BLACKROCK MUNIVEST FUND INC

Form N-Q January 28, 2009

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: Donald C. Burke, Chief Executive Officer, BlackRock MuniVest Fund, Inc., 800 Scudders Mill Road, Plainsboro, NJ 08536. Mailing address: P.O. Box 9011, Princeton, NJ 08543-9011

Registrant's telephone number, including area code: (800) 882-0052, Option 4

Date of fiscal year end: 08/31/2008

Date of reporting period: 09/01/2008 - 11/30/2008

Item 1 - Schedule of Investments

BlackRock MuniVest Fund, Inc.
Schedule of Investments November 30, 2008 (Unaudited)
(Percentages shown are based on Net Assets)

State	Municipal Bonds			
Alabama - 3.1%	Camden, Alabama, IDB, Exempt Facilities Revenue Bonds (Weyerhaeuser Company), Series A, 6.125%, 12/01/13 (a) Huntsville, Alabama, Health Care Authority Revenue Bonds, Series A, 5.75%, 6/01/11 (a) Prattville, Alabama, IDB, Environmental Improvement Revenue Bonds (International Paper Company Projects), AMT, Series A, 4.75%, 12/01/30 Selma, Alabama, IDB, Environmental Improvement Revenue Refunding Bonds (International Paper Company Project), Series B, 5.50%, 5/01/20			

Arizona - 1.7%

Maricopa County, Arizona, IDA, Education Revenue Bonds (Arizona Charter Schools Project 1), Series A, 6.75%, 7/01/29

Pima County, Arizona, IDA, Education Revenue Bonds (Arizona Charter Schools Project), Series E, 7.25%, 7/01/31

Pima County, Arizona, IDA, Education Revenue Bonds (Arizona Charter Schools Project), Series I, 6.10%, 7/01/24

Pima County, Arizona, IDA, Education Revenue Bonds (Arizona Charter Schools Project), Series I, 6.30%, 7/01/31

Pima County, Arizona, IDA, Education Revenue Refunding Bonds (Arizona Charter Schools Project), Series O, 5%, 7/01/26
Pima County, Arizona, IDA, Education Revenue Refunding Bonds (Arizona Charter Schools Project II), Series A, 6.75%, 7/01/21

California - 10.0%

California State, GO, 5.50%, 4/01/30
California State Public Works Board, Lease Revenue Bonds (Department of Corrections), Series C, 5.50%, 6/01/22
California State Public Works Board, Lease Revenue Bonds (Department of Corrections), Series C, 5.50%, 6/01/23
California State Public Works Board, Lease Revenue Bonds (Department of Mental Health - Coalinga State Hospital), Series A, 5.125%, 6/01/29
California Statewide Communities Development Authority, Health Facility Revenue Bonds (Memorial Health Services), Series A, 6%, 10/01/23
Chula Vista, California, IDR (San Diego Gas and Electric Company), AMT, Series B, 5%, 12/01/27
Golden State Tobacco Securitization Corporation of California, Tobacco Settlement Revenue Bonds, Series A-3, 7.875%, 6/01/13 (a)
Golden State Tobacco Securitization Corporation of California, Tobacco Settlement Revenue Bonds, Series A-4, 7.80%, 6/01/13 (a)

Portfolio Abbreviations

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

AMT	Alternative Minimum Tax (subject to)
EDA	Economic Development Authority
GO	General Obligation Bonds
HFA	Housing Finance Agency
IDA	Industrial Development Authority
IDB	Industrial Development Board
IDR	Industrial Development Revenue Bonds
PCR	Pollution Control Revenue Bonds
S/F	Single-Family

BlackRock MuniVest Fund, Inc.
Schedule of Investments November 30, 2008 (Unaudited)
(Percentages shown are based on Net Assets)

State Municipal Bonds

Golden State Tobacco Securitization Corporation of California, Tobacco Settlement Revenue Bonds, Series A-5, 7.875%, 6/01/13 (a)

