PIONEER MUNICIPAL & EQUITY INCOME TRUST Form N-CSR January 29, 2008

OMB APPROVAL OMB Number: 3235-0570 Expires: August 31, 2010 Estimated average burden hours per response....18.9

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

FORM N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-21448

Pioneer Municipal and Equity Income Trust (Exact name of registrant as specified in charter)

60 State Street, Boston, MA 02109 (Address of principal executive offices) (ZIP code)

Dorothy E. Bourassa, Pioneer Investment Management, Inc., 60 State Street, Boston, MA 02109 (Name and address of agent for service)

Registrant's telephone number, including area code: (617) 742-7825

Date of fiscal year end: November 30

Date of reporting period: December 1, 2006 through November 30, 2007

Form N-CSR is to be used by management investment companies to file reports with the Commission not later than 10 days after the transmission to stockholders of any report that is required to be transmitted to stockholders under Rule 30e-1 under the Investment Company Act of 1940 (17 CFR 270.30e-1). The Commission may use the information provided on Form N-CSR in its regulatory, disclosure review, inspection, and policymaking roles.

A registrant is required to disclose the information specified by Form N-CSR, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-CSR unless the Form displays a currently valid Office of Management and Budget ("OMB") control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. ss. 3507.

ITEM 1. REPORTS TO SHAREOWNERS.

PIONEER -----MUNICIPAL AND EQUITY INCOME TRUST*

PBF

Ticker Symbol

Annual Report

11/30/07

[LOGO]PIONEER Investments(R)

*Effective November 7, 2007, Pioneer Tax Advantaged Balanced Trust was renamed Pioneer Municipal and Equity Income Trust

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President's

Dear Shareowner,

In November 2007, Pioneer Tax Advantaged Balanced Trust changed its name to Pioneer Municipal and Equity Income Trust, to more clearly reflect its unique investment strategy and tax benefits. The Board of Trustees believes the new name better suggests the composition of the Trust's underlying portfolio, which combines municipal bonds with qualified dividend-producing equity securities. In

addition, the new name may also better indicate the tax advantages provided by the Trust's investment approach.

As a shareowner in Pioneer Municipal and Equity Income Trust, you are participating in an innovative investment strategy that has generated an increasing stream of tax-advantaged income. The Trust invests in a combination of municipal bonds and qualified dividend-paying equity securities to generate monthly distributions that have been subject to an average effective regular federal income tax rate of less than 10%. The November distribution and month-end market price, for example, represented a market price distribution rate of 10.01%, which represents a 13.97% market price distribution rate on a tax-equivalent basis.

The Trust's late 2007 market value performance was partially the result of a series of actions taken by the Trust's Trustees to increase shareowner value. In June, and again in October, the Trustees approved increases in the Trust's monthly distribution stream totaling 72.9%, compared to the distribution rate paid in June 2007. In part, these increases were achieved through a new level distribution policy that allows the Trust to pay a higher monthly distribution by supplementing earned income from the portfolio with a return of capital. (A return of capital is a distribution that is not derived from income or capital gains earnings from the Trust.) This new policy is designed to provide shareowners with relatively high monthly distributions.

The Trust also has applied with the Securities and Exchange Commission for an exemptive order that would allow it to include long-term capital gains in its monthly distributions to shareholders. If approved, the Trust may be able to further increase monthly distributions. Currently, funds may distribute long-term capital gains only once a year, with limited exceptions.

In October, the Trustees approved another measure intended to increase the Trust's net asset value and liquidity in the Trust's shares - a share repurchase program. Under this plan, the Trust may purchase up to 10% of its outstanding common shares through November 30, 2008, and 10% of its outstanding common shares annually thereafter.

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Letter

Together, these steps are designed to help increase the value and liquidity of your investment. Thus far, the measures have worked well for the Trust, paving the way for a higher monthly distribution level and improved stock market performance, as the discount of the Trust's share price to net asset value has narrowed from of 13.4% on November 30, 2006 to 9.5% one year later. This narrowing demonstrates enhanced market value to shareowners.

We appreciate your interest in Pioneer Municipal and Equity Income Trust. As always, we encourage you to work closely with your financial advisor to find the mix of stocks, bonds and money market assets that is best aligned to your particular risk tolerance and investment objective.

Respectfully,

/s/Daniel K. Kingsbury

Daniel K. Kingsbury President and CEO Pioneer Investment Management USA Inc.

There can be no assurance as to whether or when the Securities and Exchange

Commission would grant the exemptive order or as to the conditions to which any order would be subject.

The Trust's tax-equivalent distribution rate is based on the blended effective tax rate applicable to the Trust's income distributions as of September 30, 2007, assuming the recipient is taxed at the maximum 35% federal personal income tax rate. A portion of the Trust's distributions may be subject to the alternative minimum tax, which would reduce the tax-oriented benefits of the Trust to an investor who is subject to that tax.

Any information in this shareowner report regarding market or economic trends or the factors influencing the Trust's historical or future performance are statements of the opinion of Trust management as of the date of this report. These statements should not be relied upon for any other purposes. Past performance is no guarantee of future results, and there is no guarantee that market forecasts discussed will be realized. Please consider the Trust's investment objectives, risks, charges and expenses. Contact your advisor or Pioneer Investments for a prospectus containing this information. Please read the information carefully.

Pioneer Municipal and Equity Income Trust			
PORTFOLIO SUMMARY 11/30/07			

 6-8 Years
 7.4%

 8-10 Years
 1.4%

 10+ Years
 39.9%

Portfolio Diversification

(As a percentage of total investment portfolio)

[THE FOLLOWING DATA IS REPRESENTED AS A PIE CHART IN THE PRINTED MATERIAL]

Tax-Exempt Obligations	53.6%
Common Stocks	27.1%
Non-Convertible Preferred Stocks	15.9%
Convertible Preferred Stocks	2.2%
Temporary Cash Investment	1.2%

The portfolio is actively managed, and current holdings may be different.

10 Largest Holdings

(As a percentage of total long-term holdings)*

1	Martine Communication Tra	
⊥.	Verizon Communications, Inc.	2.96%
2.	Loews Corp. – Carolina Group	2.59
З.	Merck & Co., Inc.	2.16
4.	Georgia Municipal Electric Authority Power Revenue, RIB,	
	7.497%, 1/1/20 (144A)	1.97
5.	Altria Group, Inc.	1.75
6.	Atmos Energy Corp.	1.74
7.	Windstream Corp.	1.72
8.	Bristol-Myers Squibb Co.	1.64
9.	Golden State Tobacco Securitization Corp., RIB, 6.828%,	
	6/1/45 (144A)	1.48
10.	Garden State Preservation Trust, RIB, 10.703%, 11/1/22 (144A)	1.44

* This list excludes temporary cash and derivative instruments. The portfolio is actively managed, and current holdings may be different. The holdings listed should not be considered recommendations to buy or sell any security listed.

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Pioneer Municipal and Equity Income Trust
PRICES AND DISTRIBUTIONS

Share Prices and Distributions

Market Price	11/30/07	11/30/06
per Common Share	\$13.41	\$14.00
Net Asset Value per Common Share	\$14.82	\$16.17
Market Discount	9.5%	13.4%

	Net		
Distributions	Investment	Short-Term	Long-Term
per Common Share	Income	Capital Gains	Capital Gains
(12/1/06 - 11/30/07)	\$0.8539	\$ -	\$0.0951

Yields

11/30/07 11/30/06

Distribution Yield at Market Price	6.37%	4.77%
Distribution Yield at Net Asset Value	5.76%	4.13%
30-Day SEC Yield	11.35%	7.05%

The performance data quoted represents past performance, which is no guarantee of future results.

Note: Under generally accepted accounting principles ("GAAP"), the Trust records $____$

income and expense ratably during its fiscal year. The Trust made distributions during its latest fiscal year that were in excess of its income net of its expenses. As required by GAAP, at year end the Trust converts its earnings accounts on its statement of assets and liabilities to tax basis under federal income tax rules. Under those federal tax rules, the \$2,324,009 (\$0.08 per share) of expenses incurred by the Trust during the fiscal year that is allocated to the production of tax-exempt income is disallowed as a deduction in computing earnings available for distribution. As a result of the foregoing, \$2,324,009 of distributions made during the fiscal year ended November 30, 2007 are taxable as ordinary income though on a pure economic basis, since the Trust actually incurred those expenses, \$2,324,009 of capital was distributed by the Trust during the year. Under GAAP, due to the conversion of the Trust's capital accounts to tax basis at November 30, 2007, no return of capital is reported in the accompanying financial statements.

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Investment Returns

The mountain chart on the right shows the change in market value, including reinvestment of dividends and distributions, of a \$10,000 investment made in common shares of Pioneer Municipal and Equity Income Trust, compared to that of the Lehman Brothers Municipal Bond Index and the S&P 500 Index.

