

BLACKROCK MUNI INTERMEDIATE DURATION FUND, INC.

Form N-Q

March 23, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM N-Q

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED

MANAGEMENT INVESTMENT COMPANY

Investment Company Act file number: 811-21348

Name of Fund: BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock Muni Intermediate Duration Fund, Inc., 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: 04/30/2017

Date of reporting period: 01/31/2017

Item 1 Schedule of Investments

Schedule of Investments January 31, 2017 (Unaudited)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

(Percentages shown are based on Net Assets)

	Par (000)	Value
Municipal Bonds		
Alabama 3.0%		
City of Birmingham Alabama Special Care Facilities Financing Authority, RB, Children s Hospital (AGC), 6.00%, 6/01/19 (a)	\$ 4,615	\$ 5,116,881
County of Jefferson Alabama, RB, Limited Obligation School, Series A:		
5.50%, 1/01/21	5,500	5,522,385
5.25%, 1/01/23	6,500	6,526,455
		17,165,721
Arizona 3.6%		
Arizona Board of Regents, University of Arizona, RB, 5.00%, 8/01/28	2,000	2,225,840
Arizona Health Facilities Authority, Refunding RB, Phoenix Children s Hospital, Series A, 5.00%, 2/01/30	2,685	2,894,886
Arizona State University, RB, Series D, 5.00%, 7/01/32	1,350	1,550,570
City of Phoenix Arizona IDA, RB, Facility, Legacy Traditional Schools Project, Series A, 5.75%, 7/01/24 (b)	750	821,895
City of Tucson Arizona, COP, Refunding, (AGC), 4.00%, 7/01/20	2,325	2,499,328
County of Pinal Arizona Electric District No. 3, Refunding RB, 5.00%, 7/01/21 (a)	1,600	1,834,000
Glendale Union School District No. 205, GO, Series C:		
5.00%, 7/01/24	1,945	2,245,308
5.00%, 7/01/27	500	565,760
Phoenix-Mesa Gateway Airport Authority, RB, Mesa Project, AMT:		
5.00%, 7/01/27	700	771,715
5.00%, 7/01/32	1,925	2,084,063
Scottsdale IDA, Refunding RB, Scottsdale Healthcare, Series C (AGM), 5.00%, 9/01/35	2,050	2,199,076
State of Arizona, COP, Department of Administration, Series A (AGM), 4.25%, 10/01/23	1,000	1,050,990
		20,743,431
Arkansas 1.0%		
Arkansas State University, RB, 5.00%, 12/01/33	480	534,192
City of Benton, RB, 5.00%, 6/01/29	1,055	1,202,246
	Par (000)	Value
Municipal Bonds		
Arkansas (continued)		
University of Arkansas, Refunding RB:		
5.00%, 3/01/31	\$ 2,315	\$ 2,659,426
5.00%, 3/01/34	1,270	1,439,393
		5,835,257
California 4.1%		
California Health Facilities Financing Authority, RB, Sutter Health, Series B, 5.00%, 8/15/22	2,135	2,406,358
California Health Facilities Financing Authority, Refunding RB, 5.00%, 11/15/29	1,930	2,253,391
California Infrastructure & Economic Development Bank, Refunding RB, 4.00%, 11/01/31	1,335	1,385,343
California Pollution Control Financing Authority, RB, Mandatory Put Bonds, Republic Services, Inc. Project, Series B, AMT, 5.25%, 6/01/23 (c)	605	620,923
California Pollution Control Financing Authority, Refunding RB, Pacific Gas, Series C, AMT (NPFGC), 4.75%, 12/01/23	5,000	5,059,250
City of San Jose California, Refunding ARB, Series A-1, AMT, 5.00%, 3/01/25	2,000	2,176,860
State of California, GO:		
5.50%, 4/01/28	15	15,052
Various Purposes, 5.00%, 11/01/17 (a)	1,235	1,273,841
Various Purposes, 5.75%, 4/01/31	7,000	7,635,670
Various Purposes, 5.00%, 11/01/32	765	785,043
		23,611,731
Colorado 1.0%		
Denver Urban Renewal Authority, Refunding, Tax Allocation Bond, Stapleton, Senior-Series A-1, 5.00%, 12/01/23	2,500	2,856,275
Park Creek Metropolitan District, Refunding, Tax Allocation Bonds, 5.00%, 12/01/34	500	539,965

BLACKROCK MUNI INTERMEDIATE DURATION FUND, INC.