Colorado - 1.1% Colorado HFA, Revenue Refunding Bonds (S/F Program), AMT, Senior Series A-2, 6.60%, 5/01/28

Colorado HFA, Revenue Refunding Bonds (S/F Program), AMT, Senior Series A-2, 7.50%, 4/01/31

Colorado Health Facilities Authority Revenue Bonds (Catholic Health

Initiatives), Series D, 6.25%, 10/01/33 Colorado Health Facilities Authority Revenue Bonds (Lutheran Medical Center), Series A, 5.25%, 6/01/34

Connecticut - 0.5%	Mohegan Tribe Indians Gaming Authority, Connecticut, Public Improvement Revenue Refunding Bonds (Priority Distribution), 6.25%, 1/01/31
Florida - 3.6%	Hillsborough County, Florida, IDA, Hospital Revenue Bonds (H. Lee Moffi Cancer Center Project), Series A, 5.25%, 7/01/37 Miami-Dade County, Florida, IDA, Solid Waste Disposal Revenue Bonds (Waster Management, Inc. Project), AMT, Series 1, 3.50%, 12/01/18 (b) Orange County, Florida, Health Facilities Authority, Hospital Revenue Bonds (Adventist Health System), 5.625%, 11/15/12 (a)
Georgia - 4.2%	Gainesville, Georgia, Redevelopment Authority, Educational Facilities Revenue Refunding Bonds (Riverside Military Academy), 5.125%, 3/01/37 Georgia Municipal Electric Authority, Power Revenue Refunding Bonds, Series W, 6.60%, 1/01/18 Georgia Municipal Electric Authority, Power Revenue Refunding Bonds, Series W, 6.60%, 1/01/18 (c) Georgia Municipal Electric Authority, Power Revenue Refunding Bonds, Series Y, 10%, 1/01/10 (c) Houston County, Georgia, Hospital Authority Revenue Bonds (Houston Heart Institute Project), 5.25%, 10/01/35 Main Street Natural Gas, Inc., Georgia, Gas Project Revenue Bonds, Seri A, 6.25%, 7/15/33 (d) (e) Main Street Natural Gas, Inc., Georgia, Gas Project Revenue Bonds, Seri A, 6.375%, 7/15/38 (d) (e) Milledgeville-Baldwin County, Georgia, Development Authority Revenue Bonds (Georgia College and State University Foundation), 5.625%, 9/01/14 (a) Monroe County, Georgia, Development Authority, PCR, Refunding (Oglethorpe Power Corporation-Scherer), Series A, 6.80%, 1/01/11
Idaho - 0.0%	Idaho Housing Agency, S/F Mortgage Revenue Refunding Bonds, AMT, Series E-2, 6.90%, 1/01/27

BlackRock MuniVest Fund, Inc.
Schedule of Investments November 30, 2008 (Unaudited)
(Percentages shown are based on Net Assets)

State	Municipal Bonds
Illinois - 13.1%	Chicago, Illinois, O'Hare International Airport, General Airport Revenu
	Bonds, Third Lien, AMT, Series B-2, 6%, 1/01/27 (f)
	Chicago, Illinois, O'Hare International Airport, General Airport Revenu

Refunding Bonds, Third Lien, AMT, Series A, 5.75%, 1/01/19 (f) Chicago, Illinois, S/F Mortgage Revenue Bonds, AMT, Series C, 7%,

