

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

Form N-Q

July 24, 2017

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: 811-08349

Name of Fund: BlackRock MuniHoldings Investment Quality Fund (MFL)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock MuniHoldings Investment Quality Fund, 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: 08/31/2017

Date of reporting period: 05/31/2017

Item 1 Schedule of Investments

## Schedule of Investments May 31, 2017 (Unaudited)

## BlackRock MuniHoldings Investment Quality Fund (MFL)

	Par (000)	Value
<b>Municipal Bonds</b>		
<b>Alabama 3.5%</b>		
City of Birmingham Alabama Special Care Facilities Financing Authority, RB, Children s Hospital (AGC) (a):		
6.00%, 6/01/19	\$ 10,995	\$ 12,080,866
6.13%, 6/01/19	4,980	5,484,125
City of Selma Alabama IDB, RB, Gulf Opportunity Zone, International Paper Co. Project, Series A, 5.38%, 12/01/35	1,745	1,949,235
		19,514,226
<b>Arizona 0.5%</b>		
University of Arizona Board of Regents, Refunding RB, Series A, 5.00%, 6/01/40	2,300	2,633,822
<b>California 25.3%</b>		
California Educational Facilities Authority, RB, University of Southern California, Series A, 5.25%, 10/01/18 (a)	4,000	4,236,080
California Health Facilities Financing Authority, RB, Sutter Health, Series B, 6.00%, 8/15/42	5,370	6,143,387
Chabot-Las Positas Community College District, GO, Refunding, 4.00%, 8/01/37	10,000	10,590,100
City & County of San Francisco California Airports Commission, Refunding ARB, AMT, Series A: 5.00%, 5/01/44	3,430	3,810,284
2nd, 5.50%, 5/01/28	3,330	3,912,251
2nd, 5.25%, 5/01/33	2,600	2,935,972
City of Los Angeles California Department of Water & Power, RB, Power System, Sub-Series A-1, 5.25%, 7/01/38	5,000	5,237,550
City of Manteca California Financing Authority, RB, Manteca Sewer (AGC): 5.63%, 12/01/33	2,450	2,699,116
5.75%, 12/01/36	3,285	3,613,730
City of San Jose California, Refunding ARB, Norman Y Mineta San Jose International Airport SJC, Series A-1, AMT, 5.75%, 3/01/34	4,450	5,066,325
County of Sacramento California, ARB, Senior Series A (AGC), 5.50%, 7/01/18 (a)	5,600	5,885,824
	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>California (continued)</b>		
Irvine Ranch Water District, Special Assessment Bonds, 5.25%, 2/01/46	\$ 7,000	\$ 8,440,670
Kern Community College District, GO, Safety, Repair & Improvement, Series C, 5.50%, 11/01/33	4,365	5,263,142
Los Angeles Department of Water, Refunding RB, Series A: 5.00%, 7/01/37	5,000	5,951,250
5.00%, 7/01/38	3,250	3,859,278
Metropolitan Water District of Southern California, Refunding RB, Series A, 5.00%, 7/01/32	5,625	6,772,612
Redondo Beach Unified School District, GO, Election of 2008, Series E, 5.50%, 8/01/21 (a)	3,110	3,664,109
San Diego Public Facilities Financing Authority Water, Refunding RB, Series B (AGC), 5.38%, 8/01/19 (a)	2,000	2,190,360
State of California, GO, Various Purposes (AGC), 5.50%, 11/01/39	15,000	16,458,000
State of California Public Works Board, LRB, Various Capital Projects, Series I: 5.50%, 11/01/30	4,500	5,468,130
5.50%, 11/01/31	2,615	3,170,557
5.50%, 11/01/33	2,000	2,410,180
State of California Public Works Board, RB, Department of Corrections & Rehabilitation, Series F, 5.25%, 9/01/33	3,240	3,849,379
Township of Washington California Health Care District, GO, Election of 2004, Series B, 5.50%, 8/01/40	1,685	2,014,738
University of California, Refunding RB: Series AR, 5.00%, 5/15/46	4,000	4,658,280
The Regents of Medical Center, Series J, 5.25%, 5/15/38	12,250	14,324,782
		142,626,086
<b>Colorado 2.2%</b>		
City & County of Denver Colorado Airport System, ARB, Series A, AMT: 5.50%, 11/15/28	2,700	3,142,719
5.50%, 11/15/30	1,040	1,200,285
5.50%, 11/15/31	1,250	1,439,275