JANUARY 31, 2017

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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

	Par	
	(000)	Value
Municipal Bonds		
Colorado (continued)		
University of Northern Colorado, Refunding RB, Series A, 5.00%, 6/01/31	\$ 2,000	\$ 2,267,100
		5,663,340
Connecticut 3.2%		
Connecticut State Health & Educational Facility Authority, Refunding RB:		
5.00%, 12/01/33	3,015	3,385,061
Lawrence & Memorial Hospital, Series F, 5.00%, 7/01/31	4,530	4,857,474
University of Connecticut, RB, Series A:		
5.00%, 3/15/31	5,025	5,684,531
5.00%, 3/15/32	4,000	4,501,560
		18,428,626
Florida 6.9%		
County of Broward Florida School Board, COP, Refunding, Series A (AGM), 5.00%, 7/01/24	10,000	11,067,800
County of Lee Florida, Refunding ARB, Series A, AMT:		
5.50%, 10/01/23	1,000	1,133,150
(AGM), 5.00%, 10/01/27	1,635	1,800,707
County of Miami-Dade Florida, RB, AMT, Series B:		
6.00%, 10/01/28	3,470	4,098,625
6.00%, 10/01/29	3,480	4,096,064
County of Miami-Dade Florida Educational Facilities Authority, Refunding RB, Series A, 5.00%, 4/01/32	5,020	5,569,439
County of Miami-Dade Florida Transit System Sales Surtax Revenue, Refunding RB, 5.00%, 7/01/32	1,500	1,668,750
County of Miami-Dade Florida Water & Sewer System Revenue, Refunding RB, Series C (BHAC),		
5.00%, 10/01/18 (a)	8,000	8,514,400
Midtown Miami Community Development District, Refunding, Special Assessment Bonds, Series A,		
4.25%, 5/01/24	1,665	1,717,381
	Par	
	(000)	Value
Municipal Bonds		
Florida (continued)		
Sterling Hill Community Development District, Refunding RB, Special Assessment Bonds, Series B,		
5.50%, 11/01/10 (d)(e)	\$ 150	\$ 104,975
		39,771,291
Georgia 2.0%		
City of Atlanta Georgia Water & Wastewater Revenue RB, Refunding RB, 5.00%, 11/01/32	10,000	11,506,800
Hawaii 1.0%		
State of Hawaii Airports System, Refunding ARB, Series A, 5.25%, 7/01/29	5,000	5,553,250
Idaho 0.5%		
Boise State University, Refunding RB, Series A:		
5.00%, 4/01/32	1,300	1,499,082
5.00%, 4/01/33	1,000	1,147,980
		2,647,062
Illinois 16.7%		
City of Chicago Illinois Midway International Airport, Refunding ARB, 2nd Lien, Series A:		
5.00%, 1/01/32	5,000	5,380,700
AMT, 5.50%, 1/01/32	1,500	1,678,575
City of Chicago Illinois O Hare International Airport, Refunding GARB, AMT, Series C:		
5.25%, 1/01/28	1,350	1,521,315
5.25%, 1/01/29	3,020	3,391,007
City of Chicago Illinois O Hare International Airport, RB, Refunding GARB, 5.00%, 1/01/32	3,745	4,127,664
City of Chicago Illinois O Hare International Airport, Refunding GARB, Senior Lien, Series A, AMT,		
5.00%, 1/01/23	13,000	14,632,150
City of Chicago Illinois Transit Authority, RB, 5.25%, 12/01/31	3,700	3,992,263
Madison-Macoupin Etc. Counties Community College District No. 536, GO, Refunding, Lewis & Clark		
Community College:		
5.00%, 5/01/30	475	515,133
5.00%, 5/01/31	500	542,245

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5.00%, 5/01/32	500	541,265
McHenry County Conservation District, GO, 5.13%, 2/01/17 (a)	12,695	12,695,000

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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

	Par (000)	Value
Municipal Bonds		
Illinois (continued)		
Railsplitter Tobacco Settlement Authority, RB:		
5.50%, 6/01/23	\$ 3,500	\$ 3,944,815
6.25%, 6/01/24	11,750	11,783,370
State of Illinois, GO:		
5.25%, 2/01/30	5,000	5,125,950
5.00%, 5/01/30	10,000	10,104,300
State of Illinois Toll Highway Authority, RB, Series A, 5.00%, 1/01/34	9,140	10,103,173
State of Illinois Toll Highway Authority, Refunding RB, Senior Series A, 5.00%, 12/01/31	5,220	5,891,919
		95,970,844
Indiana 6.1%		
City of Whiting Indiana, RB, BP Products North America, Inc. Project, 5.25%, 1/01/21	4,800	5,348,352
County of Jasper Indiana, Refunding RB, Northern Indiana Public Service Co., Series C (NPFGC), 5.85%, 4/01/19	2,000	2,157,420
Indiana Finance Authority, RB, Wastewater, 1st Lien, Series A, 5.25%, 10/01/31	10,000	11,280,300
Indiana Finance Authority, Refunding RB, US Steel Corp. Project, 6.00%, 12/01/19	5,000	5,144,000
Indiana Municipal Power Agency, Refunding RB, Series A, 5.00%, 1/01/33	10,000	11,314,200
		35,244,272
Iowa 1.4%		
Iowa Higher Education Loan Authority, RB, Private College Facility:		
5.25%, 4/01/23	695	785,308
5.25%, 4/01/24	730	823,608
5.25%, 4/01/25	520	585,791
5.25%, 4/01/26	360	404,474
Iowa Higher Education Loan Authority, Refunding RB:		
Drake University Project, 4.00%, 4/01/27	620	668,707
Drake University Project, 4.00%, 4/01/28	750	800,235
Private College Facility, 5.00%, 9/01/20 (a)	2,315	2,599,745
Municipal Bonds		
Iowa (continued)		
Iowa Higher Education Loan Authority, Refunding RB (continued):		
Private College Facility, Upper Iowa University Project, 5.00%, 9/01/20 (f)	\$ 1,000	\$ 1,121,140
		7,789,008
Kansas 1.4%		
Kansas Development Finance Authority, Refunding RB, Adventist Health System/Sunbelt Obligated Group, Series C, 5.00%, 11/15/23	1,500	1,627,080
Seward County Unified School District No 480 Liberal, GO, Refunding:		
5.00%, 9/01/33	1,005	1,153,590
5.00%, 9/01/33	4,995	5,529,265
		8,309,935
Louisiana 4.1%		
City of Bossier City Louisiana Utilities, Refunding RB, 5.00%, 10/01/32	2,000	2,273,520
City of New Orleans Louisiana Aviation Board, Refunding GARB, Restructuring, Series A-2 (AGC), 6.00%, 1/01/23	850	917,116
Louisiana Local Government Environmental Facilities & Community Development Authority, Refunding RB, BRCC Facilities Corp. Project:		
5.00%, 12/01/27	3,445	3,820,057
5.00%, 12/01/28	3,715	4,119,452
New Orleans Aviation Board, RB, Series A:		
5.00%, 1/01/32	1,000	1,110,210
5.00%, 1/01/33	1,000	1,106,550
State of Louisiana Gasoline & Fuels Tax Revenue, Refunding RB, 4.00%, 5/01/34	5,750	5,964,820

