MUNIVEST FUND INC Form N-CSRS May 02, 2005

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM N-CSRS

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-05611

Name of Fund: MuniVest Fund, Inc.

Fund Address: P.O. Box 9011

Princeton, NJ 08543-9011

Name and address of agent for service: Robert C. Doll, Jr., Chief Executive Officer, 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: (609) 282-2800

Date of fiscal year end: 08/31/05

Date of reporting period: 09/01/04 - 02/28/05

Item 1 - Report to Stockholders

MuniVest Fund, Inc.

Semi-Annual Report February 28, 2005

MuniVest Fund, Inc.

The Benefits and Risks of Leveraging

MuniVest Fund, Inc. utilizes leveraging to seek to enhance the yield and net asset value of its Common Stock. However, these objectives cannot be achieved in all interest rate environments. To leverage, the Fund issues Preferred Stock, which pays dividends at prevailing short-term interest rates, and invests the proceeds in long-term municipal bonds. The interest earned on these investments, net of dividends to Preferred Stock, is paid to Common Stock shareholders in the form of dividends, and the value of these portfolio holdings is reflected in the per share net asset value of the Fund's Common Stock. However, in order to benefit Common Stock shareholders, the yield curve must be positively sloped; that is, short-term interest rates must be lower than long-term interest rates. At the same time, a period of generally declining interest rates will benefit Common Stock shareholders. If either of these conditions change, then the risks of leveraging will begin to outweigh the benefits.

To illustrate these concepts, assume a fund's Common Stock capitalization of \$100\$ million and the issuance of Preferred Stock for an additional <math>\$50\$ million, creating a total value of \$150\$ million available for investment in long-term

municipal bonds. If prevailing short-term interest rates are approximately 3% and long-term interest rates are approximately 6%, the yield curve has a strongly positive slope. The fund pays dividends on the \$50 million of Preferred Stock based on the lower short-term interest rates. At the same time, the fund's total portfolio of \$150 million earns the income based on long-term interest rates. Of course, increases in short-term interest rates would reduce (and even eliminate) the dividends on the Common Stock.

In this case, the dividends paid to Preferred Stock shareholders are significantly lower than the income earned on the fund's long-term investments, and therefore the Common Stock shareholders are the beneficiaries of the incremental yield. However, if short-term interest rates rise, narrowing the differential between short-term and long-term interest rates, the incremental yield pickup on the Common Stock will be reduced or eliminated completely. At the same time, the market value of the fund's Common Stock (that is, its price as listed on the American Stock Exchange) may, as a result, decline. Furthermore, if long-term interest rates rise, the Common Stock's net asset value will reflect the full decline in the price of the portfolio's investments, since the value of the fund's Preferred Stock does not fluctuate. In addition to the decline in net asset value, the market value of the fund's Common Stock may also decline.

As a part of its investment strategy, the Fund may invest in certain securities whose potential income return is inversely related to changes in a floating interest rate ("inverse floaters"). In general, income on inverse floaters will decrease when short-term interest rates increase and increase when short-term interest rates decrease. Investments in inverse floaters may be characterized as derivative securities and may subject the Fund to the risks of reduced or eliminated interest payments and losses of invested principal. In addition, inverse floaters have the effect of providing investment leverage and, as a result, the market value of such securities will generally be more volatile than that of fixed-rate, tax-exempt securities. To the extent the Fund invests in inverse floaters, the market value of the Fund's portfolio and the net asset value of the Fund's shares may also be more volatile than if the Fund did not invest in these securities. As of February 28, 2005, the percentage of the Fund's total net assets invested in inverse floaters was 11.36%, before the deduction of Preferred Stock.

#### Swap Agreements

The Fund may also invest in swap agreements, which are over-the-counter contracts in which one party agrees to make periodic payments based on the change in market value of a specified bond, basket of bonds, or index in return for periodic payments based on a fixed or variable interest rate or the change in market value of a different bond, basket of bonds or index. Swap agreements may be used to obtain or reduce exposure to a bond or market without owning or taking physical custody of securities. Swap agreements involve the risk that the party with whom the Fund has entered into the swap will default on its obligation to pay the Fund and the risk that the Fund will not be able to meet its obligations to pay the other party to the agreement.

2 MUNIVEST FUND, INC. FEBRUARY 28, 2005

A Letter From the President

Dear Shareholder

Financial markets broadly posted positive returns over the most recent reporting period, with international equities providing some of the most impressive results.

Total Returns as of February 28, 2005	6-month	12-month
	=======	=======
U.S. equities (Standard & Poor's 500 Index)	+ 9.99%	+ 6.98%
International equities (MSCI Europe Australasia Far East Index)	+21.18	+18.68
Fixed income (Lehman Brothers Aggregate Bond Index)	+ 1.26	+ 2.43
Tax-exempt fixed income (Lehman Brothers Municipal Bond Index)	+ 2.40	+ 2.96
High yield bonds (Credit Suisse First Boston High Yield Index)	+ 7.53	+11.21

The U.S. economy has continued to show resilience in the face of the Federal Reserve Board's (the Fed) continued interest rate hikes and, more recently, higher oil prices. The Fed's measured tightening program recently brought the federal funds rate to 2.75% en route to a more "neutral" short-term interest rate target (relative to inflation). Since the U.S. presidential election, progress has been monitored on many fronts in Washington, although concerns remain about the structural problems of debt and deficits, as reflected by a significant decline in the U.S. dollar.

U.S. equities ended 2004 in a strong rally, but remained in a fairly narrow trading range for the first two months of 2005. Divergences were notable among sectors, with energy emerging as a clear leader. On the positive side, corporations have accelerated their hiring plans, capital spending remains reasonably robust and merger-and-acquisition activity has increased. Offsetting the positives are slowing corporate earnings growth, renewed energy price concerns and the potential for an economic slowdown. International equities, particularly in Asia, have benefited from higher economic growth rates (China recorded growth of 9.3% in 2004), stronger currencies and relatively reasonable valuations.

The major action in the bond market has been a flattening of the yield curve. As short-term interest rates continued to rise, yields on the long end of the curve remained relatively stable — even declining at certain points since the Fed's monetary tightening program began in June 2004. This phenomenon has been largely attributed to continued foreign interest in U.S. bonds, which has served to absorb much of the excess supply. By period-end, many believed long-term yields were long overdue for a rise.

Looking ahead, the environment is likely to be a challenging one for investors, with diversification and selectivity becoming increasingly important themes. With this in mind, we encourage you to meet with your financial advisor to review your goals and asset allocation and to rebalance your portfolio, as necessary, to ensure it remains aligned with your objectives and risk tolerance. As always, we thank you for trusting Merrill Lynch Investment Managers with your investment assets, and we look forward to serving you in the months and years ahead.

Sincerely,

/s/ Robert C. Doll, Jr.

Robert C. Doll, Jr. President and Director

MUNIVEST FUND, INC. FEBRUARY 28, 2005

A Discussion With Your Fund's Portfolio Manager

Fund performance exceeded its comparable Lipper category average for the period, benefiting from a focus on lower-rated, higher-yielding securities -- an area of the municipal market that continued to outperform.

Describe the recent market environment relative to municipal bonds.

Despite broadly positive economic conditions, long-term bond yields declined during the past six months as bond prices, which move opposite yields, generally rose. Gross domestic product (GDP) growth was recently revised to 3.8% for the fourth quarter of 2004, similar to the 4% rate recorded in the third quarter. For 2004 as a whole, real GDP grew at a 4.4% rate, well ahead of 2003's annual rate of 3%. The improving economic activity was largely offset by inflationary trends remaining in the 1.5% – 2% range. Also helping to boost bond prices was strong currency-related demand for long-term U.S. Treasury issues on the part of many foreign governments.

Over the past six months, long-term U.S. Treasury bond yields declined 21 basis points (.21%) to 4.72% at February 28, 2005. However, the Federal Reserve Board (the Fed) continued to raise short-term interest rates, moving its federal funds target rate recently to 2.75%. The Fed's series of interest rate hikes, and the expectation for a continuation of the monetary tightening program, pressured shorter-maturity bond yields higher throughout the period. The yield on the 10-year Treasury note stood at 4.36% at the end of February, an increase of 26 basis points over the six-month period.