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## Schedule of Investments (continued)

## BlackRock MuniHoldings Investment Quality Fund (MFL)

	Par (000)	Value
<b>Municipal Bonds</b>		
<b>Colorado (continued)</b>		
Colorado Health Facilities Authority, RB, Hospital, NCMC, Inc. Project, Series B (AGM), 6.00%, 5/15/19 (a)	\$ 5,925	\$ 6,500,376
		12,282,655
<b>District of Columbia 0.6%</b>		
District of Columbia Water & Sewer Authority, Refunding RB, Series A, 6.00%, 10/01/18 (a)	3,000	3,203,310
<b>Florida 7.3%</b>		
City of Jacksonville Florida, Refunding RB, Series A, 5.25%, 10/01/33	1,250	1,459,712
County of Hillsborough Florida Aviation Authority, Refunding ARB, Tampa International Airport, Series A, AMT: 5.50%, 10/01/29	5,360	6,227,248
5.25%, 10/01/30	3,255	3,717,796
County of Lee Florida, Refunding ARB, Series A, AMT, 5.38%, 10/01/32	7,100	7,929,067
County of Lee Florida HFA, RB, S/F Housing, Multi-County Program, Series A-2, AMT (Ginnie Mae), 6.00%, 9/01/40	575	577,444
County of Manatee Florida HFA, RB, S/F Housing, Series A, AMT (Ginnie Mae, Fannie Mae & Freddie Mac), 5.90%, 9/01/40	270	273,583
County of Miami-Dade Florida, RB, Seaport Department: Series A, 5.38%, 10/01/33	3,145	3,611,875
Series B, AMT, 6.25%, 10/01/38	1,405	1,689,878
Series B, AMT, 6.00%, 10/01/42	1,885	2,212,443
County of Miami-Dade Florida, Refunding RB, Water & Sewer System, Series B, 5.25%, 10/01/29	2,870	3,427,383
County of Miami-Dade Florida Aviation, Refunding ARB, Series A, AMT, 5.00%, 10/01/31	5,465	6,082,381
	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>Florida (continued)</b>		
Reedy Creek Florida Improvement District, GO, Series A, 5.25%, 6/01/32	\$ 3,225	\$ 3,796,889
		41,005,699
<b>Hawaii 2.0%</b>		
State of Hawaii, Department of Transportation, COP, AMT: 5.25%, 8/01/25	1,350	1,554,930
5.25%, 8/01/26	2,500	2,850,050
State of Hawaii, Department of Transportation, RB, Series A, AMT, 5.00%, 7/01/45	5,985	6,733,185
		11,138,165
<b>Illinois 18.6%</b>		
Chicago O Hare International Airport, Refunding RB, Series C, 5.00%, 1/01/37	2,000	2,286,020
City of Chicago Illinois, GARB, O Hare International Airport, 3rd Lien, Series A, 5.75%, 1/01/39	7,395	8,354,649
City of Chicago Illinois Midway International Airport, Refunding ARB, 2nd Lien, Series A, AMT: 5.50%, 1/01/30	6,500	7,448,155
5.50%, 1/01/32	6,275	7,138,001
City of Chicago Illinois Midway International Airport, Refunding GARB, 2nd Lien, Series A, 5.00%, 1/01/41	8,020	8,795,775
City of Chicago Illinois O Hare International Airport, GARB, 3rd Lien, Series C, 6.50%, 1/01/21 (a)	16,800	20,011,488
City of Chicago Illinois O Hare International Airport, RB, Senior Lien, Series D, 5.25%, 1/01/42	2,630	3,105,215
City of Chicago Illinois O Hare International Airport, Refunding RB, Series C, AMT, 5.00%, 1/01/46	1,395	1,532,296
City of Chicago Illinois Transit Authority, RB: Federal Transit Administration, Section 5309, Series A (AGC), 6.00%, 12/01/18 (a)	6,000	6,452,880
Sales Tax Receipts, 5.25%, 12/01/40	10,960	11,823,209
City of Chicago Illinois Transit Authority, Refunding RB, Federal Transit Administration, Section 5309 (AGM), 5.00%, 6/01/28	7,735	8,192,370