Cumulative Total Returns (As of November 30, 2007)

Period	Net Asset Value (NAV)	Market Price
Life-of-Trust (1/30/04) 1 Year	29.83% -2.12	12.23% 2.30

[THE FOLLOWING DATA IS REPRESENTED AS A MOUNTAIN CHART IN THE PRINTED MATERIAL]

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Value of \$10,000 Investment

	Pioneer Municipal and	Lehman Brothers	Standard & Poor's
	Equity Income Trust	Municipal Bond Index	500 Index
1/04	10,000	10,000	10,000
11/04	8,374	10,263	10,529
11/05	9,008	10,662	11,418
11/06	10,970	11,314	13,041
11/07	11,223	11,621	14,048

Call 1-800-225-6292 or visit www.pioneerinvestments.com for the most recent month-end performance results. Current performance may be lower or higher than the performance data quoted.

Performance data shown represents past performance. Past performance is no guarantee of future results. Investment return and market price will fluctuate, and your shares may trade below net asset value ("NAV"), due to such factors as interest rate changes, and the perceived credit quality of borrowers.

Total investment return does not reflect broker sales charges or commissions. All performance is for common shares of the Trust.

Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange and frequently trade at prices lower than their NAV. NAV is total assets less total liabilities, which includes preferred shares, divided by the number of common shares outstanding.

When NAV is lower than market price, dividends are assumed to be reinvested at the greater of NAV or 95% of the market price. When NAV is higher, dividends are assumed to be reinvested at prices obtained under the Trust's dividend reinvestment plan.

The performance table and graph do not reflect the deduction of fees and taxes that a shareowner would pay on Trust distributions or the redemption of Trust shares.

Index comparisons begin January 31, 2004. The Lehman Brothers Municipal Bond Index is a broad measure of the municipal bond market. The Standard & Poor's 500 Stock Index (the S&P 500) is a commonly used measure of the broad U.S. stock market. Index returns are calculated monthly, assume reinvestment of dividends and, unlike Trust returns, do not reflect any fees, expenses or charges. You cannot invest directly in an index.

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Pioneer Municipal and Equity Income Trust
PORTFOLIO MANAGEMENT DISCUSSION 11/30/07

During the fiscal year ended November 30, 2007, the Trustees voted to change the name of Pioneer Tax Advantaged Balance Trust to Pioneer Municipal and Equity Income Trust, a name that the Trustees believe better reflects the composition of the Trust's underlying portfolio, which combines municipal bonds and qualified dividend-producing equity securities. In June 2007, the Trustees adopted a level-distribution policy, which may include a return of capital

component. In the following interview, David Eurkus, who is responsible for the Trust's fixed-income investments, and Walter Hunnewell, Jr., who is responsible for the Trust's equity investments, discuss the Trust's investment strategy and outlook.

- Q: How did the Trust perform over the 12 months ended November 30, 2007?
- A: For the 12-month period ended November 30, 2007, Pioneer Municipal and Equity Income Trust returned -2.12% at net asset value and 2.30% at market price. As of November 30, 2007, the Trust was selling at a discount of market price to net asset value of 9.5%. For the same 12-month period, the Lehman Brothers Municipal Bond Index returned 2.71%, and the S&P 500 Index returned 7.72%.

Call 1-800-225-6292 or visit www.pioneerinvestments.com for the most recent month-end performance results. Current performance may be lower or higher than the performance data quoted.

The performance data quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate, and shares, when redeemed, may be worth more or less than their original cost.

- Q: What was the investment environment like for fixed-income and equity securities during the 12-month period ended November 30, 2007?
- A: The major event of the year was the mid-summer turmoil in the fixed-income markets, which was triggered by concerns that weakness in the financial sector, which resulted from write-downs of subprime mortgage debt, would spread to the wider economy. In that environment, market participants generally gravitated toward the safest investments and both bonds and stocks declined.

PORTFOLIO MANAGEM	ENT DISCUSSION 11/30/07	(continued)
Pioneer Municipal	and Equity Income Trus	t

When it appeared that the loss of confidence in debt collateral could result in a credit crunch, the Federal Reserve ("Fed") stepped in and lowered short-term interest rates on two occasions during the fiscal year for a total of three-quarters of a percentage point. (The Fed also trimmed interest rates by one-quarter percentage point on December 11.) The central bank's actions had a calming effect on the financial markets, and fixed-income and equity prices stabilized. While the financial markets were volatile for the remainder of the fiscal year, both bonds and stocks ended the period with positive returns.

- Q: What were the principal strategies used in managing the Trust during the 12-month period ended November 30, 2007?
- A: We continued to focus on providing tax-favored income from a mix of about 55% municipal bonds and 45% qualified dividend income (QDI) dividend-paying equity securities during the period. The emphasis of the fixed-income portion of the Trust remained on sectors that underpin the economy, with the largest positions being in bonds related to the health care sector and other various revenue bonds on which the payment of interest and principal depends on revenues generated from the particular asset that the bond was issued to finance. About 22% of the Trust's fixed-income investments were

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insured as of November 30, 2007, which means that the interest and principal of those AAA-rated securities are guaranteed by private insurance companies. Below investment-grade bonds accounted for almost 19% of the Trust's fixed-income assets as of November 30, 2007. On November 30, 2007, the Trust had 124 fixed-income issues in 38 states, territories and the District of Columbia. The average credit quality of the fixed-income holdings was A as of November 30, 2007, compared with A- on May 31, 2007.

In the equity portion of the Trust, the focus continued to be on higher QDI dividend-paying common and preferred equities. At period-end, the split between preferred and common stocks was 40%/60%. Financial companies, which typically pay healthy dividends, accounted for 36% of the equity portion of the Trust. Moreover, approximately three-quarters of the Trust's preferred equities were in the financials sector and, while diversified across many different securities, these holdings, which trade like fixed-income securities, reacted to the late summer tumult in the credit

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Pioneer Municipal and Equity Income Trust

markets. Where appropriate, we made some changes to the preferred holdings to strengthen the Trust's portfolio; but our view is that the credit markets dislocation will eventually pass, and the value of the Trust's high-quality, preferred holdings will be recognized. The Trust's common equity holdings in the financial sector have always de-emphasized large, diversified financial institutions. Nonetheless, the nation-wide weakness in real estate values had an adverse effect on many of the Trust's bank holdings, such as KeyCorp, National City, and most notably Washington Mutual. We sold National City late in the period and Washington Mutual shortly after fiscal year end. The utilities sector, at 16% of equities on November 30, 2007, was the next-largest weighting after financials. Telecommunications services (15%), consumer staples (13%) and health care (8%) rounded out the top-five equity sector concentrations at period-end. Among the changes in common equities during the period, we sold Great Plains Energy out of concern for risks related to that company's future capital expenditures. We purchased Diamond Offshore Drilling, a mid- and deep-water oil drilling company with a good historical record of returning cash to shareholders. Another addition was B&G Foods, which manufactures an offering of food products, all with strong regional brand identification. Near period-end we added a convertible preferred of Avery Dennison, a leading manufacturer of pressure-sensitive and office product materials.

On November 30, 2007, 28.9% of the Trust was leveraged, which means that the Trust borrowed and invested those funds in high-yielding securities. Short-term rates declined over the fiscal period. However, a rise in short-term rates in the future would add to the Trust's borrowing costs, and the ability to sustain present dividend levels could be affected. Should short-term rates continue to decline, the cost of borrowing would go down, providing the Trust with a modest amount of additional income.

- Q: What affected the Trust's performance during the 12-month period ended November 30, 2007?
- A: Remaining fully invested in municipal securities contributed to the Trust's tax-free income and principal appreciation during the period. However, the performance of below investment-grade bonds during the period held back results, as investors sought high quality securities above everything else

in response to the

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PORTFOLIO MANAGEMENT DISCUSSION	11/30/07 (c	continued)
Pioneer Municipal and Equity Inc	come Trust	

market volatility created by the subprime mortgage debacle. A reduction in investor demand for municipal securities was also a factor in the Trust's underperformance during the period.

In the equity portion of the Trust, some of the strongest contributions to absolute performance during the period came from more defensive names in consumer staples, health care and telecommunications. As tobacco litigation risks receded, Carolina Group, the tobacco tracking stock of Lowes, and Altria Group posted total returns of 46% and 27%, respectively, for the period. In health care, Merck added substantially to performance because of good results in the vaccine area, and Bristol-Myers Squibb did well after weathering a patent challenge. In telecommunications, AT&T and Verizon helped boost return.

Detractors from returns during the period centered on the Trust's financial holdings. Washington Mutual (-53%) did poorly due to market fears of its subprime mortgage exposure. As noted, the stock was sold shortly after period-end. Preferred holdings Scottish Re Group (-45%) and SLM Holdings (-17%) also held back results, due to concerns with subprime exposure in the companies' investment portfolios and private equity deals in an unfavorable debt market. Both stocks remained in the portfolio at November 30, 2007 because we believe they have the potential to do well in the future and continue to pay their dividends. In the utility sector, Atmos Energy (-17%) lost ground compared to other utility stocks during the period because of its lack of exposure to unregulated power generation. The Trust continued to hold the stock at November 30, 2007 for its dividend and because we believe the company has attractive opportunities in its natural gas pipeline businesses.