3/01/32 (g) (h) (i) Hodgkins, Illinois, Environmental Improvement Revenue Bonds (Metro Biosolids Management LLC Project), AMT, 6%, 11/01/23 Illinois Development Finance Authority Revenue Bonds (Community Rehabilitation Providers Facilities), Series A, 6.50%, 7/01/22 Illinois Development Finance Authority, Revenue Refunding Bonds (Community Rehabilitation Providers Facilities), Series A, 6%, 7/01/15 Illinois State Finance Authority Revenue Bonds (Advocate Health Care Network), Series D, 6.50%, 11/01/38 Illinois State Finance Authority Revenue Bonds (Community Rehabilitation Providers Facilities), 4.625%, 7/01/27 Illinois State Toll Highway Authority Revenue Bonds, Series B, 5.50%, 1/01/33 Kane and De Kalb Counties, Illinois, Community Unit School District Number 302, GO, 5.75%, 2/01/14 (a) (j) McLean and Woodford Counties, Illinois, Community Unit School District Number 005, GO, Refunding, 6.25%, 12/01/14 (k) McLean and Woodford Counties, Illinois, Community Unit School District Number 005, GO, Refunding, 6.375%, 12/01/16 (k) Regional Transportation Authority, Illinois, Revenue Bonds, Series A, 7.20%, 11/01/20 (1) Regional Transportation Authority, Illinois, Revenue Bonds, Series C, 7.75%, 6/01/20 (f)(j) Will County, Illinois, School District Number 122 (New Lenox Elementary GO, Series A, 6.50%, 11/01/10 (a)(k) Will County, Illinois, School District Number 122 (New Lenox Elementary GO, Series A, 6.50%, 11/01/13 (k) ._____ Indiana - 6.9% Indiana Health and Educational Facilities Financing Authority, Hospital Revenue Bonds (Clarian Health Obligation), Series A, 5.25%, 2/15/40 Indiana Transportation Finance Authority, Highway Revenue Bonds, Series A, 6.80%, 12/01/16 Indianapolis, Indiana, Local Public Improvement Bond Bank, Revenue Refunding Bonds, Series D, 6.75%, 2/01/14 Kansas - 0.8% Sedgwick and Shawnee Counties, Kansas, S/F Mortgage Revenue Bonds (Mortgage-Backed Securities Program), AMT, Series A-4, 5.95%, 12/01/33 (h)(i) Kentucky - 1.0% Louisville and Jefferson County, Kentucky, Metropolitan Government Health System, Revenue Refunding Bonds (Norton Healthcare, Inc.), 5.25%, 10/01/36 BlackRock MuniVest Fund, Inc.

State	Municipal	Bonds

(Percentages shown are based on Net Assets)

Schedule of Investments November 30, 2008 (Unaudited)

Lugari	IIIIIg. BLACKNOCK MONIVEST TOND INC - TOITI N-Q
Louisiana - 3.3%	Louisiana Public Facilities Authority, Hospital Revenue Bonds (Francisco Missionaries of Our Lady Health System, Inc.), Series A, 5%, 8/15/33 Louisiana Public Facilities Authority, Hospital Revenue Bonds (Francisco Missionaries of Our Lady Health System, Inc.), Series A, 5.25%, 8/15/36
Maine - 0.3%	Portland, Maine, Housing Development Corporation, Senior Living Revenue Bonds (Avesta Housing Development Corporation Project), Series A, 5.70% 8/01/21 Portland, Maine, Housing Development Corporation, Senior Living Revenue Bonds (Avesta Housing Development Corporation Project), Series A, 6%, 2/01/34
Maryland - 0.5%	Maryland State Community Development Administration, Department of Housing and Community Development, Residential Revenue Refunding Bonds, AMT, Series D, 4.90%, 9/01/42
Massachusetts - 11.1%	Boston, Massachusetts, Water and Sewer Commission Revenue Bonds, 9.25%, 1/01/11 (c) Massachusetts Bay Transportation Authority, Revenue Refunding Bonds (General Transportation System), Series A, 7%, 3/01/19 Massachusetts State, HFA, Housing Revenue Bonds, AMT, Series A, 5.20%, 12/01/37 Massachusetts State, HFA, Housing Revenue Refunding Bonds, AMT, Series D, 4.85%, 6/01/40 Massachusetts State, HFA, S/F Housing Revenue Bonds, AMT, Series 130, 5%, 12/01/32 Massachusetts State Water Resource Authority Revenue Bonds, Series A, 6.50%, 7/15/19 (c) Massachusetts State Water Resource Authority, Revenue Refunding Bonds, Series A, 6%, 8/01/10 (a) (j)
 Michigan - 6.9%	Delta County, Michigan, Economic Development Corporation,

