

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

Form N-Q

July 23, 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: 811-08349

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 52nd Street, New York, NY 10055

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

Date of fiscal year end: 08/31/2015

Date of reporting period: 05/31/2015

Item 1 Schedule of Investments

Schedule of Investments May 31, 2015 (Unaudited)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Alabama 3.5%		
City of Birmingham Alabama Special Care Facilities Financing Authority, RB, Children s Hospital (AGC):		
6.13%, 6/01/34	\$ 4,980	\$ 5,760,715
6.00%, 6/01/39	10,995	12,638,642
City of Selma Alabama IDB, RB, Gulf Opportunity Zone, International Paper Co. Project, Series A, 5.38%, 12/01/35	1,745	1,966,755
		20,366,112
California 22.8%		
California Educational Facilities Authority, RB, University of Southern California, Series A, 5.25%, 10/01/38	8,920	9,975,058
California Health Facilities Financing Authority, RB, Sutter Health, Series B, 6.00%, 8/15/42	5,370	6,379,130
City & County of San Francisco California Airports Commission, Refunding ARB, 2nd Series A, AMT:		
5.50%, 5/01/28	3,330	3,903,692
5.25%, 5/01/33	2,600	2,931,526
City of Manteca California Financing Authority, RB, Manteca Sewer (AGC):		
5.63%, 12/01/33	2,450	2,837,223
5.75%, 12/01/36	3,285	3,797,230
City of San Jose California, Refunding ARB, Series A-1, AMT, 5.75%, 3/01/34	4,450	5,063,833
County of Sacramento California, ARB, Senior Series A (AGC), 5.50%, 7/01/41	5,600	6,251,168
Kern Community College District, GO, Safety, Repair & Improvement, Election of 2002, Series C, 5.50%, 11/01/33	4,365	5,129,137
Los Angeles California Unified School District, GO, Election of 2002, Series D, 5.25%, 7/01/25	3,485	4,012,176
Los Angeles Community College District California, GO:		
Election of 2001, Series A (NPFGC), 5.00%, 8/01/17 (a)	10,000	10,896,800
Election of 2008, Series C, 5.25%, 8/01/39	3,375	3,932,989
	Par	
Municipal Bonds		
California (concluded)	(000)	Value
Los Angeles Department of Water & Power, RB, Power System, Sub-Series A-1, 5.25%, 7/01/38	\$ 5,000	\$ 5,540,700
Los Angeles Municipal Improvement Corp., Refunding LRB, Real Property, Series B (AGC), 5.50%, 4/01/39	2,980	3,372,049
Redondo Beach Unified School District, GO, Election of 2008, Series E, 5.50%, 8/01/34	4,110	4,761,106
San Diego Public Facilities Financing Authority Water, Refunding RB, Series B (AGC), 5.38%, 8/01/34	4,690	5,356,684
State of California, GO, Various Purposes (AGC), 5.50%, 11/01/39	15,000	17,341,950
State of California Public Works Board, LRB, Various Capital Projects, Series I:		
5.50%, 11/01/30	4,500	5,372,325
5.50%, 11/01/31	2,615	3,106,855
5.50%, 11/01/33	2,000	2,376,360
State of California Public Works Board, RB, Department of Corrections & Rehabilitation, Series F, 5.25%, 9/01/33	2,240	2,609,600
Township of Washington California Health Care District, GO, Election of 2004, Series B, 5.50%, 8/01/40	1,685	1,980,616
University of California, Refunding RB, The Regents of Medical Center, Series J, 5.25%, 5/15/38	12,250	14,002,485
		130,930,692
Colorado 2.1%		
City & County of Denver Colorado Airport System, ARB, Series A, AMT:		
5.50%, 11/15/28	2,700	3,130,245
5.50%, 11/15/30	1,040	1,194,461
5.50%, 11/15/31	1,250	1,428,750