## Schedule of Investments (continued)

## BlackRock MuniHoldings Investment Quality Fund (MFL)

	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>Illinois (continued)</b>		
Illinois Finance Authority, RB, Carle Foundation, Series A, 6.00%, 8/15/41	\$ 4,000	\$ 4,569,160
Railsplitter Illinois Tobacco Settlement Authority, RB: 5.50%, 6/01/23	4,365	4,990,373
6.00%, 6/01/28	1,245	1,425,463
State of Illinois Finance Authority, RB, University of Chicago, Series B, 5.50%, 7/01/18 (a)	8,000	8,399,360
		104,524,414
<b>Indiana 4.2%</b>		
Indiana Finance Authority, Refunding RB, Stadium Project, Series A, 5.25%, 2/01/37	3,130	3,683,728
Indiana Municipal Power Agency, Refunding RB, Series A: 5.25%, 1/01/32	1,500	1,725,930
5.25%, 1/01/33	1,500	1,719,570
Indianapolis Local Public Improvement Bond Bank, Refunding RB, Waterworks Project, Series A (AGC): 5.50%, 1/01/19 (a)	2,760	2,959,134
5.50%, 1/01/38	11,345	12,048,617
State of Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges, Series A, AMT, 5.00%, 7/01/40	1,240	1,327,408
		23,464,387
<b>Kansas 0.8%</b>		
County of Wyandotte Unified School District No. 500 Kansas City, GO, Improvement, Series A, 5.50%, 9/01/47	4,000	4,848,400
<b>Kentucky 0.1%</b>		
Kentucky State Property & Building Commission, Refunding RB, Project No. 93, (AGC): 5.25%, 2/01/19 (a)	355	380,112
5.25%, 2/01/27	45	47,968
		428,080
<b>Louisiana 0.9%</b>		
City of New Orleans Louisiana Aviation Board, Refunding GARB, Restructuring (AGC) (a): Series A-1, 6.00%, 1/01/19	500	539,745
Series A-2, 6.00%, 1/01/19	720	777,233
	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>Louisiana (continued)</b>		
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A, 5.50%, 5/15/29	\$ 3,735	\$ 3,933,590
		5,250,568
<b>Massachusetts 1.1%</b>		
Massachusetts Development Finance Agency, Refunding RB, Partners Healthcare System, 5.00%, 7/01/41	4,710	5,353,669
Massachusetts Educational Financing Authority, RB, Education Loan, Issue I, AMT, 5.00%, 1/01/27	1,000	1,144,940
		6,498,609
<b>Michigan 3.5%</b>		
City of Detroit Michigan Water Supply System Revenue, RB, 2nd Lien, Series B (AGM): 6.25%, 7/01/19 (a)	6,310	6,995,392
6.25%, 7/01/36	10	10,914
Hudsonville Michigan Public Schools, GO, School Building & Site (Q-SBLF), 5.25%, 5/01/41	6,015	6,735,838
Royal Oak Michigan Hospital Finance Authority, Refunding RB, William Beaumont Hospital, Series V, 8.25%, 9/01/18 (a)	5,780	6,303,668
		20,045,812
<b>Minnesota 1.6%</b>		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series B (AGC), 6.50%, 11/15/38	8,375	8,965,689
<b>Mississippi 2.8%</b>		
Mississippi Development Bank, RB, Jackson Water & Sewer System Project (AGM):		

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6.88%, 12/01/40	6,405	8,226,838
Special Obligation, 6.75%, 12/01/31	3,775	4,820,298
Special Obligation, 6.75%, 12/01/33	2,350	3,000,715
		16,047,851
<b>Nevada 2.7%</b>		
County of Clark Nevada, ARB, Las Vegas-McCarran International Airport, Series A (AGM), 5.25%, 7/01/39	11,175	12,099,508

