

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-A

November 29, 2007

PAGE 1
000 A000000 09/30/2007
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-A

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 81
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-A

020 C000007 0
 020 C000008 0
 020 C000009 0
 020 C000010 0
 021 000000 0
 022 A000001 BLACKROCK INVESTMENTS, INC.
 022 C000001 301790
 022 D000001 0
 022 A000002 LEHMAN BROTHERS, INC.
 022 B000002 13-2518466
 022 C000002 20020
 022 D000002 3965
 022 A000003 FIRST TRYON SECURITIES, LLC
 022 B000003 56-1986792
 022 C000003 0
 022 D000003 6709
 022 A000004 CITIGROUP GLOBAL MARKETS, INC.
 022 B000004 11-2418191
 022 C000004 4065
 022 D000004 0
 022 A000005 PIPER JAFFRAY & CO.
 022 B000005 41-0953246
 022 C000005 3000
 022 D000005 0
 022 A000006 CORBY CAPITAL MARKETS, INC.
 022 B000006 52-1037969
 022 C000006 0
 022 D000006 2647
 022 A000007 STATE STREET GLOBAL MARKETS, LLC
 022 C000007 570
 022 D000007 1969
 022 A000008 BB&T INVESTMENT SERVICES, INC.
 022 C000008 2487
 022 D000008 0
 022 A000009 WACHOVIA SECURITIES, LLC
 PAGE 4
 022 B000009 54-0796506
 022 C000009 0
 022 D000009 2087
 022 A000010 BANC OF AMERICA SECURITIES, LLC
 022 B000010 56-2058405
 022 C000010 1000
 022 D000010 1008
 023 C000000 345940
 023 D000000 19736
 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
 042 F000000 0

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

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
048	I010000	0
	PAGE	5
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
062	B000000	0.0

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

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 142.3
062 P000000 0.0
062 Q000000 0.0

PAGE 6

062 R000000 0.7
063 A000000 0
063 B000000 21.9
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
070 R010000 N

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

070 R020000 N
 071 A000000 43580
 071 B000000 20620
 071 C000000 496977
 071 D000000 4

PAGE 7

072 A000000 6
 072 B000000 16422
 072 C000000 0
 072 D000000 0
 072 E000000 0
 072 F000000 1514
 072 G000000 220
 072 H000000 0
 072 I000000 216
 072 J000000 13
 072 K000000 0
 072 L000000 13
 072 M000000 7
 072 N000000 13
 072 O000000 0
 072 P000000 0
 072 Q000000 0
 072 R000000 29
 072 S000000 0
 072 T000000 0
 072 U000000 0
 072 V000000 0
 072 W000000 17
 072 X000000 2042
 072 Y000000 0
 072 Z000000 14380
 072AA000000 0
 072BB000000 330
 072CC010000 0
 072CC020000 15878
 072DD010000 10006
 072DD020000 0
 072EE000000 0
 073 A010000 0.4400
 073 A020000 0.0000
 073 B000000 0.0000
 073 C000000 0.0000
 074 A000000 0
 074 B000000 0
 074 C000000 0
 074 D000000 494264
 074 E000000 0
 074 F000000 1255
 074 G000000 0
 074 H000000 0
 074 I000000 1140
 074 J000000 0
 074 K000000 0
 074 L000000 9986
 074 M000000 676
 074 N000000 507321

PAGE 8

074 O000000 7666
 074 P000000 252
 074 Q000000 0
 074 R010000 0

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

074	R020000	0
074	R030000	0
074	R040000	1882
074	S000000	150103
074	T000000	347418
074	U010000	22752
074	U020000	0
074	V010000	15.27
074	V020000	0.00
074	W000000	0.0000
074	X000000	9775
074	Y000000	0
075	A000000	0
075	B000000	359320
076	000000	15.43
077	A000000	N
078	000000	N
080	A000000	ICI MUTUAL INSURANCE CO.
080	C000000	45000
081	A000000	Y
081	B000000	81
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	11
086	A020000	169
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
087	A020000	723762100
087	A030000	MAV
087	B010000	PREFERRED STOCK - SERIES A
087	B020000	723762209
087	C010000	PREFERRED STOCK - SERIES B
	PAGE	9
087	C020000	723762308
088	A000000	N
088	B000000	N
088	C000000	N
088	D000000	Y
SIGNATURE	MARY KELLERMANN	
TITLE	ACCOUNTING MANAGER	