A generally positive technical environment supported higher bond prices in the long end of the municipal bond market. Recent bond issuance has been heavily weighted in the 10-year - 20-year maturity range, leading to a moderate scarcity of bonds maturing in 30 years - 35 years. Investor demand was solid throughout the period and increased in the latter months. The most current statistics from the Investment Company Institute indicate that long-term municipal bond funds saw net new cash flows of \$870 million in January 2005. This represented a considerable improvement from January 2004, which experienced net cash outflows of \$224 million. As measured by the Bond Buyer Revenue Bond Index, the yield on A-rated revenue bonds maturing in 30 years declined 16 basis points to 4.93% at the end of February. AAA-rated issues maturing in 30 years, as reported by Municipal Market Data, declined 19 basis points to 4.51%. Conversely, shorter-maturity municipal bond yields increased, responding to rising U.S. Treasury note yields and increased supply pressures. AAA-rated tax-exempt bonds maturing in 10 years yielded 3.65% at the end of February, representing an increase of 15 basis points over the period.

During the past six months, more than \$175 billion in new long-term tax-exempt bonds was underwritten, essentially unchanged versus the same period a year ago. In the last three months, the pace of new issuance increased. Approximately \$91 billion in long-term tax-exempt bonds was issued during that time, an increase of 12% compared to the same three months a year ago. New-issue municipal volume is expected to be easily manageable in early 2005, continuing to support the tax-exempt market's favorable technical position.

Finally, long-term tax-exempt bond yield ratios have remained in the 88% - 95% range relative to taxable bonds, at or above their recent historic average of 85% - 88%. These attractive yield ratios should continue to attract both traditional and non-traditional investors to the municipal market.

3

How did the Fund perform during the period in light of the existing market conditions?

For the six-month period ended February 28, 2005, the Common Stock of MuniVest Fund, Inc. had net annualized yields of 6.72% and 7.09%, based on a period-end per share net asset value of \$10.09 and a per share market price of \$9.55, respectively, and \$.336 per share income dividends. Over the same period, the total investment return on the Fund's Common Stock was +5.46%, based on a change in per share net asset value from \$9.91 to \$10.09, and assuming reinvestment of all distributions.

The Fund's total return, based on net asset value, exceeded the +4.96% average return of the Lipper General Municipal Debt Funds (Leveraged) category for the six-month period. (Funds in this Lipper category invest primarily in municipal debt issues rated in the top four credit-rating categories. These funds can be leveraged via use of debt, preferred equity and/or reverse repurchase agreements.) The Fund was able to achieve the outperformance despite its modest defensive positioning during a period when long-term tax-exempt bond yields declined slightly. Benefiting performance over the past six months was the Fund's above-average yield and the continued outperformance of our lower-rated holdings, such as A-rated hospital or corporate-backed debt.

4 MUNIVEST FUND, INC. FEBRUARY 28, 2005

For a description of the Fund's total investment return based on a change in the per share market value of the Fund's Common Stock (as measured by the trading price of the Fund's shares on the American Stock Exchange), and assuming reinvestment of dividends, please refer to the Financial Highlights section of this report. As a closed-end fund, the Fund's shares may trade in the secondary market at a premium or discount to the Fund's net asset value. As a result, total investment returns based on changes in the market value of the Fund's Common Stock can vary significantly from total investment returns based on changes in the Fund's net asset value.

What changes were made to the portfolio during the period?

Along with a rise in long-term municipal bond prices, we have seen increased demand for higher-yielding tax-exempt securities. In recent months, much of the new net cash flows into municipal bond funds has been directed into "high yield" tax-exempt funds. The demand in this area of the market has helped generate significant price appreciation for the Fund's lower-rated issues. We will be monitoring the price improvement of these lower-rated issues. Should it continue and/or intensify, we would look to reduce some of the Fund's exposure to lower-rated issues. Higher-quality securities could then be purchased at historically attractive yield differentials.

During the period, we also took advantage of the continued appreciation in California state-related issues. Overall exposure to these bonds was reduced by approximately 2.5%, allowing the Fund to benefit from the recent price improvements. The proceeds from the sales were largely invested in New Jersey securities, where we found an attractive buying opportunity as supply increased and prices fell. Specifically, a number of large New Jersey issues were marketed in early October 2004, resulting in a temporary increase in New Jersey municipal bond yields.

For the six-month period ended February 28, 2005, the Fund's Auction Market Preferred Stock (AMPS) had average yields as follows: Series A, 1.38%; Series B, 1.60%; Series C, 1.71%; Series D, 1.36%; Series E, 1.53%; and Series F, 1.60%. Continued short-term interest rate increases by the Fed have modestly boosted the Fund's borrowing costs throughout the past six months. While we believe the

majority of the Fed's monetary tightening actions have already occurred, we expect additional increases in the federal funds rate until at least midyear. Despite Despite the recent rate hikes, the Fund's borrowing costs remain quite low on a historical basis and the leveraging of the Preferred Stock has continued to generate a material income benefit to the Fund's Common Stock shareholders. However, should the spread between short-term and long-term interest rates narrow, the benefits of leverage will decline and, as a result, reduce the yield on the Fund's Common Stock. At the end of the period, the Fund's leverage amount, due to AMPS, was 35.04% of total net assets. (For a more complete explanation of the benefits and risks of leveraging, see page 2 of this report to shareholders.)

How would you characterize the Fund's position at the close of the period?

The Fund ended the period with a defensive posture, and we expect to maintain that structure in the coming months. Rising short-term interest rates, an expanding domestic economy, and increasing commodity prices (especially oil) are all textbook indicators for rising long-term interest rates.

Nevertheless, bond yields are still near their historic lows and, under the circumstances, we believe the more prudent strategy is to maintain our emphasis on higher-yielding issues rather than more interest rate-sensitive securities. The Fund also will remain fully invested in order to enhance shareholder income. Given the municipal bond market's strong technical position, including favorable supply/demand dynamics, we expect the tax-exempt market to perform well relative to its taxable counterpart.

Fred K. Stuebe Vice President and Portfolio Manager

March 24, 2005

MUNIVEST FUND, INC. FEBRUARY 28, 2005

Schedule of Investments (in Thousands)

State	Face Amount	Municipal Bonds
Alabama4.0%	\$ 2,550	Camden, Alabama, IDB, Exempt Facilities Revenue Bonds (Weyerh Company), Series A, 6.125% due 12/01/2024
	7,500	Courtland, Alabama, IDB, Solid Waste Disposal Revenue Bonds (International Corporation Project), AMT, Series A, 6.50% due Huntsville, Alabama, Health Care Authority Revenue Bonds:
	3,500	Series A, 5.75% due 6/01/2031
	5,000	Series B, 5.75% due 6/01/2032
	5,000	Selma, Alabama, IDB, Environmental Improvement Revenue Refund (International Paper Company Project), Series B, 5.50% due 5/
Alaska1.4%		Anchorage, Alaska, Lease Revenue Bonds (Correctional Facility
	3,575	6% due 2/01/2014
	3,830	6% due 2/01/2016
	500	Valdez, Alaska, Marine Terminal Revenue Refunding Bonds (BP P Project), VRDN, Series B, 1.77% due 7/01/2037 (1)
Arizona1.6%	4,375	Maricopa County, Arizona, IDA, Education Revenue Bonds (Arizo

Schools Project 1), Series A, 6.75% due 7/01/2029

5

		Pima County, Arizona, IDA, Education Revenue Bonds (Arizona C Project):
	2,100	Series E, 7.25% due 7/01/2031
	500	Series I, 6.10% due 7/01/2024
	1,000	Series I, 6.30% due 7/01/2031
	1,610	Pima County, Arizona, IDA, Education Revenue Refunding Bonds
=======================================		Charter Schools Project II), Series A, 6.75% due 7/01/2021
California20.3%	4,000	California State, GO, Refunding, 5% due 3/01/2034 (h)
	F 000	California State Public Works Board, Lease Revenue Bonds:
	5,000	(Department of Corrections), Series C, 5.50% due 6/01/2
	6,000	(Department of Corrections), Series C, 5.50% due 6/01/2
	10,775	(Department of Mental HealthCoalinga State Hospital), 5.125% due 6/01/2029
		California State, Various Purpose, GO:
	13,570	5.50% due 4/01/2030
	16,250	5.50% due 4/01/2030 5.50% due 11/01/2033
	5,240	California Statewide Communities Development Authority, Healt
	3,210	Revenue Bonds (Memorial Health Services), Series A, 6% due 10
		Golden State Tobacco Securitization Corporation of California
		Settlement Revenue Bonds:
	7,280	Series A-3, 7.875% due 6/01/2042
	3,750	Series A-4, 7.80% due 6/01/2042
	1,375	Series A-5, 7.875% due 6/01/2042
	13,900	Series B, 5.375% due 6/01/2028
	8,850	Series B, 5.50% due 6/01/2033
	15,000	Series B, 5.50% due 6/01/2033 (f)
	5,000	Series B, 5.50% due 6/01/2043 (f)
======================================		Arapahoe County, Colorado, School District Number 005, GO (Ch
00_0_0	5,750	6% due 12/15/2013
	4,165	6% due 12/15/2014
	·	Colorado HFA, Revenue Refunding Bonds (S/F Program), AMT, Sen A-2:
	1,175	6.60% due 5/01/2028
	385	7.50% due 4/01/2031
	3,000	Colorado Health Facilities Authority Revenue Bonds (Lutheran
		Center), Series A, 5.25% due 6/01/2034

