

BlackRock Health Sciences Trust
Form N-CSRS
July 01, 2009

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

FORM N-CSRS

**CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT
INVESTMENT COMPANIES**

Investment Company Act file number 811-21702

Name of Fund: BlackRock Health Sciences Trust (BME)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: Donald C. Burke, Chief Executive Officer, BlackRock Health Sciences Trust, 800 Scudders Mill Road, Plainsboro, NJ, 08536. Mailing address: P.O. Box 9011, Princeton, NJ, 08543-9011

Registrant's telephone number, including area code: (800) 882-0052, Option 4

Date of fiscal year end: 10/31/2009

Date of reporting period: 04/30/2009

EQUITIES FIXED INCOME REAL ESTATE LIQUIDITY ALTERNATIVES BLACKROCK SOLUTIONS

Semi-Annual Report

APRIL 30, 2009 | (UNAUDITED)

[BlackRock Dividend Achievers Trust \(BDV\)](#)

[BlackRock Enhanced Dividend Achievers Trust \(BDJ\)](#)

[BlackRock Strategic Dividend Achievers Trust \(BDT\)](#)

[BlackRock EcoSolutions Investment Trust \(BQR\)](#)

[BlackRock Energy and Resources Trust \(BGR\)](#)

[BlackRock Global Equity Income Trust \(BFD\)](#)

[BlackRock Global Opportunities Equity Trust \(BOE\)](#)

[BlackRock Health Sciences Trust \(BME\)](#)

[BlackRock International Growth and Income Trust \(BGY\)](#)

[BlackRock Real Asset Equity Trust \(BCF\)](#)

[BlackRock S&P Quality Rankings Global Equity Managed Trust \(BQY\)](#)

[BlackRock World Investment Trust \(BWC\)](#)

NOT FDIC INSURED
MAY LOSE VALUE
NO BANK GUARANTEE

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Section 19(b) Disclosure

BlackRock Dividend Achievers™ Trust (BDV), BlackRock Enhanced Dividend Achievers™ Trust (BDJ), BlackRock Strategic Dividend Achievers™ Trust (BDT), BlackRock EcoSolutions Investment Trust (BQR), BlackRock Energy and Resources Trust (BGR), BlackRock Global Equity Income Trust (BFD), BlackRock Global Opportunities Equity Trust (BOE), BlackRock Health Sciences Trust (BME), BlackRock International Growth and Income Trust (BGY), BlackRock Real Asset Equity Trust (BCF), BlackRock S&P Quality Rankings Global Equity Managed Trust (BQY) and BlackRock World Investment Trust (BWC) (each a Trust and collectively, the Trusts), acting pursuant to a Securities and Exchange Commission (SEC) exemptive order and with the approval of each Trust's Board of Directors/Trustees (the Board), each have adopted a level distribution plan (the Plan) that is consistent with its investment objectives and policies. In adopting the Plan, each Trust employs either a managed distribution or option over-write policy to support a level distribution of income, capital gains and/or return of capital. In accordance with the Plans, the Trusts currently distribute the following fixed amounts per share on a quarterly basis:

Exchange Symbol	Amount Per Common Share
BDV	\$0.162500
BDJ	\$0.305625
BDT	\$0.162500
BQR	\$0.400000
BGR	\$0.405000
BFD	\$0.475000
BOE	\$0.568750
BME	\$0.384375
BGY	\$0.455100
BCF	\$0.271800
BQY	\$0.187500
BWC	\$0.341250

The fixed amounts distributed per share are subject to change at the discretion of each Trust's Board. Under its Plan, each Trust will distribute all available investment income to its shareholders, consistent with its primary investment objectives and as required by the Internal Revenue Code of 1986, as amended (the Code). If sufficient investment income is not available on a quarterly basis, the Trusts will distribute long-term capital gains and/or return of capital to shareholders in order to maintain a level distribution.

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Each quarterly distribution to shareholders is expected to be at the fixed amount established by the Board, except for extraordinary distributions and potential distribution rate increases or decreases to enable the Trusts to comply with the distribution requirements imposed by the Code.

Shareholders should not draw any conclusions about the Trust's investment performance from the amount of these distributions or from the terms of the Plan. Each Trust's total return performance on net asset value is presented in its financial highlights table.

The Board may amend, suspend or terminate a Trust's Plan without prior notice if it deems such actions to be in the best interests of the Trust or its shareholders. The suspension or termination of the Plan could have the effect of creating a trading discount (if the Trust's stock is trading at or above net asset value) or widening an existing trading discount. The Trusts are subject to risks that could have an adverse impact on their ability to maintain a level distribution. Examples of potential risks include, but are not limited to, economic downturns impacting the markets, decreased market volatility, companies suspending or decreasing corporate dividend distributions and changes in the Code. Please refer to each Trust's prospectus for a more complete description of its risks.