Delta County, Michigan, Economic Development Corporation, Environmental Improvement Revenue Refunding Bonds (Mead Westvaco-Escanaba), Series A, 6.25%, 4/15/12 (a)
Macomb County, Michigan, Hospital Finance Authority, Hospital Revenue Bonds (Mount Clemens General Hospital), Series B, 5.75%, 11/15/13 (a)
Macomb County, Michigan, Hospital Finance Authority, Hospital Revenue Bonds (Mount Clemens General Hospital), Series B, 5.875%, 11/15/13 (a)
Michigan State Hospital Finance Authority, Hospital Revenue Refunding Bonds (Crittenton Hospital), Series A, 5.625%, 3/01/27
Michigan State Hospital Finance Authority, Hospital Revenue Refunding Bonds (Oakwood Obligated Group), Series A, 5%, 7/15/25
Michigan State Hospital Finance Authority, Revenue Refunding Bonds (Henry Ford Health System), Series A, 5.25%, 11/15/46

BlackRock MuniVest Fund, Inc.
Schedule of Investments November 30, 2008 (Unaudited)
(Percentages shown are based on Net Assets)

State	Municipal Bonds
	Michigan State Hospital Finance Authority, Revenue Refunding Bonds (McLaren Health Care Corporation), 5.75%, 5/15/38 Michigan State Hospital Finance Authority, Revenue Refunding Bonds (Si Hospital), 6.70%, 1/01/26 Michigan State Hospital Finance Authority, Revenue Refunding Bonds (Trinity Health Credit Group), Series A, 6%, 12/01/20
 Minnesota - 2.1%	Minneapolis, Minnesota, Health Care System Revenue Bonds (Allina Healt System), Series A, 5.75%, 11/15/12 (a) Saint Cloud, Minnesota, Health Care Revenue Refunding Bonds (Saint Clo Hospital Obligation Group), Series A, 6.25%, 5/01/17 (k)
	Lowndes County, Mississippi, Solid Waste Disposal and PCR, Refunding (Weyerhaeuser Company Project), Series A, 6.80%, 4/01/22 Lowndes County, Mississippi, Solid Waste Disposal and PCR, Refunding (Weyerhaeuser Company Project), Series B, 6.70%, 4/01/22 Mississippi Business Finance Corporation, Mississippi, PCR, Refunding (System Energy Resources, Inc. Project), 5.875%, 4/01/22 Mississippi Business Finance Corporation, Mississippi, PCR, Refunding (System Energy Resources, Inc. Project), 5.90%, 5/01/22
 Missouri - 0.5%	Missouri State Development Finance Board, Infrastructure Facilities Revenue Refunding Bonds (Branson), Series A, 5.50%, 12/01/32 Missouri State Housing Development Commission, S/F Mortgage Revenue Bonds (Homeowner Loan), AMT, Series A, 7.50%, 3/01/31 (h)(i)
 Montana - 1.3%	Forsyth, Montana, PCR, Refunding (Portland General Electric Company), Series A, 5.20%, 5/01/33
New Hampshire - 0.5%	New Hampshire Health and Education Facilities Authority, Revenue Refunding Bonds (Elliot Hospital), Series B, 5.60%, 10/01/22
New Jersey - 5.1%	New Jersey EDA, Cigarette Tax Revenue Bonds, 5.50%, 6/15/24 New Jersey EDA, Cigarette Tax Revenue Bonds, 5.75%, 6/15/29 New Jersey EDA, Cigarette Tax Revenue Bonds, 5.75%, 6/15/34 New Jersey State Housing and Mortgage Finance Agency Revenue Bonds, Series AA, 6.375%, 10/01/28 Tobacco Settlement Financing Corporation of New Jersey, Asset-Backed Revenue Bonds, 7%, 6/01/13 (a)
New York - 7.9%	Metropolitan Transportation Authority, New York, Revenue Bonds, Series C, 6.25%, 11/15/23 Metropolitan Transportation Authority, New York, Revenue Bonds, Series C, 6.50%, 11/15/28 New York City, New York, City Transitional Finance Authority, Future T