#### Portfolio Abbreviations

To simplify the listings of MuniVest Fund, Inc.'s portfolio holdings in the Schedule of Investments, we have abbreviated the names of many of the securities according to the list at right.

AMT	Alternative Minimum Tax (subject to)
DRIVERS	Derivative Inverse Tax-Exempt Receipts
EDA	Economic Development Authority
GO	General Obligation Bonds
HDA	Housing Development Authority
HFA	Housing Finance Agency
IDA	Industrial Development Authority
IDB	Industrial Development Board
IDR	Industrial Development Revenue Bonds
M/F	Multi-Family
PCR	Pollution Control Revenue Bonds
RIB	Residual Interest Bonds
RITR	Residual Interest Trust Receipts
S/F	Single-Family
VRDN	Variable Rate Demand Notes

6 MUNIVEST FUND, INC. FEBRUARY 28, 2005

Schedule of Investments (continued)

(in Thousands)

State	Face Amount	Municipal Bonds
Connecticut0.5%	\$ 2,810	Mohegan Tribe Indians Gaming Authority, Connecticut, Public I Revenue Refunding Bonds (Priority Distribution), 6.25% due 1/
Florida2.8%	6,000	Highlands County, Florida, Health Facilities Authority, Hospi Bonds (Adventist Health System), Series D, 5.375% due 11/15/2
	10,320	Orange County, Florida, Health Facilities Authority, Hospital (Adventist Health System), 5.625% due 11/15/2032
Georgia3.2%	1,100	Atlanta, Georgia, Water and Wastewater Revenue Bonds, VRDN, S due 11/01/2041 (i)(1)
	4 (00	Georgia Municipal Electric Authority, Power Revenue Refunding
	4,600 250	Series W, 6.60% due 1/01/2018 Series W, 6.60% due 1/01/2018 (e)
	250	Series Y, 10% due 1/01/2010 (e)
		Milledgeville-Baldwin County, Georgia, Development Authority (Georgia College and State University Foundation):
	4,390	5.50% due 9/01/2024
	2,000	5.625% due 9/01/2030
	4,785	Monroe County, Georgia, Development Authority, PCR, Refunding Power CorporationScherer), Series A, 6.80% due 1/01/2011
Idaho0.2%	915	Idaho Housing Agency, S/F Mortgage Revenue Refunding Bonds, A 6.90% due 1/01/2027
Illinois21.5%	3 <b>,</b> 005	Chicago, Illinois, GO (Neighborhoods Alive 21 Program), Serie due 1/01/2016 (f)
	5,000	Chicago, Illinois, O'Hare International Airport, General Airp Refunding Bonds, Third Lien, AMT, Series A, 5.75% due 1/01/20 Chicago, Illinois, O'Hare International Airport Revenue Bonds
	11,200	3rd Lien, Series B-2, 6% due 1/01/2029 (n)
	8,540	Series 368, DRIVERS, 9.793% due 7/01/2011 (c)(m)
	7,000	Chicago, Illinois, O'Hare International Airport Revenue Refun DRIVERS, AMT, Series 253, 9.299% due 1/01/2020 (c) (m)
	130	Chicago, Illinois, S/F Mortgage Revenue Bonds, AMT, Series C, due 3/01/2032 (b)(d)(k)
	5,000	Cook County, Illinois, Community High School District Number Township, GO, 6% due 12/01/2010 (a)(f)
	10,000	Hodgkins, Illinois, Environmental Improvement Revenue Bonds (Biosolids Management LLC Project), AMT, 6% due 11/01/2023
	2,140	Illinois Development Finance Authority Revenue Bonds (Communi Rehabilitation Providers Facility), Series A, 6.50% due 7/01/
	1,365	Illinois Development Finance Authority, Revenue Refunding Bon Rehabilitation Providers), Series A, 6% due 7/01/2015
	3,690	Illinois HDA, Revenue Refunding Bonds (M/F Program), Series 5 due 9/01/2023
	4,000	Illinois State Finance Authority Revenue Bonds (Northwestern VRDN, Sub-Series A, 1.83% due 12/01/2034 (1)
	2,500	Kane, Cook and Du Page Counties, Illinois, School District 46 6.375% due 1/01/2011 (a)(i)
	5,245	Kane and De Kalb Counties, Illinois, Community Unit School Di

5,245 Kane and De Kalb Counties, Illinois, Community Unit School Di

	McLean and Woodford Counties, Illinois, Community Unit, Schoo
	Number 005, GO, Refunding (i):
5,000	6.25% due 12/01/2014
4,000	6.375% due 12/01/2016
	Metropolitan Pier and Exposition Authority, Illinois, Dedicat
	and Capital Appreciation Revenue Bonds (McCormick Place Expan
	Series A (c):
16,000	5.05%** due 12/15/2038
26,800	5.06%** due 12/15/2039
18,550	Metropolitan Pier and Exposition Authority, Illinois, Dedicat
	Revenue Refunding Bonds (McCormick Place Expansion Project),
	5.75% due 6/15/2023 (c)

Number 302, GO, DRIVERS, Series 283, 9.329% due 2/01/2018 (f)

MUNIVEST FUND, INC. FEBRUARY 28, 2005

7

Schedule of Investments (continued)

(in Thousands)

	T	
State	Face Amount	Municipal Bonds
Illinois (concluded)	\$ 3 <b>,</b> 500	Regional Transportation Authority, Illinois, Revenue Bonds: Series A, 7.20% due 11/01/2020 (h)
	4,000 3,000	Series C, 7.75% due 6/01/2020 (f) Will County, Illinois, Environmental Revenue Bonds (Mobil Oil Corporation Project), AMT, 6.40% due 4/01/2026 Will County, Illinois, School District Number 122 (New Lenox GO, Series A (i):
	1,475 505 395	6.50% due 11/01/2010 (a) 6.50% due 11/01/2013 6.50% due 11/01/2015
Indiana6.7%	1,700	Fort Wayne, Indiana, PCR, Refunding (General Motors Corporati 6.20% due 10/15/2025
	6,500	Indiana Health Facility Financing Authority, Hospital Revenue Bonds (Clarian Health Partners Inc.), Series A, 6% due 2/15/2
	4,290	<pre>Indiana State, HFA, S/F Mortgage Revenue Refunding Bonds, Ser due 1/01/2017 (j)</pre>
	8,195	Indiana Transportation Finance Authority, Highway Revenue Bon 6.80% due 12/01/2016
	15,335	Indianapolis, Indiana, Local Public Improvement Bond, Bank Re Refunding Bonds, Series D, 6.75% due 2/01/2014 (e)
Kansas0.7%	3,805	Sedgwick and Shawnee Counties, Kansas, S/F Mortgage Revenue B (Mortgage-Backed Securities Program), AMT, Series A-4, 5.95% due 12/01/2033 (b)(d)
Louisiana2.5%	4,000	De Soto Parish, Louisiana, Environmental Improvement Revenue Bonds (International Paper Co. Project), AMT, Series B, 6.55%
	10,575	Louisiana Local Government, Environmental Facilities, Communi Authority Revenue Bonds (Capital Projects and Equipment Acqui Series A, 6.30% due 7/01/2030 (h)
Maine0.3%	775	Portland, Maine, Housing Development Corporation, Senior Livi Bonds (Avesta Housing Development Corporation Project), Serie 5.70% due 8/01/2021

