

BLACKROCK MUNIVEST FUND, INC.

Form N-Q

January 22, 2019

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: 811-05611

Name of Fund: BlackRock MuniVest Fund, Inc. (MVF)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock MuniVest 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: 08/31/2019

Date of reporting period: 11/30/2018

Item 1 Schedule of Investments

Schedule of Investments (unaudited)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

(Percentages shown are based on Net Assets)

<i>Security</i>	<i>Par</i>	<i>Value</i>
	<i>(000)</i>	
Municipal Bonds 124.3%		
Alabama 1.9%		
City of Selma Alabama IDB, RB, Gulf Opportunity Zone, International Paper Co. Project, Series A:		
5.80%, 05/01/34	\$ 1,850	\$ 1,937,080
5.38%, 12/01/35	1,000	1,077,580
State of Alabama Docks Department, Refunding RB, 6.00%, 10/01/20 ^(a)	7,610	8,161,116
		11,175,776
Alaska 0.5%		
City of Anchorage Alaska Electric Revenue, Refunding RB, Series A, 5.00%, 12/01/41	3,000	3,287,580
Arizona 5.4%		
Arizona IDA, Refunding RB, Basis Schools, Inc. Projects, Series A, 5.38%, 07/01/50 ^(b)	2,500	2,528,550
City of Phoenix Arizona Civic Improvement Corp., Refunding RB, Junior Lien, Series A, 5.00%, 07/01/20 ^(a)	2,000	2,094,460
City of Phoenix Arizona IDA, RB, Candeo School, Inc. Project:		
6.63%, 07/01/33	2,245	2,446,960
6.88%, 07/01/44	3,440	3,716,714
City of Phoenix Arizona IDA, Refunding RB ^(b) :		
Basis Schools, Inc. Projects, 5.00%, 07/01/35	600	606,000
Basis Schools, Inc. Projects, 5.00%, 07/01/45	760	751,154
Basis Schools, Inc. Projects, Series A, 5.00%, 07/01/35	1,125	1,136,250
Legacy Traditional School Projects, 5.00%, 07/01/45	700	699,965
County of Maricopa Arizona Pollution Control Corp., Refunding RB, Southern California Edison Co., Series A, 5.00%, 06/01/35	3,300	3,390,354
Salt Verde Financial Corp., RB, Senior, 5.00%, 12/01/37	12,605	14,325,834
		31,696,241
California 7.1%		
California Health Facilities Financing Authority, RB:		
St. Joseph Health System, Series A, 5.75%, 07/01/39	5,000	5,111,950
Sutter Health, Series B, 6.00%, 08/15/20 ^(a)	5,600	6,001,968
<i>Security</i>	<i>Par</i>	<i>Value</i>
	<i>(000)</i>	
California (continued)		
California Health Facilities Financing Authority, Refunding RB, Dignity Health, Series A, 6.00%, 07/01/19 ^(a)	\$ 1,055	\$ 1,081,512
California Municipal Finance Authority, ARB, Senior Lien, Linxs APM Project, AMT, 5.00%, 12/31/43	2,800	3,005,240
City of Los Angeles California Department of Airports, Refunding ARB, Los Angeles International Airport, Series A, 5.25%, 05/15/39	1,200	1,218,528

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Golden State Tobacco Securitization Corp., Refunding RB, Series A-1, 5.25%, 06/01/47	1,880	1,864,678
Los Angeles Community College District California, GO, Refunding, Election of 2008, Series A, 6.00%, 08/01/19 ^(a)	9,585	9,862,390
Oakland Unified School District/Alameda County, GO, Series A, 5.00%, 08/01/40	1,000	1,120,530
Poway Unified School District, GO, Refunding, CAB, School Facilities Improvement District No. 2007-1, Election of 2008, Series B, 0.00%, 08/01/46 ^(c)	10,000	3,065,400
State of California, GO, Various Purposes:		
6.50%, 04/01/19 ^(a)	5,240	5,324,102
6.50%, 04/01/33	4,435	4,500,239
		42,156,537
Colorado 0.9%		
Centerra Metropolitan District No. 1, Tax Allocation Bonds, 5.00%, 12/01/47 ^(b)	1,025	1,020,295
Colorado Health Facilities Authority, RB, Catholic Health Initiatives, Series D, 6.25%, 10/01/33	2,500	2,508,825
Copperleaf Metropolitan District No. 2, GO, Refunding, 5.75%, 12/01/45	1,000	1,037,230
Serenity Ridge Metropolitan District No 2, GO, Series A, 5.13%, 12/01/43	1,000	999,280
		5,565,630
Connecticut 1.0%		
State of Connecticut, GO, Series A, 5.00%, 04/15/38	3,325	3,591,865

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

(Percentages shown are based on Net Assets)

