

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-B

May 28, 2010

PAGE 1  
000 B000000 03/31/2010  
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 SER. 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 57  
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	1423500
022	D000001	0
022	A000002	BARCLAYS CAPITAL, INC.
022	C000002	19168
022	D000002	5579
022	A000003	MCPAHAN SECURITIES CO. L.P.
022	B000003	06-1229141
022	C000003	0
022	D000003	7362
022	A000004	JEFFERIES & CO., INC.
022	B000004	95-2622900
022	C000004	1972
022	D000004	4789
022	A000005	PIPER JAFFRAY & CO.
022	B000005	41-0983246
022	C000005	5822
022	D000005	0
022	A000006	WELLS FARGO ADVISORS, LLC
022	B000006	54-0796506
022	C000006	0
022	D000006	4840
022	A000007	B.C. ZIEGLER AND CO.
022	B000007	39-0727640
022	C000007	2455
022	D000007	0
022	A000008	HERBERT J. SIMS & CO., INC.
022	B000008	13-5213180
022	C000008	1000
022	D000008	861
	PAGE	4
022	A000009	RAYMOND JAMES & ASSOCIATES, INC.
022	B000009	59-1237041
022	C000009	1000
022	D000009	717
022	A000010	CITIGROUP GLOBAL MARKETS, INC.
022	B000010	11-2418191
022	C000010	966
022	D000010	264
023	C000000	1456373
023	D000000	24908
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
045	000000	Y
046	000000	N
047	000000	Y
048	000000	0.600
048	A010000	0

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

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  
 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  
     PAGE 5  
 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 N  
 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  
 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

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

062	L000000	3.0
062	M000000	0.0
062	N000000	0.0
062	O000000	147.3
062	P000000	0.0
062	Q000000	0.0
062	R000000	0.6
063	A000000	0
063	B000000	20.1
064	A000000	Y
064	B000000	Y
065	000000	N
066	A000000	N
067	000000	N
068	A000000	N
	PAGE	6
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	N
070	Q010000	N
070	Q020000	N
070	R010000	N
070	R020000	N
071	A000000	39596
071	B000000	30016
071	C000000	390421
071	D000000	8
072	A000000	12
072	B000000	30730
072	C000000	0
072	D000000	0

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

072 E000000	0
072 F000000	2428
072 G000000	408
072 H000000	0
072 I000000	12

PAGE 7

072 J000000	13
072 K000000	0
072 L000000	35
072 M000000	13
072 N000000	24
072 O000000	0
072 P000000	0
072 Q000000	0
072 R000000	60
072 S000000	115
072 T000000	0
072 U000000	0
072 V000000	0
072 W000000	479
072 X000000	3587
072 Y000000	0
072 Z000000	27143
072AA000000	0
072BB000000	7488
072CC010000	72296
072CC020000	0
072DD010000	22013
072DD020000	0
072EE000000	0

073 A010000	0.9600
073 A020000	0.0000
073 B000000	0.0000
073 C000000	0.0000
074 A000000	0
074 B000000	0
074 C000000	0
074 D000000	414799
074 E000000	0
074 F000000	1603
074 G000000	0
074 H000000	0
074 I000000	8500
074 J000000	0
074 K000000	0
074 L000000	8578
074 M000000	48
074 N000000	433528
074 O000000	0
074 P000000	229
074 Q000000	0
074 R010000	0
074 R020000	0
074 R030000	0
074 R040000	1743
074 S000000	150005
074 T000000	281551

PAGE 8

074 U010000	22995
074 U020000	0
074 V010000	12.24
074 V020000	0.00

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

074	W000000	0.0000
074	X000000	8794
074	Y000000	0
075	A000000	0
075	B000000	254669
076	000000	13.10
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	57
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	116
086	A020000	1314
086	B010000	0
086	B020000	0
086	C010000	0
086	C020000	0
086	D010000	0
086	D020000	0
086	E010000	0
	PAGE	9
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
087	C020000	723762308
088	A000000	N
088	B000000	N
088	C000000	N
088	D000000	Y

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

SIGNATURE MARY KELLERMANN  
TITLE ACCOUNTING MANAGER