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Colorado (concluded)		
Colorado Health Facilities Authority, RB, Hospital, NCMC, Inc. Project, Series B (AGM), 6.00%, 5/15/26	\$ 5,925	\$ 6,667,106
		12,420,562
Florida 9.5%		
City of Jacksonville Florida, Refunding RB, Series A, 5.25%, 10/01/33	1,250	1,435,213
County of Hillsborough Florida Aviation Authority, Refunding ARB, Tampa International Airport, Series A, AMT: 5.50%, 10/01/29	5,360	6,141,756
5.25%, 10/01/30	3,255	3,646,251
County of Lee Florida, Refunding ARB, Series A, AMT, 5.38%, 10/01/32	7,100	7,770,595
County of Manatee Florida Housing Finance Authority, RB, S/F Housing, Series A, AMT (Ginnie Mae, Fannie Mae & Freddie Mac), 5.90%, 9/01/40	350	356,419
County of Miami-Dade Florida Aviation, Refunding ARB, AMT, Series A: Miami International Airport (AGM), 5.50%, 10/01/41	3,500	3,893,960
5.00%, 10/01/31	5,465	6,032,486
County of Miami-Dade Florida, Refunding RB, Water & Sewer System, Series B, 5.25%, 10/01/29	2,870	3,299,782
County of Miami-Dade Florida, Seaport Department, RB: Series A, 5.38%, 10/01/33	3,145	3,542,685
Series B, AMT, 6.25%, 10/01/38	1,405	1,716,390
Series B, AMT, 6.00%, 10/01/42	1,885	2,251,764
County of Osceola Florida, RB, Sales Tax, Series A: 5.00%, 10/01/40	2,165	2,400,898
5.00%, 10/01/44	4,970	5,468,392
Florida Housing Finance Corp., Refunding RB, S/F Housing, Homeowner Mortgage, Series 2, AMT (NPFGC), 5.90%, 7/01/29	3,065	3,083,605
	Par	
Municipal Bonds		
Florida (concluded)		
Reedy Creek Improvement District, GO, Series A, 5.25%, 6/01/32	\$ 3,225	\$ 3,688,658
		54,728,854
Hawaii 0.8%		
State of Hawaii, Department of Transportation, COP, AMT: 5.25%, 8/01/25	1,350	1,556,320
5.25%, 8/01/26	2,500	2,856,875
		4,413,195
Illinois 26.9%		
Chicago Midway International Airport, Refunding ARB, 2nd Lien, Series A, AMT, 5.00%, 1/01/33	4,355	4,665,512
City of Chicago Illinois, GARB, O Hare International Airport, 3rd Lien: Series A, 5.75%, 1/01/39	7,395	8,402,865
Series C, 6.50%, 1/01/41	16,800	20,226,024
City of Chicago Illinois, Refunding RB, Sales Tax, Series A, 5.25%, 1/01/38	2,445	2,568,350
City of Chicago Illinois Midway International Airport, Refunding ARB, 2nd Lien, Series A, AMT: 5.50%, 1/01/30	6,500	7,258,680
5.50%, 1/01/32	6,275	6,963,618
City of Chicago Illinois Midway International Airport, Refunding GARB, 2nd Lien, Series A, AMT, 5.00%, 1/01/41	8,020	8,436,960
City of Chicago Illinois Transit Authority, RB: Federal Transit Administration, Section 5309, Series A (AGC), 6.00%, 6/01/26	6,315	7,047,919
Sales Tax Receipts, 5.25%, 12/01/36	1,960	2,076,091
Sales Tax Receipts, 5.25%, 12/01/40	10,960	11,532,660
Sales Tax Receipts, 5.00%, 12/01/44	8,420	8,802,352
Sales Tax Receipts, 5.00%, 12/01/44	2,500	2,687,875

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City of Chicago Illinois Transit Authority, Refunding RB, Federal Transit Administration,
Section 5309 (AGM), 5.00%, 6/01/28

7,735

8,129,021

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BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