	1,190	6% due 2/01/2034
Massachusetts7.6	5% 2,035	Boston, Massachusetts, Water and Sewer Commission Revenue Bondon due 1/01/2011 (e)
	3,010	Massachusetts Bay Transportation Authority, Revenue Refunding (General Transportation System), Series A, 7% due 3/01/2019
	30,000	Massachusetts State Water Resource Authority Revenue Bonds, S due 7/15/2019 Massachusetts State Water Resource Authority, Revenue Refundi
	1,000	Series A (f): 6% due 8/01/2014
	2,480	6% due 8/01/2017
Michigan4.1%	7,695	Delta County, Michigan, Economic Development Corporation, Environment Revenue Refunding Bonds (Mead Westvaco-Escanaba), 6.25% due 4/15/2027  Macomb County, Michigan, Hospital Finance Authority, Hospital (Mount Clemens General Hospital), Series B:
	3,715	5.75% due 11/15/2025
	5,250 1,900	5.875% due 11/15/2034  Michigan State Hospital Finance Authority, Hospital Revenue F (Crittenton Hospital), Series A, 5.625% due 3/01/2027  Michigan State Hospital Finance Authority Powerus Pofunding
	390	Michigan State Hospital Finance Authority, Revenue Refunding (Ascension Health Credit), Series A, 6.125% due 11/15/2
	3,000 1,300	(Ascension Health Credit), Series A, 6.125% due 11/15/2 (Detroit Medical Center Obligation Group), Series A, 6.
	1,000	due 8/15/2013 (Sinai Hospital), 6.70% due 1/01/2026
8	MUNIVEST FUND, I	NC. FEBRUARY 28, 2005
8 Schedule of Invest		NC. FEBRUARY 28, 2005  (in Thousands)
	ments (continued)	
Schedule of Invest	ments (continued) Face	(in Thousands)
Schedule of Invest State	Face Amount	(in Thousands)  Municipal Bonds  Minneapolis, Minnesota, Health Care System Revenue Bonds (All
Schedule of Invest State	Face Amount \$ 7,235  1,405	Municipal Bonds  Minneapolis, Minnesota, Health Care System Revenue Bonds (All System), Series A, 5.75% due 11/15/2032 Saint Cloud, Minnesota, Health Care Revenue Refunding Bonds (Hospital Obligation Group), Series A, 6.25% due 5/01/2017 (i)  Lowndes County, Mississippi, Solid Waste Disposal and PCR, Re (Weyerhaeuser Company Project):
State Minnesota1.5%	Face Amount \$ 7,235  1,405	Municipal Bonds  Minneapolis, Minnesota, Health Care System Revenue Bonds (All System), Series A, 5.75% due 11/15/2032 Saint Cloud, Minnesota, Health Care Revenue Refunding Bonds (Hospital Obligation Group), Series A, 6.25% due 5/01/2017 (i)  Lowndes County, Mississippi, Solid Waste Disposal and PCR, Refugerhaeuser Company Project):  Series A, 6.80% due 4/01/2022
State  Minnesota1.5%	Face Amount \$ 7,235  1,405	Municipal Bonds  Minneapolis, Minnesota, Health Care System Revenue Bonds (All System), Series A, 5.75% due 11/15/2032 Saint Cloud, Minnesota, Health Care Revenue Refunding Bonds (Hospital Obligation Group), Series A, 6.25% due 5/01/2017 (i)  Lowndes County, Mississippi, Solid Waste Disposal and PCR, Refunding Bonds (Weyerhaeuser Company Project):  Series A, 6.80% due 4/01/2022 Series B, 6.70% due 4/01/2022
State  Minnesota1.5%  Mississippi4.9%	Face Amount  \$ 7,235  1,405  3,900 4,000	Municipal Bonds  Minneapolis, Minnesota, Health Care System Revenue Bonds (All System), Series A, 5.75% due 11/15/2032 Saint Cloud, Minnesota, Health Care Revenue Refunding Bonds Hospital Obligation Group), Series A, 6.25% due 5/01/2017 (i)  Lowndes County, Mississippi, Solid Waste Disposal and PCR, Re (Weyerhaeuser Company Project):  Series A, 6.80% due 4/01/2022 Series B, 6.70% due 4/01/2022 Mississippi Business Finance Corporation, Mississippi, PCR, F (System Energy Resources Inc. Project), 5.875% due 4/01/2022
State Minnesota1.5%	Face Amount \$ 7,235  1,405  3,900 4,000 20,705	Municipal Bonds  Minneapolis, Minnesota, Health Care System Revenue Bonds (All System), Series A, 5.75% due 11/15/2032  Saint Cloud, Minnesota, Health Care Revenue Refunding Bonds (Hospital Obligation Group), Series A, 6.25% due 5/01/2017 (i)  Lowndes County, Mississippi, Solid Waste Disposal and PCR, Re (Weyerhaeuser Company Project):  Series A, 6.80% due 4/01/2022  Series B, 6.70% due 4/01/2022  Mississippi Business Finance Corporation, Mississippi, PCR, F
State  Minnesota1.5%  Mississippi4.9%	Face Amount \$ 7,235  1,405  3,900 4,000 20,705	Municipal Bonds  Minneapolis, Minnesota, Health Care System Revenue Bonds (All System), Series A, 5.75% due 11/15/2032  Saint Cloud, Minnesota, Health Care Revenue Refunding Bonds (Hospital Obligation Group), Series A, 6.25% due 5/01/2017 (i)  Lowndes County, Mississippi, Solid Waste Disposal and PCR, Re (Weyerhaeuser Company Project):  Series A, 6.80% due 4/01/2022  Series B, 6.70% due 4/01/2022  Mississippi Business Finance Corporation, Mississippi, PCR, F (System Energy Resources Inc. Project), 5.875% due 4/01/2022  Missouri State Development Finance Board, Infrastructure Faci Refunding Bonds (Branson), Series A, 5.50% due 12/01/2032  Missouri State Housing Development Commission, S/F Mortgage F

Nebraska0.1%	810	Nebraska Investment Finance Authority, S/F Housing Revenue Bo Series C, 6.30% due $9/01/2028$ (b) (d) (k)
Nevada2.2%	6 <b>,</b> 700	Clark County, Nevada, IDR (Power Company Project), AMT, Serie due 6/01/2022 (f)
	1,600	Clark County, Nevada, Public Safety, GO, 6% due 3/01/2010 (a) Nevada Housing Division, Multi-Unit Housing Revenue Bonds, AM
		due 10/01/2023 (b):
	3,475	(Arville Electric Project), 6.60% due 10/01/2023
	1,235	Issue B, 7.45% due 10/01/2017
	265	Nevada Housing Division Revenue Bonds (S/F Program), AMT (j):
	95	Senior Series E, 7% due 10/01/2019 Series A, 6.55% due 10/01/2012
New Hampshire0.5%	2,675	New Hampshire Health and Education Facilities Authority, Reve
	.=======	Bonds (Elliot Hospital), Series B, 5.60% due 10/01/2022
New Jersey5.1%		New Jersey EDA, Cigarette Tax Revenue Bonds:
4	9,080	5.50% due 6/15/2024
	2,885	5.75% due 6/15/2029
	2,855	5.50% due 6/15/2031
	6,695	5.75% due 6/15/2034
	8,480	Tobacco Settlement Financing Corporation of New Jersey Revenudue 6/01/2041
New Mexico0.5%	3,300	Farmington, New Mexico, PCR, Refunding (Public Service Compan Project), Series A, 5.80% due 4/01/2022
New York11.8%	:=======	New York City, New York, City Municipal Water Finance Authori
		Sewer System Revenue Refunding Bonds, Series B:
	13,405	5% due 6/15/2036
	7,000	5% due 6/15/2036 (i)
	7 <b>,</b> 875	New York City, New York, City Transitional Finance Authority
		RIB, Series 283, 5% due 5/15/2010 (a)(m)
		New York City, New York, GO:
	760	Series D, 5% due 11/01/2034
	7,150	Series F, 5.25% due 1/15/2033
	2,200	Series I, 6.25% due 4/15/2007 (a)(n)
	380	Series I, 6.25% due 4/15/2017 (n)
	630	Series I, 6.25% due 4/15/2027 (n)
	7 005	New York City, New York, GO, Refunding:
	7,035	Series A, 6.375% due 5/15/2010 (a) (f)
	965	Series A, 6.375% due 5/15/2014 (f)
	4,000	Series G, 5% due 12/01/2033
	1 000	New York State Dormitory Authority, Revenue Refunding Bonds:
	1,000 11,875	(Mount Sinai Health), Series A, 6.50% due 7/01/2025
		RIB, Series 305, 9.84% due 5/15/2015 (c) (m)  New York State Local Government Assistance Corporation, Rever
	200	