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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

	Par (000)	Value
Municipal Bonds		
Louisiana (continued)		
Terrebonne Levee & Conservation District, RB, Sales Tax, 5.00%, 7/01/28	\$ 3,660	\$ 4,028,196
		23,339,921
Maine 0.3%		
Portland Housing Development Corp., Refunding RB, Senior Living, Retirement Facilities, Series A, 6.00%, 2/01/34	1,965	1,967,122
Maryland 0.8%		
Maryland EDC, RB, Transportation Facilities Project, Series A, 5.13%, 6/01/20	1,615	1,707,249
Maryland Health & Higher Educational Facilities Authority, RB, Johns Hopkins Health System, Series B, 5.00%, 7/01/33	1,140	1,253,179
Maryland Health & Higher Educational Facilities Authority, Refunding RB, 5.00%, 7/01/33	1,500	1,662,345
		4,622,773
Massachusetts 0.8%		
Massachusetts Development Finance Agency, RB, Dana-Farber Cancer Institute Issue, Series N, 5.00%, 12/01/33	1,300	1,464,450
Massachusetts Development Finance Agency, Refunding RB, 5.00%, 1/01/31	1,730	1,851,186
Massachusetts Health & Educational Facilities Authority, Refunding RB, Winchester Hospital, 5.00%, 7/01/25	1,060	1,148,065
		4,463,701
Michigan 3.2%		
Manistee Area Public Schools, GO, Refunding, (Q-SBLF), 5.00%, 5/01/25	1,000	1,105,440
Michigan Finance Authority, Refunding RB, Senior Lien, Detroit Water and Sewer, Series C-3 (AGM), 5.00%, 7/01/31	4,000	4,444,000
Michigan State Building Authority, Refunding RB, Facilities Program, Series II-A, 5.00%, 10/15/24	2,500	2,794,550
	Par (000)	Value
Municipal Bonds		
Michigan (continued)		
Michigan State Hospital Finance Authority, Refunding RB, Henry Ford Health System, 5.25%, 11/15/19 (a)	\$ 4,900	\$ 5,415,186
State of Michigan, Refunding RB, Grant Anticipation Bonds, 5.00%, 3/15/25	3,750	4,414,650
		18,173,826
Minnesota 1.2%		
City of Minneapolis, RB, YMCA of the Greater Twin Cities Project:		
4.00%, 6/01/30	150	155,337
4.00%, 6/01/31	50	51,452
Minnesota Higher Education Facilities Authority, Refunding RB, University of St. Thomas, Series 8-L, 5.00%, 4/01/35	500	557,525
University of Minnesota, RB, Biomedical Science Research Facilities Funding Program:		
Series B, 5.00%, 8/01/36	1,000	1,111,970
Series C, 5.00%, 8/01/27	1,390	1,605,853
Series C, 5.00%, 8/01/28	740	852,110
Series C, 5.00%, 8/01/29	1,555	1,781,968
Series C, 5.00%, 8/01/30	835	953,603
		7,069,818
Montana 0.4%		
County of Gallatin Montana School District No 7 Bozeman, GO, 4.00%, 12/01/31	340	362,352
County of Yellowstone Montana School District No. 2 Billings, GO, 5.00%, 6/15/30	500	572,080
Montana State Board of Regents, RB, 5.00%, 11/15/30	1,000	1,148,440
		2,082,872
Nebraska 1.1%		
County of Douglas Nebraska Hospital Authority No. 3, Refunding RB, 5.00%, 11/01/30	800	886,760
County of Lancaster Nebraska Hospital Authority No. 1, Refunding RB, Immanuel Obligation Group, 5.50%, 1/01/30	1,000	1,089,750
Nebraska Public Power District, Refunding RB:		
Series A, 5.00%, 1/01/30	1,000	1,105,210

