

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND
Form N-Q
January 24, 2013

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: 08/31/2013

Date of reporting period: 11/30/2012

Item 1 Schedule of Investments

Schedule of Investments November 30, 2012 (Unaudited)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

| | Par | | Value |
|--|--------------|----|--------------|
| | (000) | | (000) |
| Municipal Bonds | | | |
| Alabama 5.1% | | | |
| Auburn University, Refunding RB, Series A: | | | |
| 5.00%, 6/01/29 | \$ 5,665 | \$ | 6,996,615 |
| 5.00%, 6/01/31 | 3,250 | | 4,001,432 |
| Birmingham Special Care Facilities Financing Authority, RB, Children s Hospital (AGC): | | | |
| 6.13%, 6/01/34 | 4,980 | | 6,106,376 |
| 6.00%, 6/01/39 | 10,995 | | 13,493,944 |
| Selma IDB, Alabama, RB, International Paper Co., Project, Series A, 5.38%, 12/01/35 | 1,745 | | 1,945,850 |
| | | | 32,544,217 |
| Arizona 1.5% | | | |
| Arizona Board of Regents, Refunding RB, Arizona State University System, Series A: | | | |
| 5.00%, 6/01/42 | 3,000 | | 3,541,860 |
| 5.00%, 7/01/42 | 5,000 | | 5,891,450 |
| | | | 9,433,310 |
| California 19.9% | | | |
| California Educational Facilities Authority, RB, University of Southern California, Series A, 5.25%, 10/01/38 | 8,920 | | 10,821,209 |
| California Health Facilities Financing Authority, RB: | | | |
| Stanford Hospital and Clinics, Series A, 5.00%, 8/15/42 | 450 | | 519,552 |
| Stanford Hospital and Clinics, Series A, 5.00%, 8/15/51 | 4,690 | | 5,381,071 |
| Sutter Health, Series B, 6.00%, 8/15/42 | 5,370 | | 6,574,598 |
| California State Public Works Board, RB, Various Capital Projects, Series G-1 (AGC), 5.25%, 10/01/24 | 5,000 | | 5,907,150 |
| City of San Jose California, Refunding ARB, Series A-1, AMT, 5.75%, 3/01/34 | 4,450 | | 5,270,624 |
| County of Sacramento California, RB, Airport System, Senior Series A (AGC), 5.50%, 7/01/41 | 5,600 | | 6,617,968 |
| Los Angeles Community College District California, GO: | | | |
| Election of 2001, Series A (NPFGC), 5.00%, 8/01/32 | 10,000 | | 11,538,700 |
| Election of 2008, Series C, 5.25%, 8/01/39 | 3,375 | | 4,216,995 |
| Los Angeles Department of Water & Power, RB, Power System, Sub-Series A-1, 5.25%, 7/01/38 | 5,000 | | 5,953,750 |
| Los Angeles Municipal Improvement Corp., Refunding RB, Real Property, Series B (AGC), 5.50%, 4/01/39 | 2,980 | | 3,414,246 |
| | Par | | |
| | (000) | | Value |
| Municipal Bonds | | | |
| California (concluded) | | | |
| Los Angeles Unified School District California, GO, Series D, 5.25%, 7/01/25 | \$ 3,485 | \$ | 4,285,853 |
| Manteca Financing Authority California, RB, Manteca Sewer (AGC): | | | |
| 5.63%, 12/01/33 | 2,450 | | 2,882,254 |
| 5.75%, 12/01/36 | 3,285 | | 3,865,394 |
| Redondo Beach Unified School District, GO, Election of 2008, Series E, 5.50%, 8/01/34 | 4,110 | | 5,015,392 |
| San Bernardino Community College District, GO, Election of 2002, Series A, 6.25%, 8/01/33 | 3,820 | | 4,640,230 |
| San Diego Public Facilities Financing Authority, Refunding RB, Series B (AGC), 5.38%, 8/01/34 | 4,690 | | 5,608,865 |
| State of California, GO, Various Purpose (AGC), 5.50%, 11/01/39 | 15,000 | | 17,969,100 |
| State of California, GO, Refunding, Various Purpose, 5.00%, 9/01/41 | 10,345 | | 11,944,130 |
| University of California, Refunding RB, Limited Project, Series G, 5.00%, 5/15/37 | 3,020 | | 3,618,655 |
| | | | 126,045,736 |

