

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-B

May 29, 2008

PAGE 1  
000 B000000 03/31/2008  
000 C000000 1258943  
000 D000000 N  
000 E000000 NF  
000 F000000 Y  
000 G000000 N  
000 H000000 N  
000 I000000 6.1  
000 J000000 A  
001 A000000 PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST  
001 B000000 811-21409  
001 C000000 6177427825  
002 A000000 60 STATE STREET  
002 B000000 BOSTON  
002 C000000 MA  
002 D010000 02109  
003 000000 N  
004 000000 N  
005 000000 N  
006 000000 N  
007 A000000 N  
007 B000000 0  
007 C010100 1  
007 C010200 2  
007 C010300 3  
007 C010400 4  
007 C010500 5  
007 C010600 6  
007 C010700 7  
007 C010800 8  
007 C010900 9  
007 C011000 10  
008 A000001 PIONEER INVESTMENT MANAGEMENT, INC.  
008 B000001 A  
008 C000001 801-8255  
008 D010001 BOSTON  
008 D020001 MA  
008 D030001 02109  
010 A000001 PIONEER INVESTMENT MANAGEMENT, INC.  
010 B000001 801-8255  
010 C010001 BOSTON  
010 C020001 MA  
010 C030001 02109  
010 A000002 PRINCETON ADMINISTRATORS, LLC  
010 C010002 PRINCETON  
010 C020002 NJ  
010 C030002 08543  
010 C040002 9095  
011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.  
011 B000001 8-12345678  
011 C010001 BOSTON  
PAGE 2  
011 C020001 MA  
011 C030001 02109  
011 C040001 1820  
011 A000002 UBS INVESTMENT BANK  
011 B000002 8-022651  
011 C010002 STAMFORD

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST - Form NSAR-B

011 C020002 CT  
011 C030002 06901  
011 A000003 RBC CAPITAL MARKETS CORP.  
011 B000003 8-045411  
011 C010003 MINNEAPOLIS  
011 C020003 MN  
011 C030003 55402  
011 C040003 4422  
011 A000004 MERRILL LYNCH & CO.  
011 B000004 8-7221  
011 C010004 NEW YORK  
011 C020004 NY  
011 C030004 10281  
011 C040004 1201  
011 A000005 JANNEY MONTGOMERY SCOTT, LLC  
011 B000005 8-462  
011 C010005 PHILADELPHIA  
011 C020005 PA  
011 C030005 19103  
011 C040005 1675  
011 A000006 WACHOVIA CAPITAL MARKETS, LLC  
011 B000006 8-99999  
011 C010006 RICHMOND  
011 C020006 VA  
011 C030006 23219  
012 A000001 PIONEER INVEST. MGMT. SHAREHOLDER SVCS., INC.  
012 B000001 85-01359  
012 C010001 BOSTON  
012 C020001 MA  
012 C030001 02109  
012 A000002 AMERICAN STOCK TRANSFER & TRUST CO.  
012 B000002 85-00000  
012 C010002 BROOKLYN  
012 C020002 NY  
012 C030002 11219  
012 A000003 DEUTSCHE BANK TRUST COMPANY AMERICAS (PREF.)  
012 B000003 85-00000  
012 C010003 NEW YORK CITY  
012 C020003 NY  
012 C030003 10005  
013 A000001 ERNST & YOUNG, LLP  
013 B010001 BOSTON  
013 B020001 MA  
013 B030001 02116  
013 B040001 5072  
PAGE 3  
015 A000001 BROWN BROTHERS HARRIMAN & CO.  
015 B000001 C  
015 C010001 BOSTON  
015 C020001 MA  
015 C030001 02109  
015 E010001 X  
018 000000 Y  
019 A000000 Y  
019 B000000 77  
019 C000000 PIONEERFDS  
020 C000001 0  
020 C000002 0  
020 C000003 0  
020 C000004 0  
020 C000005 0  
020 C000006 0

