BLACKROCK MUNIVEST FUND, INC.

Form N-Q July 23, 2015

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: 08/31/2015

Date of reporting period: 05/31/2015

Item 1 Schedule of Investments

Schedule of Investments May 31, 2015 (Unaudited)

BlackRock MuniVest Fund, Inc. (MVF)

(Percentages shown are based on Net Assets)

	Par		
Municipal Bonds	(000)	Value	
Alabama 1.9%	(***)		
City of Selma Alabama IDB, RB, Gulf Opportunity Zone, International Paper Co. Project, Series A:			
5.80%, 5/01/34	\$ 1,850	\$ 2,122,746	
5.38%, 12/01/35	1,000	1,127,080	
State of Alabama Docks Department, Refunding RB, 6.00%, 10/01/40	7,610	8,826,839	
State of Thabania Books Bepartment, Retaining RB, 0.0076, 10/01/10	7,010	0,020,037	
		12,076,665	
Alaska 0.7%			
City of Anchorage Alaska Electric Revenue, Refunding RB, Series A, 5.00%, 12/01/41	3,000	3,333,000	
Northern Tobacco Securitization Corp., Refunding RB, Tobacco Settlement, Asset-Backed, Series			
A, 5.00%, 6/01/46	1,250	975,275	
		4,308,275	
Arizona 4.7%			
City of Phoenix Arizona Civic Improvement Corp., Refunding RB, Junior Lien, Series A, 5.00%,			
7/01/40	2,000	2,158,840	
City of Phoenix Arizona IDA, RB:			
Basis Schools, Inc. Projects, 5.00%, 7/01/35 (a)	600	608,520	
Basis Schools, Inc. Projects, 5.00%, 7/01/45 (a)	760	758,792	
Candeo School, Inc. Project, 6.63%, 7/01/33	2,245	2,514,063	
Candeo School, Inc. Project, 6.88%, 7/01/44	3,440	3,905,638	
City of Phoenix Arizona IDA, Refunding RB, Legacy Traditional School Projects, 5.00%, 7/01/45			
(a)	700	688,198	
County of Maricopa Arizona IDA, RB, Arizona Charter Schools Project, Series A, 6.75%, 7/01/29	3,430	3,205,438	
County of Maricopa Arizona Pollution Control Corp., Refunding RB, Southern California Edison			
Co., Series A, 5.00%, 6/01/35	3,300 Par	3,683,526	
Municipal Bonds	(000)	Value	
Arizona (concluded)	(000)	v anuc	
Salt Verde Financial Corp., RB, Senior, 5.00%, 12/01/37	\$ 11,725	\$ 13,063,643	
Salt Velue Financial Colp., RB, Selliol, 5.00 /0, 12/01/57	\$ 11,723	\$ 15,005,045	
		30,586,658	
California 6.3%			
California Health Facilities Financing Authority, RB:	5 000	5.500.000	
St. Joseph Health System, Series A, 5.75%, 7/01/39	5,000	5,738,900	
Sutter Health, Series B, 6.00%, 8/15/42	5,600	6,652,352	
California Health Facilities Financing Authority, Refunding RB, Catholic Healthcare West, Series	1.055	1 210 010	
A, 6.00%, 7/01/34	1,055	1,210,918	
California HFA, RB, S/F Housing, Home Mortgage, Series K, AMT, 5.50%, 2/01/42 City of Los Angeles California Department of Airports, Refunding ARB, Los Angeles	495	503,648	
International Airport, Series A, 5.25%, 5/15/39	1,200	1,351,908	
Los Angeles Community College District California, GO, Refunding, Election of 2008, Series A, 6.00%, 8/01/19 (b)	9,585	11,442,190	
Poway Unified School District, GO, Refunding, CAB, School Facilities Improvement District	,,505	11,2,170	
No. 2007-1, Election of 2008, Series B, 0.00%, 8/01/46 (c)	10,000	2,443,200	
State of California, GO, Various Purposes, 6.50%, 4/01/33	9,675	11,580,878	
	2,070	11,000,070	
		40,923,994	
Colorado 1.0%			
Colorado Health Facilities Authority, RB, Catholic Health Initiatives, Series D, 6.25%, 10/01/33 Colorado Health Facilities Authority, Refunding RB, Evangelical Lutheran, Series A, 5.25%,	2,500	2,843,175	
6/01/34	3,000	3,011,010	
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BLACKROCK MUNIVEST FUND, INC.

