

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST

Form NSAR-A

November 29, 2007

PAGE 1
000 A000000 09/30/2007
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
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002 A000000 60 STATE STREET
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010 A000002 PRINCETON ADMINISTRATORS, LLC
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011 A000001 PIONEER FUNDS DISTRIBUTOR, INC.
011 B000001 8-12345678
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PAGE 2
011 C020001 MA
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011 C040001 1820
011 A000002 UBS WARBURG
011 B000002 8-022651
011 C010002 STAMFORD

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011 C020002 CT
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011 A000003 RBC CAPITAL MARKETS
011 B000003 8-045411
011 C010003 MINNEAPOLIS
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011 A000004 MERRILL LYNCH, PIERCE, FENNER & SMITH INC.
011 B000004 8-7221
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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
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011 A000006 WACHOVIA CAPITAL MARKETS, LLC
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011 C020006 VA
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012 A000001 PIONEER INV. MGMT. SHAREHOLDER SERVICES, INC.
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012 A000002 AMERICAN STOCK TRANSFER & TRUST COMPANY
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012 A000003 DEUTSCHE BANK TRUST COMPANY AMERICAS (PREF.)
012 B000003 85-00000
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013 A000001 ERNST & YOUNG LLP
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015 A000001 BROWN BROTHERS HARRIMAN & CO.
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PAGE 6

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| SIGNATURE | MARY KELLERMANN | |
| TITLE | ACCOUNTING MANAGER | |