

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST  
Form NSAR-B  
May 30, 2012

PAGE 1  
000 B000000 03/31/2012  
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  
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 STATE STREET BANK & TRUST COMPANY  
010 C010002 BOSTON  
010 C020002 MA  
010 C030002 02101  
011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.  
011 B000001 8-41256  
011 C010001 BOSTON  
011 C020001 MA  
011 C030001 02109  
011 C040001 1820  
011 A000002 UBS INVESTMENT BANK  
011 B000002 8-022651  
011 C010002 STAMFORD  
011 C020002 CT  
011 C030002 06901  
011 A000003 RBC CAPITAL MARKETS CORP.  
011 B000003 8-045411  
PAGE 2  
011 C010003 MINNEAPOLIS  
011 C020003 MN  
011 C030003 55402  
011 C040003 4422  
011 A000004 MERRILL LYNCH & CO.  
011 B000004 8-7221

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

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. (COMMON)  
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  
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 56  
019 C000000 PIONEERFDS  
PAGE 3  
021 000000 0  
022 A000001 JP MORGAN SECURITIES, INC.  
022 B000001 13-3379014  
022 C000001 25734  
022 D000001 2535  
022 A000002 BLACKROCK INVESTMENTS, INC.  
022 C000002 15000  
022 D000002 9000  
022 A000003 FIRST MIAMI SECURITIES  
022 B000003 59-1842344  
022 C000003 3489  
022 D000003 10377  
022 A000004 FIRST TRYON SECURITIES LLC  
022 B000004 56-1986792  
022 C000004 8409  
022 D000004 1076

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

022 A000005 RAYMOND JAMES & ASSOCIATES, INC.  
022 B000005 59-1237041  
022 C000005 1500  
022 D000005 5040  
022 A000006 B.C. ZIEGLER AND COMPANY  
022 B000006 39-0727640  
022 C000006 5920  
022 D000006 0  
022 A000007 PIPER JAFFRAY & CO.  
022 B000007 41-0953246  
022 C000007 2430  
022 D000007 868  
022 A000008 BB&T INVESTMENT SERVICES, INC.  
022 B000008 80-0078024  
022 C000008 2415  
022 D000008 0  
022 A000009 JEFFERIES & COMPANY, INC.  
022 B000009 95-2622900  
022 C000009 1501  
022 D000009 860  
022 A000010 STIFEL, NICOLAUS & COMPANY, INC.  
022 B000010 43-0538770  
022 C000010 280  
022 D000010 1733  
023 C000000 76416  
023 D000000 36207  
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  
PAGE 4  
026 H000000 N  
027 000000 N  
028 A010000 0  
028 A020000 0  
028 A030000 0  
028 A040000 0  
028 B010000 0  
028 B020000 0  
028 B030000 0  
028 B040000 0  
028 C010000 0  
028 C020000 0  
028 C030000 0  
028 C040000 0  
028 D010000 0  
028 D020000 0  
028 D030000 0  
028 D040000 0  
028 E010000 0  
028 E020000 0  
028 E030000 0  
028 E040000 0  
028 F010000 0  
028 F020000 0  
028 F030000 0  
028 F040000 0

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

028	G010000	0
028	G020000	0
028	G030000	0
028	G040000	0
028	H000000	0
030	A000000	0
030	B000000	0.00
030	C000000	0.00
031	A000000	0
031	B000000	0
032	000000	0
033	000000	0
035	000000	0
036	B000000	0
038	000000	0
042	A000000	0
042	B000000	0
042	C000000	0
042	D000000	0
042	E000000	0
042	F000000	0
042	G000000	0
042	H000000	0
043	000000	0
044	000000	0
	PAGE	5
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
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

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

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  
PAGE 6  
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 147.2  
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 0.0  
062 P000000 0.0  
062 Q000000 0.0  
062 R000000 2.4  
063 A000000 0  
063 B000000 23.0  
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

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

070	H010000	N	
070	H020000	N	
070	I010000	N	
070	I020000	N	
070	J010000	Y	
	PAGE	7	
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		63492
071	B000000		64988
071	C000000		426751
071	D000000		15
072	A000000	12	
072	B000000		29045
072	C000000		0
072	D000000		0
072	E000000		0
072	F000000		2626
072	G000000		411
072	H000000		0
072	I000000		13
072	J000000		15
072	K000000		0
072	L000000		3
072	M000000		15
072	N000000		25
072	O000000		0
072	P000000		0
072	Q000000		0
072	R000000		60
072	S000000		276
072	T000000		0
072	U000000		0
072	V000000		0
072	W000000		473
072	X000000		3917
072	Y000000		0
072	Z000000		25128
072AA	000000		0
072BB	000000		5391
072CC	010000		41795
072CC	020000		0
	PAGE	8	
072DD	010000		30308
072DD	020000		0
072EE	000000		0
073	A010000		1.3100

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

073	A020000	0.0000
073	B000000	0.0000
073	C000000	0.0000
074	A000000	0
074	B000000	0
074	C000000	0
074	D000000	441031
074	E000000	0
074	F000000	1097
074	G000000	0
074	H000000	0
074	I000000	6000
074	J000000	1130
074	K000000	0
074	L000000	8638
074	M000000	210
074	N000000	458106
074	O000000	0
074	P000000	237
074	Q000000	0
074	R010000	0
074	R020000	0
074	R030000	0
074	R040000	8224
074	S000000	150008
074	T000000	299637
074	U010000	23282
074	U020000	0
074	V010000	12.87
074	V020000	0.00
074	W000000	0.0000
074	X000000	9899
074	Y000000	0
075	A000000	0
075	B000000	287325
076	000000	14.72
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
	PAGE	9
077	L000000	N
077	M000000	N
077	N000000	N
077	O000000	N
077	P000000	N
078	000000	N
080	A000000	ICI MUTUAL INSURANCE CO.
080	C000000	45000
081	A000000	Y
081	B000000	56
082	A000000	N
082	B000000	0
083	A000000	N
083	B000000	0

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

084 A000000 N  
084 B000000 0  
085 A000000 Y  
085 B000000 N  
086 A010000 149  
086 A020000 1961  
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  
087 C020000 723762308  
088 A000000 N  
088 B000000 N  
088 C000000 N  
088 D000000 Y  
SIGNATURE MARK E. BRADLEY  
TITLE TREASURER