

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-B

May 30, 2007

PAGE 1  
000 B000000 03/31/2007  
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 WARBURG  
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  
011 B000003 8-045411  
011 C010003 MINNEAPOLIS  
011 C020003 MN  
011 C030003 55402  
011 C040003 4422  
011 A000004 MERRILL LYNCH, PIERCE, FENNER & SMITH INC.  
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 INV. MGMT. SHAREHOLDER SERVICES, INC.  
012 B000001 85-00000  
012 C010001 BOSTON  
012 C020001 MA  
012 C030001 02109  
012 A000002 AMERICAN STOCK TRANSFER & TRUST COMPANY  
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 82  
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, INC.  
 022 B000001 13-3806694  
 022 C000001 1192249  
 022 D000001 0  
 022 A000002 LEHMAN BROTHERS, INC.  
 022 B000002 13-2518466  
 022 C000002 10168  
 022 D000002 11376  
 022 A000003 B.C. ZIEGLER AND COMPANY  
 022 B000003 39-0727640  
 022 C000003 19421  
 022 D000003 1160  
 022 A000004 WACHOVIA SECURITIES, LLC  
 022 B000004 54-0796506  
 022 C000004 6784  
 022 D000004 13508  
 022 A000005 UBS FINANCIAL SERVICES, INC.  
 022 B000005 13-2638166  
 022 C000005 10450  
 022 D000005 10415  
 022 A000006 HERBERT J. SIMS & CO., INC.  
 022 B000006 13-5213180  
 022 C000006 16259  
 022 D000006 2428  
 022 A000007 MERRILL LYNCH, PIERCE, FENNER & SMITH INC.  
 022 B000007 13-5674085  
 022 C000007 13000  
 022 D000007 0  
 022 A000008 CORBY CAPITAL MARKETS, INC.  
 022 B000008 52-1037969  
 PAGE 4  
 022 C000008 0  
 022 D000008 5952  
 022 A000009 CITIGROUP GLOBAL MARKETS, INC.  
 022 B000009 11-2418191  
 022 C000009 0  
 022 D000009 5487  
 022 A000010 J. GIORDANO SECURITIES GROUP  
 022 C000010 3398  
 022 D000010 0  
 023 C000000 1277957  
 023 D000000 71260  
 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

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

042 E000000 0  
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  
PAGE 5  
048 H020000 0.000  
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 Y  
053 B000000 Y  
053 C000000 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 N  
055 B000000 N  
056 000000 Y  
057 000000 N  
058 A000000 N  
059 000000 Y  
060 A000000 Y

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

060 B000000 Y  
061 000000 0  
062 A000000 Y  
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

PAGE 6

062 N000000 0.0  
062 O000000 135.0  
062 P000000 0.0  
062 Q000000 0.0  
062 R000000 0.8  
063 A000000 0  
063 B000000 22.2  
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 N  
070 J020000 N  
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

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

070 P020000 N  
070 Q010000 N  
070 Q020000 N  
070 R010000 N  
070 R020000 N

PAGE 7

071 A000000 85708  
071 B000000 94250  
071 C000000 490966  
071 D000000 17  
072 A000000 12  
072 B000000 30485  
072 C000000 0  
072 D000000 0  
072 E000000 0  
072 F000000 3019  
072 G000000 459  
072 H000000 0  
072 I000000 430  
072 J000000 23  
072 K000000 0  
072 L000000 17  
072 M000000 10  
072 N000000 24  
072 O000000 0  
072 P000000 0  
072 Q000000 0  
072 R000000 58  
072 S000000 69  
072 T000000 0  
072 U000000 0  
072 V000000 0  
072 W000000 50  
072 X000000 4159  
072 Y000000 48  
072 Z000000 26374  
072AA000000 5510  
072BB000000 0  
072CC010000 12752  
072CC020000 0  
072DD010000 19557  
072DD020000 0  
072EE000000 0  
073 A010000 0.8600  
073 A020000 0.0000  
073 B000000 0.0000  
073 C000000 0.0000  
074 A000000 0  
074 B000000 0  
074 C000000 0  
074 D000000 488393  
074 E000000 0  
074 F000000 0  
074 G000000 0  
074 H000000 0  
074 I000000 3153  
074 J000000 11628

PAGE 8

074 K000000 0  
074 L000000 9189  
074 M000000 1539  
074 N000000 513902

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

|           |                    |                            |
|-----------|--------------------|----------------------------|
| 074       | O000000            | 0                          |
| 074       | P000000            | 270                        |
| 074       | Q000000            | 0                          |
| 074       | R010000            | 0                          |
| 074       | R020000            | 0                          |
| 074       | R030000            | 0                          |
| 074       | R040000            | 1664                       |
| 074       | S000000            | 150080                     |
| 074       | T000000            | 361888                     |
| 074       | U010000            | 22741                      |
| 074       | U020000            | 0                          |
| 074       | V010000            | 15.91                      |
| 074       | V020000            | 0.00                       |
| 074       | W000000            | 0.0000                     |
| 074       | X000000            | 9917                       |
| 074       | Y000000            | 0                          |
| 075       | A000000            | 0                          |
| 075       | B000000            | 353260                     |
| 076       | 000000             | 15.61                      |
| 077       | A000000            | Y                          |
| 077       | B000000            | Y                          |
| 078       | 000000             | N                          |
| 080       | A000000            | ICI MUTUAL INSURANCE CO.   |
| 080       | C000000            | 60000                      |
| 081       | A000000            | Y                          |
| 081       | B000000            | 82                         |
| 082       | A000000            | N                          |
| 082       | B000000            | 0                          |
| 083       | A000000            | N                          |
| 083       | B000000            | 0                          |
| 084       | A000000            | N                          |
| 084       | B000000            | 0                          |
| 085       | A000000            | Y                          |
| 085       | B000000            | N                          |
| 086       | A010000            | 0                          |
| 086       | A020000            | 0                          |
| 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               |
|           | PAGE               | 9                          |
| 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 |                            |