MUNIVEST FUND, INC. FEBRUARY 28, 2005 9

Schedule of Investments (continued)

State	Amount	Municipal Bonds
	race	

(in Thousands)

Oregon1.0%	\$ 2,000	Portland, Oregon, Airport Way, Urban Renewal and Redevelopmer Allocation Refunding Bonds, Series A, 6% due 6/15/2015 (h)
	3,305 	Portland, Oregon, Sewer System Revenue Bonds, RIB, Series 386 due 8/01/2020 (f)(m)
Pennsylvania4.1%	2,440	Pennsylvania State Higher Education Assistance Agency Revenue Acquisition, 6.125% due 12/15/2010 (a)(c)
	6,250	Pennsylvania State Higher Educational Facilities Authority Re (University of Pennsylvania Medical Center Health System), Se due 1/15/2031 Philadelphia, Pennsylvania, Authority for Industrial Developm
		Living Revenue Bonds:
	1,000	(Arbor House Inc. Project), Series E, 6.10% due 7/01/20
	1,355 700	(Rieder House Project), Series A, 6.10% due 7/01/2033 Philadelphia, Pennsylvania, Water and Wastewater Revenue Refu VRDN, 1.85% due 6/15/2023 (i)(1)
	9,280	Sayre, Pennsylvania, Health Care Facilities Authority Revenue (Guthrie Health Issue), Series B, 7.125% due 12/01/2031
	1,750	Sayre, Pennsylvania, Health Care Facilities Authority, Revenu Bonds (Guthrie Healthcare System), Series A, 6.25% due 12/01/
South Carolina1.9%	3,500	Lexington County, South Carolina, Health Services District Ir Revenue Refunding and Improvement Bonds, 5.50% due 11/01/2032
	2,450	Medical University Hospital Authority, South Carolina, Hospit Revenue Refunding Bonds, 6.50% due 8/15/2012 (a)
	5,000	Richland County, South Carolina, Environmental Improvement Re Refunding Bonds (International Paper), AMT, 6.10% due 4/01/20
Tennessee1.6%	2,000	McMinn County, Tennessee, IDB, Solid Waste Revenue Bonds (Rec FacilityCalhoun Newsprint), AMT, 7.40% due 12/01/2022 Shelby County, Tennessee, Health, Educational and Housing Fac Hospital Revenue Refunding Bonds (Methodist Healthcare):
	4,120 2,380	6.50% due 9/01/2012 (a) 6.50% due 9/01/2026 (e)
Texas19.9%		Austin, Texas, Convention Center Revenue Bonds (Convention Er Inc.), First Tier, Series A:
	6,000	6.70% due 1/01/2028
	1,290	6.70% due 1/01/2032
	3,000	Brazos River Authority, Texas, PCR, Refunding, AMT: (Texas Utilities Electric Company Project), Series B, 5 due 5/01/2029
	3,055	(Texas Utility Company), Series A, 7.70% due 4/01/2033
	11,870	(Utilities Electric Company), Series B, 5.05% due 6/01/
	11,460	Brazos River, Texas, Harbor Navigation District, Brazoria Cou Environmental Revenue Refunding Bonds (Dow Chemical Company F Series A-7, 6.625% due 5/15/2033
	5,750	Dallas, Texas, Independent School District, GO, Refunding, Sedue 8/15/2031
	3,000	Gregg County, Texas, Health Facilities Development Corporation Revenue Bonds (Good Shepherd Medical Center Project), 6.875%
	10,250	due 10/01/2020 (g) Guadalupe-Blanco River Authority, Texas, Sewage and Solid Was Facility Revenue Bonds (E. I. du Pont de Nemours and Company
	3,000	6.40% due 4/01/2026 Gulf Coast, Texas, Waste Disposal Authority, Revenue Refundir
	5,500	(International Paper Company), AMT, Series A, 6.10% due 8/01/ Harris County, Houston, Texas, Sports Authority, Revenue Refu Senior Lien, Series G, 5.75% due 11/15/2020 (c)
	10,385	Harris County, Texas, Health Facilities Development Corporati Refunding Bonds, RITR, Series 6, 8.965% due 12/01/2027 (e) (m)

1,795 Houston, Texas, Industrial Development Corporation Revenue Bo Cargo), AMT, 6.375% due 1/01/2023

10 MUNIVEST FUND, INC. FEBRUARY 28, 2005

Schedule of Investments (continued)

(in Thousands)

	Face	
State	Amount	Municipal Bonds
Texas (concluded)	\$ 1,500	Katy, Texas, Independent School District, GO, Refunding, Seridue 2/15/2032
	2,030	Mansfield, Texas, Independent School District, GO, Refunding, due 2/15/2015
	9,355	Matagorda County, Texas, Navigation District Number 1, Revenu Bonds (Centerpoint Energy Project), 5.60% due 3/01/2027
	5,225	Midway, Texas, Independent School District, GO, Refunding, 6. due 8/15/2014
	5,400	Port Corpus Christi, Texas, Revenue Refunding Bonds (Celanese Series A, 6.45% due 11/01/2030
	5,000	Red River Authority, Texas, PCR, Refunding (Celanese Project) Series B, $6.70\%$ due $11/01/2030$
	6 <b>,</b> 250	San Antonio, Texas, Electric and Gas Revenue Bonds, RIB, Seri due 2/01/2014 (m)
Vermont0.2%	1,000	Vermont Educational and Health Buildings Financing Agency, De and Mental Health Revenue Bonds (Howard Center for Human Serv Series A, 6.375% due 6/15/2022
Virginia0.9%	1 <b>,</b> 425	Chesterfield County, Virginia, IDA, PCR (Virginia Electric an Company), Series A, 5.875% due 6/01/2017
	1,500	Isle of Wight County, Virginia, IDA, Solid Waste Disposal Fac Revenue Bonds (Union Camp Corporation Project), AMT, 6.55% du
	2,440	Virginia State, HDA, Commonwealth Mortgage Revenue Bonds, Ser Sub-Series J-1, 5.20% due 7/01/2019 (c)
Washington8.3%		Energy Northwest, Washington, Electric Revenue Refunding Bond DRIVERS (m):
	5,330	Series 248, 9.329% due 7/01/2018 (c)
	3,510	Series 255, 9.825% due 7/01/2018 (h)
	7,350 2,440	Series 256, 9.829% due 7/01/2017 (c) Seattle, Washington, Housing Authority Revenue Bonds (Replace Project), 6.125% due 12/01/2032
	8,100	Washington State, GO, Trust Receipts, Class R, Series 6, 9.74 due 1/01/2014 (i) (m)
	14,320	Washington State Public Power Supply System, Revenue Refundin (Nuclear Project Number 1), Series B, 7.125% due 7/01/2016
Wisconsin2.7%	4,465	Badger Tobacco Asset Securitization Corporation, Wisconsin, A Revenue Bonds, 6.125% due 6/01/2027
	1,765	Milwaukee, Wisconsin, Revenue Bonds (Air Cargo), AMT, 6.50% d
	5,000	Wisconsin State Health and Educational Facilities Authority, Revenue Bonds (Hudson Memorial Hospital), $5.70\%$ due $1/15/2029$
	4,540	Wisconsin State Health and Educational Facilities Authority R (Synergyhealth Inc.), $6\%$ due $11/15/2032$

Wyoming--2.1% Sweetwater County, Wyoming, Solid Waste Disposal Revenue Bond Corporation Project), AMT:

5,425 Series A, 7% due 6/01/2024 7,475 Series B, 6.90% due 9/01/2024

MUNIVEST FUND, INC. FEBRUARY 28, 2005 11

Schedule of Investments (concluded)

(in Thousands)