- Q: What is your outlook?
- A: We expect to see further weakness in the economy and believe that the Fed is likely to continue lowering short-term interest rates well into 2008. A decline in rates would likely enhance the value of the fixed-income securities in the portfolio and would make equities more attractive to investors. In the equity markets, we plan to maintain our focus on preferred and common stocks that emphasize dividend yield. As has always been the case, we will seek diversification and the potential for long-term capital return.

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Pioneer Municipal and Equity Income Trust

Our view is that when the economy moderates, the credit market concerns that have depressed the Trust's preferred holdings should ease, and we should see some price appreciation. When investing in common equities, we will continue to seek opportunities that strengthen the portfolio and that

have the potential to benefit from improving economic growth over the long term.

Information regarding the Trust's principal investment risks is contained in the Trust's prospectus. Please refer to those documents when considering the Trust's risks.

There can be no assurance as to the portion of the Trust's dividends that will be tax-exempt or tax-qualified.

A portion of income may be subject to state, federal, and/or alternative minimum tax. Capital gains, if any, are subject to a capital gains tax. When interest rates rise, the prices of fixed-income securities in the Trust will generally fall. Conversely, when interest rates fall the prices of fixed-income securities in the Trust will generally rise. By concentrating in municipal securities, the portfolio is more susceptible to adverse economic, political or regulatory developments than is a portfolio that invests more broadly. Investments in the Trust are subject to possible loss due to the financial failure of underlying securities and their inability to meet their debt obligations.

The Trust may invest in derivative securities, which may include futures and options. These types of instruments can increase price fluctuation.

The Trust currently uses leverage through the issuance of preferred shares. The Trust is also authorized to borrow from banks and to issue debt securities, which are other forms of leverage. Leverage creates significant risks, including the risk that the Trust's income or capital appreciation will not be sufficient to cover the cost of leverage, which may adversely affect the return of the holders of common shares.

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Pioneer Municipal and Equity Income Trust

PORTFOLIO MANAGEMENT DISCUSSION	11/30/07	(continued)		

Any information in this shareowner report regarding market or economic trends or the factors influencing the Trust's historical or future performance are statements of the opinion of Trust management as of the date of this report. These statements should not be relied upon for any other purposes. Past performance is no guarantee of future results, and there is no guarantee that the market forecasts discussed will be realized.

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Pioneer Municipal and Equity Income Trust

SCHEDULE OF INVESTMENTS	11/30/07

Principal Amount S&P/Moody's Ratings (unaudited)

TAX EXEMPT OBLIGATIONS - 75.8% of Net Assets Alabama - 1.4%

Value

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\$ 5,000,000	NR/NR	Huntsville-Redstone Village Special Care Facilities Financing Authority, 5.5%, 1/1/43	\$ 4,475,400
1,500,000	NR/NR	Sylacauga Health Care Authority Revenue, 6.0%, 8/1/35	1,477,950
			 \$ 5,953,350
		Arizona - 1.0%	
1,000,000	BBB/Baal	Maricopa County Hospital Revenue, 5.0%, 4/1/35	\$ 939 , 040
470,000+	NR/Baa3	<pre>Pima County Industrial Development Authority, 6.375%, 7/1/31</pre>	537 , 750
530,000	NR/Baa3	Pima County Industrial Development Authority, 6.375%, 7/1/31	547,008
989,000	NR/Baa3	Pima County Industrial Development Authority, 6.75%, 7/1/31	1,023,160
1,000,000+	NR/NR	Pima County Industrial Development Authority, 7.5%, 7/1/34	1,199,670
			 \$ 4,246,628
		California - 5.2%	
1,000,000	A/A2	California Health Facilities Authority Revenue, 5.25%, 7/1/23	\$ 1,030,230
9,000,000	BBB/Baa3	Golden State Tobacco Securitization Corp., 5.125%, 6/1/47	7,602,390
4,000,000+	AAA/Aaa	Golden State Tobacco Securitization Corp., 6.75%, 6/1/39	4,650,360
9,655,000(a)	NR/A3	Golden State Tobacco Securitization Corp., RIB, 6.828%, 6/1/45 (144A)	8,815,787
			 \$ 22,098,767
		Colorado - 0.7%	
3,000,000	NR/NR	Colorado Educational & Cultural Facilities Authority Revenue, 5.5%, 6/1/37 (144A)	\$ 2,837,190
		Connecticut - 0.3%	
1,500,000	BB/NR	Mohegan Tribe Indians Gaming Authority, 5.25%, 1/1/33 (144A)	\$ 1,374,930
		District of Columbia - 1.0%	
4,000,000	BBB/Baa3	District of Columbia Tobacco Settlement Financing Corp., 6.75%, 5/15/40	\$ 4,093,760

The accompanying notes are an integral part of these financial statements. 13

Pioneer Municipal and Equity Income Trust

SCHEDULE OF INVESTMENTS	11/30/07	(continued)	

S&P/Moody's Principal Ratings Amount (unaudited)

Florida - 4.1%

1,105,000	A+/A1	Highlands County Health Facilities Authority Revenue, 5.0%, 11/15/24	\$ 1,119,453
5,000,000+	NR/A1	Highlands County Health Facilities Authority Revenue, 6.0%, 11/15/25	5,581,250
2,000,000	BB/NR	Lee County Industrial Development Authority Revenue, 5.375%, 6/15/37	1,787,520
585,000	NR/NR	Madison County First Mortgage Revenue, 6.0%, 7/1/25	576 , 477
2,025,000	BB+/NR	Miami Beach Health Facilities Authority Revenue, 5.375%, 11/15/28	1,815,129
500,000	BB+/Bal	Miami Beach Health Facilities Authority Revenue, 6.7%, 11/15/19	523,105
1,400,000	NR/NR	Orange County Health Facilities Authority Revenue, 5.5%, 7/1/38	1,300,530
3,970,000(a)	NR/Aaa	Tampa-Hillsborough County Expressway Authority Revenue, RIB, 7.653%, 7/1/23 (144A)	4,670,268
			\$ 17,373,732
		Georgia – 4.1%	
9,580,000(a)	NR/Aaa	Georgia Municipal Electric Authority Power Revenue, RIB, 7.497%, 1/1/20 (144A)	\$ 11,720,938
2,500,000+	AAA/NR	Milledgeville-Baldwin County Development Authority Revenue, 5.5%, 9/1/24	2,822,850
2,500,000+	AAA/NR	Milledgeville-Baldwin County Development Authority Revenue, 5.625%, 9/1/30	2,841,525
			\$ 17,385,313
		Illinois - 4.1%	
3,000,000	AAA/Aaa	Chicago Illinois General Obligation, 5.0%, 1/1/28	\$ 3,104,790
4,580,000	NR/A3	Illinois Development Finance Authority Revenue, 5.25%, 10/1/24	4,669,173
5,000,000	AA+/Aaa	Illinois Educational Facilities Authority Revenue, 5.0%, 12/1/38	5,135,500
2,000,000	AA+/Aa2	Illinois Finance Authority Revenue, 5.5%, 8/15/43	2,091,400
		TIL'S STREET AND A STREET	
2,055,000(a)	NR/Aa2	Illinois Finance Authority Revenue, RIB, 9.313%, 8/15/43 (144A)	2,374,306

14 The accompanying notes are an integral part of these financial statements.

Pioneer Municipal and Equity Income Trust

S&P/Moody's Principal Ratings Amount (unaudited) \$5,000,000 A+/A2 Indiana Health & Educational Facilites

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Value

4 125 000		Financing Authority Hospital Revenue, 5.0%, 2/15/39	\$ 4,831,100
4,135,000	BBB+/Ba1	Indiana State Development Finance Authority Revenue, 5.75%, 10/1/11	4,189,913
2,570,000	NR/NR	Vigo County Hospital Authority Revenue, 5.8%, 9/1/47 (144A)	2,369,129
			\$ 11,390,142
4 000 000	ND /ND	Iowa - 0.9%	
4,000,000	NR/NR	Iowa Financing Authority Senior Housing Revenue, 5.625%, 12/1/45	\$ 3,670,880
		Kansas - 0.6%	
750,000	NR/NR	Manhattan Health Care Facilities Revenue,	
2 000 000		5.125%, 5/15/37	\$ 689,768
2,000,000	NR/NR	Manhattan Health Care Facilities Revenue, 5.125%, 5/15/42	1,818,920
			\$ 2,508,688
		Louisiana - 3.1%	
5,000,000	NR/A3	Louisiana Public Facilities Authority Revenue, 5.5%, 5/15/47	\$ 4,978,250
8,335,000	BBB/Baa3	Tobacco Settlement Financing Corp., 5.875%, 5/15/39	8,062,446
			\$ 13,040,696
			२ ⊥३,040,696
		Maryland - 1.8%	
3,000,000	BBB-/Baa3	Frederick County Educational Facilities Revenue, 5.625%, 9/1/38	\$ 3,045,270
1,000,000	NR/NR	Maryland State Economic Development Revenue, Series A, 5.0%, 12/1/16	978 , 740
660,000	NR/NR	Maryland State Economic Development Revenue, Series B, 5.0%, 12/1/16	645,968
1,000,000	NR/NR	Maryland State Economic Development Revenue, 5.0%, 12/1/31	889,930
2,000,000	A/A2	Maryland State Health & Higher Educational Facilities Authority Revenue,	009,930
		5.125%, 7/1/34	2,013,800
			\$ 7,573,708

