

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

Form N-Q

January 25, 2012

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: 08/31/2012

Date of reporting period: 11/30/2011

Item 1 – Schedule of Investments

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5.75%, 12/01/36 Redondo Beach Unified School District, GO, Election of 2008, Series E,	3,285	3,540,113
5.50%, 8/01/34 San Bernardino Community College District, GO, Election of 2002, Series A, 6.25%, 8/01/33	4,110	4,499,957
San Diego Public Facilities Financing Authority, Refunding RB, Series B (AGC), 5.38%, 8/01/34	3,820	4,352,088
San Jacinto Unified School District, GO, Election of 2006 (AGM), 5.25%, 8/01/32	4,690	5,079,833
State of California, GO, Various Purpose (AGC), 5.50%, 11/01/39	3,000	3,126,540
	15,000	15,927,900
		102,310,095
Colorado 1.5%		
Colorado Health Facilities Authority, RB, Hospital, NCMC Inc. Project, Series B (AGM), 6.00%, 5/15/26	5,925	6,658,160
Regional Transportation District, COP, Series A, 5.00%, 6/01/25	1,425	1,515,231
		8,173,391
District of Columbia 0.5%		
District of Columbia Water & Sewer Authority, RB, Series A (NPFGC), 5.00%, 10/01/38	2,545	2,621,375
Florida 10.0%		
County of Lee Florida, Refunding RB, Series A, AMT, 5.38%, 10/01/32	4,600	4,573,964
County of Miami-Dade Florida, RB, Miami International Airport, Series A, AMT: (AGM), 5.50%, 10/01/41	3,620	3,660,797
(NPFGC), 6.00%, 10/01/29	8,000	8,049,200

Portfolio Abbreviations

To simplify the listings of portfolio holdings in the Schedule of Investments, the names and descriptions of many of the securities have been abbreviated according to the following list:

AGC	Assured Guaranty Corp.
AGM	Assured Guaranty Municipal Corp.
AMT	Alternative Minimum Tax (subject to)
BHAC	Berkshire Hathaway Assurance Corp.
CIFG	CDC IXIS Financial Guaranty
COP	Certificates of Participation
EDA	Economic Development Authority
ERB	Education Revenue Bonds
GARB	General Airport Revenue Bonds
GO	General Obligation Bonds
HRB	Housing Revenue Bonds
IDA	Industrial Development Authority
ISD	Independent School District
MRB	Mortgage 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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Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)
(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Florida (concluded)		
Florida Housing Finance Corp., HRB, Waverly Apartments, Series C-1, AMT (AGM), 6.30%, 7/01/30	\$ 2,055	\$ 2,070,721
Florida Housing Finance Corp., Refunding RB, Homeowner Mortgage, Series 2, AMT (NPFGC):		
5.75%, 7/01/14	415	415,905
5.90%, 7/01/29	6,010	6,079,355
Jacksonville Port Authority, RB, AMT (AGC), 6.00%, 11/01/38	6,740	6,815,219
Manatee County Housing Finance Authority, RB, Series A, AMT (Ginnie Mae), 5.90%, 9/01/40	2,765	3,029,306
Miami-Dade County Housing Finance Authority Florida, MRB, Marbrisa Apartments Project, Series 2A, AMT (AGM), 6.00%, 8/01/26	2,185	2,202,611
Orange County Health Facilities Authority, RB, The Nemours Foundation, Series A, 5.00%, 1/01/29	4,435	4,543,746
Village Center Community Development District, RB, Series A (NPFGC):		
5.38%, 11/01/34	10,775	9,718,727
5.13%, 11/01/36	1,750	1,508,780
Volusia County IDA, RB, Student Housing, Stetson University Project, Series A (CIFG), 5.00%, 6/01/35	685	592,326
		53,260,657
Georgia 1.5%		
County of Fulton Georgia, RB (NPFGC), 5.25%, 1/01/35	7,575	7,821,718
Illinois 19.3%		
Chicago Board of Education Illinois, GO, Series A:		
5.50%, 12/01/39	6,370	6,715,764
5.00%, 12/01/41	9,505	9,505,000
Chicago Board of Education Illinois, GO, Refunding, Chicago School Reform Board, Series A (NPFGC), 5.50%, 12/01/26	3,745	4,051,116
Chicago Transit Authority, RB, Federal Transit Administration Section 5309, Series A (AGC), 6.00%, 6/01/26	6,315	7,133,235
Chicago Transit Authority, RB, Sales Tax Receipts Revenue, 5.25%, 12/01/36	1,960	2,037,302
City of Chicago Illinois, RB, General, Third Lien, O Hare International Airport:		