<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
Connecticut (continued)		
State of Connecticut Health & Educational Facility Authority, Refunding RB, Sacred Heart University Issue, Series I-1, 5.00%, 07/01/42	\$ 2,000	\$ 2,172,100
		5,763,965
Delaware 0.4%		
County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Power LLC Project, 6.00%, 10/01/40	2,500	2,604,800
District of Columbia 0.2%		
Metropolitan Washington Airports Authority, Refunding RB, Dulles Toll Road, 1st Senior Lien, Series A:		
5.00%, 10/01/39	415	423,371
5.25%, 10/01/44	650	663,032
		1,086,403
Florida 7.5%		
Celebration Pointe Community Development District, Special Assessment Bonds, County of Alachua Florida ^(b) :		
5.00%, 05/01/32	905	934,141
5.00%, 05/01/48	2,270	2,269,887
Central Florida Expressway Authority, Refunding RB, Senior Lien, 5.00%, 07/01/48	9,370	10,334,361
County of Miami-Dade Florida, Refunding RB, Transit System Sales Surtax, 5.00%, 07/01/42	3,750	4,018,200
County of Miami-Dade Florida Aviation, Refunding ARB, Miami International Airport, Series A-1, 5.38%, 10/01/20 ^(a)	10,290	10,920,468
County of Miami-Dade Florida Educational Facilities Authority, Refunding RB, University of Miami, Series A, 5.00%, 04/01/45	4,625	5,010,309
County of Miami-Dade Florida Expressway Authority, Refunding RB, Series A (AGM), 5.00%, 07/01/35	8,900	9,267,214
Lakewood Ranch Stewardship District, Special Assessment Bonds, Lakewood National & Polo Run Projects:		
4.63%, 05/01/27	255	258,070
5.25%, 05/01/37	470	479,254
	<i>Par</i>	<i>Value</i>
	<i>(000)</i>	
Florida (continued)		
Lakewood Ranch Stewardship District, Special Assessment Bonds, Lakewood National & Polo Run Projects (continued):		
5.38%, 05/01/47	\$ 770	\$ 780,618
		44,272,522
Georgia 0.8%		

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City of Atlanta Georgia Department of Aviation, Refunding GARB, Series B, AMT, 5.00%, 01/01/29	1,070	1,121,617
DeKalb Georgia Private Hospital Authority, Refunding RB, Children s Healthcare, 5.25%, 11/15/39	3,335	3,424,545
		4,546,162
Hawaii 0.9%		
State of Hawaii Harbor System, RB, Series A, 5.50%, 07/01/35	5,000	5,249,500
Illinois 11.8%		
Chicago Board of Education, GO, Series C: Dedicated Revenues, Series H, 5.00%, 12/01/36	865	873,105
Project, 5.25%, 12/01/35	2,785	2,826,413
Chicago Board of Education, GO, Refunding: Dedicated Revenues, 5.00%, 12/01/25	1,560	1,616,753
Dedicated Revenues, Series G, 5.00%, 12/01/34	865	876,245
5.00%, 12/01/25	1,200	1,249,212
Chicago Board of Education, GO, Series D: 5.00%, 12/01/46	995	957,309
5.00%, 12/01/46	2,575	2,495,793
Refunding Dedicated Revenues, Series F, 5.00%, 12/01/23	1,180	1,226,421
City of Chicago Illinois O Hare International Airport, GARB, Senior Lien, Series D, AMT, 5.00%, 01/01/42	1,450	1,548,600
City of Chicago Illinois Transit Authority, RB, Sales Tax Receipts, 5.25%, 12/01/36	2,110	2,224,362
City of Chicago Illinois Wastewater Transmission, Refunding RB, 2nd Lien, Series C, 5.00%, 01/01/39	1,000	1,066,040
County of Cook Illinois Community College District No. 508, GO, University & College Improvements, 5.25%, 12/01/31	5,000	5,197,650

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

(Percentages shown are based on Net Assets)

<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
Illinois (continued)		
Illinois Finance Authority, RB, Memorial Health System, Series A, 5.25%, 07/01/44	\$ 1,785	\$ 1,913,199
Illinois Finance Authority, Refunding RB: Northwestern Memorial Hospital, Series A, 6.00%, 08/15/19 ^(a)	9,000	9,253,440
OSF Healthcare System, 6.00%, 05/15/20 ^(a)	3,205	3,383,166
OSF Healthcare System, 6.00%, 05/15/39	1,000	1,039,250
Presence Health Network, Series C, 5.00%, 02/15/41	3,600	3,937,968
Metropolitan Pier & Exposition Authority, RB, McCormick Place Expansion Project Bonds, Series A: 0.00%, 12/15/56 ^(c)	8,755	1,224,299
5.00%, 06/15/57	425	437,125
Metropolitan Pier & Exposition Authority, Refunding RB, McCormick Place Expansion Project Bonds, Series B, 0.00%, 12/15/54 ^(c)	12,215	1,894,302
Railsplitter Tobacco Settlement Authority, RB, 6.00%, 06/01/21 ^(a)	2,645	2,890,086
Regional Transportation Authority, RB: Series A (AMBAC), 7.20%, 11/01/20	850	909,271
Series C (NPFGC), 7.75%, 06/01/20	1,545	1,630,114
State of Illinois, GO, Series D, 5.00%, 11/01/28	1,965	2,071,778
State of Illinois Toll Highway Authority, RB, Series A, 5.00%, 01/01/42	7,990	8,780,690
Village of Hodgkins Illinois, RB, Metropolitan Biosolids Management LLC Project, AMT, 6.00%, 11/01/23	8,565	8,574,079
		70,096,670
Indiana 1.7%		
City of Valparaiso Indiana, RB, Exempt Facilities, Pratt Paper LLC Project, AMT, 6.75%, 01/01/34	2,250	2,565,922
County of Allen Indiana, RB, StoryPoint Fort Wayne Project, Series A-1 ^(b) : 6.63%, 01/15/34	700	731,374
6.75%, 01/15/43	570	594,499
State of Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges, Series A, AMT, 5.00%, 07/01/40	2,640	2,767,301
	<i>Par (000)</i>	<i>Value</i>
Indiana (continued)		
State of Indiana Finance Authority, Refunding RB, Deaconess Health System, Series A, 5.00%, 03/01/39	\$ 3,000	\$ 3,245,370
		9,904,466
Iowa 1.6%		
Iowa Finance Authority, Refunding RB, Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.25%, 12/01/25	4,000	4,224,200
Iowa Tobacco Settlement Authority, Refunding RB, Asset-Backed, CAB, Series B, 5.60%, 06/01/34	1,000	1,000,250