MAY 31, 2015

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Schedule of Investments (continued)

BlackRock MuniVest Fund, Inc. (MVF)

(Percentages shown are based on Net Assets)

Par

	Par		
Month and Donale	(000)	¥7-1	
Municipal Bonds Colorado (concluded)	(000)	Value	
Regional Transportation District, COP, Refunding, Series A, 5.38%, 6/01/31	\$ 385	\$ 439,304	
Regional Transportation District, Co1, Retaining, Series 11, 3.35 %, 6/61/31	Ψ 303	Ψ 135,301	
		6,293,489	
Delaware 0.4%		0,293,409	
County of Sussex Delaware, RB, NRG Energy, Inc., Indian River Power LLC Project,			
6.00%, 10/01/40	2,500	2,865,850	
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	449,341	
5.25%, 10/01/44	650	719,862	
		1,169,203	
Florida 7.3%			
County of Miami-Dade Florida, GO, Building Better Communities Program:			
Series B, 6.38%, 7/01/28	4,630	5,302,091	
Series B-1, 5.63%, 7/01/38	5,000	5,604,950	
County of Miami-Dade Florida, Refunding RB, Transit System Sales Surtax, 5.00%, 7/01/42	3,750	4,112,662	
County of Miami-Dade Florida Aviation, Refunding ARB, Miami International Airport: Series A, AMT (AGC), 5.00%, 10/01/40	10,000	10,410,700	
Series A-1, 5.38%, 10/01/41	10,290	11,584,585	
County of Miami-Dade Florida Expressway Authority, RB, Toll System, Series A (AGM),	10,270	11,504,505	
5.00%, 7/01/35	8,900	9,859,420	
	-,	.,,	
		46,874,408	
Georgia 1.7%		40,674,406	
City of Atlanta Georgia Department of Aviation, Refunding GARB, Series B, AMT, 5.00%,			
1/01/29	1,070	1,166,674	
County of DeKalb Georgia Hospital Authority, Refunding RB, DeKalb Medical Center, Inc.			
Project, 6.13%, 9/01/40	3,570	3,873,878	
DeKalb Private Hospital Authority, Refunding RB, Children s Healthcare, 5.25%, 11/15/39	3,335	3,770,985	
	Par		
Municipal Bonds	(000)	Value	
Georgia (concluded)			
Municipal Electric Authority of Georgia, Refunding RB, Series W, 6.60%, 1/01/18	\$ 1,790	\$ 1,902,663	
		10,714,200	
Hawaii 0.9%			
State of Hawaii Harbor System, RB, Series A, 5.50%, 7/01/35	5,000	5,697,150	
Illinois 10.4%			
City of Chicago Illinois, GARB, O Hare International Airport, 3rd Lien, Series B-2, AMT			
(NPFGC), 6.00%, 1/01/27	605	607,759	
City of Chicago Illinois, Refunding RB, Sales Tax Receipts, Series A, 5.00%, 1/01/41	4,640	4,746,905	
City of Chicago Illinois Midway International Airport, Refunding GARB, 2nd Lien, Series A,	1.740	1 920 462	
5.00%, 1/01/41 City of Chicago Illinois Transit Authority, RB, Sales Tax Receipts, 5.25%, 12/01/36	1,740 2,110	1,830,463 2,234,975	
City of Chicago Illinois Waterworks, Refunding RB, 2nd Lien (AGM), 5.25%, 11/01/33	1,330	1,419,456	
County of Cook Illinois Community College District No. 508, GO, University & College	1,550	1,717,730	
Improvements, 5.25%, 12/01/31	5,000	5,595,950	
Illinois Finance Authority, RB:	- ,	- , ,	
Advocate Health Care Network, Series D, 6.50%, 11/01/18 (b)	9,700	11,367,236	
Community Rehabilitation Providers Facilities, Series A, 6.50%, 7/01/22	575	575,397	
Disposal Waste Management, Inc., Series A, AMT, 5.05%, 8/01/29	1,000	1,017,600	
Memorial Health System, Series A, 5.25%, 7/01/44	1,785	1,917,411	
Illinois Finance Authority, Refunding RB, Series A:			

Northwestern Memorial Hospital, 6.00%, 8/15/39	9,000	10,321,110	
OSF Healthcare System, 6.00%, 5/15/39	4,990	5,777,372	
Railsplitter Tobacco Settlement Authority, RB, 6.00%, 6/01/28	2,645	3,122,555	