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Series A, 5.75%, 1/01/39	7,395	8,026,163
Series C (AGM), 5.25%, 1/01/35	4,535	4,747,601
City of Chicago Illinois, RB, Sales Tax Revenue, Series A, 5.25%, 1/01/38	2,445	2,588,204
City of Chicago Illinois, Refunding RB: General, Third Lien, Series C, 6.50%, 1/01/41	16,800	19,228,440

	Par (000)	Value
Municipal Bonds		
Illinois (concluded)		
City of Chicago Illinois, Refunding RB (concluded):		
General, Third Lien, Series C (AGC), 5.25%, 1/01/23	\$ 3,975	\$ 4,437,372
Second Lien (NPFGC), 5.50%, 1/01/30	4,075	4,512,084
Illinois Finance Authority, RB, University of Chicago, Series B, 5.50%, 7/01/37	10,000	10,782,600
Illinois Finance Authority, Refunding RB, Carle Foundation, Series A, 6.00%, 8/15/41	4,000	4,103,120
Illinois Municipal Electric Agency, RB, Series A (NPFGC), 5.25%, 2/01/35	2,700	2,786,022
Railsplitter Tobacco Settlement Authority, RB:		
5.50%, 6/01/23	4,365	4,654,269
6.00%, 6/01/28	1,245	1,310,350
State of Illinois, RB, Build Illinois, Series B, 5.25%, 6/15/26	5,625	6,120,787
		102,739,429
Indiana 5.3%		
Indiana Finance Authority WasteWater Utility, RB, First Lien, CWA Authority, Series A, 5.25%, 10/01/31	5,810	6,282,469
Indianapolis Local Public Improvement Bond Bank, RB, Series K (AGM), 5.00%, 6/01/25	6,535	6,978,138
Indianapolis Local Public Improvement Bond Bank, Refunding RB, Watetrworks Project, Series A (AGC), 5.50%, 1/01/38	14,105	15,119,996
		28,380,603
Iowa 0.7%		
Iowa Finance Authority, Refunding RB, Iowa Health System (AGC), 5.25%, 2/15/29	3,375	3,541,826
Louisiana 0.3%		
New Orleans Aviation Board Louisiana, Refunding RB, GARB, Restructuring (AGC):		
Series A-1, 6.00%, 1/01/23	500	579,190
Series A-2, 6.00%, 1/01/23	720	834,034
		1,413,224
Michigan 16.7%		
City of Detroit Michigan, RB:		
Second Lien, Series B (AGM), 6.25%, 7/01/36	6,320	7,097,234
Second Lien, Series B (AGM), 7.00%, 7/01/36	850	1,002,600
	7,490	7,924,645