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State of Iowa Finance Authority, RB, Lifespace Communities, Series A, 5.00%, 05/15/48	3,950	4,042,786
		9,267,236
Kansas 1.0%		
City of Lenexa Kansas, Refunding RB, Lakeview Village, Inc., Series A, 5.00%, 05/15/43	1,965	1,983,825
Wyandotte County-Kansas City Unified Government Utility System, RB, Series A, 5.00%, 09/01/40	3,700	4,073,737
		6,057,562
Kentucky 2.7%		
County of Owen Kentucky, RB, Kentucky American Water Co. Project, Series B, 5.63%, 09/01/39	1,000	1,024,760
Kentucky Economic Development Finance Authority, Refunding RB, Hospital Facilities, St. Elizabeth Medical Center, Inc., Series A, 5.50%, 05/01/19 ^(a)	8,000	8,117,360
Lexington-Fayette Urban County Airport Board, Refunding GARB, Series A, 5.00%, 07/01/19 ^(a)	7,000	7,127,890
		16,270,010
Louisiana 3.4%		
Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, Series A-1, 6.50%, 11/01/35	2,615	2,793,500
Parish of St. Charles Louisiana, RB, Valero Energy Corp., 4.00%, 12/01/40 ^(d)	2,210	2,299,129
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A: 5.25%, 05/15/31	3,420	3,595,241
5.25%, 05/15/32	4,375	4,655,175

Schedule of Investments (unaudited) (continued)

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November 30, 2018

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<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
Louisiana (continued)		
Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A (continued):		
5.25%, 05/15/33	\$ 4,750	\$ 5,020,797
5.25%, 05/15/35	1,500	1,585,245
		19,949,087
Maine 1.1%		
Maine Health & Higher Educational Facilities Authority, RB, Series A:		
5.00%, 07/01/19 ^(a)	1,560	1,587,596
5.00%, 07/01/39	3,440	3,489,330
Portland Housing Development Corp., Refunding RB, Senior Living, Retirement Facilities, Series A, 6.00%, 02/01/34	1,190	1,191,440
		6,268,366
Maryland 3.2%		
City of Baltimore Maryland, Refunding RB, East Baltimore Research Park, Series A, 4.50%, 09/01/33		
	545	552,047
County of Howard Maryland Housing Commission, RB, M/F Housing, Woodfield Oxford Square Apartments, 5.00%, 12/01/42	4,935	5,351,169
Maryland Health & Higher Educational Facilities Authority, Refunding RB:		
Charlestown Community Project, 6.25%, 01/01/21 ^(a)	2,000	2,166,340
Meritus Medical Center Issue, 5.00%, 07/01/40	6,350	6,745,541
University of Maryland Medical System, 5.00%, 07/01/19 ^(a)	1,990	2,025,422
University of Maryland Medical System, 5.13%, 07/01/19 ^(a)	2,100	2,138,871
		18,979,390
Massachusetts 2.3%		
Massachusetts Bay Transportation Authority, Refunding RB, General Transportation System, Series A, 7.00%, 03/01/19		
	370	374,647
Massachusetts Development Finance Agency, RB:		
Emerson College Issue, Series A, 5.00%, 01/01/47	845	892,050
Emerson College Issue, Series A, 5.25%, 01/01/42	1,895	2,040,763
UMass Dartmouth Student Housing Project, 5.00%, 10/01/43	4,480	4,695,936
	<i>Par</i>	<i>Value</i>
<i>Security</i>	<i>(000)</i>	
Massachusetts (continued)		
Massachusetts Development Finance Agency, Refunding RB, Emerson College, Series A, 5.00%, 01/01/40	\$ 2,180	\$ 2,329,068
Massachusetts HFA, Refunding RB, Series C, AMT, 5.35%, 12/01/42	2,120	2,136,960
Massachusetts Water Resources Authority, RB, Series A, 6.50%, 07/15/19 ^(c)	1,070	1,100,538
		13,569,962
Michigan 0.7%		

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City of Detroit Michigan Water Supply System Revenue, RB, 2nd Lien, Series B (AGM), 6.25%, 07/01/19 ^(a)	2,495	2,556,876
State of Michigan Strategic Fund, RB, I-75 Improvement Projects, AMT, 5.00%, 06/30/48	1,775	1,876,779
		4,433,655
Minnesota 0.7%		
City of Cologne Minnesota Charter School, LRB, Cologne Academy Project, Series A, 5.00%, 07/01/45	1,500	1,434,120
County of St. Paul Minnesota Housing & Redevelopment Authority, Refunding RB, Fairview Health Services, Series A, 4.00%, 11/15/43	1,940	1,911,171
Housing & Redevelopment Authority of The City of Saint Paul Minnesota, RB, Great River School Project, Series A, 5.50%, 07/01/52 ^(b)	695	693,909
		4,039,200
Mississippi 4.7%		
County of Lowndes Mississippi, Refunding RB, Solid Waste Disposal & Pollution Control, Weyerhaeuser Co. Project:		
Series A, 6.80%, 04/01/22	9,160	10,222,469
Series B, 6.70%, 04/01/22	4,500	5,007,825
Mississippi Business Finance Corp., Refunding RB, System Energy Resource, Inc. Project, 5.88%, 04/01/22	9,305	9,322,307