MAY 31, 2015

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Illinois (concluded)		
County of Cook Illinois Community College District No. 508, GO, City College of Chicago:		
5.50%, 12/01/38	\$ 2,895	\$ 3,252,069
5.25%, 12/01/43	6,305	6,920,872
Illinois Finance Authority, RB:		
Carle Foundation, Series A, 6.00%, 8/15/41	4,000	4,680,120
University of Chicago, Series B, 5.50%, 7/01/18 (a)	10,000	11,277,200
Railsplitter Tobacco Settlement Authority, RB:		
5.50%, 6/01/23	4,365	5,072,130
6.00%, 6/01/28	1,245	1,469,785
State of Illinois, GO:		
5.25%, 2/01/31	2,700	2,812,401
5.25%, 2/01/32	5,525	5,731,027
5.50%, 7/01/33	7,820	8,388,827
5.50%, 7/01/38	1,295	1,376,520
5.00%, 2/01/39	5,000	5,048,700
		154,827,578
Indiana 3.6%		
Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges, Series A, AMT, 5.00%, 7/01/40	1,240	1,303,922
Indiana Municipal Power Agency, Refunding RB, Series A:		
5.25%, 1/01/32	1,500	1,717,575
5.25%, 1/01/33	1,500	1,716,435
Indianapolis Local Public Improvement Bond Bank, Refunding RB, Waterworks Project, Series A (AGC), 5.50%, 1/01/38	14,105	15,931,597
		20,669,529
Louisiana 1.9%		
City of New Orleans Louisiana Aviation Board, RB, Series B, AMT, 5.00%, 1/01/45	4,995	5,372,922
City of New Orleans Louisiana Aviation Board, Refunding GARB, Restructuring (AGC):		
Series A-1, 6.00%, 1/01/23	500	573,410
Series A-2, 6.00%, 1/01/23	720	822,470
	Par	
Municipal Bonds		
(000) Value		
Louisiana (concluded)		
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A, 5.50%, 5/15/29	\$ 3,735	\$ 4,116,456
		10,885,258
Massachusetts 0.5%		
Massachusetts Educational Financing Authority, RB, Education Loan, Issue I, AMT:		
5.00%, 1/01/26	820	906,764
5.00%, 1/01/27	2,000	2,196,360
		3,103,124
Michigan 3.6%		
City of Detroit Michigan Water Supply System, RB, 2nd Lien, Series B (AGM), 6.25%, 7/01/36	6,320	6,891,012
Hudsonville Public Schools, GO, School Building & Site (Q-SBLF), 5.25%, 5/01/41	6,015	6,583,538
Royal Oak Hospital Finance Authority Michigan, Refunding RB, William Beaumont Hospital, Series V, 8.25%, 9/01/18 (a)	5,780	7,090,095
		20,564,645
Minnesota 2.0%		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series B (AGC), 6.50%, 11/15/38	9,900	11,456,775

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Mississippi 2.8%

Mississippi Development Bank, RB, Jackson Water & Sewer System Project (AGM):		
6.88%, 12/01/40	6,405	8,204,741
Special Obligation, 6.75%, 12/01/31	3,775	4,876,771
Special Obligation, 6.75%, 12/01/33	2,350	3,024,568

16,106,080

Nebraska 1.5%

Omaha Public Power District, Refunding RB, Series A, 5.25%, 2/01/46	7,500	8,568,300
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Nevada 5.4%

County of Clark Nevada, ARB, Las Vegas-McCarran International Airport, Series A (AGM), 5.25%, 7/01/39	11,175	12,514,771
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BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

