

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-B

May 29, 2009

PAGE 1  
000 B000000 03/31/2009  
000 C000000 1258943  
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000 E000000 NF  
000 F000000 Y  
000 G000000 N  
000 H000000 N  
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001 A000000 PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST  
001 B000000 811-21409  
001 C000000 6177427825  
002 A000000 60 STATE STREET  
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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 A000002 PRINCETON ADMINISTRATORS, LLC  
010 C010002 PRINCETON  
010 C020002 NJ  
010 C030002 08543  
010 C040002 9095  
011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.  
011 B000001 8-12345678  
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PAGE 2  
011 C020001 MA  
011 C030001 02109  
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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  
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 SER. INC.  
012 B000001 85-01359  
012 C010001 BOSTON  
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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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015 A000001 BROWN BROTHERS HARRIMAN & CO.  
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 022 A000002 CITIGROUP GLOBAL MARKETS, INC.  
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 022 A000003 LEHMAN BROTHERS, INC.  
 022 C000003 21346  
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 022 A000004 FIRST TYRON SECURITIES, LLC  
 022 B000004 56-1986792  
 022 C000004 0  
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 022 A000005 BARCLAYS CAPITAL INC.  
 022 C000005 9180  
 022 D000005 7016  
 022 A000006 PIPER JAFFRAY & CO.  
 022 B000006 41-0953246  
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 022 A000007 B.C. ZIEGLER AND CO.  
 022 B000007 39-0727640  
 022 C000007 8500  
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 022 A000008 RAYMOND JAMES & ASSOCIATES, INC.  
 022 B000008 59-1237041  
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 022 A000009 BB&T INVESTMENTS SERVICES, INC.  
 PAGE 4  
 022 C000009 3262  
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 022 A000010 GUGGENHEIM CAPITAL MARKETS, LLC  
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071 C000000 394206  
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087 C010000 PREFERRED STOCK - SERIES B  
087 C020000 723762308  
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088 C000000 N  
088 D000000 Y  
SIGNATURE MARY KELLERMANN  
TITLE ACCOUNTING MANAGER