

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

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OMB APPROVAL  
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OMB Number: 3235-0145  
Expires: February 28, 2009  
Estimated average burden  
hours per response... 10.4  
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SCHEDULE 13G

Under the Securities Exchange Act of 1934  
(Amendment No.)

BlackRock Health Sciences Trust

-----  
(Name of Issuer)

Common Shares

-----  
(Title of Class of Securities)

09250W107

-----  
(CUSIP Number)

December 31, 2008

-----  
(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 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).

CUSIP No. 09250W107

-----  
1. NAME OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

Merrill Lynch & Co., Inc. 13-2740599

-----  
2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

-----  
3. SEC USE ONLY

-----  
4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

-----  
NUMBER OF 5. SOLE VOTING POWER

SHARES 0

-----  
BENEFICIALLY 6. SHARED VOTING POWER

OWNED BY 776,469

-----  
EACH 7. SOLE DISPOSITIVE POWER  
REPORTING 0  
-----  
PERSON 8. SHARED DISPOSITIVE POWER  
WITH 776,469  
-----

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
776,469  
-----

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
[ ]  
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11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
10.3%  
-----

12. TYPE OF REPORTING PERSON  
HC  
-----

CUSIP No. 09250W107  
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1. NAME OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)  
Merrill Lynch, Pierce, Fenner & Smith, Inc. 13-5674085  
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2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  
(a) [ ]  
(b) [ ]  
-----

3. SEC USE ONLY  
-----

4. CITIZENSHIP OR PLACE OF ORGANIZATION  
Delaware  
-----

NUMBER OF 5. SOLE VOTING POWER  
SHARES 0  
-----

BENEFICIALLY 6. SHARED VOTING POWER  
OWNED BY 773,868  
-----

EACH 7. SOLE DISPOSITIVE POWER  
REPORTING 0  
-----

PERSON 8. SHARED DISPOSITIVE POWER  
WITH 773,868  
-----

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
773,868  
-----

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
[ ]  
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11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
10.2%  
-----

12. TYPE OF REPORTING PERSON  
HC  
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CUSIP No. 09250W107  
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1. NAME OF REPORTING PERSONS

Merrill Lynch Bank and Trust Co. FSB 22-3513863

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)   
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF 5. SOLE VOTING POWER  
SHARES 0

BENEFICIALLY 6. SHARED VOTING POWER  
OWNED BY 2,601

EACH 7. SOLE DISPOSITIVE POWER  
REPORTING 0

PERSON 8. SHARED DISPOSITIVE POWER  
WITH 2,601

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,601

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

Less than 0.1%

12. TYPE OF REPORTING PERSON\*

BK

CUSIP No. 09250W107

1. NAME OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY)

First Republic Investment Management, Inc. 22-3623353

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)   
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF 5. SOLE VOTING POWER  
SHARES 0

BENEFICIALLY 6. SHARED VOTING POWER  
OWNED BY 1500

EACH 7. SOLE DISPOSITIVE POWER  
REPORTING 0

PERSON 8. SHARED DISPOSITIVE POWER  
WITH 1500

-----  
9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1500  
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10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES

[ ]  
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11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

Less than 0.1%  
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12. TYPE OF REPORTING PERSON\*

IA  
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CUSIP NO. 09250W107

Item 1(a). Name of Issuer:  
BlackRock Health Sciences Trust

Item 1(b). Address of Issuer's Principal Executive Offices:

100 Bellevue Parkway  
Wilmington, Delaware 19809

Item 2(a). Name of Person Filing:

Merrill Lynch & Co., Inc. ("MLCO")  
Merrill Lynch, Pierce, Fenner & Smith, Inc. ("MLPFS")  
Merrill Lynch Bank & Trust Co. FSB ("MLBT")  
First Republic Investment Management, Inc. ("FRIM")

Upon consummation of the merger on January 1, 2009 by and between Bank of America Corporation ("BAC") and MLCO, MLCO became a wholly owned subsidiary of BAC, and BAC became the ultimate parent and controlling entity of MLCO and its subsidiaries.

Item 2(b). Address of Principal Business Office, or if None, Residence:

The address of the principal business office of MLCO and MLPFS is:

4 World Financial Center  
250 Vesey Street  
New York, New York 10080

The address of the principal business office of MLBT is:

C/O Merrill Lynch & Co.  
300 Dandson Avenue  
Somerset, New Jersey 08873

The address of the principal business office of FRIM is:

111 Pine Street  
San Francisco, California 94111

Item 2(c). Citizenship:

See Item 4 of Cover Pages

Item 2(d). Title of Class of Securities:  
Common Stock

Item 2(e). CUSIP Numbers:  
09250W107

Item 3. If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a:

- (a) [ ] Broker or dealer registered under Section 15 of the Exchange Act.  
(b) [ ] Bank as defined in Section 3(a)(6) of the Exchange Act.