The accompanying notes are an integral part of these financial statements. 15

Pioneer	Municipal	and	Equity	Income	Trust
1 1011001	TIGHT OF PORT	0.110.		11001110	11000

SCHEDULE OF INVESTMENTS	11/30/07	(continued)		

Principal Amount	S&P/Moody's Ratings (unaudited)		Value
\$4,500,000	AA/NR	Massachusetts - 4.2% Massachusetts Health & Educational Facilities	

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2,000,000	AA+/Aa1	Authority Revenue, 4.625%, 8/15/28 Massachusetts Health & Educational Facilities	\$ 4,083,7
2,000,000	AA+/Ad1	Authority Revenue, 5.0%, 7/1/33	2,055,5
1,550,000	BBB-/Baa3	Massachusetts Health & Educational Facilities	
1	/	Authority Revenue, 5.25%, 7/15/18	1,556,3
1,600,000	BBB/NR	Massachusetts Health & Educational Facilities Authority Revenue, 5.45%, 11/15/23	1,614,9
2,120,000	BBB/Baa3	Massachusetts Health & Educational Facilities	1,011,5
		Authority Revenue, 5.625%, 7/1/20	2,148,8
900,000	BBB/Baa3	Massachusetts Health & Educational Facilities	0.45
2,750,000	BBB/Baa2	Authority Revenue, 6.25%, 7/1/22 Massachusetts Health & Educational Facilities	947,0
2,750,000	DDD/ Daaz	Authority Revenue, 6.625%, 7/1/32	2,871,5
500,000	BBB-/NR	Massachusetts State Development Finance	, ,
		Agency, 5.5%, 1/1/35	488,2
1,100,000	BBB/Baa2	Massachusetts State Development Finance	1 1 2 0 -
1,000,000	BBB/Baa2	Agency, 5.625%, 10/1/24 Massachusetts State Development Finance	1,129,7
1,000,000	2227 2002	Agency, 5.7%, 10/1/34	1,013,9
			\$ 17,909,8
		Michigan - 2.9%	
5,000,000	BB/NR	Macomb County Hospital Finance Authority	
	/	Revenue, 5.875%, 11/15/34	\$ 4,851,9
1,595,000	NR/NR	Meridian Economic Development Corporate Ltd. Obligation Revenue, 5.25%, 7/1/26	1,447,0
3,340,000	NR/NR	Michigan Public Educational Facilities Authority	I, II, C
		Revenue, 5.875%, 6/1/37	3,147,4
2,000,000	NR/NR	Michigan State Hospital Finance Authority	
1,000,000	NR/NR	Revenue, 5.25%, 11/15/25 Michigan State Hospital Finance Authority	1,934,5
1,000,000	INIX/ INIX	Revenue, 5.5%, 11/15/35	961,3
			\$ 12,342,2
		Minnesota - 1.3%	
2,000,000	A-/NR	Duluth Economic Development Authority	
		Health Care Facilities Revenue,	
1 500 000	7 / 7	5.25%, 2/15/28	\$ 2,019,8
1,500,000	A-/NR	Duluth Economic Development Authority Health Care Facilities Revenue,	
		5.25%, 2/15/33	1,506,1

16 The accompanying notes are an integral part of these financial statements.

Pioneer Municipal and Equity Income Trust

Principal Amount	S&P/Moody's Ratings (unaudited)			Value
\$ 1,000,000	NR/NR	Minnesota - (continued) North Oaks Senior Housing Revenue, 6.0%, 10/1/33	Ş	1,007,650

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1,000,000	NR/NR	North Oaks Senior Housing Revenue, 6.5%, 10/1/47	1,030,610
			\$ 5,564,320
1,720,000	AA/Aa3	Missouri – 0.4% Missouri State Health & Educational Authority Health Facilities Revenue, 5.25%, 8/15/28	\$ 1,721,789
1,000,000	NR/A3	Montana – 0.2% Montana Finance Authority Hospital Facilities Revenue, 5.0%, 6/1/24	\$ 1,012,730
4,980,000(a)	NR/Aaa	Nebraska – 1.3% Nebraska Public Power District Revenue, RIB, 7.645%, 1/1/41 (144A)	\$ 5,407,931
1,500,000	A/A2	Nevada - 0.4% Henderson Nevada Health Care Facilities Revenue, 5.625%, 7/1/24	\$ 1,571,685
1,700,000+ 1,000,000	NR/NR A+/A2	New Hampshire - 0.6% New Hampshire Business Finance Authority Revenue, 6.05%, 9/1/29 New Hampshire Health & Education Facilities	\$ 1,772,403
		Authority Revenue, 5.75%, 10/1/31	1,035,500 \$ 2,807,903
1,250,000 5,920,000(a) 710,000 1,000,000	BBB/Baa3 NR/Aaa NR/NR NR/NR	New Jersey - 5.7% Camden County Improvement Authority Revenue, 5.75%, 2/15/34 Garden State Preservation Trust, RIB, 10.703%, 11/1/22 (144A) New Jersey Economic Development Authority Revenue, 5.75%, 1/1/25 New Jersey Economic Development Authority Revenue, 5.875%, 1/1/37	\$ 1,277,050 8,550,730 709,957 980,140
1,000,000	BB/Ba2	New Jersey Health Care Facilities Financing Authority Revenue, 5.125%, 7/1/14	949,270
5,000,000	BBB/Baal	New Jersey Health Care Facilities Financing Authority Revenue, 5.375%, 7/1/33	4,941,500
3,500,000	NR/NR	New Jersey Health Care Facilities Financing Authority Revenue, 7.25%, 7/1/27	3,555,965
		-	

The accompanying notes are an integral part of these financial statements. 17

Pioneer	Municipal	and	Equity	Income	Trust

SCHEDULE OF INVESTMENTS	11/30/07	(continued)

S&P/MoodyPrincipalRatingsAmount(unaudited)		
\$ 3,000,000+	AAA/Aaa	New Jersey - (continued) Tobacco Settlement Financing Corp.,

Value

16

		6.25%, 6/1/43	\$ 3,426,120
			\$ 24,390,732
1,000,000	AA/NR	New Mexico - 0.6% Dona Ana County PILT Revenue,	
1,500,000	NR/A3	5.25%, 12/1/25 Farmington New Mexico Hospital Revenue, 5.0%, 6/1/23	\$ 1,009,320 1,511,580
			\$ 2,520,900
		New York - 4.3%	
2,000,000	NR/NR	Dutchess County Industrial Development Agency Revenue, 7.5%, 3/1/29	\$ 2,150,000
1,000,000	NR/Aa1	New York City Industrial Development Agency, 5.0%, 7/1/27	1,038,000
1,000,000	NR/Aa1	New York City Industrial Development Agency, 5.25%, 7/1/24	1,063,380
5,000,000	AA-/A1	Port Authority of New York & New Jersey Revenue, 5.0%, 9/1/38	5,115,750
1,000,000	NR/NR	Suffolk County Industrial Development Agency Civic Facilities Revenue, 5.5%, 1/1/37 (144A)	898 , 750
4,900,000	AAA/Aaa	Triborough Bridge & Tunnel Authority, 5.25%, 11/15/30	5,142,305
3,000,000	NR/NR	Ulster County Industrial Development Agency Civic Facility Revenue, 6.0%, 9/15/27	2,945,190
			\$ 18,353,375
1,000,000	AA/Aa3	North Carolina - 0.7% North Carolina Capital Facilities Finance Agency Student Revenue, 5.0%, 6/1/27	\$ 990,170
1,000,000	AA/Aa3	North Carolina Capital Facilities Finance Agency Student Revenue, 5.0%, 6/1/32	964,420
1,000,000	NR/NR	North Carolina Medical Care Commission Health Care Facilities Revenue,	504,420
		5.0%, 11/1/23	994 , 530
			\$ 2,949,120

18 The accompanying notes are an integral part of these financial statements.

Pioneer Municipal and Equity Income Trust

Principal Amount	S&P/Moody's Ratings (unaudited)		Value
\$ 3,000,000+ 1,500,000	AAA/Aaa NR/NR	Ohio - 1.7% Columbus City School District, 5.0%, 12/1/32 Cuyahoga County Health Care & Independent Living Facilities Revenue, 6.0%, 5/15/37	\$ 3,287,100 1,455,630