Secured Revenue Bonds, Series B, 6.25%, 5/15/10 (a)

BlackRock MuniVest Fund, Inc.
Schedule of Investments November 30, 2008 (Unaudited)
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State	Municipal Bonds		
	New York City, New York, GO, Refunding, Series A, 6.375%, 5/15/14 (j) New York State Dormitory Authority, State University Educational Facili Revenue Refunding Bonds, Series 1989, 6%, 5/15/10 (a)(f)		
North Carolina - 3.0%	Gaston County, North Carolina, Industrial Facilities and Pollution Cont Financing Authority, Revenue Bonds (National Gypsum Company Project), AMT, 5.75%, 8/01/35 North Carolina Medical Care Commission, Health Care Facilities, Revenue Refunding Bonds (University Health System), Series D, 6.25%, 12/01/33		
Ohio - 4.1%	Buckeye Tobacco Settlement Financing Authority, Ohio, Tobacco Settlement Asset-Backed Bonds, Series A-2, 6.50%, 6/01/47		
Pennsylvania - 3.2%	Pennsylvania State Higher Education Assistance Agency Revenue Bonds, Capital Acquisition, 6.125%, 12/15/10 (a) (f) Philadelphia, Pennsylvania, Authority for Industrial Development, Senio Living Revenue Bonds (Arbor House, Inc. Project), Series E, 6.10%, 7/01/33 Philadelphia, Pennsylvania, Authority for Industrial Development, Senio Living Revenue Bonds (Rieder House Project), Series A, 6.10%, 7/01/33 Sayre, Pennsylvania, Health Care Facilities Authority, Revenue Bonds (Guthrie Healthcare System), Series B, 7.125%, 12/01/11 (a) Sayre, Pennsylvania, Health Care Facilities Authority, Revenue Refundin Bonds (Guthrie Healthcare System), Series A, 6.25%, 12/01/11 (a) Sayre, Pennsylvania, Health Care Facilities Authority, Revenue Refundin Bonds (Guthrie Healthcare System), Series A, 6.25%, 12/01/18		
South Carolina - 0.9%	Georgetown County, South Carolina, Environmental Improvement Revenue Refunding Bonds (International Paper Company Project), AMT, Series A, 5.55%, 12/01/29 Richland County, South Carolina, Environmental Improvement Revenue Refunding Bonds (International Paper), AMT, 6.10%, 4/01/23		
South Dakota - 0.4%	South Dakota State Health and Educational Facilities Authority Revenue Bonds (Sanford Health), 5%, 11/01/40		
Tennessee - 0.6%	Shelby County, Tennessee, Health, Educational and Housing Facility Board, Hospital Revenue Refunding Bonds (Methodist Healthcare), 6.50%, 9/01/12 (a)		
Texas - 17.3%	Austin, Texas, Convention Center Revenue Bonds (Convention Enterprises Inc.), First Tier, Series A, 6.70%, 1/01/11 (a) Brazos River Authority, Texas, PCR, Refunding (TXU Energy Company LLC		

Project), AMT, Series A, 7.70%, 4/01/33
Brazos River, Texas, Harbor Navigation District, Brazoria County
Environmental Revenue Refunding Bonds (Dow Chemical Company
Project), AMT, Series A-7, 6.625%, 5/15/33
Dallas-Fort Worth, Texas, International Airport, Joint Revenue Bonds,
AMT, Series B, 6.25%, 11/01/28 (f)

BlackRock MuniVest Fund, Inc.
Schedule of Investments November 30, 2008 (Unaudited)
(Percentages shown are based on Net Assets)

State Municipal Bonds

Dallas-Fort Worth, Texas, International Airport, Joint Revenue Bonds, AMT. Series C. 6.25%. 11/01/28 (f)

