

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-A/A

December 18, 2012

PAGE 1
000 A000000 09/30/2012
000 C000000 0001258943
000 D000000 N
000 E000000 NF
000 F000000 Y
000 G000000 Y
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
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007 C010100 1
007 C020100 PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST
007 C030100 N
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
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010 B000001 801-8255
010 C010001 BOSTON
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010 A000002 BROWN BROTHERS HARRIMAN & CO.
010 C010002 BOSTON
010 C020002 MA
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011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.
011 B000001 8-41256
PAGE 2
011 C010001 BOSTON
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011 C030001 02109
011 C040001 1820
011 A000002 UBS INVESTMENT BANK
011 B000002 8-022651

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011 C010002 STAMFORD
011 C020002 CT
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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 SERV. 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
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012 A000003 DEUTSCHE BANK TRUST COMPANY AMERICAS (PREF.)
012 B000003 85-05212
012 C010003 NEW YORK
012 C020003 NY
012 C030003 10005
013 A000001 ERNST & YOUNG, LLP
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PAGE 3
013 B040001 5072
015 A000001 BROWN BROTHERS HARRIMAN & CO.
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020 A000001 SANFORD C. BERNSTEIN & CO., INC.
020 B000001 13-4132953
020 C000001 2
020 A000002 UBS SECURITIES
020 B000002 13-2638166

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020 C000002 0
 020 A000003 MERRILL LYNCH, PIERCE, FENNER & SMITH
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 022 C000001 8415
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 022 A000002 CITIGROUP GLOBAL MARKETS, INC.
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 022 A000006 BLACKROCK INVESTMENTS, LLC
 PAGE 4
 022 B000006 00-0000000
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 022 A000009 MERRILL LYNCH, PIERCE, FENNER & SMITH
 022 B000009 13-5674085
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 022 A000010 BARCLAYS CAPITAL, INC.
 022 B000010 61-0316560
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062 E000000 0.0
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PAGE 7

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PAGE 8

070 Q010000 N

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087 A020000	723762100
087 A030000	MAV
087 B010000	PREFERRED STOCK - SERIES A
087 B020000	723762209
PAGE 10	
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