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1,500,000	NR/NR	Cuyahoga County Health Care & Independent Living Facilities Revenue, 6.0%, 5/15/42	1,438,980
1,000,000	AAA/Aaa	Hamilton County Hospital Facilities Revenue,	
		5.125%, 5/15/28	1,024,540
			\$ 7,206,250
		Oregon - 0.7%	
2,935,000	NR/Aaa	Oregon State Housing & Community	
		Services Department Multi-Family Revenue, 6.0%, 7/1/31	\$ 2,969,251
		Pennsylvania - 2.9%	
5,000,000+	AAA/Aaa	Pennsylvania State Turnpike Commission Oil Franchise Tax Revenue, 5.0%, 12/1/31	\$ 5,436,750
2,315,000+	A/NR	Sayre Health Care Facilities Authority Revenue, 5.875%, 12/1/31	2,555,297
685,000	A/NR	Sayre Health Care Facilities Authority Revenue, 5.875%, 12/1/31	717 , 832
280,000	B-/NR	Scranton-Lackawanna Health and Welfare	
700,000		Authority Hospital Revenue, 5.9%, 7/1/08	280,846
700,000	B-/NR	Scranton-Lackawanna Health and Welfare Authority Hospital Revenue, 6.0%, 7/1/09	706 , 160
460,000	B-/NR	Scranton-Lackawanna Health and Welfare	
2,165,000	AA+/Aaa	Authority Hospital Revenue, 6.05%, 7/1/10 Swarthmore Borough Authority College	464,043
,,	,	Revenue, 5.0%, 9/15/31	2,222,762
			\$ 12,383,690
		Puerto Rico - 1.2%	
5,000,000	BBB-/Baa3	Puerto Rico Public Buildings Authority Revenue, 5.25%, 7/1/33	\$ 5,038,500
		Rhode Island - 1.1%	
1,640,000	BBB/Baa3	Tobacco Settlement Financing Corp., 6.125%, 6/1/32	\$ 1,667,732
3,100,000	BBB/Baa3	Tobacco Settlement Financing Corp.,	
		6.25%, 6/1/42	3,112,028
			\$ 4,779,760

The accompanying notes are an integral part of these financial statements. 19

Pioneer Municipal and Equity Income Trust	
SCHEDULE OF INVESTMENTS 11/30/07	(continued)

Principal Amount	S&P/Moody's Ratings (unaudited)			Value
\$ 6,000,00	0 A-/A3	South Carolina - 4.1% Berkeley County School District Installment	ć	
5,000,00	0 AAA/Aaa	Lease, 5.0%, 12/1/28 Florence County Hospital Revenue,	Ş	6,068,160

		5.25%, 11/1/34	5,142,800
3,500,000+	A+/A2	Lexington County Health Services District, Inc. Hospital Revenue, 5.5%, 11/1/32	, 3,869,250
2,500,000	A-/A3	South Carolina Jobs Economic Development Authority Revenue, 5.5%, 11/15/23	2,583,025
			\$ 17,663,235
2,500,000	NR/Ba2	Tennessee - 0.6% Knox County Health Educational & Housing Facilities Board Hospital Revenue, 6.5%, 4/15/31	\$ 2,548,450
		Texas - 5.1%	
1,552,000	NR/Aaa	Houston Housing Financing Corp., 6.25%, 9/20/31	\$ 1,643,335
2,885,000(a)	NR/Aaa	Houston Utility System Revenue, RIB, 8.453%, 5/15/24 (144A)	3,491,542
2,750,000	AAA/Aaa	Lower Colorado River Authority, 5.0%, 5/15/31	2,818,310
1,711,000	NR/Aaa	Panhandle Regional Housing Finance Corp., 6.6%, 7/20/31	1,846,751
3,000,000 1,000,000	BBB/Baa2 BBB/NR	Richardson Hospital Authority, 6.0%, 12/1/34 Seguin Higher Education Facilities Corp.	3,109,890
1,500,000	NR/Baa3	Revenue, 5.0%, 9/1/23 Texas State Student Housing Revenue, 6.5%, 9/1/34	993,460 1,565,460
3,000,000	NR/NR	Willacy County Local Government Corp. Revenue, 6.0%, 9/1/10	3,054,870
3,000,000	NR/NR	Willacy County Local Government Corp. Revenue, 6.875%, 9/1/28	3,160,860
			\$ 21,684,478
1,295,000	AA/Aa3	Vermont - 0.3% Vermont Educational & Health Buildings Financing Agency Revenue, 5.0%, 7/1/24	\$ 1,284,860
The accompanyir	ng notes are a	n integral part of these financial statements.	

Pioneer Municipal and Equity Income Trust

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Principal Amount	S&P/Moody's Ratings (unaudited)		Value
		Virginia - 1.3%	
\$1,500,000	NR/A3	Prince William County Industrial Development Hospital Revenue, 5.2%, 10/1/26	\$ 1,529,865
3,925,000	NR/A3	Prince William County Industrial Development Hospital Revenue, 5.35%, 10/1/36	3,992,000
			 \$ 5,521,865

		Washington - 2.4%	
3,000,000	AAA/Aaa	King County Washington Sewer Revenue,	
7 000 000		5.0%, 1/1/35	\$ 3,080,700
7,000,000	BBB/Baa3	Tobacco Settlement Authority Revenue,	7 152 220
		6.625%, 6/1/32	7,153,230
			\$ 10,233,930
		Wisconsin - 0.8%	
3,500,000	BBB+/NR	Wisconsin State Health & Educational	
		Facilities Authority Revenue,	
		5.6%, 2/15/29	\$ 3,518,970
		TOTAL TAX-EXEMPT OBLIGATIONS	6222 200 701
		(Cost \$315,754,086) (b)	\$322,308,781
Shares			
	0010/011		
		TOCKS - 38.3% of Net Assets	
	Energy -	- 1.3% As Drilling - 0.5%	
19,566		Offshore Drilling, Inc.	\$ 2,278,069
19,000	Diamona	orishore britting, inc.	
	Oil & Ga	us Storage & Transportation - 0.8%	
142,876		Energy Corp.	\$ 3,520,465
	Total Er	nergy	\$ 5,798,534
		0.00	
		s = 0.9%	
94,000		ied Chemicals - 0.4%	
94,000	Olin Cor	.p.	\$ 1,968,360
	Diversif	ied Metals & Mining - 0.5%	
56,012		Minerals International, Inc.	\$ 2,056,761
,	1	,	
	Total Ma	terials	\$ 4,025,121
		al Services & Supplies - 0.7%	
		al Printing - 0.7%	
79,034	R.R. Dor	nnelley & Sons Co.	\$ 2,897,386
	m · 1 ~		
	Total Co	ommercial Services & Supplies	\$ 2,897,386

The accompanying notes are an integral part of these financial statements. 21

Pioneer Municipal and Equity Income Trust

SCHEDULE OF INVESTMENTS	11/30/07	(continued)

Shares

Value

Consumer Durables & Apparel - 0.2%

	Home Furnishings - 0.2%	
50,000	Bassett Furniture Industries, Inc.	\$ 445,000
31,486	Kimball International, Inc.	420,023
	Total Consumer Durables & Apparel	\$ 865,023
	Media - 1.0%	
	Movies & Entertainment - 1.0%	
206,487	Regal Entertainment Group	\$ 4,086,378
	Publishing - 0.0%	
9,905	Idearc, Inc.	\$ 187,403
	Total Media	\$ 4,273,781
	Food, Beverage & Tobacco - 8.2%	
	Packaged Foods & Meats - 1.7%	
357,000	B&G Foods, Inc.	\$ 3,816,330
92,828	Kraft Foods, Inc.	3,207,207
		\$ 7,023,537
	Tobacco - 6.5%	
134,140	Altria Group, Inc.	\$ 10,403,898
172,872	Loews Corp Carolina Group	15,376,964
29,704	Reynolds American, Inc.	2,079,874
		\$ 27,860,736
	Total Food Rowarage (Tobagge	\$ 34,884,273
	Total Food, Beverage & Tobacco	J J4,004,273
	Pharmaceuticals, Biotechnology & Life Sciences - 5.3% Pharmaceuticals - 5.3%	
329 , 758	Bristol-Myers Squibb Co.	\$ 9,770,730
216,536	Merck & Co., Inc.	12,853,577
210,000	Herek & CO., The.	
	Total Pharmaceuticals, Biotechnology &	
	Life Sciences	\$ 22,624,307
	Banks - 2.7%	
	Diversified Banks - 0.3%	
28,642	Wachovia Corp.	\$ 1,231,606
	Regional Banks - 0.9%	
81,550	KeyCorp	\$ 2,148,027
67,800	Regions Financial Corp.	1,791,954
		\$ 3,939,981