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Series A, 5.00%, 1/01/32	2,000	2,206,540
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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

	Par	
	(000)	Value
Municipal Bonds		
Nebraska (continued)		
Nebraska Public Power District, Refunding RB (continued):		
Series A-1, 3.00%, 1/01/33	\$ 900	\$ 835,614
		6,123,874
Nevada 1.7%		
County of Clark Nevada Department of Aviation, Refunding RB, 5.00%, 7/01/33	5,000	5,579,400
County of Humboldt Nevada, Refunding RB, Idaho Power Co. Project, 5.15%, 12/01/24	3,800	4,079,908
		9,659,308
New Jersey 23.4%		
County of Essex New Jersey Improvement Authority, LRB, Newark Project, Series A (AGM), 5.00%, 11/01/20	2,000	2,160,160
New Jersey EDA, RB, AMT:		
Continental Airlines, Inc. Project, 5.13%, 9/15/23	6,040	6,379,508
Goethals Bridge Replacement Project, Private Activity Bond, 5.50%, 1/01/26	1,500	1,688,715
Goethals Bridge Replacement Project, Private Activity Bond, 5.50%, 1/01/27	1,000	1,124,500
New Jersey EDA, Refunding RB:		
New Jersey American Water Co., Series E, AMT, 4.70%, 12/01/25	3,000	3,193,140
School Facilities Construction, Series AA, 4.25%, 12/15/24	3,850	3,851,078
School Facilities Construction, Series EE, 5.00%, 9/01/23	3,465	3,590,676
New Jersey Educational Facilities Authority, RB, Higher Education Facilities Trust Fund, 5.00%, 6/15/28	10,000	10,242,000
New Jersey Educational Facilities Authority, Refunding RB, 5.00%, 7/01/30	5,000	5,585,050
New Jersey Higher Education Student Assistance Authority, Refunding RB:		
Series 1, AMT, 5.50%, 12/01/26	1,195	1,297,734
Student Loan, Series 1A, 4.75%, 12/01/21	1,470	1,558,362
New Jersey State Turnpike Authority, 5.00%, 1/01/32	12,000	13,535,520
	Par	
	(000)	Value
Municipal Bonds		
New Jersey (continued)		
New Jersey State Turnpike Authority, Refunding RB, Series B, 5.00%, 1/01/29	\$ 10,000	\$ 11,261,400
New Jersey Transportation Trust Fund Authority, RB:		
Federal Highway Reimbursement Revenue Notes, Series A, 5.00%, 6/15/30	2,000	2,103,960
Federal Highway Reimbursement Revenue Notes, Series A-2, 5.00%, 6/15/30	10,000	10,240,800
Series B, 5.25%, 6/15/26	3,500	3,673,880
Transportation Program, Series AA, 5.25%, 6/15/31	12,000	12,312,600
Transportation Program, Series AA, 5.25%, 6/15/32	2,250	2,314,305
Transportation System, Series A, 5.25%, 6/15/24	3,185	3,394,509
Transportation System, Series B, 5.50%, 6/15/31	13,970	14,620,164
Transportation System, Series C, 5.25%, 6/15/32	10,000	10,271,800
Newark Housing Authority, RB, Series A:		
5.00%, 12/01/23	1,230	1,399,642
5.00%, 12/01/25	1,345	1,512,533
South Jersey Port Corp., RB, Marine Terminal, Series O-1 (AGC), 4.63%, 1/01/19 (a)	1,375	1,465,035
State of New Jersey, GO, Various Purposes, 5.00%, 6/01/28	5,000	5,564,250
		134,341,321
New Mexico 1.2%		
Albuquerque Municipal School District No 12, GO, Series 2017, 5.00%, 8/01/30	1,250	1,471,150
County of Albuquerque Bernalillo New Mexico Water Utility Authority, Refunding RB, 4.00%, 7/01/33	2,510	2,636,253
New Mexico Hospital Equipment Loan Council, Refunding RB, 5.00%, 8/01/31	2,500	2,834,575
		6,941,978
New York 18.5%		
Build NYC Resource Corp., Refunding RB, 5.00%, 7/01/33	3,085	3,304,806

BLACKROCK MUNI INTERMEDIATE DURATION FUND, INC.