Edgar Filing: BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND - Form N-Q

Colorado 1.7%

| | | |
|---|-------|------------|
| City & County of Denver Colorado, Refunding RB, Airport System, Series B, 5.00%, 11/15/37 | 2,800 | 3,271,072 |
| Colorado Health Facilities Authority, RB, Hospital, NCMC, Inc. Project, Series B (AGM), 6.00%, 5/15/26 | 5,925 | 7,178,197 |
| | | 10,449,269 |

District of Columbia 0.2%

| | | |
|---|-------|-----------|
| District of Columbia Water & Sewer Authority, Refunding RB, Series A (NPFGC), 5.00%, 10/01/38 | 1,000 | 1,154,700 |
|---|-------|-----------|

Florida 5.7%

| | | |
|--|-------|-----------|
| City of Jacksonville Florida, Refunding RB, Sales Tax Revenue, Better Jacksonville, Series A, 5.00%, 10/01/30 | 3,500 | 4,197,900 |
| County of Lee Florida, Refunding ARB, Series A, AMT, 5.38%, 10/01/32 | 4,600 | 5,210,972 |
| County of Miami-Dade Florida, RB, Miami International Airport, Series A, AMT (NPFGC), 6.00%, 10/01/29 | 8,000 | 8,020,480 |
| County of Miami-Dade Florida, Refunding RB, Miami International Airport, Series A, AMT (AGM), 5.50%, 10/01/41 | 3,500 | 3,889,865 |
| Florida Housing Finance Corp., RB, Waverly Apartments, Series C-1, AMT (AGM), 6.30%, 7/01/30 | 2,055 | 2,059,315 |