22 The accompanying notes are an integral part of these financial statements.

Pioneer Municipal and Equity Income Trust

Shares

Value

222,700 204,886	Thrifts & Mortgage Finance - 1.5% TrustCo Bank Corp., NY Washington Mutual, Inc.	\$ 2,367,301 3,995,277
·		\$ 6,362,578
	Total Banks	\$ 11,534,165
	Diversified Financials - 0.5%	
	Other Diversified Financial Services - 0.5%	
42,500	Bank of America Corp.	\$ 1,960,525
	Total Diversified Financials	\$ 1,960,525
	Telecommunication Services - 10.0%	
	Integrated Telecommunication Services - 10.0%	
204,553	AT&T, Inc.	\$ 7,815,970
529,946	Citizens Communications Co.	6,878,699
406,745	Verizon Communications, Inc.	17,575,451
790,184	Windstream Corp.	10,232,883
	Total Telecommunication Services	\$ 42,503,003
	Utilities - 7.5%	
	Electric Utilities - 0.8%	
138,400	Empire District Electric Co.	\$ 3,188,736
	Gas Utilities - 3.1%	
81,249	AGL Resources, Inc.	\$ 3,012,713
395,466	Atmos Energy Corp.	10,357,255
		\$ 13,369,968
	Multi-Utilities - 3.6%	
100,000	Consolidated Edison, Inc.	\$ 4,845,000
285,753	Duke Energy Corp.	5,655,052
134,112	NSTAR	4,693,920
		\$ 15,193,972
	Total Utilities	\$ 31,752,676
	TOTAL COMMON STOCKS	
	(Cost \$137,323,387)	\$163,118,794
	NON-CONVERTIBLE PREFERRED STOCKS - 22.5% of Net Assets	
	Energy - 1.0%	
40.000	Oil & Gas Exploration & Production - 1.0%	<u> </u>
49,300	Apache Corp., Series B, 5.68%	\$ 4,249,044

The accompanying notes are an integral part of these financial statements. 23

Pioneer Municipal and Equity Income Trust SCHEDULE OF INVESTMENTS 11/30/07 (continued)

Shares		Value
	Automobiles & Components - 1.1%	
126,542	Automobile Manufacturers – 1.1% Ford Motor Co. Capital Trust II, 6.5%	\$ 4,439,716
·	• · ·	
	Total Automobiles & Components	\$ 4,439,716
	Banks - 5.7%	
	Diversified Banks - 3.1%	
105,000	Bank One Capital VI, 7.2%	\$ 2,548,361
120,000	Barclays Bank Plc, Series 2, 6.625%	2,647,200
120,000	HSBC Holdings Plc, Series A, 6.2%,	2,500,800
170,579	Royal Bank of Scotland Group Plc,	2 722 024
71 000	Series Q, 6.75%	3,722,034
71,000	Wachovia Preferred Funding Corp., Series A, 7.25%	1,767,900
		\$ 13,186,295
	Thrifts & Mortgage Finance - 2.6%	
56,980	Countrywide Capital V, 7.0%	\$ 812,383
171,677	Fannie Mae, Series N, 6.75%	4,034,409
57,000	Freddie Mac, 5.81%	2,422,500
39,000	Freddie Mac, Series F, 5.0%	1,384,500
58,000	Freddie Mac, Series K, 5.79%	2,604,200
		\$ 11,257,992
	Total Banks	\$ 24,444,287
	Diversified Financials - 5.9%	
	Other Diversified Financial Services - 2.2%	
49,000	ABN Amro Capital Fund Trust VII, 6.08%	\$ 968,240
120,000	Bank of America Corp., Series D, 6.204%	2,653,200
120,000	Deustche Bank Capital Funding Trust VIII, 6.375%	2,531,256
150,000	JPMorgan Chase Capital Trust XVI, 6.35%	3,316,500
200,000	ornorgan enabe capital frace ner, ereet	
		\$ 9,469,196
	Consumer Finance - 0.8%	
18,000	MBNA Capital, Series D, 8.125%	\$ 441,779
71,300	SLM Holdings Corp., Series A, 6.97%	2,994,600
		\$ 3,436,379
	Investment Banking & Brokerage - 2.9%	
57,000	Bear Stearns Companies, Inc., Series F, 5.72%	\$ 2,317,050
40,000	Bear Stearns Companies, Inc., Series G, 5.49%	1,500,000
100,000	Lehman Brothers Holdings, Inc., 6.5%	2,230,000
19,000	Lehman Brothers Holdings, Inc., Series C, 5.94%	836,000
50,800	Lehman Brothers Holdings, Inc., Series D, 5.67%	2,082,800
The accompany.	ing notes are an integral part of these financial statements	

Pioneer Municipal and Equity Income Trust

24

Shares		Value
65,000 87,000	Investment Banking & Brokerage - (continued) Merrill Lynch Preferred Capital Trust IV, 7.12% Merrill Lynch Preferred Capital Trust V, 7.28%	\$ 1,460,993 2,029,710
0,,000		\$ 12,456,553
		J 12,450,555
	Total Diversified Financials	\$ 25,362,128
	Insurance - 2.9%	
150 000	Life & Health Insurance - 0.4%	Ċ 1 000 E00
159,000	Scottish Re Group, Ltd., 7.25%	\$ 1,828,500
	Property & Casualty Insurance - 1.8%	
160,000	ACE, Ltd., Series C, 7.8%	\$ 3,929,600
161,000	Berkley W.R. Capital Trust II, 6.75%	3,446,663
		\$ 7,376,263
	Reinsurance - 0.7%	
158,000	RenaissanceRE Holdings, Ltd., Series D, 6.6%	\$ 3,039,920
	Total Insurance	\$ 12,244,683
	Real Estate - 2.6% Diversification Real Estate Investment Trust - 0.8%	
32,440	PS Business Parks, Inc., Series I, 6.875%	\$ 660,803
13,000	PS Business Parks, Inc., Series L, 7.6%	289,510
119,200	PS Business Parks, Inc., Series P, 6.7%	2,378,040
		\$ 3,328,353
	Industrial Real Estate Investment Trust - 0.2%	
40,000	Prologis Trust, Series G, 6.75%	\$ 879 , 200
	Office Real Estate Investment Trust - 0.2%	
15,000	Brandywine Realty Trust, Series C, 7.5% Brandywine Realty Trust, Series D, 7.375%	\$ 336,750
34,500	Brandywine Realty flust, Series D, 7.375%	759,000
		\$ 1,095,750
	Retail Real Estate Investment Trust - 0.8%	
94,000	Regency Centers Corp., Series C, 7.45%	\$ 2,090,560
53,500	Regency Centers Corp., Series E, 6.7%	1,136,340
		\$ 3,226,900
	Specialized Real Estate Investment Trust - 0.6%	
118,000	Public Storage, Inc., Series L, 6.75%	\$ 2,507,500
	Total Real Estate	\$ 11,037,703

The accompanying notes are an integral part of these financial statements. 25

Pioneer Municipal and Equity Income Trust

SCHEDULE OF INVESTMENTS 11/30/07	(continued)

Shares

Value

	Utilities - 3.3%	
	Electric Utilities - 2.9%	
98,000	Alabama Power Co., 5.3%	\$ 2,141,300
113,000	Alabama Power Co., 5.83%	2,683,750
78 , 000	Interstate Power and Light Co., Series B, 8.375%	2,290,860
40,000	Mississippi Power Co., 5.25%	944,800
7,700	PPL Electric Utilities Corp., 4.5%	627,550
73,000	Southern California Edison Co., 4.32%	1,423,500
94,000	Virginia Power Capital Trust II, 7.375%	2,272,890
	Virginia fonor oaptoar fract 12,	
		\$ 12,384,650
		·····
	Gas Utilities - 0.4%	
62,000	Southern Union Co., Series C, 7.55%	\$ 1,541,940
02,000	bouchein onion coll berieb of stores	·····
	Total Utilities	\$ 13,926,590
	10041 001110103	÷ ±0,520,000
	TOTAL NON-CONVERTIBLE PREFERRED STOCKS	
	(Cost \$111,661,764)	\$ 95,704,151
	(0050 9111,001,701)	
	CONVERTIBLE PREFERRED STOCKS - 3.0% of Net Assets	
	Capital Goods - 0.5%	
	Aerospace & Defense - 0.5%	
15,000	Northrop Grumman Corp., 7.0%	\$ 2,169,000
10,000	Northrop Grununan Corp., 7.0%	♀ ∠,±∪>,∪∪∪
	Total Constal Coode	\$ 2,169,000
	Total Capital Goods	२ ८,±७७,७७७
	Commercial Services & Supplies - 0.7%	
	Office Services & Supplies - 0.7%	
60,000	Avery Dennison Corp., 7.875%	\$ 3,078,000
	Total Commercial Services & Supplies	\$ 3,078,000
	Diversified Financials - 1.6%	
	Other Diversified Financial Services - 1.6%	
161,000	Lazard, Ltd., 6.625%	\$ 6,720,140
	Total Diversified Financials	\$ 6,720,140
	Insurance - 0.2%	
	Property & Casualty Insurance - 0.2%	
47,919	XL Capital, Ltd., Class A, 7.0%	\$ 1,026,425
	Total Insurance	\$ 1,026,425
	TOTAL CONVERTIBLE PREFERRED STOCKS	
	(Cost \$10,175,221)	\$ 12,993,565