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## Schedule of Investments (continued)

## BlackRock MuniHoldings Investment Quality Fund (MFL)

	Par (000)	Value
<b>Municipal Bonds</b>		
<b>Nevada (continued)</b>		
County of Clark Nevada, GO, Limited Tax, 5.00%, 6/01/18 (a)	\$ 3,000	\$ 3,124,170
		15,223,678
<b>New Jersey 6.3%</b>		
New Jersey EDA, RB, Goethals Bridge Replacement Project, AMT, Private Activity Bond: 5.38%, 1/01/43	7,000	7,827,050
(AGM), 5.00%, 1/01/31	2,425	2,666,336
New Jersey Health Care Facilities Financing Authority, RB, Virtua Health, Series A (AGC), 5.50%, 7/01/38	6,500	7,018,700
New Jersey Higher Education Student Assistance Authority, Refunding RB, Series 1, AMT, 5.75%, 12/01/28	3,215	3,554,022
New Jersey Transportation Trust Fund Authority, RB, Transportation System: Series A, 5.50%, 6/15/41	5,410	5,621,801
Series AA, 5.50%, 6/15/39	8,175	8,669,424
		35,357,333
<b>New York 10.0%</b>		
City of New York New York Municipal Water Finance Authority, Refunding RB: 2nd General Resolution, Fiscal 2009, Series EE, 5.25%, 6/15/40	7,500	8,118,225
Water & Sewer System, 2nd General Resolution, Series EE, 5.38%, 6/15/43	3,475	3,927,793
Water & Sewer System, Series FF-2, 5.50%, 6/15/40	4,000	4,348,960
Metropolitan Transportation Authority, RB: Series A, 5.25%, 11/15/38	4,000	4,566,400
Series A-1, 5.25%, 11/15/39	4,490	5,166,957
Metropolitan Transportation Authority, Refunding RB: Series B, 5.00%, 11/15/37	6,140	7,199,580
Series C-1, 5.25%, 11/15/56	5,410	6,293,615
Port Authority of New York & New Jersey, Refunding ARB, Consolidated, 166th Series, 5.25%, 7/15/36	10,000	11,210,500
	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>New York (continued)</b>		
Triborough Bridge & Tunnel Authority, Refunding RB, General, Series B, 5.00%, 11/15/38	\$ 4,500	\$ 5,337,720
		56,169,750
<b>Ohio 1.5%</b>		
State of Ohio Turnpike Commission, RB, Junior Lien, Infrastructure Projects, Series A-1: 5.25%, 2/15/31	5,145	6,084,889
5.25%, 2/15/32	2,250	2,653,020
		8,737,909
<b>Pennsylvania 4.5%</b>		
Pennsylvania Turnpike Commission, RB, Sub-Series A, 5.50%, 12/01/46	18,570	21,762,740
Township of Bristol Pennsylvania School District, GO, 5.25%, 6/01/37	3,000	3,448,020
		25,210,760
<b>South Carolina 6.6%</b>		
County of Charleston South Carolina, RB, Special Source, 5.25%, 12/01/38	6,735	7,897,124
County of Charleston South Carolina Airport District, ARB, Series A, AMT: 5.25%, 7/01/25	4,490	5,225,507
5.50%, 7/01/38	3,000	3,385,680
6.00%, 7/01/38	5,270	6,108,088
5.50%, 7/01/41	4,170	4,708,556
State of South Carolina Ports Authority, RB, AMT, 5.25%, 7/01/50	3,445	3,832,838
State of South Carolina Public Service Authority, Refunding RB, Series E, 5.25%, 12/01/55	5,500	6,131,510
		37,289,303
<b>Texas 14.2%</b>		
City of Beaumont Texas, GO, Certificates of Obligation, 5.25%, 3/01/37	4,190	4,842,257

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City of Houston Texas Combined Utility System Revenue, Refunding RB, Combined 1st Lien, Series

A (AGC):

6.00%, 5/15/19 (a)	12,030	13,203,166
6.00%, 5/15/19 (a)	8,940	9,811,829
6.00%, 11/15/35	670	734,501