Second Lien, Series B (NPFGC),
5.50%, 7/01/29

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

NOVEMBER 30, 2011

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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		
Michigan (concluded)		
City of Detroit Michigan, RB (concluded):		
Senior Lien, Series B (AGM), 7.50%, 7/01/33	\$ 6,600	\$ 7,804,434
System, Second Lien, Series A (BHAC), 5.50%, 7/01/36	20,540	21,555,497
City of Detroit Michigan, Refunding RB:		
Second Lien, Series E (BHAC), 5.75%, 7/01/31	6,000	6,440,820
Senior Lien, Series C-1 (AGM), 7.00%, 7/01/27	9,055	10,610,106
Hudsonville Public Schools, GO, School Building & Site (Q-SBLF), 5.25%, 5/01/41	6,015	6,306,246
Michigan State Building Authority, RB, Facilities Program, Series H (AGM), 5.00%, 10/15/26	1,760	1,882,725
Michigan State Building Authority, Refunding RB, Facilities Program, Series I (AGC):		
5.25%, 10/15/22	6,150	6,956,818
5.25%, 10/15/24	2,755	3,048,848
5.25%, 10/15/25	1,435	1,573,162
Royal Oak Hospital Finance Authority Michigan, Refunding RB, William Beaumont Hospital, 8.25%, 9/01/39	5,780	6,859,242
		89,062,377
Minnesota 2.1%		
City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series B (AGC), 6.50%, 11/15/38	9,900	11,040,183
Nebraska 1.0%		
Nebraska Investment Finance Authority, Refunding RB, Series A:		
5.90%, 9/01/36	3,650	3,939,299
6.05%, 9/01/41	1,205	1,275,999
		5,215,298
Nevada 7.0%		
Clark County Water Reclamation District, GO, Series A, 5.25%, 7/01/34	11,140	11,796,257
County of Clark Nevada, RB:		
Las Vegas-McCarran International Airport, Series A (AGC), 5.25%, 7/01/39	10,630	11,033,621
Subordinate Lien, Series A-2 (NPFGC), 5.00%, 7/01/36	14,500	14,576,125
		37,406,003
New Jersey 2.7%		

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New Jersey Health Care Facilities
 Financing Authority, RB, Virtua Health
 (AGC), 5.50%, 7/01/38 6,500 6,773,585

	Par (000)	Value
Municipal Bonds		
New Jersey (concluded)		
New Jersey Higher Education Student Assistance Authority, RB, Series 1, AMT, 5.75%, 12/01/28	\$ 4,475	\$ 4,626,255
New Jersey Transportation Trust Fund Authority, RB, Transportation System, Series B, 5.25%, 6/15/36 (a)	2,960	3,060,936
		14,460,776
New York 7.2%		
New York City Municipal Water Finance Authority, RB: Fiscal 2009, Series EE, 5.25%, 6/15/40	7,500	8,009,400
Second General Resolution, Series EE, 5.38%, 6/15/43	3,475	3,744,243
Series FF-2, 5.50%, 6/15/40	4,000	4,387,240
New York City Municipal Water Finance Authority, Refunding RB, Series D, 5.00%, 6/15/37	3,730	3,861,408
New York City Transitional Finance Authority, RB, Sub-Series S-2A, 5.00%, 7/15/30	7,110	7,687,830
New York City Transitional Finance Authority, RB, Fiscal 2009: Series S-3, 5.25%, 1/15/39	5,625	5,974,481
Series S-4 (AGC), 5.50%, 1/15/29	4,000	4,415,520
		38,080,122
North Carolina 2.3%		
City of Charlotte NC, RB, Airport Revenue, Charlotte Douglas Airport: Series A, 5.00%, 7/01/41	8,540	8,869,217
Series B, AMT, 5.00%, 7/01/41	3,515	3,474,683
		12,343,900
Ohio 1.3%		
Ohio Higher Educational Facility Commission, Refunding RB, Summa Health System, 2010 Project (AGC), 5.25%, 11/15/40	7,125	7,154,284
Pennsylvania 2.3%		
Pennsylvania Turnpike Commission, RB, Sub-Series A, 6.00%, 12/01/41	4,945	5,239,920
Philadelphia Hospitals and Higher Education Facilities Authority, RB, Children s Hospital Philadelphia, Series D, 5.00%, 7/01/32	6,875	7,123,737
		12,363,657
Puerto Rico 1.4%		
Puerto Rico Sales Tax Financing Corp., RB, First Sub-Series A, 6.38%, 8/01/39	6,610	7,320,046
Texas 18.4%		
City of Austin Texas, Refunding RB, Series A (AGM): 5.00%, 11/15/28	3,360	3,626,582