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

NOVEMBER 30, 2012

1

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., Refunding RB, AMT (NPFGC) Homeowner Mortgage, Series 2: 5.75%, 7/01/14 | \$ 260 | \$ 260,793 |
| 5.90%, 7/01/29 | 5,225 | 5,283,311 |
| Jacksonville Florida Port Authority, Refunding RB, AMT, 5.00%, 11/01/38 | 3,880 | 4,315,957 |
| Manatee County Housing Finance Authority, RB, Series A, AMT (Ginnie Mae), 5.90%, 9/01/40 | 725 | 795,369 |
| Miami-Dade County Housing Finance Authority Florida, RB, Marbrisa Apartments Project, Series 2A, AMT (AGM), 6.00%, 8/01/26 | 2,185 | 2,189,632 |
| | | 36,223,594 |
| Illinois 17.2% | | |
| Chicago Illinois Board of Education, GO, Series A: 5.50%, 12/01/39 | 6,370 | 7,640,496 |
| 5.00%, 12/01/42 | 8,750 | 9,896,950 |
| Chicago Illinois Board of Education, GO, Refunding, Chicago School Reform Board (NPFGC), 5.50%, 12/01/26 | 1,620 | 2,087,451 |
| Chicago Transit Authority, RB: Federal Transit Administration Section 5309, Series A (AGC), 6.00%, 6/01/26 | 6,315 | 7,494,768 |
| Sales Tax Receipts Revenue, 5.25%, 12/01/36 | 1,960 | 2,307,371 |
| Sales Tax Receipts Revenue, 5.25%, 12/01/40 | 5,515 | 6,482,883 |
| City of Chicago Illinois, ARB, O Hare International Airport, General, Third Lien: Series A, 5.75%, 1/01/39 | 7,395 | 8,921,994 |
| Series C, 6.50%, 1/01/41 | 16,800 | 22,007,832 |
| City of Chicago Illinois, Refunding RB, Sales Tax Revenue, Series A, 5.25%, 1/01/38 | 2,445 | 2,907,447 |
| Cook County Forest Preserve District, GO: Series C, 5.00%, 12/15/32 | 1,790 | 2,114,438 |
| Refunding, Limited Tax Project, Series B, 5.00%, 12/15/32 | 840 | 992,250 |
| Illinois Finance Authority, RB: Carle Foundation, Series A, 6.00%, 8/15/41 | 4,000 | 4,903,120 |
| University of Chicago, Series B, 5.50%, 7/01/37 | 10,000 | 12,255,800 |
| | Par | |
| | (000) | Value |
| Municipal Bonds | | |
| Illinois (concluded) | | |
| Metropolitan Pier & Exposition Authority, Refunding RB, McCormick Place Expansion Project, Series B, 5.00%, 12/15/28 | \$ 4,645 | \$ 5,594,670 |
| Railsplitter Tobacco Settlement Authority, RB: 5.50%, 6/01/23 | 4,365 | 5,329,796 |
| 6.00%, 6/01/28 | 1,245 | 1,531,885 |
| State of Illinois, RB, Build Illinois, Series B, 5.25%, 6/15/26 | 5,625 | 6,708,881 |
| | | 109,178,032 |
| Indiana 3.3% | | |
| Indiana Finance Authority Waste Water Utility, RB, First Lien, CWA Authority, Series A, 5.00%, 10/01/41 | 4,080 | 4,729,699 |
| Indianapolis Local Public Improvement Bond Bank, Refunding RB, Waterworks Project, Series A (AGC), 5.50%, 1/01/38 | 14,105 | 16,298,892 |
| | | 21,028,591 |
| Kansas 1.4% | | |
| Kansas Development Finance Authority, Refunding RB, Adventist Health Sunbelt Obligation Group, Series A, 5.00%, 11/15/32 | 7,290 | 8,634,495 |
| Louisiana 0.2% | | |

Edgar Filing: BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND - Form N-Q

| | | |
|--|-------|------------|
| New Orleans Aviation Board Louisiana, Refunding GARB, Restructuring (AGC): | | |
| Series A-1, 6.00%, 1/01/23 | 500 | 607,345 |
| Series A-2, 6.00%, 1/01/23 | 720 | 874,577 |
| | | 1,481,922 |
| Massachusetts 0.4% | | |
| Massachusetts Development Finance Agency, RB, Wellesley College, Series J, 5.00%, 7/01/42 | 2,090 | 2,517,071 |
| Michigan 5.9% | | |
| City of Detroit Michigan, RB, Second Lien, Series B (AGM), 6.25%, 7/01/36 | 6,320 | 7,489,263 |
| City of Detroit Michigan, Refunding RB, Sewage Disposal System, Senior Lien (AGM): Series B, 7.50%, 7/01/33 | 2,780 | 3,545,417 |
| Series C-1, 7.00%, 7/01/27 | 9,055 | 11,477,212 |
| Hudsonville Public Schools, GO, School Building & Site (Q-SBLF), 5.25%, 5/01/41 | 6,015 | 6,986,062 |
| Royal Oak Hospital Finance Authority Michigan, Refunding RB, William Beaumont Hospital, 8.25%, 9/01/39 | 5,780 | 7,528,508 |
| | | 37,026,462 |