26 The accompanying notes are an integral part of these financial statements.

Pioneer Municipal and Equity Income Trust

	TAX-EXEMPT MONEY MARKET MUTUAL FUND - 1.7% of Net Assets	
7,113,990	BlackRock Liquidity Funds MuniFund Portfolio	\$ 7,113,990
	TOTAL TAX-EXEMPT MONEY MARKET MUTUAL FUND (Cost \$7,113,990)	\$ 7,113,990
	TOTAL INVESTMENTS IN SECURITIES - 141.3% (Cost \$582,028,448) (c)	\$ 601,239,281
	OTHER ASSETS AND LIABILITIES - 0.1%	\$ 503,046
	PREFERRED SHARES AT REDEMPTION VALUE, INCLUDING DIVIDENDS PAYABLE - (41.4%)	\$(176,384,031
	NET ASSETS APPLICABLE TO COMMON SHAREOWNERS - 100.0%	\$ 425,358,296

Portfolio Abbreviations RIB Residual Interest Bonds

Shares

- (144A) Security is exempt from registration under Rule 144A of the Securities Act of 1933. Such securities may be resold normally to qualified institutional buyers in a transaction exempt from registration. At November 30, 2007, the value of these securities amounted \$52,511,501, or 12.3% of total net assets.
- NR Security not rated by S&P or Moody's.
- + Prerefunded bonds have been collateralized by U.S. Treasury securities or U.S. Government Agencies, which are held in escrow to pay interest and principal on the tax exempt issue and to retire the bonds in full at the earliest refunding date.
- (a) The interest rate is subject to change periodically and inversely based upon prevailing market rates. The interest rate shown is the rate at November 30, 2007.
- (b) The concentration of tax-exempt investments by type of obligation/market sector is as follows:

Insured:	
FSA	6.3%
MBIA	5.9
FGIC	4.2
Radian	3.2
AMBAC	2.5
	22.1%

Value

General Obligation Revenue Bonds:	3.3
Revenue Donus.	
Health Revenue	30.2
Tobacco Revenue	14.8
Development Revenue	9.5
Education Revenue	7.4
Housing Revenue	3.7
Facilities Revenue	3.0
Other Revenue	2.2
School District Revenue	1.8
Transportation Revenue	1.6
Gaming Revenue	0.4
	100.0%
	=====

The accompanying notes are an integral part of these financial statements. 27

Pioneer Municipal and Equity Income Trust

SCHEDULE OF INVESTMENTS 11/30/07	(continued)	

(c) At November 30, 2007, the net unrealized gain on investments based on cost for federal income tax purposes of \$581,819,322 was as follows:

Aggregate gross unrealized gain for all investments in which there is an excess of value over tax cost \$47,258,820 Aggregate gross unrealized loss for all investments in which there is an excess of tax cost over value (27,838,861)

Net unrealized gain

For financial reporting purposes net unrealized gain on investments

Purchases and sales of securities (excluding temporary cash investments) for the year ended November 30, 2007, aggregated \$148,315,923 and \$145,026,135, respectively.

was \$19,210,833 and cost of investments aggregated \$582,028,448.

28 The accompanying notes are an integral part of these financial statements.

Pioneer Municipal and Equity Income Trust

STATEMENT OF ASSETS AND LIABILITIES 11/30/07

ASSETS:	
Investments in securities, at value (cost \$582,028,448)	\$601,239,281
Receivables -	
Investment securities sold	90,000
Dividends and interest	7,006,515
Other	947,330

\$19,419,959

Unrealized appreciation on interest rate swaps Prepaid expenses	88,363 21,525
Total assets	\$609,393,014
LIABILITIES: Payables - Investment securities purchased Due to custodian Due to affiliates Administration fee payable Accrued expenses	\$ 3,045,180 4,107,437 304,839 31,248 161,983
Total liabilities	\$ 7,650,687
PREFERRED SHARES AT REDEMPTION VALUE: \$25,000 liquidation value per share applicable to 7,050 shares, including dividends payable of \$134,031	\$176,384,031
NET ASSETS APPLICABLE TO COMMON SHAREOWNERS: Paid-in capital Undistributed net investment income Net unrealized gain on investments Net unrealized gain on interest rate swaps	\$406,036,048 23,052 19,210,833 88,363
Net assets applicable to common shareowners	\$425,358,296
NET ASSET VALUE PER SHARE: No par value, (unlimited number of shares authorized) Based on \$425,358,296/28,706,981 common shares	\$ 14.82 =======

The accompanying notes are an integral part of these financial statements. 29

Pioneer Municipal and Equity Income Trust

STATEMENT OF OPERATIONS

For the Year Ended 11/30/07

	14,388,781 19,302,540	
		\$ 33,691,321
EXPENSES:		
Management fees \$	3,798,435	
Administration fees	500,710	
Transfer agent fees and expenses	429,195	
Auction agent fees	467,680	
Custodian fees	37,368	
Registration fees	25,362	
Professional fees	363,264	
Printing expense	56,861	
Trustees' fees	24,305	
Pricing fees	19,552	
Insurance fees	12,844	

Miscellaneous	18,681	
Total expenses Less fees paid indirectly		\$ 5,754,257 (523)
Net expenses		\$ 5,753,734
Net investment income		\$ 27,937,587
REALIZED AND UNREALIZED GAIN (LOSS) ON INVESTMENTS AND INTEREST RATE SWAPS: Net realized gain from:		
Investments	\$ 3,226,543	
Interest rate swaps	856,816	\$ 4,083,359
Change in net unrealized gain from: Investments Interest rate swaps	\$(33,872,244) (1,161,729)	\$(35,033,973)
1.002000 1400 0.000		
Net loss on investments and interest rate swaps		\$(30,950,614)
DIVIDENDS AND DISTRIBUTIONS TO PREFERRED SHAREOWNERS FROM:		
Net investment income	\$ (7,768,522)	
Net realized gains	(908,387)	
Total distributions		\$ (8,676,909)
Net decrease in net assets applicable to common		
shareowners resulting from operations		\$(11,689,936) ========

30 The accompanying notes are an integral part of these financial statements.

Pioneer Municipal and Equity Income Trust STATEMENTS OF CHANGES IN NET ASSETS For the Year Ended 11/30/07 and 11/30/06, respectively

	Year Ended 11/30/07	Year Ended 11/30/06
FROM OPERATIONS:		
Net investment income	\$ 27,937,587	\$ 27,998,168
Net realized gain on investments and interest		
rate swaps	4,083,359	688,474
Change in net unrealized gain on investments		
and interest rate swaps	(35,033,973)	44,563,306
Dividends and distributions to preferred		
shareowners from:		
Net investment income	(7,768,522)	(7,360,344)
Net realized gains	 (908,387)	 (571,728)
Net increase (decrease) in net assets		
applicable to common shareowners	\$ (11,689,936)	\$ 65,317,876

DIVIDENDS AND DISTRIBUTIONS TO COMMON SHAREOWNERS:		
Net investment income		
(\$0.85 and \$0.67 per share, respectively)	\$ (24,511,851)	\$ (19,187,745)
Net realized gains		
(\$0.10 and \$0.08 per share, respectively)	(2,731,074)	(2,315,448)
Total distributions to common shareowners	\$ (27,242,925)	\$ (21,503,193)
Net increase (decrease) in net assets applicable to common shareowners NET ASSETS APPLICABLE TO COMMON SHAREOWNERS:	\$ (38,932,861)	\$ 43,814,683
Beginning of year	464,291,157	420,476,474
End of year	\$ 425,358,296	\$ 464,291,157
Undistributed net investment income	\$ 23,052	\$ 1,185,061

The accompanying notes are an integral part of these financial statements. 31

Pioneer Municipal and Equity Income Trust

FINANCIAL HIGHLIGHTS

	Year Ended 11/30/07	Year Ended 11/30/06	Ye En 11/3
Per Common Share Operating Performance Net asset value, beginning of period	\$ 16.17	\$ 14.65	\$ 14
Net asset value, beginning of period	Ŷ ±0•±'	Y 11.00	Y ± 1
Increase (decrease) from investment operations:(a) Net investment income	\$ 0.97	\$ 0.98	\$ 0
Net realized and unrealized gain (loss) on investments and interest rate swaps Dividends and distributions to preferred shareowners from:	(1.07)	1.57	0
Net Investment income Net realized gain	(0.27) (0.03)	(0.26) (0.02)	(0
Net increase (decrease) from investment operations Dividends and distributions to common shareowners from:	\$ (0.40)	\$ 2.27	 \$ 0
Net investment income Net realized gain	(0.85) (0.10)	(0.67) (0.08)	(0
Capital charge with respect to issuance of: Common shares Preferred shares	_	_	
lielelled Shales			
Net increase (decrease) in net asset value	\$ (1.35)	\$ 1.52	\$ 0
Net asset value, end of period(e)	\$ 14.82	\$ 16.17 =======	\$ 14 ====
Market value, end of period(e)	\$ 13.41 =======	\$ 14.00 =======	\$ 12 ====
Total return(f) Ratios to average net assets of common shareowners	2.30%	21.79%	1

Net expenses(g)	1.26%	1.12%	1
Net investment income before preferred share dividends	6.12%	6.43%	6
Preferred share dividends	1.70%	1.69%	1
Net investment income available to common shareowners	4.25%	4.74%	5
Portfolio turnover	23%	16%	
Net assets of common shareowners, end of period			
(in thousands)	\$425,358	\$464,291	\$420
Preferred shares outstanding (in thousands)	\$176,250	\$176 , 250	\$176
Asset coverage per preferred share, end of period	\$ 85,354	\$ 90,870	\$ 84
Average market value per preferred share	\$ 25,000	\$ 25,000	\$ 25
Liquidation value, including dividends payable, per			
preferred share	\$ 25,019	\$ 25,015	\$25 ,
Ratios to average net assets of common shareowners			
before reimbursement of waivers and reimbursement			
of expenses			
Net expenses(q)	1.26%	1.12%	1
Net investment income before preferred share dividends	6.12%	6.43%	6
Preferred share dividends	1.70%	1.69%	1
Net investment income available to common shareowners	4.25%	4.74%	5

32 The accompanying notes are an integral part of these financial statements.

Pioneer Municipal and Equity Income Trust

FINANCIAL	HIGHLIGHTS			

(a) The per common share data presented above is based upon the average common shares outstanding for the periods presented.