Please refer to the Notes to Financial Statements for a cumulative summary of the Section 19(a) notices for each Trust's current fiscal period. Section 19(a) notices for the Trusts, as applicable, are available on the BlackRock website www.blackrock.com.

Dear Shareholder

The past 12 months reveal a tale of two markets – one of investor pessimism and decided weakness, and another of optimism and some early signs of recovery.

The majority of the past year was characterized by the former as the global financial crisis erupted into the worst recession in decades. Economic data were uniformly poor and daily headlines recounted the downfalls of storied financial firms, volatile swings in global financial markets, and monumental government actions that included widespread (and globally coordinated) monetary and quantitative easing by central banks and large-scale fiscal stimuli. Sentiment improved noticeably in March 2009, however, on the back of new program announcements by the Treasury and Federal Reserve Board, as well as signs of improved economic performance, such as in retail sales, consumer confidence and select areas of the housing market.

Against this backdrop, US equities contended with unprecedented levels of volatility, posting steep declines early, and then pared some of those losses in March and April. The experience in international markets was similar to that in the United States, though there was a marked divergence in regional performance. Notably, emerging economies, which lagged most developed regions through the downturn, were among the market leaders during the late-period rally.

In fixed income markets, while risk aversion remained a dominant theme overall, relatively attractive yields and distressed valuations, alongside a more favorable macro environment, eventually captured investor attention, leading to a modest recovery in non-Treasury assets. A notable example from the opposite end of the credit spectrum was the high yield sector, which generally outperformed in the first four months of 2009 after extraordinary challenges and severe underperformance last year. At the same time, the new year ushered in a return to normalcy for the tax-exempt market, which had registered one of its worst years on record in 2008.

All told, the major benchmark indexes posted mixed results for the current reporting period, reflective of a bifurcated market.

Total Returns as of April 30, 2009	6-month	12-month
US equities (S&P 500 Index)	(8.53)%	(35.31)%
Small cap US equities (Russell 2000 Index)	(8.40)	(30.74)
International equities (MSCI Europe, Australasia, Far East Index)	(2.64)	(42.76)
US Treasury securities (Merrill Lynch 10-Year US Treasury Index)	8.98	9.30
Taxable fixed income (Barclays Capital US Aggregate Bond Index)	7.74	3.84
Tax-exempt fixed income (Barclays Capital Municipal Bond Index)	8.20	3.11
High yield bonds (Barclays Capital US Corporate High Yield 2% Issuer Capped Index)	16.39	(12.55)

Past performance is no guarantee of future results. Index performance shown for illustrative purposes only. You cannot invest directly in an index.

On June 16, 2009, BlackRock, Inc. announced that it received written notice from Barclays PLC (Barclays) in which Barclays Board of Directors had accepted BlackRock's offer to acquire Barclays Global Investors (BGI). Barclays also notified BlackRock that its Board will recommend the transaction to Barclays' shareholders for approval at a special meeting to be held in early August 2009. The combination of BlackRock and BGI will bring together market leaders in active and index strategies to create the preeminent asset management firm. The transaction is expected to close in the fourth quarter 2009 following approval by Barclays shareholders, the receipt of client consents and regulatory approvals, and satisfaction of customary closing conditions.

Through periods of market turbulence, as ever, BlackRock's full resources are dedicated to the management of our clients' assets. We thank you for entrusting BlackRock with your investments and look forward to continuing to serve you in the months and years ahead.

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Sincerely,

Rob Kapito
President, BlackRock Advisors, LLC

THIS PAGE NOT PART OF YOUR FUND REPORT

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Trust Summary as of April 30, 2009

BlackRock Dividend Achievers™ Trust

Investment Objective

BlackRock Dividend Achievers™ Trust (BDV) (the Trust) seeks to provide total return through a combination of current income and capital appreciation by investing in common stocks that pay above average dividends and have the potential for capital appreciation. The Trust recently implemented an option writing (selling) strategy to help enhance current gains. No assurance can be given that the Trust's investment objective will be achieved.

Performance

For the six months ended April 30, 2009, the Trust returned (20.91)% based on market price and (17.74)% based on net asset value (NAV). For the same period, the Mergent Broad Dividend Achievers Index (Dividend Achievers Index) returned (15.01)%, and the broader market, measured by the Russell 1000 Index and the Russell 1000 Value Index, returned (7.39)% and (13.27)%, respectively. All returns reflect reinvestment of dividends. The Trust's discount to NAV, which widened during the period, accounts for the difference between performance based on price and performance based on NAV.