AMT, Series C, 6.25%, 11/01/28 (f)
Dallas-Fort Worth, Texas, International Airport, Joint Revenue Refunding

Bonds, AMT, Sub-Series A-2, 6.10%, 11/01/24 (f) Gregg County, Texas, Health Facilities Development Corporation, Hospital Revenue Bonds (Good Shepherd Medical Center Project),

6.875%, 10/01/10 (a) (m)

Guadalupe-Blanco River Authority, Texas, Sewage and Solid Waste Disposa

Facility Revenue Bonds (E. I. du Pont de Nemours and Company Project), AMT, 6.40%, 4/01/26 Gulf Coast Waste Disposal Authority, Texas, Revenue Refunding Bonds

(International Paper Company), AMT, Series A, 6.10%, 8/01/24

Harris County-Houston Sports Authority Taxas Revenue Refunding Bo

Harris County-Houston Sports Authority, Texas, Revenue Refunding Bonds, Senior Lien, Series G, 5.75%, 11/15/20 (f)

Harris County, Texas, Health Facilities Development Corporation, Hospit Revenue Refunding Bonds (Memorial Hermann Healthcare System), Series B, 7.125%, 12/01/31

Harris County, Texas, Health Facilities Development Corporation, Hospit Revenue Refunding Bonds (Memorial Hermann Healthcare System), Series B, 7.25%, 12/01/35

Houston, Texas, Industrial Development Corporation Revenue Bonds (Air Cargo), AMT, 6.375%, 1/01/23

Judson, Texas, Independent School District, School Building, GO, 5%, 2/01/37 (n)

Mansfield, Texas, Independent School District, GO, Refunding, 6.625%, 2/15/15

Matagorda County, Texas, Navigation District Number 1, Revenue Refunding Bonds (Centerpoint Energy Project), 5.60%, 3/01/27 Midway, Texas, Independent School District, GO, Refunding, 6.125%, 8/15/14

Port Corpus Christi, Texas, Revenue Refunding Bonds (Celanese Project), Series A, 6.45%, 11/01/30

Red River Authority, Texas, PCR, Refunding (Celanese Project), AMT, Series B, 6.70%, 11/01/30

Texas State University, System Financing Revenue Refunding Bonds, 5.25% 3/15/27

Vermont - 0.2% Vermont Educational and Health Buildings Financing Agency,
Developmental and Mental Health Revenue Bonds (Howard Center for

Developmental and Mental Health Revenue Bonds (Howard Center for Human Services), Series A, 6.375%, 6/15/22

8

Virginia - 1.4%	Chesterfield County, Virginia, IDA, PCR (Virginia Electric and Power Company), Series A, 5.875%, 6/01/17 Fairfax County, Virginia, EDA, Residential Care Facilities, Mortgage Revenue Refunding Bonds (Goodwin House, Inc.), 5.125%, 10/01/37	
BlackRock MuniVest Fund Schedule of Investments	November 30, 2008 (Unaudited) (Percentages shown are based on Net Assets)	
State	Municipal Bonds	
	Fairfax County, Virginia, EDA, Residential Care Facilities, Mortgage Revenue Refunding Bonds (Goodwin House, Inc.), 5.125%, 10/01/42	
Washington - 7.2%	Energy Northwest, Washington, Electric Revenue Refunding Bonds (Columbia Generating), Series B, 6%, 7/01/18 (1) Seattle, Washington, Housing Authority Revenue Bonds (Replacement Housing Project), 6.125%, 12/01/32 Washington State Health Care Facilities Authority, Revenue Refunding Bonds (Catholic Health Initiatives), Series D, 6.375%, 10/01/36 Washington State Public Power Supply System, Revenue Refunding Bonds (Nuclear Project Number 1), Series B, 7.125%, 7/01/16	
Wisconsin - 3.0%	Milwaukee, Wisconsin, Revenue Bonds (Air Cargo), AMT, 6.50%, 1/01/25 Wisconsin Housing and EDA, Home Ownership Revenue Refunding Bonds, AMT, Series A, 5.625%, 3/01/31 Wisconsin State Health and Educational Facilities Authority, Mortgage Revenue Bonds (Hudson Memorial Hospital), 5.70%, 1/15/29 (o) Wisconsin State Health and Educational Facilities Authority Revenue Bor (SynergyHealth, Inc.), 6%, 11/15/32	
U.S. Virgin Islands -	Virgin Islands Government Refinery Facilities, Revenue Refunding Bonds (Hovensa Coker Project), AMT, 6.50%, 7/01/21	
	Total Municipal Bonds - 134.5%	
	Municipal Bonds Transferred to Tender Option Bond Trusts (p)	
Connecticut - 2.5%	Connecticut State Health and Educational Facilities Authority Revenue Bonds (Yale University), Series Z-3, 5.05%, 7/01/42	
Florida - 1.6%	Miami-Dade County, Florida, Aviation Revenue Refunding Bonds (Miami International Airport), AMT, 5%, 10/01/40 (q)	
Illinois - 7.0%	Chicago, Illinois, Water Revenue Refunding Bonds, Second Lien, 5.25%,	

