

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

Form N-Q

July 23, 2014

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: 08/31/2014

Date of reporting period: 05/31/2014

Item 1 Schedule of Investments

Schedule of Investments May 31, 2014(Unaudited)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Alabama 3.6%		
City of Birmingham Alabama Special Care Facilities Financing Authority, RB, Children s Hospital (AGC):		
6.13%, 6/01/34	\$ 4,980	\$ 5,807,327
6.00%, 6/01/39	10,995	12,757,389
City of Selma Alabama IDB, RB, Gulf Opportunity Zone, International Paper Co. Project, Series A, 5.38%, 12/01/35	1,745	1,875,212
		20,439,928
California 22.8%		
California Educational Facilities Authority, RB, University of Southern California, Series A, 5.25%, 10/01/38		
	8,920	10,156,936
California Health Facilities Financing Authority, RB, Sutter Health, Series B, 6.00%, 8/15/42		
	5,370	6,463,815
California State Public Works Board, LRB:		
Department of Corrections & Rehabilitation, Series F, 5.25%, 9/01/33		
	2,240	2,564,576
Various Capital Projects, Series I, 5.50%, 11/01/30		
	4,500	5,372,190
Various Capital Projects, Series I, 5.50%, 11/01/31		
	2,615	3,105,391
Various Capital Projects, Series I, 5.50%, 11/01/33		
	2,000	2,375,060
City & County of San Francisco California Airports Commission, Refunding ARB, 2nd Series A, AMT:		
5.50%, 5/01/28	3,330	3,866,829
5.25%, 5/01/33	2,600	2,918,422
City of Manteca California Financing Authority, RB, Manteca Sewer (AGC):		
5.63%, 12/01/33	2,450	2,733,196
5.75%, 12/01/36	3,285	3,667,703
City of San Jose California, Refunding ARB, Series A-1, AMT, 5.75%, 3/01/34		
	4,450	5,007,852
County of Sacramento California, ARB, Senior Series A (AGC), 5.50%, 7/01/41		
	5,600	6,378,288
Kern Community College District, GO, Safety, Repair & Improvement, Election of 2002, Series C, 5.50%, 11/01/33		
	4,365	5,171,870
	Par (000)	Value
Municipal Bonds		
California (concluded)		
Los Angeles California Unified School District, GO, Election of 2002, Series D, 5.25%, 7/01/25		
	\$ 3,485	\$ 4,128,889
Los Angeles Community College District California, GO:		
Election of 2001, Series A (NPFGC), 5.00%, 8/01/32		
	10,000	11,083,100
Election of 2008, Series C, 5.25%, 8/01/39		
	3,375	3,899,104
Los Angeles Department of Water & Power, RB, Power System, Sub-Series A-1, 5.25%, 7/01/38		
	5,000	5,648,150
Los Angeles Municipal Improvement Corp., Refunding LRB, Real Property, Series B (AGC), 5.50%, 4/01/39		
	2,980	3,414,454
Redondo Beach Unified School District, GO, Election of 2008, Series E, 5.50%, 8/01/34		
	4,110	4,671,673
San Diego Public Facilities Financing Authority Water, Refunding RB, Series B (AGC), 5.38%, 8/01/34		
	4,690	5,405,272
State of California, GO, Various Purposes (AGC), 5.50%, 11/01/39		
	15,000	17,267,250
Township of Washington California Health Care District, GO, Election of 2004, Series B, 5.50%, 8/01/40		
	1,685	1,974,331
University of California, Refunding RB, The Regents of Medical Center, Series J, 5.25%, 5/15/38		
	12,250	13,805,872
		131,080,223
Colorado 2.2%		
City & County of Denver Colorado Airport System, ARB, Series A, AMT:		
5.50%, 11/15/28	2,700	3,075,597
5.50%, 11/15/30	1,040	1,174,066
5.50%, 11/15/31	1,250	1,400,613
Colorado Health Facilities Authority, RB, Hospital, NCMC, Inc. Project, Series B (AGM), 6.00%, 5/15/26		
	5,925	6,783,947
		12,434,223
Florida 9.3%		
City of Jacksonville Florida, Refunding RB, Series A, 5.25%, 10/01/33		
	1,250	1,416,488

