

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL

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☒ Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

☐ Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan for the purchase or sale of equity securities of the issuer that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). See Instruction 10.

1. Name and Address of Reporting Person * <u>BANK OF AMERICA CORP /DE/</u> (Last) (First) (Middle) <u>BANK OF AMERICA CORPORATE CENTER</u> <u>100 N TRYON ST</u> (Street) <u>CHARLOTTE</u> <u>NC</u> <u>28255</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>PIONEER MUNICIPAL HIGH INCOME ADVANTAGE FUND, INC. [MAV]</u> 3. Date of Earliest Transaction (Month/Day/Year) <u>08/18/2025</u> 4. If Amendment, Date of Original Filed (Month/Day/Year)	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director ☒ 10% Owner Officer (give title below) Other (specify below) 6. Individual or Joint/Group Filing (Check Applicable Line) Form filed by One Reporting Person ☒ Form filed by More than One Reporting Person
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Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Variable Rate MuniFund Term Preferred Shares ⁽¹⁾⁽²⁾⁽³⁾	08/18/2025		J ⁽¹⁾		500	D	⁽¹⁾	0	I	See Footnotes ⁽¹⁾⁽²⁾⁽³⁾

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					

1. Name and Address of Reporting Person * <u>BANK OF AMERICA CORP /DE/</u> (Last) (First) (Middle) <u>BANK OF AMERICA CORPORATE CENTER</u> <u>100 N TRYON ST</u> (Street) <u>CHARLOTTE</u> <u>NC</u> <u>28255</u> (City) (State) (Zip)	1. Name and Address of Reporting Person * <u>Banc of America Preferred Funding Corp</u> (Last) (First) (Middle) <u>214 NORTH TRYON STREET</u> (Street) <u>CHARLOTTE</u> <u>NC</u> <u>28255</u> (City) (State) (Zip)
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Explanation of Responses:

1. The 500 Variable Rate MuniFund Term Preferred Shares, Series 2021, (VMTP Shares) reported as disposed of in Table I represent shares that were beneficially owned by Banc of America Preferred Funding Corporation (BAPFC). The 500 VMTP Shares held by BAPFC were redeemed by the Issuer on August 18, 2025, as described in the Notice of Intention to Redeem Securities, N-23C-2, filed by Pioneer Municipal High Income Advantage Fund with the SEC on July 17, 2025, for a redemption price of the liquidation preference and accumulated but unpaid dividends. BAPFC is a wholly owned subsidiary of Bank of America Corporation.

2. This statement is jointly filed by Bank of America Corporation and PFC. Bank of America Corporation held an indirect interest in the securities listed in Table I by virtue of its indirect ownership of PFC.

3. Each reporting person declares that neither the filing of this statement nor anything herein shall be construed as an admission that such person is, for the purposes of Section13(d) of the US Securities Exchange Act of 1934 or any other purpose, (i) acting (or has agreed or is agreeing to act together with any other person) as a partnership, limited partnership, syndicate or other group for the purpose of acquiring, holding or disposing of securities of the Issuer or otherwise with respect to the Issuer or any securities of the Issuer or (ii) a member of any group with respect to the Issuer or any securities of the Issuer.

<u>BANK OF AMERICA CORP</u> <u>/DE/ By: Its: Authorized</u> <u>Signatory Andres Ortiz</u>	<u>08/20/2025</u>
<u>BANC OF AMERICA</u> <u>PREFERRED FUNDING</u> <u>CORPORATION. By: Its:</u> <u>Authorized Signatory Andres</u> <u>Ortiz</u>	<u>08/20/2025</u>
** Signature of Reporting Person	Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

JOINT FILING AGREEMENT

Pursuant to and in accordance with the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations thereunder, each party hereto hereby agrees to the joint filing, on behalf of each of them, of any filing required by such party under Section 13 or Section 16 of the Exchange Act or any rule or regulation thereunder (including any amendment, restatement, supplement, and/or exhibit thereto) with the Securities and Exchange Commission (and, if such security is registered on a national securities exchange, also with the exchange), and further agrees to the filing, furnishing, and/or incorporation by reference of this agreement as an exhibit thereto. This agreement shall remain in full force and effect until revoked by any party hereto in a signed writing provided to each other party hereto, and then only with respect to such revoking party.

IN WITNESS WHEREOF, each party hereto, being duly authorized, has caused this agreement to be executed and effective as of August 20, 2025.

BANK OF AMERICA CORPORATION
By: /s/ Andres Ortiz
Name: Andres Ortiz
Title: Authorized Signatory

BANC OF AMERICA PREFERRED FUNDING CORPORATION
By: /s/ Andres Ortiz
Name: Andres Ortiz
Title: Authorized Signatory