida Water & Sewer Utility, Refunding RB, Series A, 5.25%, 10/01/18 (c)	750	824,370
	Par	
	(000)	Value
Municipal Bonds		
Florida (continued)		
County of Collier Florida Health Facilities Authority, Refunding RB, Series A, 5.00%, 5/01/45	\$ 960	\$ 1,130,294
County of Miami-Dade Florida, RB, CAB, Series A (NPFGC), 0.00%, 10/01/37 (b)	910	304,604
County of Miami-Dade Florida Aviation, Refunding ARB, Miami International Airport, Series A-1, 5.38%, 10/01/41	2,620	3,012,712
Mid-Bay Bridge Authority, RB, Springing Lien, Series A, 7.25%, 10/01/21 (c)	2,095	2,742,250
Palm Coast Park Community Development District, Special Assessment Bonds, 5.70%, 5/01/37	590	566,382
Village Community Development District No. 10, Special Assessment Bonds, 5.13%, 5/01/43	1,475	1,663,594
		12,922,019
Georgia 1.5%		
County of Gainesville Georgia & Hall Hospital Authority, Refunding RB, Northeast Georgia Health System, Inc. Project, Series A, 5.50%, 8/15/54	370	458,748
DeKalb Private Hospital Authority, Refunding RB, Children's Healthcare, 5.25%, 11/15/39	585	659,880
Metropolitan Atlanta Rapid Transit Authority, RB, Sales Tax, 3rd Indenture, Series A, 5.00%, 7/01/39	2,410	2,690,283
		3,808,911
Hawaii 0.4%		
State of Hawaii Harbor System, RB, Series A, 5.25%, 7/01/30	945	1,078,132
Illinois 16.1%		
City of Chicago Illinois, GARB, 3rd Lien:		
O'Hare International Airport, Series C, 6.50%, 1/01/41	4,055	4,934,854
O'Hare International Airport, Series A, 5.75%, 1/01/39	2,000	2,344,560
City of Chicago Illinois, GO, Project, 5.00%, 1/01/34	1,265	1,287,783

Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

	Par	
	(000)	Value
Municipal Bonds		
Illinois (continued)		
City of Chicago Illinois, GO, Refunding, Series A: Project, 5.25%, 1/01/32	\$ 2,195	\$ 2,286,575
5.00%, 1/01/35	2,000	2,042,180
City of Chicago Illinois, Special Assessment Bonds, Lake Shore East, 6.75%, 12/01/32	897	901,306
City of Chicago Illinois Transit Authority, RB, Sales Tax Receipts, 5.25%, 12/01/40	730	810,826
City of Chicago Illinois Waterworks, Refunding RB, 2nd Lien Project, 5.00%, 11/01/42	1,000	1,115,670
County of Cook Illinois Community College District No. 508, GO, City College of Chicago, 5.50%, 12/01/38	560	652,786
Illinois Finance Authority, Refunding RB: Central Dupage Health, Series B, 5.50%, 11/01/39	1,115	1,275,304
Presence Health Network, Series C, 5.00%, 2/15/36 (d)	155	176,740
Presence Health Network, Series C, 4.00%, 2/15/41 (d)	1,035	1,037,639
Illinois State Toll Highway Authority, RB: Senior, Series C, 5.00%, 1/01/36	1,870	2,229,302
Senior, Series C, 5.00%, 1/01/37	2,000	2,382,600
Series A, 5.00%, 1/01/38	1,610	1,866,038
Metropolitan Pier & Exposition Authority, Refunding RB, McCormick Place Expansion Project: CAB, Series B (AGM), 0.00%, 6/15/47 (b)	13,220	3,879,806
Series B (AGM), 5.00%, 6/15/50	3,070	3,332,946
Series B-2, 5.00%, 6/15/50	1,740	1,840,276
Railsplitter Tobacco Settlement Authority, RB: 5.50%, 6/01/23	315	371,054
6.00%, 6/01/28	800	959,328
State of Illinois, GO: 5.00%, 2/01/39	1,100	1,187,736
Series A, 5.00%, 4/01/38	2,625	2,813,764
State of Illinois, RB, Build Illinois, Series B, 5.25%, 6/15/34	440	487,863
	Par	
	(000)	Value
Municipal Bonds		
Illinois (continued)		
University of Illinois, RB, Auxiliary Facilities System, Series A: 5.00%, 4/01/39	\$ 580	\$ 669,256
5.00%, 4/01/44	705	810,341
		41,696,533
Indiana 4.2%		
City of Valparaiso Indiana, RB, Exempt Facilities, Pratt Paper LLC Project, AMT: 6.75%, 1/01/34	560	693,319
7.00%, 1/01/44	1,355	1,695,891
Indiana Finance Authority, RB, Series A: CWA Authority Project, 1st Lien, 5.25%, 10/01/38	2,275	2,709,252
Private Activity Bond, Ohio River Bridges East End Crossing Project, AMT, 5.00%, 7/01/44	310	348,486
Private Activity Bond, Ohio River Bridges East End Crossing Project, AMT, 5.00%, 7/01/48	1,030	1,151,056
Private Activity Bond, Ohio River Bridges East End Crossing Project, AMT, 5.25%, 1/01/51	290	327,604
Sisters of St. Francis Health Services, 5.25%, 11/01/39	585	658,014
Indiana Finance Authority, Refunding RB, Parkview Health System, Series A, 5.75%, 5/01/31	1,300	1,471,587
Indiana Municipal Power Agency, RB, Series B, 6.00%, 1/01/19 (c)	775	874,076
Indianapolis Local Public Improvement Bond Bank, RB, Series A, 5.00%, 1/15/40	880	1,042,774
		10,972,059
Iowa 2.0%		
Iowa Finance Authority, Refunding RB, Midwestern Disaster Area, Iowa Fertilizer Co. Project: 5.00%, 12/01/19	615	638,825
5.50%, 12/01/22	1,630	1,695,037
5.25%, 12/01/25	320	345,203
Iowa Student Loan Liquidity Corp., Refunding RB, Student Loan, Senior Series A-1, AMT, 5.15%, 12/01/22	800	852,160