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Florida (concluded)		
County of Hillsborough Florida Aviation Authority, Refunding ARB, Tampa International Airport, Series A, AMT:		
5.50%, 10/01/29	\$ 5,360	\$ 6,070,254
5.25%, 10/01/30	3,255	3,598,598
County of Lee Florida, Refunding ARB, Series A, AMT, 5.38%, 10/01/32	7,100	7,768,465
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	465	474,295
County of Miami-Dade Florida, RB, Seaport:		
Series A, 5.38%, 10/01/33	3,145	3,501,014
Series B, AMT, 6.25%, 10/01/38	1,405	1,657,591
Series B, AMT, 6.00%, 10/01/42	1,885	2,173,028
County of Miami-Dade Florida, Refunding RB, Water & Sewer System, Series B, 5.25%, 10/01/29	5,870	6,813,720
County of Miami-Dade Florida Aviation, Refunding ARB, Series A, AMT:		
Miami International Airport (AGM), 5.50%, 10/01/41	3,500	3,949,925
5.00%, 10/01/31	5,465	5,933,624
County of Miami-Dade Florida Housing Finance Authority, MRB, M/F Housing, Marbrisa Apartments Project, Series 2A, AMT (AGM), 6.00%, 8/01/26	2,185	2,188,867
Florida Housing Finance Corp., Refunding RB, S/F Housing, Homeowner Mortgage, Series 2, AMT (NPFGC):		
5.75%, 7/01/14	60	60,224
5.90%, 7/01/29	3,930	3,957,313
Reedy Creek Improvement District, GO, Series A, 5.25%, 6/01/32	3,225	3,660,278
		53,223,684
Hawaii 0.7%		
State of Hawaii, Department of Transportation, COP, AMT:		
5.25%, 8/01/25	1,350	1,514,471
5.25%, 8/01/26	2,500	2,779,025
		4,293,496
	Par	
	(000)	Value
Municipal Bonds		
Illinois 24.7%		
City of Chicago Illinois, GARB, O Hare International Airport, 3rd Lien:		
Series A, 5.75%, 1/01/39	\$ 7,395	\$ 8,361,305
Series C, 6.50%, 1/01/41	16,800	19,816,776
City of Chicago Illinois, GO, Refunding, Project, Series A:		
5.25%, 1/01/29	3,635	3,897,920
5.25%, 1/01/33	2,640	2,786,362
City of Chicago Illinois, Refunding RB, Series A:		
Sales Tax, 5.25%, 1/01/38	2,445	2,631,602
Waterworks, 2nd Lien (AMBAC), 5.00%, 11/01/36	5,305	5,576,828
City of Chicago Illinois Midway Airport, Refunding ARB, 2nd Lien, Series A, AMT:		
5.50%, 1/01/30	6,500	7,257,445
5.50%, 1/01/32	6,275	6,924,337
5.00%, 1/01/41 (a)	2,020	2,121,949
City of Chicago Illinois Transit Authority, RB:		
Federal Transit Administration, Section 5309, Series A (AGC), 6.00%, 6/01/26	6,315	7,002,640
Sales Tax Receipts, 5.25%, 12/01/36	1,960	2,138,674
Sales Tax Receipts, 5.25%, 12/01/40	10,960	11,921,850
City of Chicago Illinois Transit Authority, Refunding RB, Federal Transit Administration, Section 5309 (AGM), 5.00%, 6/01/28	7,735	8,258,969
County of Cook Illinois Community College District No. 508, GO, City College of Chicago:		
5.50%, 12/01/38	2,895	3,252,532

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5.25%, 12/01/43	3,305	3,585,396
Illinois Finance Authority, RB:		
Carle Foundation, Series A, 6.00%, 8/15/41	4,000	4,566,320
University of Chicago, Series B, 5.50%, 7/01/37	10,000	11,270,100
Railsplitter Tobacco Settlement Authority, RB:		
5.50%, 6/01/23	4,365	5,119,927
6.00%, 6/01/28	1,245	1,457,895
State of Illinois, GO:		
5.25%, 2/01/31	2,700	2,947,914
5.25%, 2/01/32	5,525	6,000,095
5.50%, 7/01/33	7,820	8,674,491
5.50%, 7/01/38	1,295	1,416,924

