

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-A/A

March 06, 2013

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 U  
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  
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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  
008 D030001 02109  
010 A000001 PIONEER INVESTMENT MANAGEMENT, INC.  
010 B000001 801-8255  
010 C010001 BOSTON  
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010 A000002 BROWN BROTHERS HARRIMAN & CO.  
010 C010002 BOSTON  
010 C020002 MA  
010 C030002 02109  
011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.  
011 B000001 8-41256  
PAGE 2  
011 C010001 BOSTON  
011 C020001 MA  
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  
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 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  
012 C030002 11219  
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  
013 B010001 BOSTON  
013 B020001 MA  
013 B030001 02116  
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013 B040001 5072  
015 A000001 BROWN BROTHERS HARRIMAN & CO.  
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015 E010001 X  
018 000000 Y  
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019 B000000 56  
019 C000000 PIONEERFDS  
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  
 020 B000003 13-5674085  
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 020 A000004 WELLS FARGO SECURITIES LLC  
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 022 A000001 JP MORGAN SECURITIES, LLC  
 022 B000001 13-3379014  
 022 C000001 8415  
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 022 A000002 CITIGROUP GLOBAL MARKETS, INC.  
 022 B000002 11-2418191  
 022 C000002 7425  
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 022 A000003 MORGAN KEEGAN & CO., INC.  
 022 B000003 64-0474907  
 022 C000003 4727  
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 022 A000004 BNY MELLON CAPITAL MARKETS, LLC  
 022 B000004 23-2384977  
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 022 A000005 SOCIETE GENERALE  
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 022 A000006 BLACKROCK INVESTMENTS, LLC  
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 022 B000006 00-0000000  
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 022 A000007 OPPENHEIMER & CO., INC.  
 022 B000007 13-5657518  
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 022 A000008 MESIROW FINANCIAL, INC.  
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 022 A000009 MERRILL LYNCH, PIERCE, FENNER & SMITH  
 022 B000009 13-5674085  
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 022 D000009 1990  
 022 A000010 BARCLAYS CAPITAL, INC.  
 022 B000010 61-0316560  
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 023 C000000 28379  
 023 D000000 11034  
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| 048 | D020000 | 0.000 |
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| 062 | D000000 | 0.0   |

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062 E000000 0.0  
062 F000000 0.0  
062 G000000 0.0  
062 H000000 0.0  
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PAGE 7

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067 000000 N  
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069 000000 N

070 A010000 Y  
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070 N020000 N

070 O010000 Y  
070 O020000 N

070 P010000 Y  
070 P020000 N

PAGE 8

070 Q010000 N  
070 Q020000 N

070 R010000 N  
070 R020000 N

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| 072 F000000 | 1382   |
| 072 G000000 | 100    |
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| 072 I000000 | 9      |
| 072 J000000 | 4      |
| 072 K000000 | 0      |
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| 072 N000000 | 12     |
| 072 O000000 | 0      |
| 072 P000000 | 0      |
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| 072 R000000 | 31     |
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| 072 U000000 | 0      |
| 072 V000000 | 0      |
| 072 W000000 | 249    |
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| 072 Y000000 | 0      |
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| 072AA000000 | 1136   |
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| 072CC020000 | 0      |
| 072DD010000 | 13286  |
| 072DD020000 | 0      |
| 072EE000000 | 0      |
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| 073 A020000 | 0.0000 |
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| 073 C000000 | 0.0000 |
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| 074 B000000 | 0      |
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| 074 R030000 | 0      |

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|           |                 |                            |
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| 074       | R040000         | 271                        |
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| 074       | T000000         | 317202                     |
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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       |                            |