BLACKROCK MUNIHOLDINGS FUND, INC.

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Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

	Par	
	(000)	Value
Municipal Bonds		
Iowa (continued)		
Iowa Tobacco Settlement Authority, Refunding RB, Asset-Backed, Series C, 5.63%, 6/01/46	\$ 1,730	\$ 1,734,498
		5,265,723
Kansas 0.7%		
Kansas Development Finance Authority, Refunding RB, Adventist Health, Series C, 5.75%, 11/15/38	1,520	1,750,706
Kentucky 0.6%		
Kentucky Economic Development Finance Authority, RB, Catholic Health Initiatives, Series A, 5.25%, 1/01/45	705	809,438
Kentucky Public Transportation Infrastructure Authority, RB, Downtown Crossing Project, Convertible CAB, 1st Tier, Series C, 0.00%, 7/01/43 (e)	865	771,191
		1,580,629
Louisiana 3.3%		
East Baton Rouge Sewerage Commission, RB, Series A, 5.25%, 2/01/19 (c)	570	634,957
Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, 6.75%, 11/01/32	3,500	3,745,910
New Orleans Aviation Board, RB, Passenger Facility Charge, Series A, 5.25%, 1/01/41	430	474,643
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A: 5.50%, 5/15/30	700	800,989
5.25%, 5/15/31	600	680,508
5.25%, 5/15/32	765	881,586
5.25%, 5/15/33	830	949,736
5.25%, 5/15/35	350	402,587
		8,570,916
Maine 0.1%		
Maine Health & Higher Educational Facilities Authority, RB, Series A, 5.00%, 7/01/39	210	232,113
	Par	
	(000)	Value
Municipal Bonds		
Maryland 1.0%		
Maryland EDC, RB, Transportation Facilities Project, Series A, 5.75%, 6/01/35	\$ 300	\$ 336,168
Maryland EDC, Refunding RB, CNX Marine Terminals, Inc., 5.75%, 9/01/25	530	526,640
Maryland Health & Higher Educational Facilities Authority, Refunding RB, Charlestown Community Project, 6.25%, 1/01/41	1,520	1,802,705
		2,665,513
Massachusetts 2.1%		
Commonwealth of Massachusetts, GO, Series E, 3.00%, 4/01/44	2,085	2,077,932
Massachusetts Development Finance Agency, Refunding RB: Boston University, Series P, 5.45%, 5/15/59	1,165	1,502,268
Covanta Energy Project, Series C, AMT, 5.25%, 11/01/42 (a)	1,575	1,604,200
Massachusetts Health & Educational Facilities Authority, Refunding RB, Partners Healthcare System, Series J1, 5.00%, 7/01/39	255	284,108
		5,468,508
Michigan 3.0%		
City of Detroit Michigan Sewage Disposal System, Refunding RB, Senior Lien, Series A, 5.25%, 7/01/39	3,085	3,536,459
Kalamazoo Hospital Finance Authority, Refunding RB, Bronson Methodist Hospital, 5.50%, 5/15/36	955	1,084,765
Michigan Finance Authority, Refunding RB, Detroit Water & Sewage Department Project, Senior Lien, Series C-1, 5.00%, 7/01/44	630	709,903

Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

	Par	
	(000)	Value
Municipal Bonds		
Michigan (continued)		
Michigan State Hospital Finance Authority, Refunding RB, Henry Ford Health System, 5.75%, 11/15/39	\$ 2,105	\$ 2,403,152
		7,734,279
Minnesota 0.9%		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series A, 6.75%, 11/15/18 (c)	2,135	2,432,021
Mississippi 0.3%		
University of Southern Mississippi, RB, Campus Facilities Improvements Project, 5.38%, 9/01/19 (c)	675	771,100
Missouri 0.2%		
Bi-State Development Agency of the Missouri-Illinois Metropolitan District, Refunding RB, Combined Lien, Series A, 5.00%, 10/01/44	175	205,558
State of Missouri Health & Educational Facilities Authority, Refunding RB, St. Louis College of Pharmacy Project, 5.50%, 5/01/43	175	200,069
		405,627
Nebraska 0.3%		
Central Plains Energy Project Nebraska, RB, Gas Project No. 3, 5.25%, 9/01/37	575	659,588
New Hampshire 1.3%		
New Hampshire Health & Education Facilities Authority, Refunding RB, Dartmouth-Hitchcock, 6.00%, 8/01/38	3,035	3,483,209
New Jersey 6.5%		
Casino Reinvestment Development Authority, Refunding RB:		
5.25%, 11/01/39	735	784,098
5.25%, 11/01/44	1,095	1,163,448
County of Essex New Jersey Improvement Authority, RB, AMT, 5.25%, 7/01/45 (a)	775	810,681
New Jersey EDA, RB, Continental Airlines, Inc. Project, AMT:		
5.13%, 9/15/23	1,410	1,589,944
5.25%, 9/15/29	1,365	1,528,431
	Par	
	(000)	Value
Municipal Bonds		
New Jersey (continued)		
New Jersey EDA, Refunding, Special Assessment Bonds, Kapkowski Road Landfill Project, 5.75%, 4/01/31	\$ 1,550	\$ 1,856,234
New Jersey State Turnpike Authority, RB:		
Series A, 5.00%, 1/01/43	1,925	2,250,672
Series E, 5.00%, 1/01/45	1,875	2,227,406
New Jersey Transportation Trust Fund Authority, RB:		
Transportation Program, Series AA, 5.00%, 6/15/44	895	992,555
Transportation System, Series A, 5.50%, 6/15/41	1,575	1,756,157
Transportation System, Series B, 5.25%, 6/15/36	1,705	1,885,969
		16,845,595
New York 8.0%		
City of New York New York Transitional Finance Authority, RB, Fiscal 2012, Sub-Series E-1, 5.00%, 2/01/42	1,560	1,843,873
Counties of New York Tobacco Trust IV, Refunding RB, Settlement Pass-Through Turbo, Series A, 6.25%, 6/01/41 (a)	1,300	1,376,141
County of Dutchess New York Industrial Development Agency, Refunding RB, Bard College Civic Facility, Series A-1, 5.00%, 8/01/46	1,800	1,767,060
County of Westchester New York Healthcare Corp., RB, Senior Lien, Series A, 5.00%, 11/01/44	241	280,956
Erie Tobacco Asset Securitization Corp., Refunding RB, Asset-Backed, Series A, 5.00%, 6/01/45	1,405	1,405,070
Long Island Power Authority, Refunding RB, Electric System, Series A, 5.75%, 4/01/39	1,450	1,617,069
Metropolitan Transportation Authority, RB, Series B, 5.25%, 11/15/38	1,715	2,116,773
Metropolitan Transportation Authority, Refunding RB, Dedicated Tax Fund, Series B, 5.00%, 11/15/34	1,740	1,976,605

Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

	Par	
	(000)	Value
Municipal Bonds		
New York (continued)		
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	\$ 850	\$ 966,722
3 World Trade Center Project, Class 1, 5.00%, 11/15/44 (a)	2,275	2,608,606
3 World Trade Center Project, Class 2, 5.15%, 11/15/34 (a)	245	275,562
3 World Trade Center Project, Class 2, 5.38%, 11/15/40 (a)	605	704,958
Port Authority of New York & New Jersey, ARB, Special Project, JFK International Air Terminal LLC Project, Series 8:		
6.00%, 12/01/36	900	1,061,721
6.00%, 12/01/42	875	1,029,306
Westchester Tobacco Asset Securitization, Refunding RB, 5.13%, 6/01/45	1,700	1,699,847
		20,730,269
North Carolina 0.6%		
North Carolina Medical Care Commission, RB, Health Care Facilities, Duke University Health System, Series A, 5.00%, 6/01/19 (c)	970	1,088,098
North Carolina Medical Care Commission, Refunding RB, 1st Mortgage, Retirement Facilities Whitestone Project, Series A, 7.75%, 3/01/41	415	480,105
		1,568,203
Ohio 0.5%		
County of Franklin Ohio, RB, Health Care Facilities Improvement, OPRS Communities Obligation Group, Series A, 6.13%, 7/01/40	470	535,462
	Par	
Municipal Bonds		
Ohio (continued)		
State of Ohio, RB, Portsmouth Bypass Project, AMT, 5.00%, 6/30/53	\$ 580	\$ 655,603
		1,191,065
Oklahoma 0.4%		
County of Epworth Oklahoma Finance Authority, Refunding RB, Epworth Villa Project, Series A, 5.13%, 4/01/42	975	972,582
Pennsylvania 3.1%		
City of Philadelphia Pennsylvania Hospitals & Higher Education Facilities Authority, RB, Temple University Health System, Series A, 5.63%, 7/01/42	460	516,304
Pennsylvania Economic Development Financing Authority, RB:		
American Water Co. Project, 6.20%, 4/01/39	2,520	2,848,029
Pennsylvania Bridge Finco LP, AMT, 5.00%, 6/30/42	2,015	2,367,947
Pennsylvania Economic Development Financing Authority, Refunding RB, National Gypsum Co., AMT, 5.50%, 11/01/44	1,105	1,243,644
Pennsylvania Turnpike Commission, RB, Series A, 5.00%, 12/01/44	795	945,056
		7,920,980
Rhode Island 1.9%		
Tobacco Settlement Financing Corp., Refunding RB, Series B:		
4.50%, 6/01/45	1,900	2,031,366
5.00%, 6/01/50	2,605	2,791,205
		4,822,571
South Carolina 3.8%		
State of South Carolina Ports Authority, RB:		
5.25%, 7/01/40	2,285	2,593,841
AMT, 5.25%, 7/01/55	925	1,080,289
State of South Carolina Public Service Authority, RB, Santee Cooper, Series A, 5.50%, 12/01/54	2,790	3,359,606

Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

	Par	
	(000)	Value
Municipal Bonds		
South Carolina (continued)		
State of South Carolina Public Service Authority, Refunding RB, Series E, 5.25%, 12/01/55	\$ 2,260	\$ 2,732,815
		9,766,551
Tennessee 0.9%		
City of Chattanooga Tennessee Health Educational & Housing Facility Board, RB, Catholic Health Initiatives, Series A, 5.25%, 1/01/45	980	1,125,177
County of Hardeman Tennessee Correctional Facilities Corp., RB, 7.75%, 8/01/17	525	525,116
Metropolitan Government Nashville & Davidson County Health & Educational Facilities Board, RB, Vanderbilt University Medical Center, Series A, 5.00%, 7/01/46	495	594,465
		2,244,758
Texas 5.9%		
Central Texas Regional Mobility Authority, Refunding RB:		
Senior Lien, 6.25%, 1/01/21 (c)	1,480	1,822,502
Sub-Lien, 5.00%, 1/01/33	250	284,955
Central Texas Turnpike System, Refunding RB, Series C, 5.00%, 8/15/42	425	495,252
City of Austin Texas Airport System, ARB, Revenue, AMT, 5.00%, 11/15/39	440	510,484
City of Austin Texas Electric Utility Revenue, Refunding RB, Series A, 5.00%, 11/15/37	1,500	1,755,180
City of Dallas Texas Waterworks & Sewer System, Refunding RB, 5.00%, 10/01/35	1,050	1,218,273
City of Houston Texas Airport System, Refunding ARB, Senior Lien, Series A, 5.50%, 7/01/39	1,070	1,164,984
County of Harris Texas Cultural Education Facilities Finance Corp., RB, 1st Mortgage, Brazos Presbyterian Homes, Inc. Project, Series B, 7.00%, 1/01/48	325	388,525
County of Harris Texas Health Facilities Development Corp., Refunding RB, Memorial Hermann Healthcare System, Series B, 7.25%, 12/01/18 (c)	1,910	2,200,893
	Par	
	(000)	Value
Municipal Bonds		
Texas (continued)		
La Vernia Higher Education Finance Corp., RB, Kipp, Inc., Series A, 6.38%, 8/15/19 (c)	\$ 450	\$ 525,271
North Texas Tollway Authority, RB, CAB, Special Project System, Series B, 0.00%, 9/01/37 (b)	1,400	640,836
Texas Private Activity Bond Surface Transportation Corp., RB, Senior Lien:		
LBJ Infrastructure Group LLC, 7.00%, 6/30/40	2,000	2,369,980
NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	1,700	2,016,574
		15,393,709
Vermont 0.0%		
Vermont Educational & Health Buildings Financing Agency, RB, Developmental & Mental Health, Series A, 6.00%, 6/15/17	10	10,083
Virginia 2.3%		
County of Fairfax Virginia EDA, Refunding RB, Goodwin House, Inc., 5.13%, 10/01/42	1,000	1,034,820
County of Hanover Virginia EDA, Refunding RB, Covenant Woods, Series A:		
5.00%, 7/01/42	625	669,556
Residential Care Facility, 5.00%, 7/01/47	970	1,034,166
Virginia Small Business Financing Authority, RB, Senior Lien, Elizabeth River Crossings OpCo LLC Project, AMT:		
5.25%, 1/01/32	550	631,136
6.00%, 1/01/37	2,230	2,663,891
		6,033,569
Washington 2.4%		
Grant County Public Utility District No 2, Refunding RB, Series A:		
5.00%, 1/01/41	1,355	1,640,309
5.00%, 1/01/43	1,555	1,879,513
Port of Seattle Washington, RB, Series C, AMT, 5.00%, 4/01/40	540	634,408

Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

	Par	
	(000)	Value
Municipal Bonds		
Washington (continued)		
Washington Health Care Facilities Authority, RB, Catholic Health Initiatives, Series A, 5.75%, 1/01/45	\$ 1,625	\$ 1,965,454
		6,119,684
Wisconsin 3.5%		
State of Wisconsin, Refunding RB, Series A, 6.00%, 5/01/36	4,980	5,657,977
State of Wisconsin Health & Educational Facilities Authority, RB, Ascension Health Senior Credit Group, Series E, 5.00%, 11/15/33	1,710	1,935,121
Wisconsin Health & Educational Facilities Authority, Refunding RB, Medical College of Wisconsin, Inc., 4.00%, 12/01/46	1,305	1,425,452
		9,018,550
Wyoming 0.1%		
Wyoming Municipal Power Agency, Inc., RB, Series A, 5.00%, 1/01/42	210	227,575
Total Municipal Bonds 110.2%		285,448,455

Municipal Bonds Transferred to**Tender Option Bond Trusts (f)**

California 7.4%		
Bay Area Toll Authority, Refunding RB, San Francisco Bay Area, Series F-1, 5.63%, 4/01/19 (c)	2,271	2,571,417
California Educational Facilities Authority, RB, University of Southern California, Series B, 5.25%, 10/01/39 (g)	1,845	2,023,227
City & County of San Francisco California Public Utilities Commission, RB, Water Revenue, Series B, 5.00%, 11/01/39	6,600	7,467,240
City of Los Angeles California Department of Airports, Refunding ARB, Los Angeles International Airport, Senior Series A, 5.00%, 5/15/40	4,121	4,696,724
Los Angeles Community College District California, GO, Election of 2001, Series A (AGM), 5.00%, 8/01/17 (c)	1,620	1,694,001
Municipal Bonds Transferred to	Par	