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Illinois (concluded)		
State of Illinois, GO (concluded):		
5.00%, 2/01/39	\$ 5,000	\$ 5,205,900
		142,194,151
Indiana 3.6%		
Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges East End Crossing Project, Series A, AMT:		
5.00%, 7/01/40	1,240	1,288,583
5.00%, 7/01/44	495	510,662
Indiana Municipal Power Agency, Refunding RB, Series A:		
5.25%, 1/01/32	1,500	1,701,510
5.25%, 1/01/33	1,500	1,692,795
Indianapolis Local Public Improvement Bond Bank, Refunding RB, Waterworks Project, Series A (AGC), 5.50%, 1/01/38	14,105	15,681,093
		20,874,643
Louisiana 1.0%		
City of New Orleans Louisiana Aviation Board, Refunding GARB, Restructuring (AGC):		
Series A-1, 6.00%, 1/01/23	500	577,010
Series A-2, 6.00%, 1/01/23	720	830,895
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A, 5.50%, 5/15/29	3,735	4,115,148
		5,523,053
Massachusetts 0.8%		
Massachusetts Educational Financing Authority, RB, Education Loan, Issue I, AMT (a):		
5.00%, 1/01/26	2,070	2,273,419
5.00%, 1/01/27	2,000	2,187,440
		4,460,859
Michigan 5.8%		
City of Detroit Michigan Sewage Disposal System, Refunding RB, Senior Lien (AGM):		
Series B, 7.50%, 7/01/33	2,780	3,051,578
Series C-1, 7.00%, 7/01/27	9,055	9,867,415
City of Detroit Michigan Water Supply System, RB, 2nd Lien, Series B (AGM), 6.25%, 7/01/36	6,320	6,450,571
	Par	
Municipal Bonds		
Michigan (concluded)		
Hudsonville Public Schools, GO, School Building & Site (Q-SBLF), 5.25%, 5/01/41	\$ 6,015	\$ 6,510,696
Royal Oak Hospital Finance Authority, Refunding RB, William Beaumont Hospital, Series V, 8.25%, 9/01/18 (b)	5,780	7,530,473
		33,410,733
Minnesota 2.0%		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series B (AGC), 6.50%, 11/15/38	9,900	11,686,257
Mississippi 3.3%		
Mississippi Development Bank, RB, Special Obligation, Jackson Water & Sewer System Project (AGM):		
6.75%, 12/01/31	3,775	4,974,619
6.75%, 12/01/33	2,350	3,080,780
6.88%, 12/01/40	6,405	8,388,180
Mississippi State University Educational Building Corp., Refunding RB, Mississippi State University Improvement Project, 5.25%, 8/01/38	2,300	2,622,943
		19,066,522

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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	12,135,491
County of Clark Nevada, GO, Limited Tax, 5.00%, 6/01/38	11,245	12,186,431
County of Clark Nevada Water Reclamation District, GO, Series A, 5.25%, 7/01/34	5,850	6,714,806
		31,036,728

New Jersey 7.5%

New Jersey EDA, RB:

Private Activity, The Goethals Bridge Replacement Project, AMT, 5.38%, 1/01/43	7,000	7,477,470
Private Activity, The Goethals Bridge Replacement Project, AMT (AGM), 5.00%, 1/01/31	2,425	2,622,444
School Facilities Construction (AGC), 6.00%, 12/15/18 (b)	4,280	5,227,763