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## Schedule of Investments (continued)

## BlackRock MuniHoldings Investment Quality Fund (MFL)

	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>Texas (continued)</b>		
City of Houston Texas Combined Utility System Revenue, Refunding RB, Combined 1st Lien, Series A (AGC) (continued):		
6.00%, 11/15/36	\$ 495	\$ 542,654
5.38%, 11/15/38	265	284,634
County of Tarrant Texas Cultural Education Facilities Finance Corp., Refunding RB, Christus Health, Series A (AGC), 6.50%, 7/01/37	1,450	1,553,051
Dallas-Fort Worth Texas International Airport, ARB, Joint Improvement, AMT:		
Series A, 5.00%, 11/01/38	5,580	6,016,914
Series H, 5.00%, 11/01/37	4,575	5,028,245
Lower Colorado River Authority, Refunding RB, 5.50%, 5/15/33	3,735	4,412,566
North Texas Tollway Authority, Refunding RB, 1st Tier: (AGM), 6.00%, 1/01/43	5,555	6,350,643
Series K-1 (AGC), 5.75%, 1/01/19 (a)	12,150	13,064,166
Red River Texas Education Financing Corp., RB, Texas Christian University Project, 5.25%, 3/15/38	7,170	8,188,857
Texas Water Development Board, RB, State Water Implementation Revenue, 5.25%, 10/15/46	4,780	5,769,986
		79,803,469
<b>Utah 1.5%</b>		
County of Utah Utah, RB, IHC Health Services, Inc., Series B, 5.00%, 5/15/46	7,500	8,670,300
<b>Virginia 1.2%</b>		
City of Lexington Virginia IDA, RB, Washington & Lee University, 5.00%, 1/01/43	1,750	1,964,112
State of Virginia Public School Authority, RB, Fluvanna County School Financing, 6.50%, 12/01/18 (a)	4,300	4,659,437
		6,623,549
<b>Washington 1.7%</b>		
City of Richland, GO, Refunding, 5.00%, 12/01/45 (b)	1,175	1,376,900
City of Seattle Washington Municipal Light & Power, Refunding RB, Series A, 5.25%, 2/01/36	4,200	4,705,848
	<b>Par (000)</b>	<b>Value</b>
<b>Municipal Bonds</b>		
<b>Washington (continued)</b>		
State of Washington, GO, Various Purposes, Series B, 5.25%, 2/01/36	\$ 3,290	\$ 3,708,686
		9,791,434
<b>Total Municipal Bonds - 125.2%</b>		<b>705,355,258</b>
<b>Municipal Bonds Transferred to</b>		
<b>Tender Option Bond Trusts (c)</b>		
<b>Alabama 8.1%</b>		
City of Birmingham Alabama Special Care Facilities Financing Authority, Refunding RB, Senior Credit:		
Ascension Health, Series C, 5.00%, 11/15/46	11,920	13,790,129
Ascension Group, Series B, 5.00%, 11/15/46	27,798	32,065,144
		45,855,273
<b>California 2.6%</b>		
Los Angeles Unified School District California, GO, Series I, 5.00%, 1/01/34	2,400	2,594,592
University of California, Refunding RB, 5.00%, 5/15/38	10,000	11,749,100
		14,343,692
<b>Florida 2.0%</b>		
County of Hillsborough Florida Aviation Authority, ARB, Tampa International Airport, Series A, AMT (AGC), 5.50%, 10/01/38	10,657	11,191,518
<b>Indiana 1.8%</b>		
Indiana Health & Educational Facilities Financing Authority, Refunding RB, St. Francis, Series E (AGM), 5.25%, 5/01/18 (a)	9,850	10,243,606

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<b>Massachusetts 2.8%</b> Commonwealth of Massachusetts, GO, Series G, 4.00%, 9/01/42	15,000	15,793,550
<b>Nevada 2.5%</b> County of Clark Nevada Water Reclamation District, GO (a): Limited Tax, 6.00%, 7/01/18	8,000	8,444,160

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## Schedule of Investments (continued)