Face

Amount Municipal Bonds

U.S. Virgin Islands--1.4% \$ 8,000 Virgin Islands Government Refinery Facilities, Revenue Refund (Hovensa Coker Project), AMT, 6.50% due 7/01/2021

\_\_\_\_\_\_\_

Total Investments (Cost--\$865,623\*)--152.2%

Other Assets Less Liabilities--1.7%

Preferred Stock, at Redemption Value-- (53.9%)

Net Assets Applicable to Common Stock--100.0%

The cost and unrealized appreciation (depreciation) of investments as of February 28, 2005, as computed for federal income tax purposes, were as follows:

	(in Tho	usands)
Aggregate cost	\$	865,633
Gross unrealized appreciation Gross unrealized depreciation	== \$	77,823 (1,093)
Net unrealized appreciation	\$	76 <b>,</b> 730

- \*\* Represents a zero coupon bond; the interest rate shown reflects the effective yield at the time of purchase by the Fund.
- (a) Prerefunded.
- (b) FNMA Collateralized.
- (c) MBIA Insured.
- (d) GNMA Collateralized.
- (e) Escrowed to maturity.
- (f) FGIC Insured.
- (g) Radian Insured.
- (h) AMBAC Insured.
- (i) FSA Insured.
- (j) FHA Insured.
- (k) FHLMC Collateralized.
- (1) Security has a maturity of more than one year, but has variable rate and demand features which qualify it as a short-term security. The rate disclosed is that currently in effect. This rate changes periodically

based upon prevailing market rates.

- (m) The rate disclosed is that currently in effect. This rate changes periodically and inversely based upon prevailing market rates.
- (n) XL Capital Insured.

Investments in companies considered to be an affiliate of the Fund (such companies are defined as "Affiliated Companies" in Section 2(a)(3) of the Investment Company Act of 1940) were as follows:

		(in Thousands)
Affiliate	Net Activity	Dividend Income
Merrill Lynch Institutional Tax-Exempt Fund	(37,658)	\$ 96
Forward interest rate swaps outstanding as follows:	of February 28,	2005 were as
		(in Thousands)
		Unrealized Appreciation
Receive a variable rate equal to 7-Day Bond Market Association Municipal Swap Index Rate and pay a fixed rate of 3.63%		
Broker, JPMorgan Chase Bank Expires March 2015	\$ 7,000	\$ 28
Receive a variable rate equal to 7-Day Bond Market Association Municipal Swap Index Rate and pay a fixed rate of 3.688%		
Broker, JPMorgan Chase Bank Expires April 2015	\$24,000	9
Receive a variable rate equal to 7-Day Bond Market Association Municipal Swap Index Rate and pay a fixed rate of 3.565%		
Broker, JPMorgan Chase Bank Expires April 2015	\$43,500	483
Receive a variable rate equal to 7-Day Bond Market Association Municipal Swap Index Rate and pay a fixed rate of 3.567%		
Broker, JPMorgan Chase Bank Expires May 2015	\$20,200	244
Total		\$ 764 ======

See Notes to Financial Statements.

MUNIVEST FUND, INC. FEBRUARY 28, 2005 12 Statement of Net Assets As of February 28, 2005 \_\_\_\_\_\_\_ Assets Investments in unaffiliated securities, at value (identified cost--\$865,622,979) ...... Cash ..... Unrealized appreciation on forward interest rate swaps ...... Receivables: Securities sold ..... Interest ..... Prepaid expenses ..... Total assets ..... \_\_\_\_\_\_ Liabilities \_\_\_\_\_\_ Payables: Securities purchased ..... Dividends to Common Stock shareholders ..... Investment adviser ...... Other affiliates ..... Accrued expenses and other liabilities ...... Total liabilities ...... Preferred Stock Preferred Stock, at redemption value, par value \$.025 per share; 10,000,000 shares authorized (2,000 Series A Shares, 2,000 Series B Shares, 2,000 Series C Shares, 2,000 Series D Shares, 3,000 Series E Shares and 2,360 Series F Shares of AMPS $^*$ , issued and outstanding at \$25,000 per share liquidation preference) ..... \_\_\_\_\_\_ Net Assets Applicable to Common Stock \_\_\_\_\_\_ Net assets applicable to Common Stock ...... \_\_\_\_\_\_ Analysis of Net Assets Applicable to Common Stock Common Stock, par value \$.10 per share; 150,000,000 shares authorized (61,346,288 shares issued and outstanding) ...... Paid-in capital in excess of par ..... Undistributed investment income--net ..... Accumulated realized capital losses--net ...... Unrealized appreciation--net ......

	9
	Total accumulated earningsnet
	TotalEquivalent to \$10.09 net asset value per share of Common Stock (market price\$9.55)
* Auction Market	Preferred Stock.
See Notes to F	inancial Statements.
M	UNIVEST FUND, INC. FEBRUARY 28, 2005 13
Statement of Operation	ons
For the Six Months E	nded February 28, 2005
Investment Income	
	Interest Dividends from affiliates
	Total income
Expenses	
	Investment advisory fees  Commission fees  Accounting services  Transfer agent fees  Professional fees  Printing and shareholder reports  Custodian fees  Directors' fees and expenses  Pricing fees  Listing fees  Other  Total expenses before reimbursement  Reimbursement of expenses  Total expenses after reimbursement  Investment income—net
Realized & Unrealized	d Gain (Loss)Net
	Realized gain (loss) on: Investmentsnet
	Change in unrealized appreciation (depreciation) on: Investmentsnet

Total realized and unrealized gain--net .....

	Preferred Stock Shareholders	
	Investment incomenet	
	Net Increase in Net Assets Resulting from Operations	
See No	otes to Financial Statements.	
14	MUNIVEST FUND, INC. FEBRUARY 28, 2005	
Statements o	of Changes in Net Assets	
		E Mc
Increase (De	ecrease) in Net Assets:	F€
Operations		
	Investment incomenet	\$
	Net increase in net assets resulting from operations	
	Common Stock Shareholders	
	Investment incomenet	
	Net decrease in net assets resulting from dividends to Common Stock shareholders	
	ck Transactions	
	Offering and underwriting costs resulting from issuance of Preferred Stock	
	Net decrease in net assets resulting from capital stock transactions	
Net Assets A	Applicable to Common Stock	
	Total increase in net assets applicable to Common Stock  Beginning of period	
	End of period*	\$
	* Undistributed investment incomenet	\$

See Notes to Financial Statements.

MUNIVEST FUND, INC. FEBRUARY 28, 2005 15

Financial Highlights

	Mont	the Six		For t
		2005	2004	
Per Share Operating Performance			======	
Net asset value, beginning of period	\$ 	9.91	\$  9.54	\$ 
Investment incomenet		.37+ .19		
from investment incomenet		(.04)	(.04)	
Total from investment operations		.52	 1.04	
Less dividends to Common Stock shareholders from investment incomenet		(.34)	 (.66)	
Offering costs resulting from the issuance of Preferred Stock			 (.01)	
Net asset value, end of period		10.09		
Market price per share, end of period		9.55	\$ 9.30	\$
	== =====		 	
Total Investment Return++			 	
Based on net asset value per share		5.46%@		
Based on market price per share			13.53%	
Ratios Based on Average Net Assets of Common Stock			 	
Total expenses, net of reimbursement**		1.01%* ======		
Total expenses**		1.02%*	.95%	
Total investment incomenet**		7.51%*	7.37%	
Amount of dividends to Preferred Stock shareholders		.83%*	.43%	
Investment incomenet, to Common Stock shareholders		6.68%*	6.94%	

MUNIVEST FUND, INC. FEBRUARY 28, 2005

Financial Highlights (concluded)

		For the Six Months Ended	Fo	For th	
from information provided in the financial statements.		February 28, 2005	2004		
	ge Net Assets of Common & Preferred Stock**				
	Total expenses, net of reimbursement	.66%*	.65%		
	Total expenses	.66%*	.65%	====	
	Total investment incomenet	4.87%* ========	5.06%		
	ge Net Assets of Preferred Stock			====	
	Dividends to Preferred Stock shareholders	1.53%*	.95%		
Supplemental Data					
	Net assets applicable to Common Stock, end of period (in thousands)	\$619,099	\$607 <b>,</b> 842	\$5	
	Preferred Stock outstanding, end of period (in thousands)	\$334 <b>,</b> 000	\$334,000	\$2	
	Portfolio turnover	23.98%	45.33%		
Leverage				====	
	Asset coverage per \$1,000	\$ 2,854 =======	\$ 2,820	\$	
Dividends Per Share or	Preferred Stock Outstanding			====	
	Series AInvestment incomenet	\$ 171	\$ 244	\$	
	Series BInvestment incomenet	,	\$ 238	\$	
	Series CInvestment incomenet	\$ 212	\$ 239	\$	
	Series DInvestment incomenet	\$ 169	\$ 242	\$	
	Series EInvestment incomenet	\$ 190	\$ 229	\$	
	Series F***Investment incomenet	\$ 198			
		========		====	

<sup>\*</sup> Annualized

 $<sup>^{\</sup>star\star}$   $\,\,$  Do not reflect the effect of dividends to Preferred Stock shareholders.

