

PIONEER MUNICIPAL HIGH INCOME TRUST  
Form SC 13G/A  
January 11, 2011

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 5)\*

Pioneer Municipal High Income Trust  
-----  
(Name of Issuer)

Common Stock  
-----  
(Title of Class of Securities)

723763108  
-----  
(CUSIP Number)

December 31, 2010  
-----  
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)  
 Rule 13d-1(c)  
 Rule 13d-1(d)

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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1. Names of Reporting Persons, I.R.S. Identification Nos. of above persons (entities only):

First Trust Portfolios L.P.: 36-3768815  
First Trust Advisors L.P.: 36-3788904  
The Charger Corporation: 36-3772451

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) [ ]  
(b) [ ]

3. SEC Use Only

4. Citizenship or Place of Organization of each

Reporting Person: Illinois, U.S.A.

Number of  
Shares Bene-  
ficially  
Owned by Each  
Reporting  
Person With:

5. Sole Voting Power: 0  
6. Shared Voting Power:  
Such shares are held by the following entities in the  
respective amounts listed:

First Trust Portfolios L.P.: 0  
First Trust Advisors L.P.: 0  
The Charger Corporation: 0

7. Sole Dispositive Power: 0

8. Shared Dispositive Power:

Such shares are held by the following entities in the  
respective amounts listed:

First Trust Portfolios L.P.: 2,886,843  
First Trust Advisors L.P.: 2,886,843  
The Charger Corporation: 2,886,843

9. Aggregate Amount Beneficially Owned by Each  
Reporting Person: 2,886,843

10. Check if the Aggregate Amount in Row (9) Excludes  
Certain Shares (See Instructions)

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11. Percent of Class Represented by Amount in Row (9): 13.0%

12. Type of Reporting Person (See Instructions)

|                             |      |
|-----------------------------|------|
| First Trust Portfolios L.P. | - BD |
| First Trust Advisors L.P.   | - IA |
| The Charger Corporation     | - HC |

ITEM 1.

(a) Name of Issuer: Pioneer Municipal High Income Trust

(b) Address of issuer's Principal Executive Offices

60 State Street  
19th Floor  
Boston, MA 02109  
USA

ITEM 2.

(a) Name of Person Filing

First Trust Portfolios L.P.  
First Trust Advisors L.P.  
The Charger Corporation

(b) Address of Principal Business Office or, if none, Residence

First Trust Portfolios L.P.  
120 East Liberty Drive, Suite 400  
Wheaton, Illinois 60187

First Trust Advisors L.P.  
120 East Liberty Drive, Suite 400  
Wheaton, Illinois 60187

The Charger Corporation  
120 East Liberty Drive, Suite 400  
Wheaton, Illinois 60187

(c) Citizenship of each Reporting Person:

Illinois, U.S.A.

(d) Title of Class of Securities

Common Stock

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(e) CUSIP Number 723763108

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ITEM 3. If this statement is filed pursuant to Sec. 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a)  Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b) Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c) Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d) Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e)  An investment adviser in accordance with Sec. 240.13d-1 (b) (1) (ii) (E).
- (f) An employee benefit plan or endowment fund in accordance with Sec. 140.13d-1(b) (1) (ii) (F).
- (g)  A parent holding company or control person in accordance with Sec. 240.13d-1(b) (1) (ii) (G).
- (h) A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813).
- (i) A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3).
- (j) Group, in accordance with Sec. 240.13d-1(b)1(ii) (J).

ITEM 4. Ownership

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount beneficially owned: 2,886,843
- (b) Percent of class: 13.0%
- (c) Number of shares as to which the person has:
  - (i) Sole power to vote or to direct the vote: 0
  - (ii) Shared power to vote or to direct the vote: 0
  - (iii) Sole power to dispose or to direct the disposition of: 0

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- (iv) Shared power to dispose or to direct the disposition  
of: 2,886,843

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Instruction. For computations regarding securities which represent a right to acquire an underlying security see Sec. 204.13d-3(d)(1).

ITEM 5. Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [ ] .

Instruction: Dissolution of a group requires a response to this item.

ITEM 6. Ownership of More than Five Percent on Behalf of Another Person

This Schedule 13G filing is jointly filed by The Charger Corporation, First Trust Portfolios L.P. and First Trust Advisors L.P. pursuant to Rule 13d-1(k)(1). The Charger Corporation is the General Partner of both First Trust Portfolios L.P. and First Trust Advisors L.P. First Trust Portfolios L.P. acts as sponsor of certain unit investment trusts which hold shares of the issuer. The total number of shares of the issuer held by these unit investment trusts is set forth in Row (8) above with respect to First Trust Portfolios L.P. No individual unit investment trust sponsored by First Trust Portfolios L.P. holds more than 3% of the issuer's shares. First Trust Advisors L.P., an affiliate of First Trust Portfolios L.P., acts as portfolio supervisor of the unit investment trusts sponsored by First Trust Portfolios L.P., certain of which hold shares of the issuer. Neither First Trust Portfolios L.P., First Trust Advisors L.P. nor The Charger Corporation have the power to vote the shares of the issuer held by these unit investment trusts sponsored by First Trust Portfolios L.P. These shares are voted by the trustee of such unit investment trusts so as to insure that the shares are voted as closely as possible in the same manner and in the same general proportion as are the shares held by owners other than such unit investment trusts. The difference, if any, between the aggregate amount of shares beneficially owned by each reporting person, as set forth in Row (9) above, and the number of shares of the issuer held by the unit investment trusts sponsored by First Trust Portfolios L.P. represents shares of the issuer which are either held in other registered investment companies, pooled investment vehicles and/or separately managed accounts for which First Trust Advisors L.P. serves as investment advisor and/or investment sub-advisor. Each of First Trust Portfolios L.P., First Trust Advisors L.P. and The Charger Corporation disclaims beneficial ownership of the shares of the issuer identified in this filing.

ITEM 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company

See Item 6.

ITEM 8. Identification and Classification of Members of the Group

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Not Applicable.

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ITEM 9. Notice of Dissolution of Group

Not Applicable.

ITEM 10. Certification

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

FIRST TRUST PORTFOLIOS L.P.  
Date: January 11, 2011

By: /s/ Mark R. Bradley

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Mark R. Bradley  
Chief Financial Officer and  
Chief Operating Officer

FIRST TRUST ADVISORS L.P.  
Date: January 11, 2011

By: /s/ Mark R. Bradley

-----  
Mark R. Bradley  
Chief Financial Officer and  
Chief Operating Officer

THE CHARGER CORPORATION  
Date: January 11, 2011

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By: /s/ Mark R. Bradley

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Mark R. Bradley  
Treasurer

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