

PIONEER MUNICIPAL HIGH INCOME ADVANTAGE TRUST  
Form N-PX  
August 21, 2007

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM N-PX  
ANNUAL REPORT OF PROXY VOTING RECORD OF REGISTERED  
MANAGEMENT INVESTMENT COMPANIES

Investment Company Act file number 811-21409  
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Pioneer Municipal High Income Advantage Trust  
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(Exact name of registrant as specified in charter)

60 State Street Boston, MA 02109  
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(Address of principal executive offices)

Dorothy Bourassa  
60 State Street  
Boston, MA 02109  
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(Name and address of agent for service)

Registrant's telephone number, including area code: (617) 742-7825

Date of fiscal year end: March 31

Date of reporting period: July 1, 2006 to June 30, 2007

SIGNATURES

Pursuant to the requirements of the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

(Registrant) Pioneer Municipal High Income Advantage Trust

By (Signature and Title) /s/ John F. Cogan, Jr.  
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John F. Cogan, Jr., Chairman and President

Date August 17, 2007  
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===== PIONEER MUNI HIGH INCOME ADVANTAGE TRUST =====

WAYNE CHARTER COUNTY

Ticker: Security ID: 944315AN0  
Meeting Date: MAY 7, 2007 Meeting Type: Written Consent  
Record Date: MAR 29, 2007

#	Proposal	Mgt Rec	Vote Cast	Sponsor
1	THE PLAN	For	For	Management
2	U.S. CITIZEN	For	For	Management

===== END NPX REPORT