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MAY 31, 2015

Schedule of Investments (continued)

BlackRock MuniVest Fund, Inc. (MVF)

(Percentages shown are based on Net Assets)

	Par		
Municipal Bonds	(000)	Value	
Illinois (concluded)	(000)	value	
Regional Transportation Authority, RB:			
Series A (AMBAC), 7.20%, 11/01/20	\$ 2,240	\$ 2,580,682	
Series C (NPFGC), 7.75%, 6/01/20	3,455	3,984,755	
Village of Hodgkins Illinois, RB, Metropolitan Biosolids Management LLC Project, AMT,	3,733	3,764,733	
6.00%, 11/01/23	10,000	10,016,600	
Indiana 0.9%		67,116,226	
	2.250	2,720,858	
City of Valparaiso Indiana, RB, Exempt Facilities, Pratt Paper LLC Project, AMT, 6.75%, 1/01/34 Indiana Finance Authority, RB, Private Activity Bond, Ohio River Bridges, Series A, AMT,	2,250	2,720,838	
5.00%, 7/01/40	2,640	2,776,092	
		5,496,950	
Iowa 1.6%			
Iowa Finance Authority, Refunding RB, Midwestern Disaster Area, Iowa Fertilizer Co. Project, 5.25%, 12/01/25	4,500	4,998,060	
Iowa Tobacco Settlement Authority, Refunding RB, Asset-Backed:	.,000	.,,	
CAB, Series B, 5.60%, 6/01/34	1,500	1,421,130	
Series C, 5.63%, 6/01/46	4,500	3,966,750	
	1,500	2,500,720	
		10,385,940	
Kentucky 2.8%			
County of Owen Kentucky, RB, Kentucky American Water Co. Project, Series B, 5.63%, 9/01/39 Kentucky Economic Development Finance Authority, Refunding RB, Hospital Facilities, St.	1,000	1,091,130	
Elizabeth Medical Center, Inc., Series A, 5.50%, 5/01/39	8,000	8,995,360	
	Par		
	1 ai		
Municipal Bonds		Value	
Municipal Bonds Kentucky (concluded)	(000)	Value	
Kentucky (concluded)	(000)		
		Value \$ 7,885,360	
Kentucky (concluded)	(000)		
Kentucky (concluded)	(000)	\$ 7,885,360	
Kentucky (concluded) Lexington-Fayette Urban County Airport Board, Refunding GARB, Series A, 5.00%, 7/01/27	(000)	\$ 7,885,360	
Kentucky (concluded) Lexington-Fayette Urban County Airport Board, Refunding GARB, Series A, 5.00%, 7/01/27 Louisiana 3.3%	(000)	\$ 7,885,360	
Kentucky (concluded) Lexington-Fayette Urban County Airport Board, Refunding GARB, Series A, 5.00%, 7/01/27 Louisiana 3.3% Louisiana Local Government Environmental Facilities & Community Development Authority, RB,	(000) \$ 7,000	\$ 7,885,360 17,971,850	
Kentucky (concluded) Lexington-Fayette Urban County Airport Board, Refunding GARB, Series A, 5.00%, 7/01/27 Louisiana 3.3% Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, Series A-1, 6.50%, 11/01/35	(000) \$ 7,000	\$ 7,885,360 17,971,850 3,137,869	
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Kentucky (concluded) Lexington-Fayette Urban County Airport Board, Refunding GARB, Series A, 5.00%, 7/01/27 Louisiana 3.3% Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, Series A-1, 6.50%, 11/01/35 Parish of St. Charles Louisiana, RB, Valero Energy Corp., 4.00%, 12/01/40 (d) Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A: 5.25%, 5/15/31 5.25%, 5/15/32 5.25%, 5/15/33 5.25%, 5/15/35 Maine 1.0% Maine Health & Higher Educational Facilities Authority, RB, Series A, 5.00%, 7/01/39 Portland Housing Development Corp., Refunding RB, Senior Living, Retirement Facilities, Series A, 6.00%, 2/01/34	(000) \$ 7,000 \$ 2,615 2,210 3,420 4,375 4,750 1,500 5,000 1,190	\$ 7,885,360 17,971,850 3,137,869 2,409,651 3,825,270 4,971,575 5,284,328 1,676,250 21,304,943 5,411,450 1,202,388 6,613,838	