Schedule of Investments (unaudited) (continued)

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November 30, 2018

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<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
Mississippi (continued)		
Mississippi Development Bank, Refunding RB, Municipal Energy Agency Of Mississippi, Series A (AGM), 4.00%, 03/01/41	\$ 3,000	\$ 2,995,470
		27,548,071
Montana 0.3%		
Montana State Board of Housing, RB, S/F, Series B-2: 3.38%, 12/01/37	785	754,566
3.50%, 12/01/42	335	315,741
3.60%, 12/01/47	515	478,996
		1,549,303
Nebraska 1.1%		
Central Plains Nebraska Energy Project, RB, Gas Project No. 3, 5.00%, 09/01/42	6,200	6,667,356
Nevada 1.3%		
City of Carson City Nevada, Refunding RB, Carson Tahoe Regional Healthcare Project, 5.00%, 09/01/42	1,150	1,232,627
County of Clark Nevada, GO, Stadium Improvement, Series A: 5.00%, 06/01/36	4,080	4,650,466
5.00%, 06/01/37	1,500	1,704,615
		7,587,708
New Jersey 12.0%		
Casino Reinvestment Development Authority, Refunding RB, 5.25%, 11/01/44	1,400	1,471,666
New Jersey EDA, RB: Continental Airlines, Inc. Project, Series A, AMT, 5.63%, 11/15/30	1,530	1,709,928
Goethals Bridge Replacement Project, AMT, Private Activity Bond, 5.38%, 01/01/43	10,000	10,677,600
Goethals Bridge Replacement Project, AMT, Private Activity Bond, 5.13%, 01/01/34	1,050	1,115,132
School Facilities Construction, Series UU, 5.00%, 06/15/40	3,390	3,503,192
New Jersey EDA, Refunding RB, School Facilities Construction: 5.25%, 06/15/19 ^(a)	2,650	2,697,620
Series AA, 5.25%, 06/15/19 ^(a)	700	712,579
Series AA, 5.25%, 12/15/33	6,650	6,740,573
New Jersey Housing & Mortgage Finance Agency, Refunding RB, S/F Housing, Series BB, AMT, 3.80%, 10/01/32	4,880	4,817,731
	<i>Par (000)</i>	<i>Value</i>
New Jersey (continued)		
New Jersey Transportation Trust Fund Authority, RB: CAB, Transportation System, Series A, 0.00%, 12/15/38 ^(c)	\$ 7,260	\$ 2,742,320
Transportation Program, Series AA, 5.25%, 06/15/33	8,750	9,357,250
Transportation Program, Series AA, 5.25%, 06/15/41	780	822,611

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Transportation Program, Series AA, 5.00%, 06/15/44	4,450	4,607,441
Transportation System, Series B, 5.50%, 06/15/31	8,000	8,476,640
New Jersey Transportation Trust Fund Authority, Refunding RB, Transportation System, Series A, 5.00%, 12/15/32	5,430	5,857,504
Tobacco Settlement Financing Corp., Refunding RB:		
Series A, 5.25%, 06/01/46	4,550	4,822,044
Sub-Series B, 5.00%, 06/01/46	665	665,845
		70,797,676
New York 5.4%		
Build NYC Resource Corp., Refunding RB, Pratt Paper, Inc. Project, AMT, 5.00%, 01/01/35 ^(b)	2,145	2,256,068
City of New York Water & Sewer System, Refunding RB, 2nd General Resolution, Series FF-2, 5.50%, 06/15/40	4,150	4,219,139
Counties of New York Tobacco Trust IV, Refunding RB, Settlement Pass-Through Turbo, Series A, 6.25%, 06/01/41 ^(b)	3,500	3,585,365
Erie Tobacco Asset Securitization Corp., Refunding RB, Asset-Backed, Series A, 5.00%, 06/01/45	4,435	4,228,906
New York Counties Tobacco Trust IV, Refunding RB, Tobacco Settlement Pass-Through Bonds, Series A, 5.00%, 06/01/38	3,675	3,486,399
New York Liberty Development Corp., Refunding RB, 3 World Trade Center Project, Class 2 ^(b) :		
5.15%, 11/15/34	460	478,359
5.38%, 11/15/40	1,145	1,195,529
New York Transportation Development Corp., Refunding ARB, American Airlines, Inc., AMT, 5.00%, 08/01/31	3,070	3,168,455
Port Authority of New York & New Jersey, ARB, Special Project, JFK International Air Terminal LLC Project, Series 8, 6.00%, 12/01/36	3,165	3,380,188