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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

	Par	
	(000)	Value
Municipal Bonds		
New York (continued)		
City of New York New York, GO, Refunding, Series A, 5.00%, 8/01/29	\$ 6,125	\$ 7,135,502
City of New York New York, GO:		
Sub-Series B-1, 5.25%, 9/01/22	4,250	4,526,505
Sub-Series I-1, 5.50%, 4/01/21	5,000	5,471,400
Sub-Series-D- 1, 5.13%, 12/01/17 (a)	2,730	2,825,768
Sub-Series-D- 1, 5.13%, 12/01/26	1,885	1,947,676
City of New York New York Transitional Finance Authority, BARB, Fiscal 2009, Series S-3, 5.00%, 1/15/23	3,560	3,800,371
County of Monroe New York Industrial Development Corp., Refunding RB, Series A, 5.00%, 7/01/29	5,695	6,563,374
County of Nassau New York, GO, Series A, 5.00%, 1/01/33	3,110	3,525,714
County of Westchester New York Healthcare Corp., Refunding RB, Senior Lien, Remarketing, Series A: 5.00%, 11/01/24	5,470	6,067,433
5.00%, 11/01/30	655	709,692
Long Island Power Authority, Refunding RB, Electric System, Series A, 5.50%, 4/01/19 (a)	1,000	1,092,250
Metropolitan Transportation Authority, RB:		
Sub-Series B-1, 5.00%, 11/15/24	2,300	2,632,511
Sub-Series B-4, 5.00%, 11/15/24	1,500	1,716,855
New York City Trust for Cultural Resources, Refunding RB, Carnegie Hall, Series A, 5.00%, 12/01/29	2,750	2,987,050
New York State Dormitory Authority, RB, North Shore-Long Island Jewish Health System, Series A, 5.50%, 5/01/19 (a)	1,495	1,637,623
New York State Dormitory Authority, Refunding RB:		
4.25%, 9/01/19 (a)	480	515,933
5.00%, 7/01/30	1,555	1,799,804
New York State Thruway Authority, RB, Junior Lien, Series A:		
5.00%, 1/01/33	4,500	5,075,550
5.00%, 1/01/34	2,000	2,244,300
	Par	
	(000)	Value
Municipal Bonds		
New York (continued)		
Port Authority of New York & New Jersey, ARB, JFK International Air Terminal LLC Project, 5.00%, 12/01/20	\$ 2,475	\$ 2,714,011
Port Authority of New York & New Jersey, Refunding ARB, Consolidated, 152nd Series, AMT, 5.00%, 11/01/23	1,000	1,044,990
Port Authority of New York & New Jersey, Refunding RB, 5.00%, 11/01/28	6,185	7,269,663
State of New York Dormitory Authority, RB:		
Fordham University, Series A, 5.25%, 7/01/25	900	1,009,692
Icahn School of Medicine at Mount Sinai, Series A, 5.00%, 7/01/32	9,000	9,935,190
Mental Health Services (AGM), 5.00%, 8/15/18 (a)	10	10,610
Mental Health Services (AGM), 5.00%, 8/15/18 (a)	3,625	3,846,016
Mental Health Services (AGM), 5.00%, 8/15/18 (a)	30	31,829
Mental Health Services (AGM), 5.00%, 2/15/22	325	343,467
Mental Health Services, 2nd Series (AGM), 5.00%, 8/15/18 (a)	10	10,610
Municipal Health Facilities Lease, Sub-Series 2-4, 5.00%, 1/15/27	6,900	7,142,742
New York University Hospitals Center, Series A, 5.00%, 7/01/20 (a)	1,725	1,930,844
New York University Hospitals Center, Series A, 5.13%, 7/01/20 (a)	1,670	1,876,212
State of New York Dormitory Authority, Refunding RB, North Shore-Long Island Jewish Obligated Group, Series A, 5.00%, 5/01/32	3,060	3,425,854
		106,171,847
North Carolina 0.3%		
North Carolina Medical Care Commission, Refunding RB, WakeMed, Series A, 5.00%, 10/01/31	1,500	1,646,190

Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

	Par	
	(000)	Value
Municipal Bonds		
Ohio 1.2%		
State of Ohio Turnpike Commission, RB, Junior Lien, Infrastructure Projects, Series A-1, 5.25%, 2/15/31	\$ 6,000	\$ 6,843,660
Oklahoma 0.8%		
Oklahoma City Public Property Authority, Refunding RB:		
5.00%, 10/01/27	1,190	1,368,203
5.00%, 10/01/28	1,265	1,444,579
5.00%, 10/01/29	1,400	1,588,790
		4,401,572
Oregon 2.3%		
County of Klamath Oregon School District, GO:		
5.00%, 6/15/30	1,000	1,140,070
5.00%, 6/15/31	1,000	1,135,040
County of Umatilla Oregon School District No. 16R Pendleton, GO, Series A, 5.00%, 6/15/32	2,000	2,274,060
County of Yamhill Oregon School District No. 40 McMinnville, GO, 4.00%, 6/15/33	1,380	1,464,152
Klamath Falls Intercommunity Hospital Authority, Refunding RB, Sky Lakes Medical Center Project:		
5.00%, 9/01/30	400	453,592
5.00%, 9/01/31	300	338,445
5.00%, 9/01/32	540	606,388
Oregon Health & Science University, Refunding RB, Series B, 5.00%, 7/01/33	1,500	1,727,205
Oregon State Facilities Authority, Refunding RB, Reed College Project, Series A, 5.00%, 7/01/29	1,835	2,012,078
State of Oregon, GO, Series H, 5.00%, 5/01/36	2,000	2,230,940
		13,381,970
Pennsylvania 4.3%		
City of Philadelphia Pennsylvania, ARB, Series A, AMT, 5.00%, 6/15/20	2,895	2,937,238
County of Allegheny Pennsylvania, GO, Refunding, Series C-68, 5.00%, 11/01/25	2,515	2,821,604
County of Allegheny Pennsylvania, GO, Series C-67:		
5.00%, 11/01/25	2,700	3,038,229
5.00%, 11/01/26	2,375	2,646,391
	Par	
Municipal Bonds	(000)	Value
Pennsylvania (continued)		
Pennsylvania Turnpike Commission, RB:		
Series B, 5.00%, 12/01/32	\$ 1,500	\$ 1,680,525
Sub-Series B, 5.25%, 12/01/31	4,000	4,401,960
South Fork Municipal Authority, Refunding RB, Conemaugh Valley Memorial Hospital, Series A (AGC), 6.00%, 7/01/20 (a)	6,225	7,163,481
		24,689,428
Puerto Rico 1.6%		
Puerto Rico Housing Finance Authority, Refunding RB, M/F Housing, Subordinate, Capital Fund Modernization, 5.13%, 12/01/27	9,000	9,493,560
Rhode Island 1.9%		
Narragansett Bay Commission, Refunding RB, Series B, 5.00%, 9/01/32	4,150	4,718,176
Providence Redevelopment Agency, Refunding RB, Series A, 5.00%, 4/01/29	1,000	1,086,830
Rhode Island Health & Educational Building Corp., RB, City of Newport Issue Financing Program, Series C, 5.00%, 5/15/30	2,305	2,556,499
Rhode Island Health & Educational Building Corp., Refunding RB, 5.00%, 9/01/32	2,000	2,289,980
		10,651,485
South Carolina 2.2%		
South Carolina Public Service Authority, Refunding RB, Series A:		
5.00%, 12/01/30	5,500	6,326,650
5.00%, 12/01/31	5,660	6,466,380
		12,793,030

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South Dakota 0.2%

South Dakota Health & Educational Facilities Authority, Refunding RB, Regional Health, 5.00%, 9/01/25	1,000	1,091,140
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BLACKROCK MUNI INTERMEDIATE DURATION FUND, INC.

JANUARY 31, 2017

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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

	Par	
	(000)	Value
Municipal Bonds		
Tennessee 2.0%		
County of Memphis-Shelby Tennessee Sports Authority, Inc., Refunding RB, Memphis Arena Project:		
Series A, 5.00%, 11/01/23	\$ 2,695	\$ 2,916,718
Series B, 5.00%, 11/01/22	1,000	1,083,950
Knox County Health Educational & Housing Facility Board Tennessee, Refunding RB, Eastowne Village Project, 4.00%, 6/01/31 (c)	3,200	3,340,544
Metropolitan Government Nashville & Davidson County Health & Educational Facilities Board, RB, Vanderbilt University Medical Center, Series A, 5.00%, 7/01/35	4,000	4,410,160
		11,751,372
Texas 8.6%		
City of Austin Texas Water & Wastewater System Revenue, Refunding RB, 5.00%, 11/15/30	6,000	7,078,080
City of Grapevine Texas, GO, 5.00%, 2/15/33	5,685	6,425,926
City of Houston Texas, Refunding ARB, Subordinate Lien, Series A, AMT:		
5.00%, 7/01/25	1,500	1,638,150
5.00%, 7/01/32	1,010	1,084,649
Dallas/Fort Worth International Airport, Refunding RB, AMT:		
Series E, 5.00%, 11/01/26	2,185	2,402,582
Series E, 5.00%, 11/01/27	4,960	5,448,312
Series F, 5.00%, 11/01/31	6,345	6,911,101
Love Field Airport Modernization Corp., RB, Southwest Airlines Co. Project, AMT, 5.00%, 11/01/28	1,000	1,084,400
North Texas Tollway Authority, Refunding RB, Series A, 5.00%, 1/01/33	2,500	2,811,525
Red River Education Financing Corp., RB, 5.00%, 3/15/33	1,340	1,496,767
San Jacinto River Authority, RB, Special Project (AGM), 5.25%, 10/01/25	2,910	3,147,601
Socorro ISD, GO, Refunding, School Building (PSF-GTD), 5.00%, 8/15/32	2,500	2,759,650
	Par	
Municipal Bonds	(000)	Value
Texas (continued)		
Via Metropolitan Transit Authority, Refunding RB:		
5.25%, 8/01/28	\$ 1,585	\$ 1,800,116
5.25%, 8/01/29	1,720	1,928,860
Via Metropolitan Transit Authority, Refunding RB (continued):		
5.25%, 8/01/33	3,000	3,358,350
		49,376,069
U.S. Virgin Islands 1.0%		
Virgin Islands Public Finance Authority, Refunding RB, Series A, 5.25%, 10/01/24	5,000	5,488,450
Vermont 1.0%		
University of Vermont & State Agricultural College, Refunding RB, 4.00%, 10/01/30	5,565	5,875,082
West Virginia 1.0%		
West Virginia Hospital Finance Authority, Refunding RB, Charleston Area Medical Center, Inc., Series A, 5.13%, 9/01/23	4,000	4,270,680
West Virginia University, RB, West Virginia University Project, Series B, 5.00%, 10/01/30	1,500	1,672,740
		5,943,420
Wisconsin 1.4%		
Public Finance Authority, Refunding RB, AMT: National Gypsum Co., 5.25%, 4/01/30	2,410	2,531,825
Wisconsin Airport Facilities, Senior Obligated Group, Series B, 5.25%, 7/01/28	4,765	5,096,596
Wisconsin Health & Educational Facilities Authority, Refunding RB, The Monroe Clinic, Inc., 4.00%, 2/15/31	450	463,127
		8,091,548
Total Municipal Bonds 138.4%		794,716,905