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

NOVEMBER 30, 2012

2

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

| | Par (000) | Value |
|--|--------------|--------------------------|
| Municipal Bonds | | |
| Minnesota 2.0% | | |
| City of Minneapolis Minnesota, Refunding RB, Fairview Health Services, Series B (AGC), 6.50%, 11/15/38 | \$ 9,900 | \$ 12,447,567 |
| Mississippi 2.2% | | |
| Medical Center Educational Building Corp., RB, University of Mississippi Medical Center Facilities Expansion & Renovation Project, Series A, 5.00%, 6/01/41 | 2,830 | 3,307,732 |
| Mississippi Development Bank, Refunding RB, City of Jacksonville Mississippi Water & Sewer System Project, Special Obligation, Series A (AGM), 5.00%, 9/01/30 | 9,030 | 10,817,128 14,124,860 |
| Nevada 4.0% | | |
| Clark County Water Reclamation District, GO, Series A, 5.25%, 7/01/34 | 5,850 | 7,220,772 |
| County of Clark Nevada, RB: Las Vegas-McCarran International Airport, Series A (AGC), 5.25%, 7/01/39 | 11,175 | 12,853,709 |
| Subordinate Lien, Series A-2 (NPFGC), 5.00%, 7/01/36 | 4,965 | 5,223,875 25,298,356 |
| New Jersey 3.6% | | |
| New Jersey Health Care Facilities Financing Authority, RB, Virtua Health (AGC), 5.50%, 7/01/38 | 6,500 | 7,393,685 |
| New Jersey Higher Education Student Assistance Authority, Refunding RB, Series 1, AMT, 5.75%, 12/01/28 | 4,475 | 5,183,124 |
| New Jersey Transportation Trust Fund Authority, RB, Transportation System: Series A, 5.50%, 6/15/41 | 5,410 | 6,531,060 |
| Series B, 5.25%, 6/15/36 | 2,960 | 3,519,884 22,627,753 |
| New York 11.6% | | |
| Metropolitan Transportation Authority, Refunding RB, Transportation, Series C, 5.00%, 11/15/28 | 5,500 | 6,673,040 |
| New York City Municipal Water Finance Authority, Refunding RB, Second General Resolution: Fiscal 2009, Series EE, 5.25%, 6/15/40 | 7,500 | 8,943,450 |
| Series FF-2, 5.50%, 6/15/40 | 4,000 | 4,931,680 |
| | Par | |
| | (000) | Value |
| Municipal Bonds | | |
| New York (concluded) | | |
| New York City Municipal Water Finance Authority, Refunding RB, Second General Resolution (concluded): Water & Sewer System, Fiscal 2011, Series EE, 5.38%, 6/15/43 | \$ 3,475 | \$ 4,277,690 |
| New York City Transitional Finance Authority, RB: Fiscal 2009, Series S-4 (AGC), 5.50%, 1/15/29 | 4,000 | 4,857,160 |
| Future Tax Secured, Sub-Series E-1, 5.00%, 2/01/42 | 7,210 | 8,555,170 |
| Sub-Series S-2A, 5.00%, 7/15/30 | 7,110 | 8,573,024 |
| New York State Dormitory Authority, RB, General Purpose, Series B: 5.00%, 3/15/37 | 9,900 | 11,804,661 |
| 5.00%, 3/15/42 | 9,655 | 11,477,478 |
| New York State Thruway Authority, Refunding RB, General, Series I, 5.00%, 1/01/37 | 2,890 | 3,404,507 73,497,860 |
| North Carolina 1.2% | | |
| | 6,305 | 7,513,290 |

Edgar Filing: BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND - Form N-Q

North Carolina Medical Care Commission, RB, Health Care Facilities, Duke University Health System,
Series A, 5.00%, 6/01/32

Pennsylvania 4.6%

Berks County Municipal Authority, Refunding RB, Reading Hospital & Medical Center, Series A,
5.00%, 11/01/40

Pennsylvania Higher Educational Facilities Authority, RB, 5.00%, 4/01/42

Pennsylvania Turnpike Commission, RB:

Motor License Fund- Enhanced Subordinate Special,
5.00%, 12/01/42

Sub-Series A, 6.00%, 12/01/41

Puerto Rico 1.2%

Puerto Rico Sales Tax Financing Corp., RB, First Sub-Series A, 6.38%, 8/01/39

Texas 19.3%

City of Houston Texas, Refunding RB, Combined First Lien, Series A (AGC):