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

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<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
New York (continued)		
TSASC, Inc., Refunding RB: Series A, 5.00%, 06/01/41	\$ 1,785	\$ 1,820,878
Tobacco Settlement Bonds, Series B, 5.00%, 06/01/48	1,420	1,350,704
Westchester New York Tobacco Asset Securitization, Refunding RB, Tobacco Settlement Bonds, Sub-Series C, 5.13%, 06/01/51	2,740	2,761,564
		31,931,554
Ohio 4.2%		
Buckeye Tobacco Settlement Financing Authority, RB, Asset-Backed, Senior Turbo Term, Series A-2: 5.75%, 06/01/34	950	887,395
5.88%, 06/01/47	2,525	2,389,483
County of Allen Ohio Hospital Facilities Revenue, Refunding RB, Catholic Healthcare Partners, Series A, 5.25%, 06/01/20 ^(a)	2,875	3,008,170
County of Butler Port Authority, RB, StoryPoint Fairfield Project, Series A-1 ^(b) : 6.38%, 01/15/43	675	687,980
6.50%, 01/15/52	390	398,334
County of Franklin Ohio, RB, Health Care Facilities Improvement, OPRS Communities Obligation Group, Series A, 6.13%, 07/01/40	1,690	1,803,821
County of Lucas Ohio, Refunding RB, Promedica Healthcare, Series A, 6.50%, 11/15/21 ^(a)	1,915	2,151,637
County of Montgomery Ohio, RB, Catholic Health Initiatives, Series D-2, 5.45%, 10/01/38	7,430	8,041,935
County of Montgomery Ohio, Refunding RB, Catholic Health: 5.50%, 05/01/19 ^(a)	1,910	1,937,638
Series A, 5.50%, 05/01/34	3,560	3,607,918
		24,914,311
Oklahoma 0.9%		
Oklahoma Development Finance Authority, RB: OU Medicine Project, Series B, 5.25%, 08/15/48	2,205	2,350,618
	<i>Par (000)</i>	<i>Value</i>
Security		
Oklahoma (continued)		
Oklahoma Development Finance Authority, RB (continued): Provident Oklahoma Education Resources, Inc., Cross Village Student Housing Project, Series A, 5.25%, 08/01/57	\$ 3,275	\$ 3,009,037
		5,359,655
Pennsylvania 8.0%		
Allentown Neighborhood Improvement Zone Development Authority, RB, City Center Project, 5.00%, 05/01/42 ^(b)	1,725	1,789,653
Altoona Area School District, GO, 5.00%, 12/01/36	365	398,930
County of Delaware Pennsylvania IDA, Refunding RB, Covanta Project, 5.00%, 07/01/43	5,000	5,021,600

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County of Delaware Springfield School District, GO:		
5.00%, 03/01/40	2,955	3,314,653
5.00%, 03/01/43	2,145	2,397,080
County of Montgomery Higher Education & Health Authority, Refunding RB, Thomas Jefferson University, Series A, 5.00%, 09/01/48	3,330	3,617,046
County of Montgomery Pennsylvania IDA, Refunding RB, Whitemarsh Continuing Care Retirement Community, 5.25%, 01/01/40	4,170	4,050,821
County of Northampton Pennsylvania General Purpose Authority, Refunding RB, Lafayette College, 4.00%, 11/01/38	1,855	1,875,108
County of Westmoreland Pennsylvania Municipal Authority, Refunding RB, (BAM), 5.00%, 08/15/36	4,385	4,891,731
Pennsylvania Economic Development Financing Authority, RB, Pennsylvania Rapid Bridge Replacement, 5.00%, 12/31/38	2,565	2,696,841
Pennsylvania HFA, RB, S/F Housing Mortgage, Series 118-B, 4.05%, 10/01/40	3,850	3,864,784
Pennsylvania Housing Finance Agency, RB, S/F, Series 125B, 3.65%, 10/01/42	7,000	6,677,440
Pennsylvania Turnpike Commission, RB: Series A-1, 5.00%, 12/01/41	440	476,529

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

(Percentages shown are based on Net Assets)

<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
Pennsylvania (continued)		
Pennsylvania Turnpike Commission, RB (continued):		
Sub-Series B-1, 5.25%, 06/01/47	\$ 5,680	\$ 6,135,991
		47,208,207
Puerto Rico 1.0%		
Children's Trust Fund, Refunding RB, Tobacco Settlement Asset-Backed Bonds:		
5.50%, 05/15/39	3,555	3,563,283
5.63%, 05/15/43	2,170	2,174,036
		5,737,319
Rhode Island 1.4%		
Tobacco Settlement Financing Corp., Refunding RB, Series B:		
4.50%, 06/01/45	6,820	6,275,355
5.00%, 06/01/50	2,000	1,992,500
		8,267,855
South Carolina 2.1%		
South Carolina Jobs EDA, Refunding RB, Prisma Health Obligated Group, Series A,		
5.00%, 05/01/43	3,810	4,079,252
South Carolina Jobs-Economic Development Authority, Refunding RB, Prisma Health		
Obligated Group, 4.25%, 05/01/48	675	653,029
State of South Carolina Public Service Authority, RB, Series E, 5.50%, 12/01/53	750	794,880
State of South Carolina Public Service Authority, Refunding RB, Series E, 5.25%, 12/01/55	6,450	6,840,612
		12,367,773
Texas 12.5%		
Central Texas Regional Mobility Authority, RB, Senior Lien, Series A:		
5.00%, 01/01/40	1,215	1,298,361
5.00%, 01/01/45	3,500	3,725,470
Central Texas Regional Mobility Authority, Refunding RB, Senior Lien:		
5.75%, 01/01/21 ^(a)	1,000	1,072,020
6.00%, 01/01/21 ^(a)	4,300	4,631,401
Series A, 5.00%, 01/01/43	6,925	7,324,226
City of Houston Texas Airport System, Refunding ARB, United Airlines, Inc. Terminal E		
Project, AMT, 5.00%, 07/01/29	2,665	2,860,211
City of Houston Texas Airport System Revenue, Refunding RB, Sub-Series D,		
5.00%, 07/01/37	4,005	4,529,775
	<i>Par (000)</i>	<i>Value</i>
Texas (continued)		
County of Harris Texas Cultural Education Facilities Finance Corp., RB, 1st Mortgage, Brazos		
Presbyterian Homes, Inc. Project, Series B, 7.00%, 01/01/23 ^(a)	\$ 850	\$ 1,003,808