The key investment objective of the BDV portfolio is to generate above-average current income through positions in large-cap stocks with attractive dividend yields, selected primarily from the Dividend Achievers Index. Over period, this strategy was negatively affected by three factors: (1) higher-yielding stocks underperformed the broader market; (2) the drive for yield meant higher exposure to financials, which underperformed; and (3) mid-cap stocks outperformed large-cap stocks and growth stocks outperformed value stocks, each hurting the large-cap, value-oriented BDV portfolio. The enhancement to the BDV strategy, writing calls on approximately 20% of the portfolio, added to current income and total return.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other conditions. These views are not intended to be a forecast of future events and are no guarantee of future results.

Trust Information

Symbol on New York Stock Exchange	BDV
Initial Offering Date	December 23, 2003
Yield on Closing Market Price as of April 30, 2009 (\$6.97) ¹	9.33%
Current Quarterly Distribution per Common Share ²	\$0.1625
Current Annualized Distribution per Common Share ²	\$0.6500

- Yield on closing market price is calculated by dividing the current annualized distribution per share by the closing market price. Past performance does not guarantee future results.
- The distribution rate is not constant and is subject to further change. A portion of the distribution may be deemed a tax return of capital or net realized gain.

The table below summarizes the changes in the Trust's market price and net asset value per share:

	4/30/09	10/31/08	Change	High	Low
Market Price	\$ 6.97	\$ 9.20	(24.24)%	\$ 9.84	\$ 5.05
Net Asset Value	\$ 8.14	\$ 10.33	(21.20)%	\$ 10.71	\$ 6.69

The following charts show the ten largest holdings and sector allocations of the Trust's long-term investments:

Ten Largest Holdings

4/30/09

International Business Machines Corp.	5%
Chevron Corp.	5
AT&T Inc.	4
ExxonMobil Corp.	4
Wal-Mart Stores, Inc.	4
Coca-Cola Co. (The)	4
Wells Fargo & Co.	4
Pfizer, Inc.	4
Johnson & Johnson	3
General Electric Co.	3

Sector Allocations³

	4/30/09	10/31/08
Consumer Products	29%	25%
Industrials	21	8
Financial Institutions	11	26
Energy	9	8
Technology	7	3
Telecommunications	6	5
Health Care	5	15
Utilities	5	6
Basic Materials	3	1
Aerospace & Defense	2	1
Real Estate Investment Trusts	1	2
Automotive	1	

- ³ For Trust compliance purposes, the Trust's sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or ratings group indexes, and/or as defined by Portfolio management. This definition may not apply for purposes of this report, which may combine sector sub-classifications for reporting ease.

Trust Summary as of April 30, 2009

BlackRock Enhanced Dividend Achievers™ Trust

Investment Objective

BlackRock Enhanced Dividend Achievers™ Trust (BDJ) (the Trust) seeks to provide current income and current gains, with a secondary objective of long-term capital appreciation. The Trust seeks to achieve these objectives by investing in common stocks that pay above average dividends and have the potential for capital appreciation and by utilizing an option writing strategy to enhance distributions paid to the Trust's shareholders. No assurance can be given that the Trust's investment objective will be achieved.

Performance

For the six months ended April 30, 2009, the Trust returned (14.07)% based on market price and (14.73)% based on NAV. For the same period, the Dividend Achievers Index returned (15.01)%, and the broader market, measured by the Russell 1000 Index and the Russell 1000 Value Index, returned (7.39)% and (13.27)%, respectively. All returns reflect reinvestment of dividends. The Trust's discount to NAV, which narrowed during the period, accounts for the difference between performance based on price and performance based on NAV.

In addition to covered call writing, the other objective of the BDJ portfolio is to generate above-average current income through positions in large-cap stocks with attractive dividend yields, selected primarily from the Dividend Achievers Index. Over the period, this strategy was negatively affected by three factors: (1) higher-yielding stocks underperformed the market; (2) the drive for yield meant higher exposure to financials, which underperformed; and (3) mid-cap stocks outperformed large-cap stocks and growth stocks outperformed value stocks, each hurting the large-cap, value-oriented BDJ portfolio. Offsetting some of these negative impacts were rich option call premiums received on the covered call portion of the BDJ strategy, driven by the near-record high volatility.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other conditions. These views are not intended to be a forecast of future events and are no guarantee of future results.

Trust Information

Symbol on New York Stock Exchange	BDJ
Initial Offering Date	August 31, 2005
Yield on Closing Market Price as of April 30, 2009 (\$6.72) ¹	18.19%
Current Quarterly Distribution per Common Share ²	\$0.305625
Current Annualized Distribution per Common Share ²	\$1.222500

- Yield on closing market price is calculated by dividing the current annualized distribution per share by the closing market price. Past performance does not guarantee future results.
- The distribution is not constant and is subject to change. A portion of the distribution may be deemed a tax return of capital or net realized gain.