Kane and De Kalb Counties, Illinois, Community Unit School District

11/01/33 (k)

Number 302, GO, 5.75%, 2/01/18 (j)
Kane and De Kalb Counties, Illinois, Community Unit School District
Number 302, GO, 5.75%, 2/01/19 (j)
Kane and De Kalb Counties, Illinois, Community Unit School District
Number 302, GO, 5.75%, 2/01/21 (j)
Metropolitan Pier and Exposition Authority, Illinois, Dedicated State T
Revenue Refunding Bonds (McCormick Place Expansion Project), Series B,
5.75%, 6/15/23 (f)

Maryland - 0.9%	Maryland State Transportation Authority, Transportation Facilities Proj Revenue Bonds, 5%, 7/01/41 (k)
Massachusetts - 4.1%	Massachusetts State School Building Authority, Dedicated Sales Tax Revenue Bonds, Series A, 5%, 8/15/30 (k)

BlackRock MuniVest Fund, Inc.
Schedule of Investments November 30, 2008 (Unaudited)
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State	Municipal Bonds Transferred to Tender Option Bond Trusts (p)
New York - 4.8%	New York City, New York, City Municipal Water Finance Authority, Water and Sewer System, Revenue Refunding Bonds, Series DD, 5%, 6/15/37
North Carolina - 2.6%	North Carolina Capital Facilities Finance Agency, Revenue Refunding Bon (Duke University Project), Series A, 5%, 10/01/41
Ohio - 0.8%	Ohio State Higher Educational Facilities Commission, Hospital Revenue Bonds (University Hospitals Health System), Series A, 5.25%, 01/01/33
Texas - 7.5%	Harris County, Texas, Health Facilities Development Corporation Revenue Refunding Bonds (School Health Care System), Series B, 5.75%, 7/01/27 (Texas State Department of Housing and Community Affairs, S/F Mortgage Revenue Bonds, AMT, Series B, 5.25%, 9/01/32 (g)(h)(i) Texas State University, System Financing Revenue Refunding Bonds, 5%, 3/15/30 (k)

Washington - 10.9%

Central Puget Sound Regional Transportation Authority, Washington, Sales and Use Tax Revenue Bonds, Series A, 5%, 11/01/32 (k)

Central Puget Sound Regional Transportation Authority, Washington, Sales and Use Tax Revenue Bonds, Series A, 5%, 11/01/34

Central Puget Sound Regional Transportation Authority, Washington, Sales and Use Tax Revenue Bonds, Series A, 5%, 11/01/36

Energy Northwest, Washington, Electric Revenue Refunding Bonds (Columbia Generating), Series A, 5.75%, 7/01/18 (f)

Energy Northwest, Washington, Electric Revenue Refunding Bonds (Project

Number 1), Series B, 6%, 7/01/17 (f)

