

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-A

November 28, 2008

PAGE 1  
000 A000000 09/30/2008  
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 B000000 811-21409  
001 C000000 6177427825  
002 A000000 60 STATE STREET  
002 B000000 BOSTON  
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002 D010000 02109  
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008 A000001 PIONEER INVESTMENT MANAGEMENT, INC.  
008 B000001 A  
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008 D010001 BOSTON  
008 D020001 MA  
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010 A000001 PIONEER INVESTMENT MANAGEMENT, INC.  
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010 C010001 BOSTON  
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010 A000002 PRINCETON ADMINISTRATORS, LLC  
010 C010002 PRINCETON  
010 C020002 NJ  
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010 C040002 9095  
011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.  
011 B000001 8-12345678  
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PAGE 2  
011 C020001 MA  
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011 A000002 UBS INVESTMENT BANK  
011 B000002 8-022651  
011 C010002 STAMFORD

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011 C020002 CT  
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011 A000003 RBC CAPITAL MARKETS CORP.  
011 B000003 8-045411  
011 C010003 MINNEAPOLIS  
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011 A000004 MERRILL LYNCH & CO.  
011 B000004 8-7221  
011 C010004 NEW YORK  
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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 SERVICES  
012 B000001 85-01359  
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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  
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013 B020001 MA  
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015 A000001 BROWN BROTHERS HARRIMAN & CO.  
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 022 A000002 LEHMAN BROTHERS, INC.  
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 022 A000003 FIRST TRYON SECURITIES, LLC  
 022 B000003 56-1986792  
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 022 A000004 B.C. ZIEGLER AND CO.  
 022 B000004 39-0727640  
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 022 A000005 PIPER JAFFRAY & CO.  
 022 B000005 41-0953246  
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 022 A000006 CITIGROUP GLOBAL MARKETS, INC.  
 022 B000006 11-2418191  
 022 C000006 5741  
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 022 A000007 BB&T INVESTMENTS SERVICES, INC.  
 022 C000007 3262  
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 022 A000008 RAYMOND JAMES & ASSOCIATES, INC.  
 022 B000008 59-1237041  
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 022 A000009 RBC CAPITAL MARKETS CORP.  
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SIGNATURE	MARY KELLERMANN	
TITLE	ACCOUNTING MANAGER	