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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		
Texas (concluded)		
City of Austin Texas, Refunding RB, Series A (AGM) (concluded): 5.00%, 11/15/29	\$ 4,255	\$ 4,546,212
City of Houston Texas, Refunding RB, Combined First Lien, Series A (AGC): 6.00%, 11/15/35	12,700	14,393,799
6.00%, 11/15/36	9,435	10,673,816
5.38%, 11/15/38	5,000	5,382,700
Clifton Higher Education Finance Corp., Refunding RB, Baylor University, 5.25%, 3/01/32	5,690	6,161,929
Dallas Area Rapid Transit, Refunding RB, Senior Lien, 5.25%, 12/01/38	10,110	10,767,251
Harris County Cultural Education Facilities Finance Corp., RB, Texas Children s Hospital Project, 5.25%, 10/01/29	3,645	3,880,576
Harris County Health Facilities Development Corp., Refunding RB, Memorial Hermann Healthcare System, Series B, 7.25%, 12/01/35	1,500	1,684,170
Harris County Metropolitan Transit Authority, RB, Series A, 5.00%, 11/01/36	2,345	2,486,075
Lower Colorado River Authority, Refunding RB, LCRA Transmission Services Project (AGC), 5.50%, 5/15/36	3,295	3,484,627
Lubbock Cooper ISD Texas, GO, School Building (AGC), 5.75%, 2/15/42	2,300	2,479,538
North Texas Tollway Authority, RB, System, First Tier, Series K-1 (AGC), 5.75%, 1/01/38	12,150	13,039,380
North Texas Tollway Authority, Refunding RB, System, First Tier: (AGM), 6.00%, 1/01/43	5,555	6,153,107
Series A (AGC), 5.75%, 1/01/40	7,000	7,441,910
Tarrant County Cultural Education Facilities Finance Corp., Refunding RB, Christus Health, Series A (AGC), 6.50%, 7/01/37	1,770	1,895,104
		98,096,776
Utah 1.2%		
City of Riverton Utah, RB, IHC Health Services Inc., 5.00%, 8/15/41	6,375	6,468,203
Virginia 0.9%		
Virginia Public School Authority, RB, School Financing, 6.50%, 12/01/35	4,300	4,877,920
Washington 1.5%		

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City of Seattle Washington, Refunding
 RB, Series A, 5.25%, 2/01/36 4,200 4,565,820

	Par (000)	Value
Municipal Bonds		
Washington (concluded)		
State of Washington, GO, Various Purpose, Series B, 5.25%, 2/01/36	\$ 3,290	\$ 3,589,686
		8,155,506
Total Municipal Bonds 129.8%		691,225,324

Municipal Bonds Transferred to Tender

Option Bond (TOB) Trusts (b)

Alabama 1.3%

Mobile Board of Water & Sewer
 Commissioners, RB (NPFGC), 5.00%,
 1/01/31 6,500 6,690,710

California 3.0%

California State University, Refunding
 RB, Systemwide, Series A (AGM),
 5.00%, 11/01/32 7,960 8,269,405

Los Angeles Unified School District
 California, GO, Series I, 5.00%,
 1/01/34 2,400 2,496,648

San Diego Community College District
 California, GO, Election of 2002
 (AGM), 5.00%, 5/01/30 5,000 5,291,250

16,057,303

District of Columbia 0.7%

District of Columbia Water & Sewer
 Authority, RB, Series A, 6.00%,
 10/01/35 3,381 3,963,163

Florida 4.8%

City of Jacksonville Florida, RB, Better
 Jacksonville (NPFGC), 5.00%,
 10/01/27 10,000 10,199,700

Hillsborough County Aviation Authority,
 RB, Series A, AMT (AGC), 5.50%,
 10/01/38 10,657 10,783,133

Lee County Housing Finance Authority,
 RB, Multi-County Program, Series A-2,
 AMT (Ginnie Mae), 6.00%, 9/01/40 4,140 4,376,270

25,359,103

Illinois 1.5%

Chicago Transit Authority, Refunding RB,
 Federal Transit Administration Section
 5309 (AGM), 5.00%, 6/01/28 7,737 7,953,129

Indiana 1.9%

Indiana Health & Educational Facilities
 Financing Authority, Refunding RB, St.
 Francis, Series E (AGM), 5.25%,
 5/15/41 9,850 9,988,787

Kentucky 0.1%

Kentucky State Property & Building
 Commission, Refunding RB, Project
 No. 93 (AGC), 5.25%, 2/01/27 404 438,140