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST - Form NSAR-B

020 C000007 0  
 020 C000008 0  
 020 C000009 0  
 020 C000010 0  
 021 000000 0  
 022 A000001 BLACKROCK INVESTMENTS, INC.  
 022 C000001 792188  
 022 D000001 0  
 022 A000002 LEHMAN BROTHERS, INC.  
 022 B000002 13-2518466  
 022 C000002 38211  
 022 D000002 28783  
 022 A000003 CORBY CAPITAL MARKETS, INC.  
 022 B000003 52-1037969  
 022 C000003 5207  
 022 D000003 7873  
 022 A000004 FIRST TRYON SECURITIES, LLC  
 022 B000004 56-1986792  
 022 C000004 0  
 022 D000004 6709  
 022 A000005 CITIGROUP GLOBAL MARKETS, INC.  
 022 B000005 11-2418191  
 022 C000005 4635  
 022 D000005 1969  
 022 A000006 B.C. ZIEGLER & CO.  
 022 B000006 39-0727640  
 022 C000006 3395  
 022 D000006 1984  
 022 A000007 MORGAN KEEGAN & CO., INC.  
 022 B000007 64-0474907  
 022 C000007 3931  
 022 D000007 0  
 022 A000008 PIPER JAFFRAY & CO.  
 022 B000008 41-0953246  
 022 C000008 3000  
 PAGE 4  
 022 D000008 0  
 022 A000009 DOUGHERTY & CO., LLC  
 022 B000009 41-1883794  
 022 C000009 2640  
 022 D000009 0  
 022 A000010 BB&T INVESTMENT SERVICES, INC.  
 022 C000010 2487  
 022 D000010 0  
 023 C000000 860636  
 023 D000000 51765  
 024 000000 N  
 026 A000000 N  
 026 B000000 Y  
 026 C000000 N  
 026 D000000 Y  
 026 E000000 N  
 026 F000000 N  
 026 G010000 N  
 026 G020000 N  
 026 H000000 N  
 027 000000 N  
 042 A000000 0  
 042 B000000 0  
 042 C000000 0  
 042 D000000 0  
 042 E000000 0

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST - Form NSAR-B

042	F000000	0
042	G000000	0
042	H000000	0
043	000000	0
044	000000	0
045	000000	Y
046	000000	N
047	000000	Y
048	000000	0.600
048	A010000	0
048	A020000	0.000
048	B010000	0
048	B020000	0.000
048	C010000	0
048	C020000	0.000
048	D010000	0
048	D020000	0.000
048	E010000	0
048	E020000	0.000
048	F010000	0
048	F020000	0.000
048	G010000	0
048	G020000	0.000
048	H010000	0
048	H020000	0.000
	PAGE	5
048	I010000	0
048	I020000	0.000
048	J010000	0
048	J020000	0.000
048	K010000	0
048	K020000	0.000
049	000000	N
050	000000	N
051	000000	N
052	000000	N
053	A000000	N
054	A000000	Y
054	B000000	Y
054	C000000	Y
054	D000000	N
054	E000000	N
054	F000000	N
054	G000000	N
054	H000000	Y
054	I000000	N
054	J000000	Y
054	K000000	N
054	L000000	N
054	M000000	Y
054	N000000	N
054	O000000	N
055	A000000	Y
055	B000000	N
056	000000	Y
057	000000	N
058	A000000	N
059	000000	Y
060	A000000	Y
060	B000000	Y
061	000000	0
062	A000000	Y

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST - Form NSAR-B

062 B000000 0.0  
062 C000000 0.0  
062 D000000 0.0  
062 E000000 0.0  
062 F000000 0.0  
062 G000000 0.0  
062 H000000 0.0  
062 I000000 0.0  
062 J000000 0.0  
062 K000000 0.0  
062 L000000 0.0  
062 M000000 0.0  
062 N000000 0.0  
062 O000000 146.3  
062 P000000 0.0