6.00%, 11/15/35

6.00%, 11/15/36

| | | |
|--|--------|------------|
| | 4,425 | 5,041,181 |
| | 9,325 | 10,849,917 |
| | 6,480 | 7,537,990 |
| | 4,945 | 5,661,728 |
| | | 29,090,816 |
| | 6,610 | 7,705,607 |
| | 12,700 | 15,833,090 |
| | 9,435 | 11,827,716 |

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

NOVEMBER 30, 2012

3

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

| | Par | | Value |
|--|------------|----|--------------------|
| | (000) | | |
| Municipal Bonds | | | |
| Texas (concluded) | | | |
| City of Houston Texas, Refunding RB, Combined First Lien, Series A (AGC) (concluded): | | | |
| 5.38%, 11/15/38 | \$ 5,000 | \$ | 6,027,650 |
| Dallas Area Rapid Transit, Refunding RB, Senior Lien, 5.25%, 12/01/38 | 9,110 | | 10,805,189 |
| Dallas/Fort Worth International Airport, Joint RB, Series H, | | | |
| 5.00%, 11/01/42 (a) | 10,425 | | 11,546,522 |
| Dallas/Fort Worth International Airport, Joint Refunding RB, Series F, AMT, 5.00%, 11/01/35 | 10,000 | | 11,153,900 |
| Harris County Health Facilities Development Corp., Refunding RB, Memorial Hermann Healthcare | | | |
| System, Series B, 7.25%, 12/01/35 | 1,500 | | 1,901,565 |
| Katy ISD Texas, GO, Refunding, School Building, Series A, (PSF-GTD), 5.00%, 2/15/42 | 3,505 | | 4,180,273 |
| North Texas Tollway Authority, RB, Special Projects System, Series A, 5.50%, 9/01/41 | 3,500 | | 4,268,390 |
| North Texas Tollway Authority System, First Tier, Refunding RB:: | | | |
| (AGM), 6.00%, 1/01/43 | 5,555 | | 6,819,651 |
| Series B, 5.00%, 1/01/42 | 2,600 | | 2,979,652 |
| Series K-1 (AGC), | | | |
| 5.75%, 1/01/38 | 12,150 | | 14,135,188 |
| Tarrant County Cultural Education Facilities Finance Corp., Refunding RB, Christus Health, Series A | | | |
| (AGC), 6.50%, 7/01/37 | 1,770 | | 2,140,691 |
| Texas State Turnpike Authority, RB, Central Texas Turnpike System, First Tier, Series A (AMBAC), | | | |
| 5.00%, 8/15/42 | 4,165 | | 4,181,410 |
| Texas Tech University, Refunding RB, Improvement Bonds, 14th Series A, 5.00%, 8/15/32 | 1,500 | | 1,816,590 |
| Texas Transportation Commission, Refunding RB, Central Texas Turnpike System, First Tier, | | | |
| Series A, 5.00%, 8/15/41 | 2,070 | | 2,345,476 |
| University of Texas System, Refunding RB, Financing System, Series B, 5.00%, 8/15/43 | 8,495 | | 10,339,859 |
| | | | 122,302,812 |
| Utah 1.8% | | | |
| Utah Transit Authority, Refunding RB, Subordinated Sales Tax, | | | |
| 5.00%, 6/15/42 | 9,910 | | 11,517,105 |
| Virginia 2.5% | | | |
| Fairfax County IDA, RB, Health Care, Inova Health System Project, | | | |
| Series A, 5.00%, 5/15/40 | 3,230 | | 3,744,087 |
| | Par | | |
| | (000) | | Value |
| Municipal Bonds | | | |
| Virginia (concluded) | | | |
| Virginia Public School Authority, RB, School Financing, 6.50%, 12/01/35 | \$ 4,300 | \$ | 5,436,662 |
| Virginia Resources Authority, RB, | | | |
| Series A-1, 5.00%, 11/01/42 | 5,770 | | 6,940,271 |
| | | | 16,121,020 |
| Washington 1.8% | | | |
| City of Seattle Washington, Refunding RB, Series A, 5.25%, 2/01/36 | 4,200 | | 5,034,792 |
| State of Washington, GO, Various Purpose, Series B, 5.25%, 2/01/36 | 3,290 | | 4,011,727 |
| Washington Higher Education Facilities Authority, Refunding RB, The University of Puget Sound | | | |
| Project, Series A, 5.00%, 10/01/42 | 2,000 | | 2,294,380 |
| | | | 11,340,899 |
| Wisconsin 1.3% | | | |
| Wisconsin Health & Educational Facilities Authority, RB, Ascension Health, Series D, 5.00%, | | | |
| 11/15/41 | 5,800 | | 6,636,650 |
| Wisconsin Health & Educational Facilities Authority, Refunding RB, Froedtert Health, Inc., Series A, | | | |
| 5.00%, 4/01/42 | 1,470 | | 1,693,058 |
| | | | 8,329,708 |
| Total Municipal Bonds 119.6% | | | 757,635,052 |