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County of Harris Texas Health Facilities Development Corp., Refunding RB, Memorial Hermann Healthcare System, Series B, 7.13%, 12/01/18 ^(a)	3,500	3,500,000
County of Tarrant Texas Cultural Education Facilities Finance Corp., RB, Scott & White Healthcare, 6.00%, 08/15/20 ^(a)	4,630	4,938,173
County of Tarrant Texas Cultural Education Facilities Finance Corp., Refunding RB, Trinity Terrace Project, 5.00%, 10/01/44	3,500	3,637,655
La Vernia Higher Education Finance Corp., RB, KIPP, Inc., Series A, 6.25%, 08/15/19 ^(a)	925	952,186
Love Field Airport Modernization Corp., RB, Southwest Airlines Co. Project, 5.25%, 11/01/40	1,100	1,140,568
New Hope Cultural Education Facilities Corp., RB:		
Collegiate Housing Tarleton State University Project, 5.00%, 04/01/35	500	520,295
Jubilee Academic Center Project, Series A, 5.00%, 08/15/37 ^(b)	2,000	1,975,920
New Hope Cultural Education Facilities Corp., Refunding RB, 1st Mortgage, Morningside Ministries Project, 6.25%, 01/01/33	1,600	1,731,568
North Texas Education Finance Corp., ERB, Uplift Education, Series A, 5.13%, 12/01/42	1,000	1,034,340
North Texas Tollway Authority, Refunding RB, Series A:		
1st Tier System, 6.25%, 01/01/19 ^(a)	2,845	2,854,588
1st Tier System, 6.25%, 01/01/39	655	656,952
1st Tier, 5.00%, 01/01/48	5,350	5,858,999
5.00%, 01/01/38	5,000	5,440,550
Texas Private Activity Bond Surface Transportation Corp., RB, Senior Lien:		
LBJ Infrastructure Group LLC, 7.00%, 06/30/40	8,000	8,497,760

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

(Percentages shown are based on Net Assets)

<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
Texas (continued)		
Texas Private Activity Bond Surface Transportation Corp., RB, Senior Lien (continued):		
NTE Mobility Partners LLC, North Tarrant Express Managed Lanes Project, 6.88%, 12/31/39	\$ 4,710	\$ 4,906,595
		74,091,421
Vermont 0.9%		
University of Vermont & State Agricultural College, Refunding RB, 5.00%, 10/01/43	4,995	5,578,066
Virginia 4.3%		
Ballston Quarter Community Development Authority, Tax Allocation Bonds, Series A:		
5.38%, 03/01/36	430	439,292
5.50%, 03/01/46	1,475	1,506,831
City of Portsmouth Virginia, GO, Refunding Series D, 5.00%, 07/15/20 ^(a)	3,030	3,174,592
County of Fairfax Virginia IDA, Refunding RB, Health Care-Inova Health, 5.50%, 05/15/19 ^(a)	735	747,017
Tobacco Settlement Financing Corp., Refunding RB, Senior Series B-1, 5.00%, 06/01/47	3,665	3,473,870
Virginia Small Business Financing Authority, RB, AMT:		
Senior Lien, Elizabeth River Crossings OpCo LLC Project, 6.00%, 01/01/37	2,150	2,322,323
Senior Lien, Elizabeth River Crossings OpCo LLC Project, 5.50%, 01/01/42	5,140	5,437,400
Transform 66 P3 Project, 5.00%, 12/31/49	7,895	8,247,196
		25,348,521
Washington 3.8%		
Port of Seattle Washington, ARB, AMT:		
Intermediate Lien, Series C, 5.00%, 05/01/37	4,905	5,406,536
Series A, 5.00%, 05/01/43	1,295	1,399,429
State of Washington, COP, Series B:		
5.00%, 07/01/36	1,725	1,949,215
5.00%, 07/01/38	2,300	2,564,040
Washington Health Care Facilities Authority, RB, Catholic Health Initiatives, Series A, 5.75%, 01/01/45	4,010	4,357,226
	<i>Par (000)</i>	<i>Value</i>
Washington (continued)		
Washington Health Care Facilities Authority, Refunding RB, Catholic Health Initiatives, Series D, 6.38%, 10/01/36	\$ 7,000	\$ 7,020,790
		22,697,236
West Virginia 0.4%		
West Virginia Hospital Finance Authority, Refunding RB, Improvement, Charleston Area Medical Center, Inc., Series A, 5.63%, 09/01/32	2,500	2,552,750
Wisconsin 1.8%		