- (b) Trust shares were first publicly offered on January 28, 2004.
- (c) Net asset value immediately after the closing of the first public offering was \$14.30.
- (d) Amount is less than \$0.01 per common share.
- (e) Net asset value and market value are published in Barron's on Saturday, The Wall Street Journal on Monday and The New York Times on Monday and Saturday.
- (f) Total investment return is calculated assuming a purchase of common shares at the current market value on the first day and a sale at the current market value on the last day of the periods reported. Dividends and distributions, if any, are assumed for purposes of this calculation to be reinvested at prices obtained under the Trust's dividend reinvestment plan. Total investment return does not reflect brokerage commissions. Total investment return less than a full period is not annualized. Past performance is not a guarantee of future results.
- (g) Expense ratios do not reflect the effect of dividend payments to preferred shareowners.
- (h) Annualized.

The information above represents the audited operating performance data for a common share outstanding, total investment return, ratios to average net assets of common shareowners and other supplemental data for the periods indicated. This information has been determined based upon financial information provided in the financial statements and market value data for the Trust's common shares.

The accompanying notes are an integral part of these financial statements. 33

Pioneer	Municipal	and Equity	Income	Trust
NOTES TO) FINANCIAL	STATEMENTS	11/30/	/07

1. Organization and Significant Accounting Policies

Pioneer Municipal and Equity Income Trust (the Trust) is organized as a Delaware statutory trust and registered as a diversified, closed-end management investment company under the Investment Company Act of 1940. The Trust changed its name from Pioneer Tax Advantaged Balanced Trust effective November 7, 2007. The Trust's investment objective is to provide a high level of total after-tax return, including attractive tax-advantaged income.

The Trust's financial statements have been prepared in conformity with U.S. generally accepted accounting principles that require the management of the Trust to, among other things, make estimates and assumptions that affect the reported amounts of assets and liabilities, and the reported amounts of income, expenses and gains and losses on investments during the reporting year. Actual results could differ from those estimates.

The Trust may invest in municipal securities with a broad range of maturities and credit ratings, including both investment grade and below investment grade municipal securities. By concentrating in municipal securities, the portfolio is more susceptible to adverse economic, political or regulatory developments than is a portfolio that invests more broadly. Investments in the Trust are subject to possible loss due to the financial failure of underlying securities and their inability to meet their debt obligations. The Trust may also invest in common stocks and preferred securities that pay tax-qualified dividends. In addition, the Trust may invest in other securities, including debt instruments, real estate investment trusts ("REITS") and equity securities, that generate income taxable at ordinary income rates, rather than long-term capital gain rates.

There can be no assurance as to the portion of the Trust's dividends that will be tax-exempt or tax-qualified.

A portion of income may be subject to state, federal, and/or alternative minimum tax. Capital gains, if any, are subject to a capital gains tax. When interest rates rise, the prices of fixed-income securities in the Trust will generally fall. Conversely, when interest rates fall the prices of fixed-income securities in the Trust will generally rise.

The Trust may invest in derivative securities, which may include futures and options. These types of instruments can increase price fluctuation.

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Pioneer Municipal and Equity Income Trust

Information regarding the Trust's principal risks is contained in the Trust's original offering prospectus, with additional information included in the Trust's shareowner reports. Please refer to those documents when considering the Trust's risks. At times, the Trust's investments may represent industries or industry sectors that are interrelated or have common risks, making it more susceptible to any economic, political, or regulatory developments or other risks affecting those industries and sectors.

The following is a summary of significant accounting policies followed by the Trust in preparation of its financial statements, which are consistent with those policies generally accepted in the investment company industry:

A. Security Valuation

Security transactions are recorded as of trade date. Debt securities are valued at prices supplied by independent pricing services, which consider such factors as Treasury spreads, yields, maturities and ratings. Valuations may be supplemented by dealers and other sources, as required. Equity securities are valued at the last sale price on the principal exchange where they are traded. The values of interest rate swaps are determined by obtaining dealer quotations. Securities for which market quotations are not readily available are valued at their fair values as determined by, or under the direction of, the Board of Trustees. The Trust may also use the fair value of a security, including a non U.S. security, when the closing market price on the principal exchange where the security is traded no longer accurately reflects the value of the security as of the close of the exchange. At November 30, 2007, there were no securities fair valued. Temporary cash investments are valued at cost which approximates market value.

Dividend income is recorded on the ex-dividend date, except that certain dividends from foreign securities where the ex-dividend date may have passed are recorded as soon as the Trust becomes aware of the ex-dividend data in the exercise of reasonable diligence. Discount and premium on debt securities are accreted or amortized, respectively, daily, on an effective yield to maturity basis and are included in interest income. Interest income, including income on interest bearing cash accounts, is recorded on an accrual basis.

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Pioneer Municipal and Equity	Income Trust	
NOTES TO FINANCIAL STATEMENTS	5 11/30/07	(continued)
	- , , -	

Gains and losses on sales of investments are calculated on the identified cost method for both financial reporting and federal income tax purposes.

B. Federal Income Taxes

It is the Trust's policy to comply with the requirements of the Internal Revenue Code applicable to regulated investment companies and to distribute all of its taxable income and net realized capital gains, if any, to its shareowners. Therefore, no federal income tax provision is required.

The amounts and characterizations of distributions to shareowners for financial reporting purposes are determined in accordance with federal income tax rules. Therefore, the source of the Trust's distributions may be shown in the accompanying financial statements as either from or in excess of net investment income or net realized gain on investment transactions, or from paid-in capital, depending on the type of book/tax differences that may exist.

At November 30, 2007, the Trust reclassified \$3,180,777 to decrease distribution in excess of net investment income, \$856,768 to decrease net realized gain on investments and \$2,324,009 to decrease paid-in capital. The reclassification has no impact on the net asset value of the Trust and presents the Trust's capital accounts on a tax basis.

The tax character of current year distributions paid to common and preferred shareowners for the years ended November 30, 2007 and November 30, 2006 were as follows:

	2007	2006
Distributions paid from:		
Tax-Exempt income	\$15,264,954	\$13,521,779
Ordinary income*	17,015,419	13,026,310
Long-term capital gain	3,639,461	2,887,176
	\$35,919,834	\$29,435,265

* Included in the Trust's distributions from 2007 ordinary income is \$2,324,009 (\$0.08 per common share) in excess of investment company taxable income, which, in accordance with applicable U.S. tax law, is taxable to shareowners as ordinary income distributions.

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Pioneer Municipal and Equity Income Trust

The following shows the components of distributable earnings on a federal income tax basis at November 30, 2007.

	2007	
Undistributed ordinary income	\$	-
Undistributed long-term gains		-
Dividends payable	(134,031)	
Unrealized appreciation	19,45	56 , 279
Total	\$19 , 32	22,248
	======	

The difference between book basis and tax basis unrealized appreciation is primarily attributable to the difference between book and tax amortization methods for premiums and discounts on fixed income securities and the accounting treatment for swap agreements.

C. Automatic Dividend Reinvestment Plan

All common shareowners automatically participate in the Automatic Dividend Reinvestment Plan (the "Plan"), under which participants receive all dividends and capital gain distributions (collectively, "dividends") in full and fractional common shares of the Trust in lieu of cash. Shareowners may elect not to participate in the Plan. Shareowners not participating in the Plan receive all dividends and capital gain distributions in cash. Participation in the Plan is completely voluntary and may be terminated or resumed at any time without penalty by notifying American Stock Transfer & Trust Company, the agent for shareowners in administering the Plan (the "Plan Agent"), in writing prior to any dividend record date; otherwise such termination or resumption will be effective with respect to any

subsequently declared dividend or other distribution.

Whenever the Trust declares a dividend on common shares payable in cash, participants in the Plan will receive the equivalent in common shares acquired by the Plan Agent either (i) through receipt of additional unissued but authorized common shares from the Trust or (ii) by purchase of outstanding common shares on the New York Stock Exchange or elsewhere. If, on the payment date for any dividend, the net asset value per common share is equal to or less than the market price per share plus e