Municipal Bonds Transferred to

Tender Option Bond (TOB) Trusts (b)

Alabama 1.1%

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

6,500

7,115,420

California 1.9%

California State University, Refunding RB, Systemwide, Series A (AGM),
5.00%, 11/01/32

7,960

9,126,140

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

2,400

2,799,816

11,925,956

District of Columbia 0.7%

District of Columbia Water & Sewer Authority, Refunding RB, Series A,
6.00%, 10/01/35 (c)

3,381

4,197,465

Florida 3.0%

County of Miami-Dade Florida, Refunding RB, Transit System, Sales Surtax, 5.00%, 7/01/42

3,060

3,558,199

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

NOVEMBER 30, 2012

4

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

| | Par | | Value |
|---|--------------|----|-------------------------|
| | (000) | | (000) |
| Municipal Bonds Transferred to | | | |
| Tender Option Bond (TOB) Trusts (b) | | | |
| Florida (concluded) | | | |
| Hillsborough County Aviation Authority, RB, Series A, AMT (AGC), 5.50%, 10/01/38 | \$ 10,657 | \$ | 11,838,367 |
| Lee County Housing Finance Authority, RB, Multi-County Program, Series A-2, AMT (Ginnie Mae), 6.00%, 9/01/40 | 3,120 | | 3,311,131 18,707,697 |
| Illinois 2.2% | | | |
| Chicago Transit Authority, Refunding RB, Federal Transit Administration Section 5309 (AGM), 5.00%, 6/01/28 | 7,737 | | 8,731,811 |
| City of Chicago Illinois, Refunding RB, Second Lien, Water Project, 5.00%, 11/01/42 | 4,358 | | 5,117,436 13,849,247 |
| Indiana 1.7% | | | |
| Indiana Health & Educational Facilities Financing Authority, Refunding RB, St. Francis, Series E (AGM), 5.25%, 5/15/41 | 9,850 | | 10,816,285 |
| Kentucky 0.1% | | | |
| Kentucky State Property & Building Commission, Refunding RB, Project No. 93 (AGC), 5.25%, 2/01/27 | 404 | | 476,133 |
| Massachusetts 1.8% | | | |
| Massachusetts School Building Authority, Sales Tax RB, Senior-Series B, 5.00%, 10/15/41 | 9,440 | | 11,291,090 |
| Nevada 2.5% | | | |
| Clark County Water Reclamation District, GO: Limited Tax, 6.00%, 7/01/38 | 8,000 | | 9,897,840 |
| Series B, 5.50%, 7/01/29 | 5,008 | | 6,257,061 16,154,901 |
| New Jersey 3.6% | | | |
| New Jersey EDA, RB, School Facilities Construction, Series Z (AGC), 6.00%, 12/15/34 | 4,350 | | 5,310,611 |
| New Jersey State Housing & Mortgage Finance Agency, RB, S/F Housing, Series CC, 5.25%, 10/01/29 | 7,402 | | 8,319,679 |
| New Jersey Transportation Trust Fund Authority, RB, Transportation System, Series A (AGM), 5.00%, 12/15/32 | 8,000 | | 9,229,440 22,859,730 |
| New York 13.7% | | | |
| Hudson New York Yards Infrastructure Corp., RB, Series A, 5.75%, 2/15/47 | 9,249 | | 11,235,193 |
| | Par | | |
| | (000) | | Value |
| Municipal Bonds Transferred to | | | |
| Tender Option Bond (TOB) Trusts (b) | | | |
| New York (concluded) | | | |
| New York City Municipal Water Finance Authority, Refunding RB: Series FF, 5.00%, 6/15/45 | \$ 11,236 | \$ | 13,252,516 |
| Series FF-2, 5.50%, 6/15/40 | 4,994 | | 6,157,050 |
| New York City Transitional Finance Authority, RB: Fiscal 2009, Series S-3, 5.25%, 1/15/39 | 5,619 | | 6,446,420 |
| Future Tax Secured, Sub-Series E1, 5.00%, 2/01/42 | 5,439 | | 6,453,680 |
| New York Liberty Development Corp., RB, World Trade Center Port Authority, Series 1, 5.25%, 12/15/43 | 13,950 | | 16,576,985 |