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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		
New Jersey (concluded)		
New Jersey EDA, RB (concluded):		
School Facilities Construction (AGC), 6.00%, 12/15/34	\$ 70	\$ 81,353
New Jersey Health Care Facilities Financing Authority, RB, Virtua Health, Series A (AGC), 5.50%, 7/01/38	6,500	7,031,440
New Jersey Higher Education Student Assistance Authority, Refunding RB, Series 1, AMT, 5.75%, 12/01/28	4,475	5,064,984
New Jersey Transportation Trust Fund Authority, RB:		
Transportation Program, Series AA, 5.50%, 6/15/39	8,175	9,296,937
Transportation System, Series A, 5.50%, 6/15/41	5,410	6,040,698
		42,843,089
New York 8.9%		
City of New York New York Municipal Water Finance Authority, Refunding RB, Water & Sewer System, 2nd General Resolution:		
Fiscal 2009, Series EE, 5.25%, 6/15/40	7,500	8,444,550
Fiscal 2011, Series EE, 5.38%, 6/15/43	3,475	3,996,041
Series FF-2, 5.50%, 6/15/40	4,000	4,572,360
City of New York New York Transitional Finance Authority Building Aid, BARB, Fiscal 2009, Series S-4 (AGC), 5.50%, 1/15/29	4,000	4,658,560
Metropolitan Transportation Authority, RB:		
Series A, 5.25%, 11/15/38	4,000	4,411,760
Series A-1, 5.25%, 11/15/39	4,490	5,041,103
Series B, 5.25%, 11/15/44	8,000	8,954,160
Port Authority of New York & New Jersey, Refunding ARB, Consolidated, 166th Series, 5.25%, 7/15/36	10,000	11,284,700
		51,363,234
Ohio 2.0%		
State of Ohio Turnpike Commission, RB, Junior Lien, Infrastructure Projects, Series A-1:		
5.25%, 2/15/30	2,645	3,028,181
5.25%, 2/15/31	5,145	5,861,133
	Par	
Municipal Bonds		
Ohio (concluded)		
State of Ohio Turnpike Commission, RB, Junior Lien, Infrastructure Projects, Series A-1 (concluded):		
5.25%, 2/15/32	\$ 2,250	\$ 2,552,287
		11,441,601
Pennsylvania 1.9%		
Pennsylvania Turnpike Commission, RB:		
Series A, 5.00%, 12/01/44	2,030	2,230,117
Sub-Series A, 6.00%, 12/01/41	4,945	5,428,176
Township of Bristol Pennsylvania School District, GO, 5.25%, 6/01/37	3,000	3,350,850
		11,009,143
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:		
5.25%, 7/01/25	4,490	5,197,265
5.50%, 7/01/38	3,000	3,306,240
6.00%, 7/01/38	5,270	6,010,119
5.50%, 7/01/41	4,170	4,605,640
		26,918,057

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Texas 16.0%		
City of Beaumont Texas, GO, Certificates of Obligation, 5.25%, 3/01/37	4,190	4,785,986
City of Houston Texas Utility System, Refunding RB, Combined 1st Lien, Series A (AGC):		
6.00%, 11/15/35	12,700	14,932,533
6.00%, 11/15/36	9,435	11,117,827
5.38%, 11/15/38	5,000	5,675,200
County of Tarrant Texas Cultural Education Facilities Finance Corp., Refunding RB, Christus Health, Series A (AGC), 6.50%, 7/01/37	1,770	1,998,719
Dallas Area Rapid Transit, Refunding RB, Senior Lien, 5.25%, 12/01/38	9,110	10,302,954