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Municipal Bonds Transferred to

Tender Option Bond Trusts (g)

Connecticut 2.0%

Connecticut State Health & Educational Facility Authority, Refunding RB, 5.00%, 12/01/33	10,000	11,227,371
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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

Municipal Bonds Transferred to		Par	
		(000)	Value
Tender Option Bond Trusts (g)			
Illinois 1.5%			
Du Page & Will Counties Community School District No. 204, GO, School Building, Series A (NPFGC), 5.25%, 6/30/17 (a)		\$ 8,650	\$ 8,811,558
Louisiana 2.4%			
State of Louisiana, GO, Series A, 5.00%, 8/01/24		12,000	13,585,920
Massachusetts 2.0%			
Massachusetts Development Finance Agency, Refunding RB, Partners Healthcare, Series L, 5.00%, 7/01/31		10,175	11,313,257
Minnesota 1.9%			
State of Minnesota, GO, State Various Purposes, Series A, 4.00%, 8/01/29		10,525	10,963,783
New York 9.6%			
City of New York New York, GO, Refunding, Series E, 5.00%, 8/01/27		3,507	3,806,807
City of New York New York, GO, Series I, 5.00%, 3/01/32		7,009	7,950,456
City of New York New York Municipal Water Finance Authority, Refunding RB, Water & Sewer System, Series A: 4.75%, 6/15/17 (a)		1,508	1,527,805
4.75%, 6/15/30		6,492	6,578,195
Metropolitan Transportation Authority, RB, Series B, 5.25%, 11/15/19 (a)		4,001	4,438,868
Port Authority of New York & New Jersey, ARB, Consolidated, 169th Series, AMT, 5.00%, 10/15/26		5,530	6,160,475
Port Authority of New York & New Jersey, RB, 178th Series, AMT, 5.00%, 12/01/32		4,009	4,459,011
Sales Tax Asset Receivable Corp., Refunding RB, Fiscal 2015, Series A, 5.00%, 10/15/31		5,010	5,844,516
Municipal Bonds Transferred to		Par	
		(000)	Value
Tender Option Bond Trusts (g)			
New York (continued)			
State of New York Dormitory Authority, Refunding RB, Series E, 5.25%, 3/15/33	\$	7,000	\$ 8,211,770
State of New York Urban Development Corp., RB, Personal Income Tax, Series A-1, 5.00%, 3/15/32		5,501	6,293,936
			55,271,839
Total Municipal Bonds Transferred to			
Tender Option Bond Trusts 19.4%			111,173,728
Total Long-Term Investments			
(Cost \$874,637,164) 157.8%			905,890,633
Short-Term Securities		Shares	
BlackRock Liquidity Funds, MuniCash, Institutional Class, 0.50% (h)(i)		11,470,427	11,471,574
Total Short-Term Securities			
(Cost \$11,470,587) 2.0%			11,471,574
Total Investments (Cost \$886,107,751*) 159.8%			917,362,207
Other Assets Less Liabilities 1.2%			6,946,419
Liability for TOB Trust Certificates, Including Interest Expense and Fees Payable (11.0)%			(63,233,912)
VMTP Shares, at Liquidation Value (50.0)%			(287,100,000)
Net Assets Applicable to Common Shares 100.0%			\$ 573,974,714

* As of January 31, 2017, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 824,630,828
Gross unrealized appreciation	\$ 36,591,557
Gross unrealized depreciation	(6,962,026)

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Net unrealized appreciation

\$ 29,629,531

Notes to Schedule of Investments

- (a) U.S. Government securities, held in escrow, are used to pay interest on this security, as well as to retire the bond in full at the date indicated, typically at a premium to par.
- (b) Security exempt from registration pursuant to Rule 144A under the Securities Act of 1933, as amended. These securities may be resold in transactions exempt from registration to qualified institutional investors.
- (c) Variable rate security. Rate as of period end.
- (d) Non-income producing security.
- (e) Issuer filed for bankruptcy and/or is in default.
- (f) Security is collateralized by municipal bonds or U.S. Treasury obligations.

BLACKROCK MUNI INTERMEDIATE DURATION FUND, INC.