## BlackRock MuniHoldings Investment Quality Fund (MFL)

## Municipal Bonds Transferred to

	Par (000)	Value
<b>Tender Option Bond Trusts (c)</b>		
<b>Nevada (continued)</b>		
County of Clark Nevada Water Reclamation District, GO (a) (continued): Series B, 5.50%, 7/01/19	\$ 5,008	\$ 5,476,252
		13,920,412
<b>New Jersey 3.3%</b>		
New Jersey Housing & Mortgage Finance Agency, RB, S/F Housing, Series CC, 5.25%, 10/01/29	7,118	7,393,095
New Jersey Transportation Trust Fund Authority, RB, Transportation System: Series A (AMBAC), 5.00%, 12/15/32	8,000	8,152,160
Series B, 5.25%, 6/15/36 (d)	2,961	3,060,575
		18,605,830
<b>New York 12.0%</b>		
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	4,995	5,430,764
City of New York New York Transitional Finance Authority, BARB, Fiscal 2009, Series S-3, 5.25%, 1/15/39	5,619	5,970,504
Hudson Yards Infrastructure Corp., RB, Fiscal 2012, Series A, 5.75%, 2/15/47 (d)	9,249	10,538,127
New York City Transitional Finance Authority Future Tax Secured Revenue, RB, Fiscal 2017, Sub-Series B-1, 5.00%, 8/01/40	5,000	5,852,850
New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Consolidated Bonds, 5.25%, 12/15/43	13,950	15,881,173
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 (d)	8,200	9,418,188
New York State Dormitory Authority, ERB, Personal Income Tax, Series B, 5.25%, 3/15/38	13,500	14,474,430
		67,566,036
<b>Texas 7.5%</b>		
City of San Antonio Texas Public Service Board, Refunding RB, Series A, 5.25%, 2/01/19 (a)(d)	12,027	12,882,237
<b>Municipal Bonds Transferred to</b>		
<b>Tender Option Bond Trusts (c)</b>		
<b>Texas (continued)</b>		
North Texas Tollway Authority, RB, Special Projects System, Series A, 5.50%, 9/01/41	\$ 9,640	\$ 11,191,365
State of Texas, GO, Texas Transportation Commission, Highway Improvement, 5.00%, 4/01/43	15,550	18,183,704
		42,257,306
<b>Utah 1.2%</b>		
City of Riverton Utah, RB, IHC Health Services, Inc., 5.00%, 8/15/41	6,373	6,805,009
<b>Total Municipal Bonds Transferred to</b>		
		246,582,232
<b>Tender Option Bond Trusts - 43.8%</b>		
<b>Total Long-Term Investments</b>		
		951,937,490
<b>(Cost \$888,087,849) 169.0%</b>		
<b>Short-Term Securities</b>		
<b>BlackRock Liquidity Funds, MuniCash, Institutional Class, 0.60% (e)(f)</b>		
	2,137,783	2,138,211
<b>Total Short-Term Securities</b>		
		2,138,211
<b>(Cost \$2,138,211) 0.4%</b>		
<b>Total Investments</b>		
<b>(Cost \$890,226,060*) 169.4%</b>		
		954,075,701

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<b>Other Assets Less Liabilities</b> 1.2%	6,593,456
<b>Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable</b> (21.9)%	(123,359,848)
<b>VRDP Shares, at Liquidation Value Net of Deferred Offering Costs</b> (48.7)%	(274,191,943)
<b>Net Assets Applicable to Common Shares</b> 100.0%	\$ 563,117,366

\* As of May 31, 2017, gross unrealized appreciation and depreciation based on cost for U.S. federal income tax purposes were as follows:

Tax cost	\$ 767,823,876
Gross unrealized appreciation	\$ 67,244,357
Gross unrealized depreciation	(4,103,093)
Net unrealized appreciation	\$ 63,141,264

## Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

## Notes to Schedule of Investments

- (a) 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.
- (b) When-issued security.
- (c) Represent bonds transferred to a TOB Trust in exchange of cash and residual certificates received by the Trust. These bonds serve as collateral in a secured borrowing.
- (d) All or a portion of security is subject to a recourse agreement. The aggregate maximum potential amount the Trust could ultimately be required to pay under the agreements, which expire between September 6, 2018 to November 15, 2019, is \$19,874,974.
- (e) During the period ended May 31, 2017, investments in issuers considered to be an affiliate of the Trust for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Affiliate	Shares Held at August 31, 2016	Net Activity	Shares Held at May 31, 2017	Value at May 31, 2017	Income	Net Realized Gain <sup>1</sup>	Change in Unrealized Appreciation (Depreciation)
BlackRock Liquidity Funds, MuniCash, Institutional Class	3,476,692	(1,338,909)	2,137,783	\$ 2,138,211	\$ 12,085	\$ 1,688	

<sup>1</sup> Includes net capital gain distributions.

- (f) Current yield as of period end.

## Derivative Financial Instruments Outstanding as of Period End

## Futures Contracts

Short	Issue	Expiration	Notional Value	Unrealized Depreciation
(130)	5-Year U.S. Treasury Note	September 2017	\$ 15,380,625	\$ (22,712)
(250)	10-Year U.S. Treasury Note	September 2017	\$ 31,574,219	(95,018)
(149)	Long U.S. Treasury Bond	September 2017	\$ 22,918,062	(186,458)
(39)	Ultra U.S. Treasury Bond	September 2017	\$ 6,439,875	(77,346)
<b>Total</b>				\$ (381,534)

**Portfolio Abbreviations**

<b>AGC</b>	Assured Guarantee Corp.
<b>AGM</b>	Assured Guaranty Municipal Corp.
<b>AMBAC</b>	American Municipal Bond Assurance Corp.
<b>AMT</b>	Alternative Minimum Tax (subject to)
<b>ARB</b>	Airport Revenue Bonds
<b>BARB</b>	Building Aid Revenue Bonds
<b>COP</b>	Certificates of Participation
<b>EDA</b>	Economic Development Authority
<b>ERB</b>	Education Revenue Bonds
<b>GARB</b>	General Airport Revenue Bonds
<b>GO</b>	General Obligation Bonds
<b>HFA</b>	Housing Finance Agency
<b>IDA</b>	Industrial Development Authority
<b>IDB</b>	Industrial Development Board
<b>LRB</b>	Lease Revenue Bonds
<b>Q-SBLF</b>	Qualified School Bond Loan Fund
<b>RB</b>	Revenue Bond
<b>S/F</b>	Single-Family



## Schedule of Investments (concluded)

BlackRock MuniHoldings Investment Quality Fund (MFL)

## 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 Trust 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 Trust'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. Investments classified within Level 3 have significant unobservable inputs used by the BlackRock Global Valuation Methodologies Committee (the Global Valuation Committee) in determining the price for Fair Valued Investments. Level 3 investments include equity or debt issued by privately held companies or funds. There may not be a secondary market, and/or there are a limited number of investors. Level 3 investments may also be adjusted to reflect illiquidity and/or non-transferability, with the amount of such discount estimated by the Global Valuation Committee in the absence of market information.

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

	Level 1	Level 2	Level 3	Total
<b>Assets:</b>				
Investments:				
Long-Term Investments <sup>1</sup>		\$ 951,937,490		\$ 951,937,490
Short-Term Securities	\$ 2,138,211			2,138,211
<b>Total</b>	\$ 2,138,211	\$ 951,937,490		\$ 954,075,701
Derivative Financial Instruments <sup>2</sup>				
<b>Liabilities:</b>				
Interest rate contracts		\$ (381,534)		\$ (381,534)

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

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

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

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	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
<b>Liabilities:</b>				
TOB Trust Certificates		\$ (123,110,561)		\$ (123,110,561)
VRDP Shares at Liquidation Value		(274,600,000)		(274,600,000)
<b>Total</b>		<b>\$ (397,710,561)</b>		<b>\$ (397,710,561)</b>

During the period ended May 31, 2017, 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

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

BlackRock MuniHoldings Investment Quality Fund

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

Date: July 24, 2017

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 Investment Quality Fund

Date: July 24, 2017

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

Date: July 24, 2017