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Texas (concluded)		
Dallas-Fort Worth International Airport, ARB, Joint Improvement, AMT: Series A, 5.00%, 11/01/38	\$ 5,580	\$ 5,860,730
Series H, 5.00%, 11/01/37	4,575	4,820,998
Lower Colorado River Authority, Refunding RB, 5.50%, 5/15/33	3,735	4,237,507
North Texas Tollway Authority, Refunding RB, 1st Tier: (AGM), 6.00%, 1/01/43	5,555	6,285,149
Series K-1 (AGC), 5.75%, 1/01/38	12,150	13,878,945
Red River Education Financing Corp., RB, Texas Christian University Project, 5.25%, 3/15/38	7,170	8,182,045
		92,078,593
Virginia 1.3%		
City of Lexington Virginia IDA, RB, Washington & Lee University, 5.00%, 1/01/43	1,750	1,934,555
Virginia Public School Authority, RB, Fluvanna County School Financing, 6.50%, 12/01/18 (b)	4,300	5,339,009
		7,273,564
Washington 1.5%		
City of Seattle Washington Municipal Light & Power, Refunding RB, Series A, 5.25%, 2/01/36	4,200	4,710,552
State of Washington, GO, Various Purposes, Series B, 5.25%, 2/01/36	3,290	3,788,369
		8,498,921
Total Municipal Bonds 129.0%		741,150,702
Municipal Bonds Transferred to		
Tender Option Bond (TOB) Trusts (c)		
Alabama 1.2%		
City of Mobile Alabama Board of Water & Sewer Commissioners, RB (NPFGC), 5.00%, 1/01/31	6,500	6,828,965
California 2.0%		
California State University, Refunding RB, Systemwide, Series A (AGM), 5.00%, 11/01/32	7,960	8,761,731
Municipal Bonds Transferred to		
	Par	
Tender Option Bond (TOB) Trusts (c)		
	(000)	Value
California (concluded)		
Los Angeles Unified School District California, GO, Series I, 5.00%, 1/01/34	\$ 2,400	\$ 2,706,168
		11,467,899
District of Columbia 0.7%		
District of Columbia Water & Sewer Authority, Refunding RB, Senior Lien, Series A, 6.00%, 10/01/35 (d)	3,379	3,897,973
Florida 2.3%		
County of Hillsborough Florida Aviation Authority, ARB, Tampa International Airport, Series A, AMT (AGC), 5.50%, 10/01/38	10,657	11,868,322
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	1,515	1,571,858
		13,440,180
Indiana 1.8%		
Indiana Health & Educational Facilities Financing Authority, Refunding RB, St. Francis, Series E (AGM), 5.25%, 5/15/41	9,850	10,409,382
Kentucky 0.1%		
Kentucky State Property & Building Commission, Refunding RB, Project No. 93 (AGC), 5.25%, 2/01/27	404	463,104
Nevada 2.6%		
County of Clark Nevada Water Reclamation District, GO: Limited Tax, 6.00%, 7/01/38	8,000	9,316,160
Series B, 5.50%, 7/01/29	5,008	5,917,583

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		15,233,743
New Jersey 3.5%		
New Jersey Housing & Mortgage Finance Agency, RB, S/F Housing, Series CC, 5.25%, 10/01/29	7,402	7,932,437
New Jersey Transportation Trust Fund Authority, RB, Transportation System: Series A (AMBAC), 5.00%, 12/15/32	8,000	8,840,960

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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 Tender Option Bond (TOB) Trusts (c)	Par (000)	Value
New Jersey (concluded)		
New Jersey Transportation Trust Fund Authority, RB, Transportation System (concluded): Series B, 5.25%, 6/15/36 (d)	\$ 2,961	\$ 3,260,117
		20,033,514
New York 10.9%		
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	5,708,950
City of New York New York Transitional Finance Authority, BARB, Fiscal 2009, Series S-3, 5.25%, 1/15/39	5,619	6,323,201
Hudson Yards Infrastructure Corp., RB, Fiscal 2012, Series A, 5.75%, 2/15/47 (d)	9,249	10,564,860
New York Liberty Development Corp., RB, 1 World Trade Center Port Authority Consolidated Bonds, 5.25%, 12/15/43	13,950	15,371,087
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 (d)	8,200	9,195,972
New York State Dormitory Authority, ERB, Personal Income Tax, Series B, 5.25%, 3/15/38	13,500	15,404,580
		62,568,650
Texas 4.3%		
City of San Antonio Texas Public Service Board, Refunding RB, Series A, 5.25%, 2/01/31 (d)	12,027	13,721,049
Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts (c)		
Texas (concluded)		
North Texas Tollway Authority, RB, Special Projects System, Series A, 5.50%, 9/01/41	\$ 9,640	\$ 11,004,156
		24,725,205
Utah 1.2%		
City of Riverton Utah, RB, IHC Health Services, Inc., 5.00%, 8/15/41	6,371	6,809,662
Total Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts 30.6%		175,878,277
Total Long-Term Investments		917,028,979
(Cost \$832,863,685) 159.6%		
Short-Term Securities 2.8%		
	Shares	
FFI Institutional Tax-Exempt Fund, 0.03% (e)(f)	15,830,156	15,830,156
Total Short-Term Securities		
(Cost \$15,830,156) 2.8%		15,830,156
Total Investments		932,859,135
(Cost \$848,693,841*) 162.4%		5,395,905
Other Assets Less Liabilities 0.9%		(89,176,658)
Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable (15.5%)		(274,600,000)
VRDP Shares, at Liquidation Value (47.8%)		
Net Assets Applicable to Common Shares 100.0%		\$ 574,478,382