- \*\*\* Series F was issued on August 31, 2004.
- + Based on average shares outstanding.
- ++ Total investment returns based on market value, which can be significantly greater or lesser than the net asset value, may result in substantially different returns. Total investment returns exclude the effects of sales charges.
- @ Aggregate total investment return.

See Notes to Financial Statements.

MUNIVEST FUND, INC. FEBRUARY 28, 2005

17

#### Notes to Financial Statements

#### 1. Significant Accounting Policies:

MuniVest Fund, Inc. (the "Fund") is registered under the Investment Company Act of 1940, as amended, as a non-diversified, closed-end management investment company. The Fund's financial statements are prepared in conformity with U.S. generally accepted accounting principles, which may require the use of management accruals and estimates. Actual results may differ from these estimates. These unaudited financial statements reflect all adjustments, which are, in the opinion of management, necessary to present a fair statement of the results for the interim period. All such adjustments are of a normal, recurring nature. The Fund determines and makes available for publication the net asset value of its Common Stock on a daily basis. The Fund's Common Stock is listed on the American Stock Exchange under the symbol MVF. The following is a summary of significant accounting policies followed by the Fund.

- (a) Valuation of investments -- Municipal bonds are traded primarily in the over-the-counter markets and are valued at the last available bid price in the over-the-counter market or on the basis of values as obtained by a pricing service. Pricing services use valuation matrixes that incorporate both dealer-supplied valuations and valuation models. The procedures of the pricing service and its valuations are reviewed by the officers of the Fund under the general direction of the Board of Directors. Such valuations and procedures are reviewed periodically by the Board of Directors of the Fund. Financial futures contracts and options thereon, which are traded on exchanges, are valued at their closing prices as of the close of such exchanges. Options written or purchased are valued at the last sale price in the case of exchange-traded options. In the case of options traded in the over-the-counter market, valuation is the last asked price (options written) or the last bid price (options purchased). Swap agreements are valued by quoted fair values received daily by the Fund's pricing service. Short-term investments with a remaining maturity of 60 days or less are valued at amortized cost, which approximates market value, under which method the investment is valued at cost and any premium or discount is amortized on a straight line basis to maturity. Investments in open-end investment companies are valued at their net asset value each business day. Securities and other assets for which market quotations are not readily available are valued at fair value as determined in good faith by or under the direction of the Board of Directors of the Fund.
- (b) Derivative financial instruments -- The Fund may engage in various portfolio investment strategies both to increase the return of the Fund and to hedge, or protect its exposure to interest rate movements and movements in the securities markets. Losses may arise due to changes in the value of the contract or if the counterparty does not perform under the contract.
- Financial futures contracts -- The Fund may purchase or sell financial futures contracts and options on such futures contracts. Futures contracts

are contracts for delayed delivery of securities at a specific future date and at a specific price or yield. Upon entering into a contract, the Fund deposits and maintains as collateral such initial margin as required by the exchange on which the transaction is effected. Pursuant to the contract, the Fund agrees to receive from or pay to the broker an amount of cash equal to the daily fluctuation in value of the contract. Such receipts or payments are known as variation margin and are recorded by the Fund as unrealized gains or losses. When the contract is closed, the Fund records a realized gain or loss equal to the difference between the value of the contract at the time it was opened and the value at the time it was closed.

Options -- The Fund may purchase and write call and put options. When the Fund writes an option, an amount equal to the premium received by the Fund is reflected as an asset and an equivalent liability. The amount of the liability is subsequently marked-to-market to reflect the current market value of the option written. When a security is purchased or sold through an exercise of an option, the related premium paid (or received) is added to (or deducted from) the basis of the security acquired or deducted from (or added to) the proceeds of the security sold. When an option expires (or the Fund enters into a closing transaction), the Fund realizes a gain or loss on the option to the extent of the premiums received or paid (or gain or loss to the extent the cost of the closing transaction exceeds the premium paid or received).

Written and purchased options are non-income producing investments.

Forward interest rate swaps -- The Fund may enter into forward interest rate swaps. In a forward interest rate swap, the Fund and the counterparty agree to make periodic net payments on a specified notional contract amount, commencing on a specified future effective date, unless terminated earlier. When the agreement is closed, the Fund records a realized gain or loss in an amount equal to the value of the agreement.

MUNIVEST FUND, INC. FEBRUARY 28, 2005

Notes to Financial Statements (concluded)

- (c) Income taxes -- It is the Fund's policy to comply with the requirements of the Internal Revenue Code applicable to regulated investment companies and to distribute substantially all of its taxable income to its shareholders. Therefore, no federal income tax provision is required.
- (d) Security transactions and investment income -- Security transactions are recorded on the dates the transactions are entered into (the trade dates). Realized gains and losses on security transactions are determined on the identified cost basis. Dividend income is recorded on the ex-dividend dates. Interest income is recognized on the accrual basis. The Fund amortizes all premiums and discounts on debt securities.
- (e) Dividends and distributions -- Dividends from net investment income are declared and paid monthly. Distributions of capital gains are recorded on the ex-dividend dates.
- 2. Investment Advisory Agreement and Transactions with Affiliates:

The Fund has entered into an Investment Advisory Agreement with Fund Asset Management, L.P. ("FAM"). The general partner of FAM is Princeton Services, Inc. ("PSI"), an indirect, wholly-owned subsidiary of Merrill Lynch & Co. ("ML & Co."), which is the limited partner.

FAM is responsible for the management of the Fund's portfolio and provides the necessary personnel, facilities, equipment and certain other services necessary to the operations of the Fund. For such services, the Fund pays a monthly fee at an annual rate of .50% of the Fund's average daily net assets, including assets acquired from the sale of Preferred Stock. The Investment Adviser has agreed to waive its management fee by the amount of management fees the Fund pays to FAM indirectly through its investment in the Merrill Lynch Institutional Tax-Exempt Fund. For the six months ended February 28, 2005, FAM reimbursed the Fund in the amount of \$13,941.

For the six months ended February 28, 2005, the Fund reimbursed FAM \$9,886 for certain accounting services.

Certain officers and/or directors of the Fund are officers and/or directors of FAM, PSI, and/or ML & Co.

#### 3. Investments:

Purchases and sales of investments, excluding short-term securities, for the six months ended February 28, 2005, were \$252,223,863 and \$221,777,394 respectively.

#### 4. Capital Stock Transactions:

Common Stock

At February 28, 2005, the Fund had one class of shares of Common Stock, par value \$.10 per share, of which 150,000,000 shares were authorized.

#### Preferred Stock

Auction Market Preferred Stock are redeemable shares of Preferred Stock of the Fund with a par value of \$.025 per share and a liquidation preference of \$25,000 per share plus accrued and unpaid dividends, that entitle their holders to receive cash dividends at an annual rate that may vary for the successive dividend periods for each series. The Fund is authorized to issue 10,000,000 shares of Preferred Stock. The yields in effect at February 28, 2005 were as follows: Series A,1.85%; Series B,1.84%; Series C, 1.859%; Series D, 1.809%; Series E, 1.80%; and Series F, 1.84%.

Shares issued and outstanding for the six months ended February 28, 2005 remained constant. During the year ended August 31, 2004, shares increased by 2,360 shares from the issuance of an additional series of Preferred Stock.

The Fund pays commissions to certain broker-dealers at the end of each auction at an annual rate ranging from .25% to .375% calculated on the proceeds of each auction. For the six months ended February 28, 2005, Merrill Lynch, Pierce, Fenner & Smith Incorporated, an affiliate of FAM, received \$207,835 as commissions.