MAY 31, 2015

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Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Nevada (concluded)		
County of Clark Nevada, GO, Limited Tax, 5.00%, 6/01/38	\$ 11,245	\$ 12,277,966
County of Clark Nevada Water Reclamation District, GO, Series A, 5.25%, 7/01/34	5,850	6,611,260
		31,403,997
New Jersey 7.3%		
New Jersey EDA, RB:		
School Facilities Construction (AGC), 6.00%, 12/15/18 (a)	4,280	4,980,979
School Facilities Construction (AGC), 6.00%, 12/15/34	70	80,273
The Goethals Bridge Replacement Project, AMT, 5.38%, 1/01/43	7,000	7,619,220
The Goethals Bridge Replacement Project, AMT (AGM), 5.00%, 1/01/31	2,425	2,686,124
New Jersey Health Care Facilities Financing Authority, RB, Virtua Health, Series A (AGC), 5.50%, 7/01/38	6,500	7,205,250
New Jersey Higher Education Student Assistance Authority, Refunding RB, Series 1, AMT, 5.75%, 12/01/28	4,475	4,913,147
New Jersey Transportation Trust Fund Authority, RB, Transportation System:		
Series A, 5.50%, 6/15/41	5,410	5,649,771
Series AA, 5.50%, 6/15/39	8,175	8,636,724
		41,771,488
New York 8.0%		
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	8,523,225
Water & Sewer System, 2nd General Resolution, Series EE, 5.38%, 6/15/43	3,475	4,066,723
Water & Sewer System, Series FF-2, 5.50%, 6/15/40	4,000	4,603,200
City of New York New York Transitional Finance Authority, BARB, Fiscal 2009, Series S-4 (AGC), 5.50%, 1/15/29	4,000	4,560,680
County of Nassau New York, GO, General Improvement, Series B, 5.00%, 4/01/35 (b)	3,000	3,320,190
	Par	
Municipal Bonds		
New York (concluded)		
Metropolitan Transportation Authority, RB:		
Series A, 5.25%, 11/15/38	\$ 4,000	\$ 4,545,120
Series A-1, 5.25%, 11/15/39	4,490	5,099,787
Port Authority of New York & New Jersey, Refunding ARB, Consolidated, 166th Series, 5.25%, 7/15/36	10,000	11,222,900
		45,941,825
Ohio 1.5%		
State of Ohio Turnpike Commission, RB, Junior Lien, Infrastructure Projects, Series A-1:		
5.25%, 2/15/31	5,145	5,905,894
5.25%, 2/15/32	2,250	2,571,143
		8,477,037
Pennsylvania 2.4%		
Pennsylvania Economic Development Financing Authority, RB, AMT, Pennsylvania Bridges Finco LP:		
5.00%, 12/31/34	3,700	4,007,877
5.00%, 12/31/38	865	928,975
Pennsylvania Turnpike Commission, RB, Sub-Series A, 6.00%, 12/01/16 (a)	4,945	5,348,364
Township of Bristol Pennsylvania School District, GO, 5.25%, 6/01/37	3,000	3,404,100
		13,689,316
South Carolina 4.7%		
County of Charleston South Carolina, RB, Special Source, 5.25%, 12/01/38		
County of Charleston South Carolina Airport District, ARB, Series A, AMT:	6,735	7,750,099

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5.25%, 7/01/25	4,490	5,202,024
5.50%, 7/01/38	3,000	3,356,640
6.00%, 7/01/38	5,270	6,086,587
5.50%, 7/01/41	4,170	4,659,558
		27,054,908
Texas 16.8%		
Central Texas Transportation Commission Turnpike System, Refunding RB, Series C, 5.00%, 8/15/42	4,000	4,261,560

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BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