Edgar Filing: BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND - Form N-Q

| | | |
|--|--------|--------------------------|
| New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 | 8,200 | 10,031,962 |
| New York State Dormitory Authority, ERB, Short Term Personal Income, Tax Revenue Education, Series B, 5.25%, 3/15/38 | 13,500 | 16,546,545 86,700,351 |
| Puerto Rico 1.0% | | |
| Puerto Rico Sales Tax Financing Corp., Sales Tax, Refunding RB, Series C, 5.25%, 8/01/40 | 5,590 | 6,289,253 |
| Texas 6.3% | | |
| City of San Antonio Texas, Refunding RB, Series A, 5.25%, 2/01/31 (c) | 12,027 | 14,643,509 |
| North Texas Tollway Authority, RB, Special Projects System, Series A, 5.50%, 9/01/41 | 9,640 | 11,756,366 |
| Waco Educational Finance Corp., Refunding RB, Baylor University, 5.00%, 3/01/43 | 11,250 | 13,274,775 39,674,650 |
| Utah 1.1% | | |
| City of Riverton Utah Hospital, RB, IHC Health Services, Inc., 5.00%, 8/15/41 | 6,373 | 7,113,777 |
| Washington 1.6% | | |
| University of Washington, Refunding RB, Series A, 5.00%, 7/01/41 | 8,698 | 10,459,285 |
| Total Municipal Bonds Transferred to Tender | | |
| Option Bond (TOB) Trusts 42.3% | | 267,631,240 |
| Total Long-Term Investments | | |
| (Cost \$907,880,254) 161.9% | | 1,025,266,292 |

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

NOVEMBER 30, 2012

5

Schedule of Investments (continued)

BlackRock MuniHoldings Investment Quality Fund (MFL)

(Percentages shown are based on Net Assets)

| | Par (000) | Value |
|---|--------------|----------------|
| Short-Term Securities | | |
| Alabama 0.00% | | |
| Eutaw Industrial Development Board, Refunding RB, VRDN, Alabama Power Co. Project, 0.17%, 1/08/13 (d) | \$ 200 | \$ 200,000 |
| Money Market Funds 2.1% | | |
| FFI Institutional Tax-Exempt Fund, 0.01%(e)(f) | 13,397,263 | 13,397,263 |
| Total Short-Term Securities | | |
| (Cost \$13,597,263) 2.1% | | 13,597,263 |
| Total Investments | | |
| (Cost - \$921,477,517*) 164.0% | | 1,038,863,555 |
| Other Assets Less Liabilities 0.1% | | 531,808 |
| Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable (20.7)% | | (131,421,793) |
| VRDP Shares, at Liquidation Value (43.4)% | | (274,600,000) |
| Net Assets Applicable to Common Shares 100.0% | | \$ 633,373,570 |