PAGE 6

062 Q000000 0.0  
062 R000000 1.2  
063 A000000 0  
063 B000000 20.8  
064 A000000 Y  
064 B000000 Y  
065 000000 N  
066 A000000 N  
067 000000 N  
068 A000000 N  
068 B000000 N  
069 000000 N  
070 A010000 Y  
070 A020000 N  
070 B010000 N  
070 B020000 N  
070 C010000 Y  
070 C020000 N  
070 D010000 N  
070 D020000 N  
070 E010000 Y  
070 E020000 N  
070 F010000 N  
070 F020000 N  
070 G010000 Y  
070 G020000 N  
070 H010000 N  
070 H020000 N  
070 I010000 N  
070 I020000 N  
070 J010000 Y  
070 J020000 Y  
070 K010000 Y  
070 K020000 Y  
070 L010000 N  
070 L020000 N  
070 M010000 N  
070 M020000 N  
070 N010000 N  
070 N020000 N  
070 O010000 Y  
070 O020000 N  
070 P010000 Y  
070 P020000 Y  
070 Q010000 N  
070 Q020000 N

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST - Form NSAR-B

070 R010000 N  
 070 R020000 N  
 071 A000000 79416  
 071 B000000 60249  
 071 C000000 483413

PAGE 7

071 D000000 12  
 072 A000000 12  
 072 B000000 33345  
 072 C000000 0  
 072 D000000 0  
 072 E000000 0  
 072 F000000 2963  
 072 G000000 432  
 072 H000000 0  
 072 I000000 429  
 072 J000000 40  
 072 K000000 0  
 072 L000000 27  
 072 M000000 14  
 072 N000000 24  
 072 O000000 0  
 072 P000000 0  
 072 Q000000 0  
 072 R000000 56  
 072 S000000 0  
 072 T000000 0  
 072 U000000 0  
 072 V000000 0  
 072 W000000 29  
 072 X000000 4014  
 072 Y000000 0  
 072 Z000000 29331  
 072AA000000 0  
 072BB000000 4089  
 072CC010000 0  
 072CC020000 53216  
 072DD010000 20247  
 072DD020000 0  
 072EE000000 0

073 A010000 0.8900  
 073 A020000 0.0000  
 073 B000000 0.0000  
 073 C000000 0.0000  
 074 A000000 0  
 074 B000000 0  
 074 C000000 0  
 074 D000000 451307  
 074 E000000 0  
 074 F000000 730  
 074 G000000 0  
 074 H000000 0  
 074 I000000 2989  
 074 J000000 0  
 074 K000000 0  
 074 L000000 9408  
 074 M000000 40

PAGE 8

074 N000000 464474  
 074 O000000 3175  
 074 P000000 268  
 074 Q000000 0

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST - Form NSAR-B

074	R010000	0
074	R020000	0
074	R030000	0
074	R040000	2470
074	S000000	150061
074	T000000	308500
074	U010000	22787
074	U020000	0
074	V010000	13.54
074	V020000	0.00
074	W000000	0.0000
074	X000000	9066
074	Y000000	0
075	A000000	0
075	B000000	354772
076	000000	13.74
077	A000000	Y
077	B000000	Y
077	C000000	N
077	D000000	N
077	E000000	N
077	F000000	N
077	G000000	N
077	H000000	N
077	I000000	N
077	J000000	N
077	K000000	N
077	L000000	N
077	M000000	N
077	N000000	N
077	O000000	N
077	P000000	N
077	Q010000	N
077	Q020000	N
077	Q030000	N
078	000000	N
080	A000000	ICI MUTUAL INSURANCE CO.
080	C000000	45000
081	A000000	Y
081	B000000	77
082	A000000	N
082	B000000	0
083	A000000	N
083	B000000	0
084	A000000	N
084	B000000	0
085	A000000	Y
	PAGE	9
085	B000000	N
086	A010000	46
086	A020000	656
086	B010000	0
086	B020000	0
086	C010000	0
086	C020000	0
086	D010000	0
086	D020000	0
086	E010000	0
086	E020000	0
086	F010000	0
086	F020000	0
087	A010000	COMMON STOCK

Edgar Filing: PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST - Form NSAR-B

087 A020000 723762100  
087 A030000 MAV  
087 B010000 PREFERRED STOCK - SERIES A  
087 B020000 723762209  
087 C010000 PREFERRED STOCK - SERIES B  
087 C020000 723762308  
088 A000000 N  
088 B000000 N  
088 C000000 N  
088 D000000 Y  
SIGNATURE MARY KELLERMANN  
TITLE ACCOUNTING MANAGER