Tender Option Bond Trusts

	(000)	Value
California (continued)		
San Diego Community College District California, GO, Election of 2002, 5.25%, 8/01/33	\$ 748	\$ 850,226
		19,302,835
Colorado 3.6%		
Colorado Health Facilities Authority, RB, Catholic Health (AGM) (c):		
Series C-3, 5.10%, 4/29/18	2,580	2,783,846
Series C-7, 5.00%, 5/01/18	1,650	1,777,891
Colorado Health Facilities Authority, Refunding RB, Catholic Health Initiatives, Series A, 5.50%, 7/01/34 (g)	1,490	1,670,886
County of Adams Colorado, COP, Refunding, 4.00%, 12/01/45	2,700	2,980,908
		9,213,531
Connecticut 2.6%		
Connecticut State Health & Educational Facility Authority, RB, Yale University:		
Series T-1, 4.70%, 7/01/29	3,179	3,295,809
Series X-3, 4.85%, 7/01/37	3,262	3,386,095
		6,681,904
Florida 1.7%		
County of Miami-Dade Florida, RB, Water & Sewer System, 5.00%, 10/01/34	3,939	4,530,716
Georgia 0.9%		
Private Colleges & Universities Authority, Refunding RB, Emory University, Series C, 5.00%, 9/01/38	2,259	2,458,734
Massachusetts 2.1%		

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Massachusetts School Building Authority, RB, Senior, Series B, 5.00%, 10/15/41	4,502	5,325,171
New Hampshire 0.6%		
New Hampshire Health & Education Facilities Authority, RB, Dartmouth College, 5.25%, 6/01/39 (g)	1,410	1,590,317

Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

Municipal Bonds Transferred to	Par	
Tender Option Bond Trusts	(000)	Value
New York 9.0%		
City of New York New York Municipal Water Finance Authority, Refunding RB, Water & Sewer System, 2nd General Resolution, Series FF-2, 5.50%, 6/15/40	\$ 1,110	\$ 1,257,408
Hudson Yards Infrastructure Corp., RB, Fiscal 2012, Series A, 5.75%, 2/15/47 (g)	1,110	1,312,344
Metropolitan Transportation Authority, Refunding RB, Series C-1, 5.25%, 11/15/56	3,240	3,999,919
New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Consolidated Bonds, 5.25%, 12/15/43	7,440	8,956,981
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 (g)	4,460	5,396,174
Port Authority of New York & New Jersey, Refunding ARB, 194th Series, 5.25%, 10/15/55	1,860	2,311,124
		23,233,950
North Carolina 1.3%		
North Carolina Capital Facilities Finance Agency, Refunding RB:		
Duke University Project, Series B, 5.00%, 10/01/55	1,830	2,227,989
Wake Forest University, 5.00%, 1/01/38	1,080	1,193,821
		3,421,810
Ohio 4.1%		
State of Ohio, Refunding RB, Cleveland Clinic Health System Obligated Group, Series A, 5.50%, 1/01/39	9,644	10,706,394
Texas 4.8%		
City of San Antonio Texas Public Service Board, RB, Electric & Gas Systems, Junior Lien, 5.00%, 2/01/43	1,720	2,036,755
County of Harris Texas, Refunding RB, Toll Road, Senior Lien, Series A: 5.00%, 8/15/19 (c)	2,620	2,917,730
5.00%, 8/15/38	2,004	2,231,811
County of Harris Texas Metropolitan Transit Authority, Refunding RB, Series A, 5.00%, 11/01/41	2,350	2,759,793
Municipal Bonds Transferred to	Par	
Tender Option Bond Trusts	(000)	Value
Texas (continued)		
University of Texas, Refunding RB, Financing System, Series B, 5.00%, 8/15/43	\$ 2,041	\$ 2,439,221
		12,385,310
Utah 1.1%		
City of Riverton Utah, RB, IHC Health Services, Inc., 5.00%, 8/15/41	2,519	2,772,056
Virginia 2.5%		
University of Virginia, Refunding RB, GO, 5.00%, 6/01/40	3,749	4,046,905
Virginia Small Business Financing Authority, Refunding RB, Sentara Healthcare, 5.00%, 11/01/40	2,095	2,370,275
		6,417,180
Washington 0.8%		
Central Puget Sound Regional Transit Authority, RB, Series A (AGM), 5.00%, 11/01/17 (c)	1,860	1,962,682
Wisconsin 1.7%		
Wisconsin Health & Educational Facilities Authority, Refunding RB, Froedtert & Community Health, Inc., Obligated Group, Series C, 5.25%, 4/01/39 (g)	3,959	4,314,472
Total Municipal Bonds Transferred to		
Tender Option Bond Trusts 44.2%		114,317,062
Total Long-Term Investments		
(Cost \$350,911,459) 154.4%		399,765,517
Short-Term Securities	Shares	
BlackRock Liquidity Funds, MuniCash, 0.26% (h)(i)	3,874,660	3,874,660
Total Short-Term Securities		
(Cost \$3,874,660) 1.5%		3,874,660

Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

	Value
Total Investments (Cost \$354,786,119*) 155.9%	\$ 403,640,177
Other Assets Less Liabilities 0.6%	1,744,988
Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable (24.2)%	(62,780,724)
VMTP Shares, at Liquidation Value (32.3)%	(83,700,000)
Net Assets Applicable to Common Shares 100.0%	\$ 258,904,441

* As of July 31, 2016, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 292,777,732
Gross unrealized appreciation	\$ 48,909,465
Gross unrealized depreciation	(766,181)
Net unrealized appreciation	\$ 48,143,284

Notes to Schedule of Investments

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

- (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) Zero-coupon bond.
- (c) 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.
- (d) When-issued security.
- (e) Step-up bond that pays an initial coupon rate for the first period and then a higher coupon rate for the following periods. Rate as of period end.
- (f) 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.
- (g) All or a portion of security is subject to a recourse agreement. The aggregate maximum potential amount the Fund could ultimately be required to pay under the agreements, which expire between October 1, 2016 to February 15, 2031, is \$11,665,103.

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(h) During the period ended July 31, 2016, investments in issuers considered to be affiliates 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,	Net Activity	Shares Held at July 31,	Value at	Income
	2016		2016	July 31, 2016	
BlackRock Liquidity Funds, MuniCash	1,575,949	2,298,711	3,874,660	\$ 3,874,660	\$ 1,565

(i) Current yield as of period end.

Derivative Financial Instruments Outstanding as of Period End

Futures Contracts

Contracts Short	Issue	Expiration	Notional Value	Unrealized Appreciation (Depreciation)
(25)	5-Year U.S. Treasury Note	September 2016	\$3,050,391	\$ 2,377
(29)	10-Year U.S. Treasury Note	September 2016	\$3,858,359	(1,903)
(17)	Long U.S. Treasury Bond	September 2016	\$2,965,438	(60,578)
(6)	Ultra U.S. Treasury Bond	September 2016	\$1,143,187	(4,113)
Total				\$ (64,217)

Schedule of Investments (continued)

BlackRock MuniHoldings Fund, Inc. (MHD)

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
COP	Certificates of Participation
EDA	Economic Development Authority
EDC	Economic Development Corp.
GARB	General Airport Revenue Bonds
GO	General Obligation Bonds
LRB	Lease Revenue Bonds
NPFGC	National Public Finance Guarantee Corp.
RB	Revenue Bonds
S/F	Single-Family

Fair Value Hierarchy as of Period End

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 the Fund's own assumptions used in determining the fair value of investments and derivative financial instruments)

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Accordingly, the degree of judgment exercised in determining fair value is greatest for instruments categorized in Level 3. The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the fair value hierarchy classification is determined based on the lowest level input that is significant to the fair value measurement in its entirety. 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.

Schedule of Investments (concluded)

BlackRock MuniHoldings Fund, Inc. (MHD)

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		\$ 399,765,517		\$ 399,765,517
Short-Term Securities	\$ 3,874,660			3,874,660
Total	\$ 3,874,660	\$ 399,765,517		\$ 403,640,177

Derivative Financial Instruments²

Assets:				
Interest rate contracts	\$ 2,377			\$ 2,377
Liabilities:				
Interest rate contracts	(66,594)			(66,594)
Total	\$ (64,217)			\$ (64,217)

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

² Derivative financial instruments are futures contracts. Futures contracts 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 period end, such assets and/or liabilities are categorized within the disclosure hierarchy as follows:

	Level 1	Level 2	Level 3	Total
Assets:				
Cash	\$ 505			\$ 505
Cash pledged for futures contracts	153,550			153,550
Liabilities:				
TOB Trust Certificates		\$ (62,719,161)		(62,719,161)
VMTP Shares		(83,700,000)		(83,700,000)
Total	\$ 154,055	\$ (146,419,161)		\$ (146,265,106)

During the period ended July 31, 2016, 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 MuniHoldings Fund, Inc.

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

Date: September 21, 2016

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 MuniHoldings Fund, Inc.

Date: September 21, 2016

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

Date: September 21, 2016