* As of November 30, 2012, gross unrealized appreciation and gross unrealized depreciation based on cost for federal income tax purposes were as follows:

| | |
|-------------------------------|----------------|
| Tax cost | \$ 791,313,443 |
| Gross unrealized appreciation | \$ 117,386,044 |
| Gross unrealized depreciation | (1,158,631) |
| Net unrealized appreciation | \$ 116,227,413 |

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

| Counterparty | Value | Unrealized Appreciation |
|---------------------|---------------|----------------------------|
| Merill Lynch Pierce | \$ 11,546,522 | \$ 93,304 |

- (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) 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 is \$9,707,818.
- (d) Variable rate security. Rate shown is as of report date and maturity shown is the date the principal owed can be recovered through demand.
- (e) Investments in issuers considered to be an affiliate of the Fund during the period ended November 30, 2012, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Edgar Filing: BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND - Form N-Q

| Affiliate | Shares Held at August 31, 2012 | Net Activity | Shares | |
|-----------------------------------|---|-----------------|---------------------------------|--------|
| | | | Held at November 30, 2012 | Income |
| FFI Institutional Tax-Exempt Fund | 687,432 | 12,709,831 | 13,397,263 | \$ 779 |

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

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. |
| AMBAC | American Municipal Bond Assurance Corp. |
| AMT | Alternative Minimum Tax (subject to) |
| ARB | Airport Revenue Bonds |
| EDA | Economic Development Authority |
| ERB | Education Revenue Bonds |
| GARB | General Airport Revenue Bonds |
| Ginnie Mae | Government National Mortgage Association |
| GO | General Obligation Bonds |
| IDA | Industrial Development Authority |
| IDB | Industrial Development Board |
| ISD | Independent School District |
| NPFGC | National Public Finance Guarantee Corp. |
| PSF-GTD | Permanent School Fund Guaranteed |
| Q-SBLF | Qualified School Bond Loan Fund |
| RB | Revenue Bonds |
| S/F | Single-Family |
| VRDN | Variable Rate Demand Notes |

BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND

NOVEMBER 30, 2012

6

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 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 and 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)

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 level in the fair value hierarchy within which the fair value measurement falls in its entirety 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 is based on the pricing transparency of the investment 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 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 Fund's investments categorized in the disclosure hierarchy as of November 30, 2012:

| | Level 1 | Level 2 | Level 3 | Total |
|------------------------------------|---------------|------------------|---------|------------------|
| Assets: | | | | |
| Investments: | | | | |
| Long-Term Investments ¹ | | \$ 1,025,266,292 | | \$ 1,025,266,292 |
| Short-Term Securities | \$ 13,397,263 | 200,000 | | 13,597,263 |
| Total | \$ 13,397,263 | \$ 1,025,466,292 | | \$ 1,038,863,555 |

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

Certain of the Fund's liabilities are held at carrying amount, which approximates fair value for financial reporting purposes. As of November 30, 2012, such liabilities are categorized within the disclosure hierarchy as follows:

| | Level 1 | Level 2 | Level 3 | Total |
|------------------------|---------|------------------|---------|------------------|
| Liabilities: | | | | |
| TOB trust certificates | | \$ (131,322,699) | | \$ (131,322,699) |
| VRDP Shares | | (274,600,000) | | (274,600,000) |
| Total | | \$ (405,922,699) | | \$ (405,922,699) |

There were no transfers between levels during the period ended November 30, 2012.

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

Edgar Filing: BLACKROCK MUNIHOLDINGS INVESTMENT QUALITY FUND - Form N-Q

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, 2013

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, 2013

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

Date: January 23, 2013