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Wisconsin Health & Educational Facilities Authority, Refunding RB:		
Froedtert & Community Health, Inc., Obligated Group: Series C, 5.25%, 04/01/19 ^(a)	6,100	6,167,466
Milwaukee Regional Medical Center Thermal Service, 5.00%, 04/01/44	4,080	4,516,438
		10,683,904
Wyoming 1.4%		
County of Sweetwater Wyoming, Refunding RB, Idaho Power Co. Project, Remarketing, 5.25%, 07/15/26	4,500	4,597,020
State of Wyoming Municipal Power Agency, Inc., Refunding RB, Series A (BAM), 5.00%, 01/01/42	1,120	1,227,721
Wyoming Community Development Authority, Refunding RB, Series 2 & 3, 4.05%, 12/01/38	2,215	2,229,863
		8,054,604
Total Municipal Bonds 124.3%		
(Cost \$717,999,976)		735,184,010

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

(Percentages shown are based on Net Assets)

<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
Municipal Bonds Transferred to Tender Option Bond Trusts (f) 34.7%		
Arizona 0.6%		
City of Phoenix Civic Improvement Corp., Refunding RB, Water System, Junior Lien, Series A, 5.00%, 07/01/19 ^(a)	\$ 3,500	\$ 3,562,720
California 6.3%		
Sacramento Area Flood Control Agency, Refunding, Consolidated Capital Assessment District No. 2 Bonds, 5.00%, 10/01/47	14,998	16,649,425
University of California, RB, Series O ^(a) : General, 5.25%, 05/15/19	5,675	5,773,404
Prefunded -General, 5.25%, 05/15/19	3,235	3,291,095
Unrefunded Balance-2016, General, 5.25%, 05/15/19	11,090	11,282,301
		36,996,225
Colorado 1.2%		
City & County of Denver Colorado Airport System Revenue, Refunding ARB, Sub-System, Series A, AMT, 5.25%, 12/01/43 ^(g)	6,504	7,306,855
Florida 2.6%		
County of Miami-Dade Florida Water & Sewer System, RB, (AGM), 5.00%, 10/01/20 ^(a)	14,747	15,551,766
Illinois 2.0%		
State of Illinois Toll Highway Authority, RB, Series B, 5.00%, 01/01/40	10,976	11,933,931
Kentucky 1.6%		
County of Louisville & Jefferson Kentucky Metropolitan Government Parking Authority, RB, River City, Inc., 1st Mortgage, Series A, 5.38%, 12/01/19 ^(a)	9,195	9,500,672
Maryland 0.9%		
City of Baltimore Maryland, RB, Wastewater Project, Series A, 5.00%, 07/01/46	4,898	5,417,063
Nevada 2.7%		
County of Clark Nevada Water Reclamation District, GO, Series B, 5.75%, 07/01/19 ^(a)	15,789	16,145,312
	<i>Par (000)</i>	<i>Value</i>
New York 1.8%		
New York Liberty Development Corp., Refunding RB, 4 World Trade Center Project, 5.75%, 11/15/51 ^(g)	\$ 10,001	\$ 10,903,395
North Carolina 0.9%		

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North Carolina Capital Facilities Finance Agency, Refunding RB, Wake Forest University, 5.00%, 01/01/19 ^(a)	5,000	5,012,150
Ohio 1.4%		
State of Ohio, RB, Cleveland Clinic Health Obligated Group, Series B, 5.50%, 01/01/34	8,500	8,523,035
Oregon 0.7%		
State of Oregon Housing & Community Services Department, HRB, M/F Housing, Series A, AMT, 4.95%, 07/01/30	3,898	3,951,909
Pennsylvania 2.0%		
Commonwealth of Pennsylvania, GO, 1st Series, 4.00%, 03/01/38 ^(g)	7,250	7,311,081
County of Westmoreland Pennsylvania Municipal Authority, Refunding RB, (BAM), 5.00%, 08/15/38	3,925	4,282,630
		11,593,711
Texas 5.9%		
City of Houston Texas Higher Education Finance Corp., RB, Rice University Project, Series A, 5.00%, 05/15/20 ^(a)	10,000	10,421,341
County of Harris Texas Health Facilities Development Corp., Refunding RB, School Health Care System, Series B, 5.75%, 07/01/27 ^(e)	20,370	24,307,012
		34,728,353
Virginia 2.2%		
County of Fairfax Virginia EDA, RB, Metrorail Parking System Project, 5.00%, 04/01/47 ^(g)	6,960	7,736,458

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

(Percentages shown are based on Net Assets)

<i>Security</i>	<i>Par (000)</i>	<i>Value</i>
Virginia (continued)		
Virginia Small Business Financing Authority, Refunding RB, Sentara Healthcare, 5.00%, 11/01/40	\$ 5,002	\$ 5,192,311
		12,928,769
Washington 1.9%		
Washington Health Care Facilities Authority, Refunding RB, Seattle Children's Hospital, Series B, 5.00%, 10/01/38	10,000	11,278,700
Total Municipal Bonds Transferred to Tender Option Bond Trusts 34.7% (Cost \$198,866,896)		205,334,566
Total Long-Term Investments 159.0% (Cost \$916,866,872)		940,518,576
<i>Security</i>	<i>Shares</i>	<i>Value</i>
Short-Term Securities 0.1%		
BlackRock Liquidity Funds, MuniCash, Institutional Class, 1.55% ^{(h)(i)}	251,444	\$ 251,469
Total Short-Term Securities 0.1% (Cost \$251,469)		251,469
Total Investments 159.1% (Cost \$917,118,341)		940,770,045
Other Assets Less Liabilities 0.3%		1,927,717
Liability for TOB Trust Certificates, Including		
Interest Expense and Fees Payable (18.2)%		(107,634,893)
VMTP Shares, at Liquidation Value (41.2)%		(243,800,000)
Net Assets Applicable to Common Shares 100.0%		\$ 591,262,869

(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) Zero-coupon bond.

