

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  
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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  
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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.  
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010 C020001 MA  
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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  
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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

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011 C010004 NEW YORK  
011 C020004 NY  
011 C030004 10281  
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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  
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013 A000001 ERNST & YOUNG, LLP  
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015 A000001 BROWN BROTHERS HARRIMAN & CO.  
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022 A000001 JP MORGAN SECURITIES, INC.  
022 B000001 13-3379014  
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022 A000002 BLACKROCK INVESTMENTS, INC.  
022 C000002 15000  
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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  
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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  
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022 A000007 PIPER JAFFRAY & CO.  
022 B000007 41-0953246  
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022 A000008 BB&T INVESTMENT SERVICES, INC.  
022 B000008 80-0078024  
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022 A000009 JEFFERIES & COMPANY, INC.  
022 B000009 95-2622900  
022 C000009 1501  
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022 A000010 STIFEL, NICOLAUS & COMPANY, INC.  
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PAGE 6

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088 C000000 N  
088 D000000 Y  
SIGNATURE MARK E. BRADLEY  
TITLE TREASURER