#### 5. Capital Loss Carryforward:

On August 31, 2004, the Fund had a net capital loss carryforward of \$25,236,756, of which \$7,556,873 expires in 2008 and \$17,679,883 expires in 2009. This amount will be available to offset like amounts of any future taxable gains.

#### 6. Subsequent Event:

The Fund paid a tax-exempt income dividend to holders of Common Stock in the amount of 0.056000 per share payable on March 30, 2005 to shareholders of record on March 15, 2005.

MUNIVEST FUND, INC. FEBRUARY 28, 2005

19

Portfolio Information as of February 28, 2005

Quality Ratings by	Percent of	
S&P/Moody's	Total Investments	
AAA/Aaa	34.6%	
AA/Aa	15.1	
A/A	20.7	
BBB/Baa	23.9	
BB/Ba	4.8	
NR (Not Rated)	0.9	

#### Dividend Policy

The Fund's dividend policy is to distribute all or a portion of its net investment income to its shareholders on a monthly basis. In order to provide shareholders with a more stable level of dividend distributions, the Fund may at times pay out less than the entire amount of net investment income earned in any particular month and may at times in any particular month pay out such accumulated but undistributed income in addition to net investment income earned in that month. As a result, the dividends paid by the Fund for any particular month may be more or less than the amount of net investment income earned by the Fund during such month. The Fund's current accumulated but undistributed net investment income, if any, is disclosed in the Statement of Net Assets, which comprises part of the financial information included in this report.

20 MUNIVEST FUND, INC. FEBRUARY 28, 2005

#### Proxy Results

During the six-month period ended February 28, 2005, MuniVest Fund, Inc.'s Common Stock shareholders voted on the following proposal. The proposal was approved at a shareholders' meeting on January 27, 2005. A description of the proposal and number of shares voted are as follows:

		Shares Voted For
1. To elect the Fund's Directors:	Robert C. Doll, Jr.	57,862,025
	Cynthia A. Montgomery	57,924,601
	Jean Margo Reid	57,923,489
	Roscoe S. Suddarth	57,878,125
	Edward D. Zinbarg	57,865,181

During the six-month period ended February 28, 2005, MuniVest Fund, Inc.'s Preferred Stock shareholders (Series A-F) voted on the following proposal. The proposal was approved at a shareholders' meeting on January 27, 2005. A description of the proposal and number of shares voted are as follows:

24

\_\_\_\_\_\_ Shares Voted

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1. To elect the Fund's Directors: Ronald W. Forbes and Richard R. West

Availability of Quarterly Schedule of Investments

The Fund files its complete schedule of portfolio holdings with the Securities and Exchange Commission ("SEC") for the first and third quarters of each fiscal year on Form N-Q. The Fund's Forms N-Q are available on the SEC's Web site at http://www.sec.gov. The Fund's Forms N-Q may also be reviewed and copied at the SEC's Public Reference Room in Washington, DC. Information on the operation of the Public Reference Room may be obtained by calling 1-800-SEC-0330.

MUNIVEST FUND, INC. FEBRUARY 28, 2005

21

Officers and Directors

Robert C. Doll, Jr., President and Director Ronald W. Forbes, Director Cynthia A. Montgomery, Director Jean Margo Reid, Director Roscoe S. Suddarth, Director Richard R. West, Director Edward D. Zinbarg, Director Kenneth A. Jacob, Senior Vice President John M. Loffredo, Senior Vice President Fred K. Stuebe, Vice President Donald C. Burke, Vice President and Treasurer Jeffrey Hiller, Chief Compliance Officer Alice A. Pellegrino, Secretary

#### Custodian

The Bank of New York 100 Church Street New York, NY 10286

Transfer Agents

Common Stock:

The Bank of New York 101 Barclay Street -- 11 East New York, NY 10286

Preferred Stock:

The Bank of New York 101 Barclay Street -- 7 West New York, NY 10286

Amex Symbol

MVF

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Effective January 1, 2005, Terry K. Glenn, President and Director and Kevin A. Ryan, Director of MuniVest Fund, Inc. retired. The Fund's Board of Directors wishes Messrs. Glenn and Ryan well in their retirements.

Effective January 1, 2005, Robert C. Doll, Jr. became President and Director of the Fund.

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22 MUNIVEST FUND, INC. FEBRUARY 28, 2005

#### Electronic Delivery

The Fund offers electronic delivery of communications to its shareholders. In order to receive this service, you must register your account and provide us with e-mail information. To sign up for this service, simply access this Web site at http://www.icsdelivery.com/live and follow the instructions. When you visit this site, you will obtain a personal identification number (PIN). You will need this PIN should you wish to update your e-mail address, choose to discontinue this service and/or make any other changes to the service. This service is not available for certain retirement accounts at this time.

MUNIVEST FUND, INC. FEBRUARY 28, 2005 23

[LOGO] Merrill Lynch Investment Managers

www.mlim.ml.com

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Mercury Advisors

A Division of Merrill Lynch Investment Managers

www.mercury.ml.com

MuniVest Fund, Inc. seeks to provide shareholders with as high a level of current income exempt from federal income taxes as is consistent with its investment policies and prudent investment management by investing primarily in a portfolio of long-term, investment grade municipal obligations, the interest on which is exempt from federal income taxes in the opinion of bond counsel to the issuer.

This report, including the financial information herein, is transmitted to the shareholders of MuniVest Fund, Inc. for their information. It is not a prospectus, circular or representation intended for use in the purchase of shares of the Fund or any securities mentioned in the report. Past performance results shown in this report should not be considered a representation of future performance. The Fund has leveraged its Common Stock and intends to remain leveraged by issuing Preferred Stock to provide the Common Stock shareholders with a potentially higher rate of return. Leverage creates risks for Common Stock shareholders, including the likelihood of greater volatility of net asset value and market price of shares of the Common Stock, and the risk that fluctuations in the short-term dividend rates of the Preferred Stock may affect the yield to Common Stock shareholders. Statements and other information herein are as dated and are subject to change.

A description of the policies and procedures that the Fund uses to determine how to vote proxies relating to portfolio securities is available (1) without charge, upon request, by calling toll-free 1-800-MER-FUND (1-800-637-3863); (2) at www.mutualfunds.ml.com; and (3) on the Securities and Exchange Commission's Web site at http://www.sec.gov. Information about how the Fund voted proxies relating to securities held in the Fund's portfolio during the most recent 12-month period ended June 30 is available (1) at www.mutualfunds.ml.com and (2) on the Securities and Exchange Commission's Web site at http://www.sec.gov.

MuniVest Fund, Inc. Box 9011 Princeton, NJ 08543-9011

#10787 -- 2/05

- Item 2 Code of Ethics Not Applicable to this semi-annual report
- Item 3 Audit Committee Financial Expert Not Applicable to this semi-annual
   report
- Item 4 Principal Accountant Fees and Services Not Applicable to this
   semi-annual report
- Item 5 Audit Committee of Listed Registrants Not Applicable to this
   semi-annual report
- Item 6 Schedule of Investments Not Applicable

- Item 10 Submission of Matters to a Vote of Security Holders Not Applicable
- Item 11 Controls and Procedures
- 11(a) The registrant's certifying officers have reasonably designed such disclosure controls and procedures to ensure material information relating to the registrant is made known to us by others particularly during the period in which this report is being prepared. The registrant's certifying officers have determined that the registrant's disclosure controls and procedures are effective based on our evaluation of these controls and procedures as of a date within 90 days prior to the filing date of this report.
- 11(b) There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the Act (17 CFR 270.30a-3(d)) that occurred during the last fiscal half-year of the period covered by this report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 12 - Exhibits attached hereto

12(a)(1) - Code of Ethics - Not Applicable to this semi-annual report

12(a)(2) - Certifications - Attached hereto

12(a)(3) - Not Applicable

12(b) - 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.

MuniVest Fund, Inc.

By: /s/ Robert C. Doll, Jr.

Robert C. Doll, Jr.,
Chief Executive Officer of
MuniVest Fund, Inc.

Date: April 22, 2005

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/ Robert C. Doll, Jr.

Robert C. Doll, Jr.,
Chief Executive Officer of
MuniVest Fund, Inc.

Date: April 22, 2005

By: /s/ Donald C. Burke

Donald C. Burke,
Chief Financial Officer of
MuniVest Fund, Inc.

Date: April 22, 2005