MAY 31, 2015

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Texas (concluded)		
City of Beaumont Texas, GO, Certificates of Obligation, 5.25%, 3/01/37	\$ 4,190	\$ 4,757,116
City of Houston Texas Utility System, Refunding RB, Combined 1st Lien, Series A (AGC):		
6.00%, 11/15/35	12,700	14,988,667
6.00%, 11/15/36	9,435	11,135,281
5.38%, 11/15/38	5,000	5,658,750
County of Tarrant Texas Cultural Education Facilities Finance Corp., Refunding RB, Christus Health, Series A (AGC):		
6.50%, 1/01/19 (a)	320	376,800
6.50%, 7/01/37	1,450	1,653,754
Dallas Area Rapid Transit, Refunding RB, Senior Lien, 5.25%, 12/01/38	9,110	10,143,803
Dallas-Fort Worth International Airport, ARB, Joint Improvement, AMT:		
Series A, 5.00%, 11/01/38	5,580	5,885,561
Series H, 5.00%, 11/01/37	4,575	4,879,741
Lower Colorado River Authority, Refunding RB, 5.50%, 5/15/33	3,735	4,345,897
North Texas Tollway Authority, Refunding RB, 1st Tier:		
(AGM), 6.00%, 1/01/43	5,555	6,481,074
Series K-1 (AGC), 5.75%, 1/01/38	12,150	13,702,041
Red River Education Financing Corp., RB, Texas Christian University Project, 5.25%, 3/15/38	7,170	8,150,067
		96,420,112
Virginia 1.2%		
City of Lexington Virginia IDA, RB, Washington & Lee University, 5.00%, 1/01/43	1,750	1,923,740
Virginia Public School Authority, RB, Fluvanna County School Financing, 6.50%, 12/01/18 (a)	4,300	5,084,621
		7,008,361
Washington 1.5%		
City of Seattle Washington Municipal Light & Power, Refunding RB, Series A, 5.25%, 2/01/36	4,200	4,740,750
	Par	
Municipal Bonds		
Washington (concluded)		
State of Washington, GO, Various Purposes, Series B, 5.25%, 2/01/36	\$ 3,290	\$ 3,778,828
		8,519,578
Total Municipal Bonds 130.3%		749,327,326
Municipal Bonds Transferred to		
Tender Option Bond Trusts (c)		
California 2.0%		
California State University, Refunding RB, Systemwide, Series A (AGM), 5.00%, 11/01/32	7,960	8,503,190
Los Angeles Unified School District California, GO, Series I, 5.00%, 1/01/34	2,400	2,702,928
		11,206,118
District of Columbia 0.7%		
District of Columbia Water & Sewer Authority, Refunding RB, Senior Lien, Series A, 6.00%, 10/01/18 (a)(d)	3,378	3,913,544
Florida 2.2%		
County of Hillsborough Florida Aviation Authority, ARB, Tampa International Airport, Series A, AMT (AGC), 5.50%, 10/01/38	10,657	11,791,250
County of Lee Florida Housing Finance Authority, RB, S/F Housing, Multi-County Program, Series A-2, AMT (Ginnie Mae), 6.00%, 9/01/40	1,116	1,134,910
		12,926,160

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Indiana 1.8%		
Indiana Health & Educational Facilities Financing Authority, Refunding RB, St. Francis, Series E (AGM), 5.25%, 5/15/41	9,850	10,488,182
Kentucky 0.1%		
Kentucky State Property & Building Commission, Refunding RB, Project No. 93 (AGC), 5.25%, 2/01/27	404	456,790
Nevada 2.6%		
County of Clark Nevada Water Reclamation District, GO: Limited Tax, 6.00%, 7/01/38	8,000	9,115,200

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

MAY 31, 2015

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Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

Municipal Bonds Transferred to	Par	
Tender Option Bond Trusts (c)	(000)	Value
Nevada (concluded)		
County of Clark Nevada Water Reclamation District, GO (concluded): Series B, 5.50%, 7/01/29	\$ 5,008	\$ 5,771,191
		14,886,391
New Jersey 3.4%		
New Jersey Housing & Mortgage Finance Agency, RB, S/F Housing, Series CC, 5.25%, 10/01/29	7,402	7,814,111
New Jersey Transportation Trust Fund Authority, RB, Transportation System: Series A (AMBAC), 5.00%, 12/15/32	8,000	8,674,480
Series B, 5.25%, 6/15/36 (d)	2,961	3,032,907
		19,521,498
New York 11.0%		
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	4,994	5,747,462
City of New York New York Transitional Finance Authority, BARB, Fiscal 2009, Series S-3, 5.25%, 1/15/39	5,619	6,258,248
Hudson Yards Infrastructure Corp., RB, Fiscal 2012, Series A, 5.75%, 2/15/47 (d)	9,249	10,558,385
New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Consolidated Bonds, 5.25%, 12/15/43	13,950	15,917,926
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 (d)	8,200	9,458,208
Municipal Bonds Transferred to		
Tender Option Bond Trusts (c)		
New York (concluded)		
New York State Dormitory Authority, ERB, Personal Income Tax, Series B, 5.25%, 3/15/38	\$ 13,500	\$ 15,193,035
		63,133,264
Texas 4.3%		
City of San Antonio Texas Public Service Board, Refunding RB, Series A, 5.25%, 2/01/31 (d)	12,027	13,524,278
North Texas Tollway Authority, RB, Special Projects System, Series A, 5.50%, 9/01/41	9,640	11,280,632
		24,804,910
Utah 1.2%		
City of Riverton Utah, RB, IHC Health Services, Inc., 5.00%, 8/15/41	6,371	6,955,820
Total Municipal Bonds Transferred to		
Tender Option Bond Trusts 29.3%		168,292,677
Total Long-Term Investments		
(Cost \$834,973,086) 159.6%		917,620,003
Short-Term Securities		
	Shares	
FFI Institutional Tax-Exempt Fund, 0.02% (e)(f)	13,809,281	13,809,281
Total Short-Term Securities		
(Cost \$13,809,281) 2.4%		13,809,281
Total Investments (Cost \$848,782,367*) 162.0%		931,429,284
Other Assets Less Liabilities 0.7%		3,802,140
Liability for TOB Trust Certificates, Including Interest		
Expense and Fees Payable (14.9%)		(85,655,253)
VRDP Shares, at Liquidation Value (47.8%)		(274,600,000)