Kentucky (concluded) Lexington-Fayette Urban County Airport Board, Refunding GARB, Series A, 5.00%, 7/01/27 Louisiana 3.3% Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, Series A-1, 6.50%, 11/01/35 Parish of St. Charles Louisiana, RB, Valero Energy Corp., 4.00%, 12/01/40 (d) Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A: 5.25%, 5/15/31 5.25%, 5/15/32 5.25%, 5/15/33 5.25%, 5/15/35 Maine 1.0% Maine Health & Higher Educational Facilities Authority, RB, Series A, 5.00%, 7/01/39 Portland Housing Development Corp., Refunding RB, Senior Living, Retirement Facilities, Series A, 6.00%, 2/01/34 Maryland 1.8% Maryland Community Development Administration, HRB, Series H, AMT, 5.10%, 9/01/37	(000) \$ 7,000 \$ 2,615 2,210 3,420 4,375 4,750 1,500 5,000 1,190	\$ 7,885,360 17,971,850 3,137,869 2,409,651 3,825,270 4,971,575 5,284,328 1,676,250 21,304,943 5,411,450 1,202,388 6,613,838	
Louisiana 3.3% Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, Series A-1, 6.50%, 11/01/35 Parish of St. Charles Louisiana, RB, Valero Energy Corp., 4.00%, 12/01/40 (d) Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A: 5.25%, 5/15/31 5.25%, 5/15/32 5.25%, 5/15/33 5.25%, 5/15/35 Maine 1.0% Maine Health & Higher Educational Facilities Authority, RB, Series A, 5.00%, 7/01/39 Portland Housing Development Corp., Refunding RB, Senior Living, Retirement Facilities, Series A, 6.00%, 2/01/34 Maryland 1.8% Maryland Community Development Administration, HRB, Series H, AMT, 5.10%, 9/01/37 Maryland Community Development Administration, Refunding, HRB, Residential, Series D, AMT, 4.90%, 9/01/42 Maryland Health & Higher Educational Facilities Authority, Refunding RB:	(000) \$ 7,000 \$ 7,000 2,615 2,210 3,420 4,375 4,750 1,500 5,000 1,190	\$ 7,885,360 17,971,850 3,137,869 2,409,651 3,825,270 4,971,575 5,284,328 1,676,250 21,304,943 5,411,450 1,202,388 6,613,838 1,861,626	
 Kentucky (concluded) Lexington-Fayette Urban County Airport Board, Refunding GARB, Series A, 5.00%, 7/01/27 Louisiana 3.3% Louisiana Local Government Environmental Facilities & Community Development Authority, RB, Westlake Chemical Corp. Project, Series A-1, 6.50%, 11/01/35 Parish of St. Charles Louisiana, RB, Valero Energy Corp., 4.00%, 12/01/40 (d) Tobacco Settlement Financing Corp., Refunding RB, Asset-Backed, Series A: 5.25%, 5/15/31 5.25%, 5/15/32 5.25%, 5/15/33 5.25%, 5/15/35 Maine 1.0% Maine Health & Higher Educational Facilities Authority, RB, Series A, 5.00%, 7/01/39 Portland Housing Development Corp., Refunding RB, Senior Living, Retirement Facilities, Series A, 6.00%, 2/01/34 Maryland 1.8% Maryland Community Development Administration, HRB, Series H, AMT, 5.10%, 9/01/37 Maryland Community Development Administration, Refunding, HRB, Residential, Series D, AMT, 4.90%, 9/01/42 	(000) \$ 7,000 \$ 7,000 2,615 2,210 3,420 4,375 4,750 1,500 5,000 1,190	\$ 7,885,360 17,971,850 3,137,869 2,409,651 3,825,270 4,971,575 5,284,328 1,676,250 21,304,943 5,411,450 1,202,388 6,613,838 1,861,626	

University of Maryland Medical System, 5.00%, 7/01/34

2,100

2,262,120

BLACKROCK MUNIVEST FUND, INC.

MAY 31, 2015

3

Schedule of Investments (continued)

BlackRock MuniVest Fund, Inc. (MVF)

(Percentages shown are based on Net Assets)

Par

Municipal Bonds	(000)	Value	
Maryland (concluded)			
Maryland Health & Higher Educational Facilities Authority, Refunding RB (concluded):			
University of Maryland Medical System, 5.13%, 7/01/39	\$ 2,100	\$ 2,262,078	
		11,888,289	

Massachusetts 4.1%
Massachusetts Bay Transportation Authority, Refunding RB, General Transportation System, Series A, 7.00%, 3/01/19