* As of May 31, 2014, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 760,948,363
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Gross unrealized appreciation	\$ 84,192,342
Gross unrealized depreciation	(1,438,448)
Net unrealized appreciation	\$ 82,753,894

Notes to Schedule of Investments

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

Counterparty	Value	Unrealized Appreciation/ Depreciation)
Barclays Capital, Inc.	\$ 2,121,949	\$ (16,865)
Morgan Stanley & Co. LLC	\$ 4,460,859	\$ 54,386

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

- (b) U.S. government securities, held in escrow, are used to pay interest on this security, as well as to retire the bond in full at the date indicated, typically at a premium to par.
- (c) Represent bonds transferred to a TOB. In exchange for which the Fund acquired residual interest certificates. These bonds serve as collateral in a financing transaction.
- (d) All or a portion of security is subject to a recourse agreement, which may require the Fund to pay the liquidity provider in the event there is a shortfall between the TOB trust certificates and proceeds received from the sale of the security contributed to the TOB trust. In the case of a shortfall, the aggregate maximum potential amount the Fund could ultimately be required to pay under the agreements, which expire from October 1, 2016 to November 15, 2019 is \$22,520,646.
- (e) Investments in issuers considered to be an affiliate of the Fund during the period ended May 31, 2014, 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, 2013	Net Activity	Shares Held at May 31, 2014	Income
FFI Institutional Tax-Exempt Fund	27,631,574	(11,801,418)	15,830,156	\$ 2,199

- (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
Fannie Mae	Federal National Mortgage Association
Freddie Mac	Federal Home Loan Mortgage Corp.
GARB	General Airport Revenue Bonds
Ginnie Mae	Government National Mortgage Association
GO	General Obligation Bonds
IDB	Industrial Development Board
LRB	Lease Revenue Bonds
M/F	Multi-Family
MRB	Mortgage Revenue Bonds
NPFGC	National Public Finance Guarantee Corp.
Q-SBLF	Qualified School Bond Loan Fund
RB	Revenue Bonds
S/F	Single-Family

Financial futures contracts outstanding as of May 31, 2014 were as follows:

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Contracts Sold	Issue	Exchange	Expiration	Notional	
				Value	Unrealized Depreciation
(663)	10-Year U.S. Treasury Note	Chicago Board of Trade	September 2014	\$ 83,216,859	\$ (316,889)

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

MAY 31, 2014

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Schedule of Investments (continued)

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 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.

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

The following tables summarize the Fund's investments and derivative financial instruments categorized in the disclosure hierarchy as of May 31, 2014:

	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 917,028,979		\$ 917,028,979
Short-Term Securities	\$ 15,830,156			15,830,156
Total	\$ 15,830,156	\$ 917,028,979		\$ 932,859,135

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

	Level 1	Level 2	Level 3	Total
Derivative Financial Instruments ²				
Liabilities:				
Interest rate contracts	\$ (316,889)			\$ (316,889)

² Derivative financial instruments are financial futures contracts, which are valued at the unrealized appreciation/depreciation on the instrument.

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

The Fund may hold assets and/or liabilities in which the fair value approximates the carrying amount for financial reporting purposes. As of May 31, 2014, 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	\$ 872,000			\$ 872,000
Liabilities:				
TOB trust certificates		\$ (89,156,878)		(89,156,878)
VRDP Shares		(274,600,000)		(274,600,000)
Total	\$ 872,000	\$ (363,756,878)		\$ (362,884,878)

There were no transfers between levels during the period ended May 31, 2014.

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

MAY 31, 2014

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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, 2014

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, 2014

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

Date: July 23, 2014