CUSIP No. 09250W107

- (c) [ ] Insurance company as defined in Section 3(a)(19) of the Exchange Act.  
(d) [ ] Investment company registered under Section 8 of the Investment Company Act.  
(e) [ ] An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E)  
(f) [ ] An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F)

- (g)  A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G)
- (h)  A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act
- (i)  A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act
- (j)  Group, in accordance with Rule 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:  
See Item 9 of Cover Pages
- (b) Percent of class:  
See Item 11 of Cover Pages
- (c) Number of shares as to which such person has:
  - (i) Sole power to vote or to direct the vote:
  - (ii) Shared power to vote or to direct the vote:
  - (iii) Sole power to dispose or to direct the disposition of:
  - (iv) Shared power to dispose or to direct the disposition of:  
See Items 5-8 of Cover Pages

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 5 percent of the class of securities, check the following [ ]

Item 6. Ownership of More Than Five Percent on Behalf of Another Person.

Not Applicable

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

With respect to the beneficial ownership of the reporting person, see Items 5 through 11 of the cover pages to this Schedule 13G, which are incorporated herein by reference.

CUSIP No. 09250W107

Item 8. Identification and Classification of Members of the Group.

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certifications.

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.

SIGNATURES

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.

February 17, 2009

Merrill Lynch & Co., Inc.  
Merrill Lynch, Pierce, Fenner & Smith, Inc.

By: /s/ Pia K. Thompson

Name: Pia K. Thompson  
Title: Assistant Secretary

Merrill Lynch Bank & Trust Co. FSB

By: /s/ Jennifer Marre

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Name: Jennifer Marre  
Title: First Vice President

First Republic Investment Management, Inc.

By: /s/ Charles Christofilis

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Name: Charles Christofilis  
Title: Chief Compliance Officer

\* Executed pursuant to a Power of Attorney, dated November 17, 1995, a copy of which is attached hereto as Exhibit A.

Schedule 13G  
Exhibit A

Power of Attorney

The undersigned, Merrill Lynch & Co., Inc. (the "Corporation"), a corporation duly organized under the laws of Delaware, with its principal place of business at World Financial Center, North Tower, 250 Vesey Street, New York, New York 10281 does hereby make, constitute and appoint Richard B. Alsop, Richard D. Kreuder, Andrea Lowenthal, Gregory T. Russo, or any individual from time to time elected or appointed as secretary or an assistant secretary of the Corporation, acting severally, each of whose address is Merrill Lynch & Co., Inc., World Financial Center, North Tower, 250 Vesey Street, New York, New York 10281, as its true and lawful attorneys-in-fact, for it and in its name, place and stead (i) to execute on behalf of the Corporation and cause to be filed and/or delivered, as required under Section 13(d) of the Securities Exchange Act of 1934 (the "Act") and the regulations thereunder, any number, as appropriate, of original, copies, or electronic filings of the Securities and Exchange Commission Schedule 13D or Schedule 13G Beneficial Ownership Reports (together with any amendments and joint filing agreements under Rule 13d-1(f)(1) of the Act, as may be required thereto) to be filed and/or delivered with respect to any equity security (as defined in Rule 13d-1(d) under the Act) beneficially owned by the undersigned and which must be reported by the undersigned pursuant to Section 13(d) of the Act and the regulations thereunder, (ii) to execute on behalf of the Corporation and cause to be filed and/or delivered, any number, as appropriate, of original, copies or electronic filings of any forms (including without limitation), Securities and Exchange Commission Forms 3, 4 and 5) required to be filed pursuant to Section 16(a) of the Act and the regulations thereunder, and (iii) generally to take such other actions and perform such other things necessary to effectuate the foregoing as fully in a all respects as if the undersigned could do if personally present.

This Power of Attorney shall remain in effect until revoked, in writing, by the undersigned.

IN WITNESS WHEREOF, the undersigned has executed this Power of Attorney, this 17th day of November 1995.

MERRILL LYNCH & CO., INC.

By: /s/ David H. Komansky

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Name: David H. Komansky  
Title: President and Chief Operating Officer

EXHIBIT 99.1 - JOINT FILING AGREEMENT

The undersigned hereby agree that they are filing this statement jointly pursuant to Rule 13d-1(k)(1). Each of them is responsible for the timely filing of such Schedule 13G and any amendments thereto, and for the completeness and accuracy of the information concerning such person contained therein; but none of them is responsible for the completeness or accuracy of the information concerning the other persons making the filing, unless such person knows or has reason to believe that such information is inaccurate.

In accordance with Rule 13d-1(k)(1) promulgated under the Securities and Exchange Act of 1934, as amended, the undersigned hereby agree to the joint filing with each other on behalf of each of them of to such a statement on Schedule 13G with respect to the common stock of beneficially owned by each of them. This Joint Filing Agreement shall be included as an exhibit to such Schedule 13G.

Dated: February 17, 2009

Merrill Lynch & Co., Inc.  
Merrill Lynch, Pierce, Fenner & Smith, Inc.

By: /s/ Pia K. Thompson  
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Pia K. Thompson  
Assistant Secretary

Merrill Lynch Bank & Trust Co. FSB

By: /s/ Jennifer Marre  
-----  
Jennifer Marre  
First Vice President

First Republic Investment Management, Inc.

By: /s/ Charles Christofilis  
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Charles Christofilis  
Chief Compliance Officer