JANUARY 31, 2017

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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

- (g) Represent bonds transferred to a TOB Trust in exchange of cash and residual certificates received by the Fund. These bonds serve as collateral in a secured borrowing.
- (h) During the period ended January 31, 2017, investments in issuers considered to be an affiliate of the Fund for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

	Shares Held at April 30, 2016	Net Activity	Shares Held at January 31, 2017	Value at January 31, 2017	Income	Net Realized Gain (Loss)	Change in Unrealized Appreciation (Depreciation)
Affiliate							
BlackRock Liquidity Funds, MuniCash, Institutional Class	12,303,103	(832,676)	11,470,427	\$ 11,471,574	\$ 35,198	\$ (323)	\$ 987

- (i) Current yield as of period end.

Derivative Financial Instruments Outstanding as of Period End

Futures Contracts

Contracts			Notional	Unrealized
Long (Short)	Issue	Expiration	Value	Depreciation
(102)	5-Year U.S. Treasury Note	March 2017	\$ 12,022,453	\$ (24,491)
(434)	10-Year U.S. Treasury Note	March 2017	\$ 54,019,438	(140,408)
(137)	Long U.S. Treasury Bond	March 2017	\$ 20,665,594	(23,874)
5	Ultra Long U.S. Treasury Bond	March 2017	\$ 803,438	(1,447)
Total				\$ (190,220)

Portfolio Abbreviations

AGC	Assured Guarantee Corp.
AGM	Assured Guaranty Municipal Corp.
AMT	Alternative Minimum Tax (subject to)
ARB	Airport Revenue Bonds
BARB	Building Aid Revenue Bonds
BHAC	Berkshire Hathaway Assurance Corp.
COP	Certificates of Participation
EDA	Economic Development Authority
EDC	Economic Development Corp.
GARB	General Airport Revenue Bonds
GO	General Obligation Bonds
GTD	Guaranteed
IDA	Industrial Development Authority
ISD	Independent School District

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LRB	Lease Revenue Bonds
M/F	Multi-Family
NPFGC	National Public Finance Guarantee Corp.
PSF	Permanent School Fund
RB	Revenue Bonds

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Schedule of Investments (continued)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

Fair Value Hierarchy as of Period End

Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs to valuation techniques are categorized into a fair value hierarchy consisting of three broad levels for financial reporting purposes as follows:

Level 1 unadjusted price quotations in active markets/exchanges for identical assets or liabilities that the 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. Investments classified within Level 3 have significant unobservable inputs used by the BlackRock Global Valuation Methodologies Committee (the Global Valuation Committee) in determining the price for Fair Valued Investments. Level 3 Investments include equity or debt issued by privately-held companies. There may not be a secondary market, and/or there are a limited number of investors. Level 3 investments may also be adjusted to reflect illiquidity and/or non-transferability, with the amount of such discount estimated by the Global Valuation Committee in the absence of market information.

Changes in valuation techniques may result in transfers into or out of an assigned level within the hierarchy. In accordance with the Fund's policy, transfers between different levels of the fair value hierarchy are deemed to have occurred as of the beginning of the reporting period. The categorization of a value determined for investments and derivative financial instruments is based on the pricing transparency of the investments and derivative financial instruments and is not necessarily an indication of the risks associated with investing in those securities. For information about the Fund's policy regarding valuation of investments and derivative financial instruments, 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:

	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 905,890,633		\$ 905,890,633
Short-Term Securities	\$ 11,471,574			11,471,574
Total	\$ 11,471,574	\$ 905,890,633		\$ 917,362,207
Derivative Financial Instruments ²				
Liabilities:				
Interest rate contracts	\$ (190,220)			\$ (190,220)

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

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

BLACKROCK MUNI INTERMEDIATE DURATION FUND, INC.

JANUARY 31, 2017

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Schedule of Investments (concluded)

BlackRock Muni Intermediate Duration Fund, Inc. (MUI)

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

	Level 1	Level 2	Level 3	Total
Liabilities:				
TOB Trust Certificates		\$ (63,101,848)		\$ (63,101,848)
VMTP Shares at Liquidation Value		(287,100,000)		(287,100,000)
Total		\$ (350,201,848)		\$ (350,201,848)

During the period ended January 31, 2017, there were no transfers between levels.

Item 2 Controls and Procedures

- 2(a) The registrant's principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the "1940 Act")) are effective as of a date within 90 days of the filing of this report based on the evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act and Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended.
- 2(b) There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3 Exhibits

Certifications Attached hereto

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 Muni Intermediate Duration Fund, Inc.

By: /s/ John M. Perlowski
John M. Perlowski
Chief Executive Officer (principal executive officer) of
BlackRock Muni Intermediate Duration Fund, Inc.
Date: March 23, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: /s/ John M. Perlowski
John M. Perlowski
Chief Executive Officer (principal executive officer) of
BlackRock Muni Intermediate Duration Fund, Inc.

Date: March 23, 2017

By: /s/ Neal J. Andrews
Neal J. Andrews
Chief Financial Officer (principal financial officer) of
BlackRock Muni Intermediate Duration Fund, Inc.

Date: March 23, 2017