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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 Transferred to Tender Option Bond (TOB) Trusts (b)		
Massachusetts 1.9%		
Massachusetts School Building Authority, RB, Senior-Series B, 5.00%, 10/15/41	\$ 9,440	\$ 9,997,904
Nevada 2.7%		
Clark County Water Reclamation District, GO: Limited Tax, 6.00%, 7/01/38 Series B, 5.50%, 7/01/29	8,000 5,008	8,927,840 5,533,717 14,461,557
New Jersey 3.9%		
New Jersey EDA, RB, School Facilities Construction, Series Z (AGC), 6.00%, 12/15/34	4,350	4,775,691
New Jersey State Housing & Mortgage Finance Agency, RB, S/F Housing, Series CC, 5.25%, 10/01/29	7,532	7,842,954
New Jersey Transportation Trust Fund Authority, RB, Transportation System, Series A (AGM), 5.00%, 12/15/32	8,000	8,308,000 20,926,645
New York 7.2%		
Hudson Yards Infrastructure Corp., RB, Series A, 5.75%, 2/15/47	9,249	9,783,361
New York City Municipal Water Finance Authority, RB, Series FF-2, 5.50%, 6/15/40	4,994	5,477,180
New York Liberty Development Corp., Refunding RB, World Trade Center Project, 5.75%, 11/15/51	8,200	8,704,054
New York State Dormitory Authority, ERB, Series B, 5.25%, 3/15/38	13,500	14,390,325 38,354,920
Texas 4.4%		
City of San Antonio Texas, Refunding RB, Series A, 5.25%, 2/01/31	12,027	13,136,071
North Texas Tollway Authority, RB, Special Projects System, Series A, 5.50%, 9/01/41	9,640	10,417,273 23,553,344
Total Municipal Bonds Transferred to Tender Option Bond (TOB) Trusts		177,744,705
Total Long-Term Investments (Cost \$830,516,456) 163.2%		868,970,029
Short-Term Securities		
	Shares 15,436,017	Value \$ 15,436,017

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FFI Institutional Tax-Exempt Fund, 0.01% (c)(d)		
Total Short-Term Securities		
(Cost \$15,436,017)	2.9%	15,436,017
Total Investments (Cost \$845,952,473*)	-166.1%	884,406,046
Other Assets Less Liabilities	2.1%	11,303,160
Liability for TOB Trust Certificates, Including Interest		
Expense and Fees Payable	(16.6)%	(88,454,796)
VRDP Shares, at Liquidation Value	(51.6)%	(274,600,000)
Net Assets Applicable to Common Shares	100.0%	\$ 532,654,410

* The cost and unrealized appreciation (depreciation) of investments as of November 30, 2011, as computed for federal income tax purposes, were as follows:

Aggregate cost	\$	757,776,657
Gross unrealized appreciation	\$	40,279,177
Gross unrealized depreciation		(2,059,065)
Net unrealized appreciation	\$	38,220,112

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

Counterparty	Value	Unrealized Appreciation
Morgan Stanley	\$ 2,806,878	\$ 27,338
Piper Jaffray	\$ 254,058	\$ 2,474

(b) Securities represent bonds transferred to a TOB in exchange for which the Fund acquired residual interest certificates. These securities serve as collateral in a financing transaction.

(c) Investments in companies considered to be an affiliate of the Fund during the period, 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, 2011	Net Activity	Shares Held at November 30, 2011	Income
FFI Institutional Tax-Exempt Fund	22,122,505	(6,686,488)	15,436,017	\$ 694

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

Schedule of Investments (concluded)

BlackRock MuniHoldings Investment Quality Fund (MFL)

Fair Value Measurements - Various inputs are used in determining the fair value of investments. These inputs 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 and liabilities

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)

Changes in valuation techniques may result in transfers in or out of an assigned level within the disclosure hierarchy. The categorization of a value determined for investments is based on the pricing transparency of the investment and does not necessarily correspond to the Fund's perceived risk of investing in those securities. For information about the Fund's policy regarding valuation of investments and other significant accounting policies, please refer to the Fund's most recent financial statements as contained in its annual report.

The following table summarizes the inputs used as of November 30, 2011 in determining the fair valuation of the Fund's investments:

Valuation Inputs	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 868,970,029		\$ 868,970,029
Short-Term Securities	\$ 15,436,017			15,436,017
Total	\$ 15,436,017	\$ 868,970,029		\$ 884,406,046

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

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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: January 23, 2012

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: January 23, 2012

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

Date: January 23, 2012