(d) Variable or floating rate security, which interest rate adjusts periodically based on changes in current interest rates and prepayments on the underlying pool of assets. Rate shown is the rate in effect as of period end.

(e) Security is collateralized by municipal bonds or U.S. Treasury obligations.

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- (f) Represent bonds transferred to a TOB Trust in exchange of cash and residual certificates received by the Trust. These bonds serve as collateral in a secured borrowing.
- (g) All or a portion of security is subject to a recourse agreement. The aggregate maximum potential amount the Trust could ultimately be required to pay under the agreements, which expire between November 15, 2019 to June 1, 2026, is \$16,153,828.
- (h) Annualized 7-day yield as of period end.
- (i) During the period ended November 30, 2018, investments in issuers considered to be an affiliate of the Trust for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

	<i>Shares</i>		<i>Shares</i>		<i>Value at</i> <i>11/30/18</i>	<i>Income</i>	<i>Net</i> <i>Realized</i> <i>Gain (Loss) ^(a)</i>	<i>Change in</i> <i>Unrealized</i> <i>Appreciation</i> <i>(Depreciation)</i>
	<i>Held at</i> <i>08/31/18</i>	<i>Net</i> <i>Activity</i>	<i>Held at</i> <i>11/30/18</i>					
<i>Affiliate</i> BlackRock Liquidity Funds, MuniCash, Institutional Class	159,172	92,272	251,444	\$ 251,469	\$ 12,371	\$	\$	

(a) Includes net capital gain distributions, if applicable.

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

Portfolio Abbreviations

AGM Assured Guaranty Municipal Corp.

AMBAC American Municipal Bond Assurance Corp.

AMT Alternative Minimum Tax (subject to)

ARB Airport Revenue Bonds

BAM Build America Mutual Assurance Co.

CAB Capital Appreciation Bonds

COP Certificates of Participation

EDA Economic Development Authority

ERB Education Revenue Bonds

GARB General Airport Revenue Bonds

GO General Obligation Bonds

HFA Housing Finance Agency

HRB Housing Revenue Bonds

IDA Industrial Development Authority

IDB Industrial Development Board

LRB Lease Revenue Bonds

M/F Multi-Family

NPFGC National Public Finance Guarantee Corp.

RB Revenue Bonds

S/F Single-Family

Derivative Financial Instruments Outstanding as of Period End

Futures Contracts

<i>Description</i>	<i>Number of Contracts</i>	<i>Expiration Date</i>	<i>Notional Amount (000)</i>	<i>Value/ Unrealized Appreciation (Depreciation)</i>
Short Contracts:				
10-Year U.S. Treasury Note	69	03/20/19	\$ 8,242	\$ (17,353)
Long U.S. Treasury Bond	191	03/20/19	26,722	(114,569)
5-Year U.S. Treasury Note	30	03/29/19	3,389	(4,797)
				\$ (136,719)

Schedule of Investments (unaudited) (continued)

BlackRock MuniVest Fund, Inc. (MVF)

November 30, 2018

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 Trust has the ability to access

Level 2 Other observable inputs (including, but not limited to, quoted prices for similar assets or liabilities in markets that are active, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the assets or liabilities (such as interest rates, yield curves, volatilities, prepayment speeds, loss severities, credit risks and default rates) or other market-corroborated inputs)

Level 3 Unobservable inputs based on the best information available in the circumstances, to the extent observable inputs are not available (including the Trust's own assumptions used in determining the fair value of investments and derivative financial instruments)

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 or funds. 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 Trust'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 Trust's policy regarding valuation of investments and derivative financial instruments, refer to the Trust's most recent financial statements as contained in its annual report.

The following tables summarize the Trust's investments and derivative financial instruments categorized in the disclosure hierarchy:

	<i>Level 1</i>	<i>Level 2</i>	<i>Level 3</i>	<i>Total</i>
Assets:				
Investments:				
Long-Term Investments ^(a)	\$	\$ 940,518,576	\$	\$ 940,518,576
Short-Term Securities	251,469			251,469
	\$ 251,469	\$ 940,518,576	\$	\$ 940,770,045
Derivative Financial Instruments ^(b)				
Liabilities:				
Interest rate contracts	\$ (136,719)	\$	\$	\$ (136,719)

^(a) See above Schedule of Investments for values in each state or political subdivision.

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

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

	<i>Level 1</i>	<i>Level 2</i>	<i>Level 3</i>	<i>Total</i>
Liabilities:				
TOB Trust Certificates	\$	\$ (107,312,984)	\$	\$ (107,312,984)
VMTP Shares at Liquidation Value		(243,800,000)		(243,800,000)
	\$	\$ (351,112,984)	\$	\$ (351,112,984)

During the period ended November 30, 2018, 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 MuniVest Fund, Inc.

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

Date: January 18, 2019

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 MuniVest Fund, Inc.

Date: January 18, 2019

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

Date: January 18, 2019