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Net Assets Applicable to Common Shares	100.0%	\$ 574,976,171
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* As of May 31, 2015, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 764,420,892
Gross unrealized appreciation	\$ 83,470,808
Gross unrealized depreciation	(2,088,663)
Net unrealized appreciation	\$ 81,382,145

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.

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Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(b) When-issued security. Unsettled when-issued transactions were as follows:

Counterparty	Value	Unrealized Appreciation
JP Morgan Clearing Corp.	\$ 3,320,190	\$ 54,780

(c) Represent bonds transferred to a TOB Trust in exchange of cash and residual interest 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, which may require the Trust 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 or in the event of a default on the security. In the case of a shortfall or default, the aggregate maximum potential amount the Trust could ultimately be required to pay under the agreements, which expire from October 1, 2016 to November 15, 2019 is \$22,519,117.

(e) During the period ended May 31, 2015, investments in issuers considered to be an affiliate of the Trust for purposes of Section 2(a)(3) of the Investment Company Act 1940, as amended, were as follows:

Affiliate	Shares Held			
	Shares Held at August 31, 2014	Net Activity	at May 31, 2015	Income
FFI Institutional Tax-Exempt Fund	6,198,367	7,610,914	13,809,281	\$ 2,244

(f) Represents the current yield as of report date.

Portfolio Abbreviations

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

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As of May 31, 2015, financial futures contracts outstanding were as follows:

Contracts	Issue	Exchange	Expiration	Notional Value	Unrealized Depreciation
Short (429)	10-Year U.S. Treasury Note	Chicago Board of Trade	September 2015	\$ 54,777,938	\$ (174,903)

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

MAY 31, 2015

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Schedule of Investments (concluded)

BlackRock MuniHoldings Investment Quality Fund (MFL)

Fair Value Measurements Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs to valuation techniques are categorized into a disclosure hierarchy consisting of three broad levels for financial reporting purposes. 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 categorization of a value determined for investments and derivative financial instruments is based on the pricing transparency of the investment and derivative financial instrument and is not necessarily an indication of the risks associated with investing in those securities. The three levels of the fair value hierarchy are as follows:

Level 1 unadjusted quoted prices 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)

Changes in valuation techniques may result in transfers into or out of an assigned level within the disclosure hierarchy. In accordance with the Trust's policy, transfers between different levels of the fair value disclosure hierarchy are deemed to have occurred as of the beginning of the reporting period. 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.

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

	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 917,620,003		\$ 917,620,003
Short-Term Securities	\$ 13,809,281			13,809,281
Total	\$ 13,809,281	\$ 917,620,003		\$ 931,429,284

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

	Level 1	Level 2	Level 3	Total
Derivative Financial Instruments²				
Liabilities:				
Interest rate contracts	\$ (174,903)			\$ (174,903)

² Derivative financial instruments are financial 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 amount for financial reporting purposes. As of May 31, 2015, such assets and/or liabilities are categorized within the disclosure hierarchy as follows:

	Level 1	Level 2	Level 3	Total
Assets:				
Cash pledged for financial futures contracts	\$ 579,150			\$ 579,150
Liabilities:				
TOB Trust Certificates		\$ (85,626,247)		(85,626,247)
VRDP Shares		(274,600,000)		(274,600,000)
Total	\$ 579,150	\$ (360,226,247)		\$ (359,647,097)

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

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BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

MAY 31, 2015

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 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 23, 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 MuniHoldings Investment Quality Fund

Date: July 23, 2015

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

Date: July 23, 2015