Total Municipal Bonds Transferred to Tender Option Bond Trusts - 42.7%

Total Long-Term Investments (Cost - \$891,646,838) - 177.2%

Short-Term Securities

Merrill Lynch Institutional Tax-Exempt Fund, 1.08% (r)(s)

Total Short-Term Securities (Cost - \$46,600,000) - 10.2%

_____ Total Investments (Cost - \$938,246,838*) - 187.4%

Liabilities in Excess of Other Assets - (2.6)%

Liability for Trust Certificates, Including Interest Expense and Fees Payable - (24.6)%

Preferred Shares, at Redemption Value - (60.2)%

Net Assets Applicable to Common Shares - 100.0%

The cost and unrealized appreciation (depreciation) of investments as of November 30, 2008, as computed for federal income tax purposes, were as follows:

Aggregate cost \$ 827,102,393 ========= \$ 23,784,173 Gross unrealized appreciation Gross unrealized depreciation (104,028,542)_____ Net unrealized depreciation \$ (80,244,369) _____

BlackRock MuniVest Fund, Inc. Schedule of Investments November 30, 2008 (Unaudited)

- 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.
- Variable rate security. Rate shown is as of report date. Maturity shown is (b) the final maturity date.
- Security is collateralized by Municipal or U.S. Treasury Obligations. (C)
- Non-income producing security.
- Issuer filed for bankruptcy and/or is in default of interest payments.
- MBIA Insured.
- FHLMC Collateralized. (g)
- (h) FNMA Collateralized.
- (i) GNMA Collateralized.
- (j) FGIC Insured.
- FSA Insured. (k)
- AMBAC Insured. (1)
- Radian Insured. (m)
- Assured Guaranty Insured. (n)
- (0) FHA Insured.
- Securities represent bonds transferred to a tender option bond trust in exchange for which the Fund acquired residual interest certificates. These

- securities serve as collateral in a financing transaction.
- (q) XL Capital Insured.
- (r) Investments in companies considered to be an affiliate of the Fund, for purposes of Section 2(a)(3) of the Investment Company Act of 1940, were as follows:

Affiliate	Net Activity	Income
Merrill Lynch Institutional Tax-Exempt Fund	41,169,026	\$ 209,813

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

BlackRock MuniVest Fund, Inc. Schedule of Investments November 30, 2008 (Unaudited)

- Effective September 1, 2008, the Fund adopted Financial Accounting Standards Board Statement of Financial Accounting Standards No. 157, "Fair Value Measurements" ("FAS 157"). FAS 157 clarifies the definition of fair value, establishes a framework for measuring fair values and requires additional disclosures about the use of fair value measurements. Various inputs are used in determining the fair value of investments, which are as follows:
 - o Level 1 price quotations in active markets/exchanges for identical securities ${}^{\circ}$
 - Level 2 other observable inputs (including, but not limited to: quoted prices for 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)
 - o Level 3 unobservable inputs based on the best information available in the circumstance, to the extent observable inputs are not available (including the Fund's own assumption used in determining the fair value of investments)

The inputs or methodology used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. For information about the Fund's policy regarding valuation of investments and other significant accounting policies, please refer to the Fund's most recent financial statements as contained in its annual report.

The following table summarizes the inputs used as of November 30, 2008 in determining the fair valuation of the Fund's investments:

Valuation	Investments in
Inputs	Securities
Level 1	\$ 46,600,000
Level 2	811,941,243
Level 3	
Total	\$ 858,541,243
	==========

- 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/ Donald C. Burke

Donald C. Burke Chief Executive Officer of BlackRock MuniVest Fund, Inc.

Date: January 20, 2009

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/ Donald C. Burke

Donald C. Burke

Chief Executive Officer (principal executive officer) of BlackRock MuniVest Fund, Inc.

Date: January 20, 2009

By: /s/ Neal J. Andrews

Neal J. Andrews

Chief Financial Officer (principal financial officer) of BlackRock MuniVest Fund, Inc.

Date: January 20, 2009