The table below summarizes the changes in the Trust's market price and net asset value per share:

	4/30/09	10/31/08	Change	High	Low
Market Price	\$ 6.72	\$ 8.47	(20.66)%	\$ 9.26	\$ 5.04
Net Asset Value	\$ 7.55	\$ 9.59	(21.27)%	\$ 9.93	\$ 6.39

The following charts show the ten largest holdings and sector allocations of the Trust's long-term investments:

Ten Largest Holdings

	4/30/09
International Business Machines Corp.	5%
Chevron Corp.	5
AT&T Inc.	4
ExxonMobil Corp.	4
Wal-Mart Stores, Inc.	4
Coca-Cola Co. (The)	4
Pfizer, Inc.	4
Wells Fargo & Co.	4
Johnson & Johnson	3
General Electric Co.	3

Sector Allocations³

	4/30/09	10/31/08
Consumer Products	30%	24%
Industrials	21	8
Financial Institutions	11	25
Energy	9	9
Technology	7	3
Telecommunications	6	6
Health Care	5	16
Utilities	4	6
Basic Materials	3	1
Aerospace & Defense	2	
Real Estate Investment Trusts	1	2
Automotive	1	

- 3 For Trust compliance purposes, the Trust's sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or ratings group indexes, and/or as defined by Portfolio management. This definition may not apply for purposes of this report, which may combine sector sub-classifications for reporting ease.

Trust Summary as of April 30, 2009

BlackRock Strategic Dividend Achievers™ Trust

Investment Objective

BlackRock Strategic Dividend Achievers™ Trust (BDT) (the Trust) seeks to provide total return through a combination of current income and capital appreciation by investing primarily in common stocks of small to mid-capitalization companies that pay above average dividends and have potential for capital appreciation. The Trust recently implemented an option writing (selling) strategy to help enhance current gains. No assurance can be given that the Trust's investment objective will be achieved.

Performance

For the six months ended April 30, 2009, the Trust returned (12.97)% based on market price and (12.15)% based on NAV. For the same period, the Dividend Achievers Index returned (15.01)%, and the broader market, as measured by the Russell 1000 Index and the Russell 1000 Value Index, returned (7.39)% and (13.27)%, respectively. All returns reflect reinvestment of dividends. The Trust's discount to NAV, which widened during the period, accounts for the difference between performance based on price and performance based on NAV.

The key investment objective of the BDT portfolio is to generate above-average current income through positions in mid- and small-cap stocks with attractive dividend yields, selected primarily from the Dividend Achievers Index. Over the period, this strategy was negatively affected by three factors: (1) higher-yielding stocks underperformed the broader market; (2) the drive for yield meant higher exposure to financials, which underperformed; and (3) growth stocks outperformed value stocks, hurting the value-oriented BDT portfolio. Offsetting some of these negative impacts was the strong outperformance of mid-cap stocks, which represents more than half of the BDT portfolio. Further, the enhancement to the BDT strategy, writing calls on approximately 20% of the portfolio, added to current income and total return.

The views expressed reflect the opinions of BlackRock as of the date of this report and are subject to change based on changes in market, economic or other conditions. These views are not intended to be a forecast of future events and are no guarantee of future results.

Trust Information

Symbol on New York Stock Exchange	BDT
Initial Offering Date	March 30, 2004
Yield on Closing Market Price as of April 30, 2009 (\$7.52) ¹	8.64%
Current Quarterly Distribution per Common Share ²	\$0.1625
Current Annualized Distribution per Common Share ²	\$0.6500

¹ Yield on closing market price is calculated by dividing the current annualized distribution per share by the closing market price. Past performance does not guarantee future results.

² The distribution rate is not constant and is subject to further change. A portion of the distribution may be deemed a tax return of capital or net realized gain.

The table below summarizes the changes in the Trust's market price and net asset value per share:

	4/30/09	10/31/08	Change	High	Low
Market Price	\$ 7.52	\$ 9.01	(16.54)%	\$ 9.42	\$ 5.38
Net Asset Value	\$ 8.99	\$ 10.67	(15.75)%	\$ 10.92	\$ 6.95

The following charts show the ten largest holdings and sector allocations of the Trust's long-term investments:

Ten Largest Holdings

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4/30/09

W.W. Grainger, Inc.	3%
Clorox Co.	3
Sherwin-Williams Co. (The)	3
Genuine Parts Co.	3
VF Corp.	2
D.R. Horton, Inc.	2
H&R Block, Inc.	2
Linear Technology Corp.	2
Pitney Bowes, Inc.	2
Vulcan Materials Co.	2

Sector Allocations³

4/30/09 10/31/08

Financial Institutions	25% &
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