

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  
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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  
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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

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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  
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013 B030001 02116  
013 B040001 5072  
PAGE 3  
015 A000001 BROWN BROTHERS HARRIMAN & CO.  
015 B000001 C  
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020 C000007 0  
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021 000000 0  
022 A000001 BLACKROCK, INC.  
022 B000001 13-3806694  
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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  
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022 D000007 0  
022 A000008 CORBY CAPITAL MARKETS, INC.  
022 B000008 52-1037969  
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022 C000008 0  
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022 A000009 CITIGROUP GLOBAL MARKETS, INC.  
022 B000009 11-2418191  
022 C000009 0  
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022 A000010 J. GIORDANO SECURITIES GROUP  
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PAGE 6

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070 P010000 Y

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

PAGE 7

071 A000000 85708  
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PAGE 8

074 K000000 0  
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081	B000000	82
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087	A020000	723762100
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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	