

BlackRock Health Sciences Trust
Form N-CSR
February 27, 2015

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM N-CSR

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: John M. Perlowski, Chief Executive Officer, BlackRock Health

Sciences Trust, 55 East 52nd Street, New York, NY 10055

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

Date of fiscal year end: 12/31/2014

Date of reporting period: 12/31/2014

Item 1 Report to Stockholders

ANNUAL REPORT

BLACKROCK[®]

BlackRock Energy and Resources Trust (BGR)

BlackRock Enhanced Capital and Income Fund, Inc. (CII)

BlackRock Enhanced Equity Dividend Trust (BDJ)

BlackRock Global Opportunities Equity Trust (BOE)

BlackRock Health Sciences Trust (BME)

BlackRock International Growth and Income Trust (BGY)

BlackRock Resources & Commodities Strategy Trust (BCX)

BlackRock Science and Technology Trust (BST)

BlackRock Utility and Infrastructure Trust (BUI)

Not FDIC Insured ; May Lose Value ; No Bank Guarantee

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Section 19(a) Notices

BlackRock Energy and Resources Trust s (BGR), BlackRock Enhanced Capital and Income Fund, Inc. s (CII), BlackRock Enhanced Equity Dividend Trust s (BDJ), BlackRock Global Opportunities Equity Trust s (BOE), BlackRock Health Sciences Trust s (BME), BlackRock International Growth and Income Trust s (BGY), BlackRock Resources & Commodities Strategy Trust s (BCX), BlackRock Science and Technology Trust s (BST) and BlackRock Utility and Infrastructure Trust s (BUI) (each, a Trust and collectively, the Trusts), reported amounts and sources of distributions are estimates and are not being provided for tax reporting purposes. The actual amounts and sources for tax reporting purposes will depend upon each Trust s investment experience during the period and may be subject to changes based on the tax regulations. Each Trust will provide a Form 1099-DIV each calendar year that will tell you how to report these distributions for federal income tax purposes.

For the two-month period ended December 31, 2014

	Total Cumulative Distributions for the Fiscal Period				% Breakdown of the Total Cumulative Distributions for the Fiscal Period					
	Net Investment Income	Net Realized Capital Gains Short-Term	Net Realized Capital Gains Long-Term	Return of Capital	Total Per Common Share	Net Investment Income	Net Realized Capital Gains Short-Term	Net Realized Capital Gains Long-Term	Return of Capital	Total Per Common Share
BGR*	\$ 0.079835		\$ 1.308083	\$ 0.022081	\$ 1.410000	6%	0%	93%	1%	100%
CII*	\$ 0.031144			\$ 0.168856	\$ 0.200000	16%	0%	0%	84%	100%
BDJ*	\$ 0.030852			\$ 0.062548	\$ 0.093400	33%	0%	0%	67%	100%
BOE*				\$ 0.200900	\$ 0.200900	0%	0%	0%	100%	100%
BME		\$ 0.220498	\$ 2.475282	\$ 0.004220	\$ 2.700000	0%	8%	92%	0%	100%
BGY*				\$ 0.105000	\$ 0.105000	0%	0%	0%	100%	100%
BCX*	\$ 0.014048			\$ 0.140152	\$ 0.154200	9%	0%	0%	91%	100%
BST*				\$ 0.100000	\$ 0.100000	0%	0%	0%	100%	100%
BUI*	\$ 0.093279		\$ 0.034561	\$ 0.114160	\$ 0.242000	39%	0%	14%	47%	100%

* Certain Trusts estimate they have distributed more than the amount of earned income and net realized gains; therefore, a portion of the distribution may be a return of capital. A return of capital may occur, for example, when some or all of the shareholder s investment in a Trust is returned to the shareholder. A return of capital does not necessarily reflect a Trust s investment performance and should not be confused with yield or income. When distributions exceed total return performance, the difference will reduce the Trust s net asset value per share.

Section 19(a) notices for each Trust, as applicable, are available on the BlackRock website <http://www.blackrock.com>.

Section 19(b) Disclosure

The Trusts, acting pursuant to a U.S. Securities and Exchange Commission (SEC) exemptive order and with the approval of each Trust s Board of Trustees/Directors (the Board), each have adopted a plan, consistent with its investment objectives and policies to support a level distribution of income, capital gains and/or return of capital (the Plan). In accordance with the Plans, the Trusts currently distribute the following fixed amounts per share on a monthly basis as of December 31, 2014:

Exchange Symbol	Amount Per Common Share
BGR	\$0.1350
CII	\$0.1000
BDJ	\$0.0467
BOE	\$0.0970
BME	\$0.1650
BGY	\$0.0490
BCX	\$0.0771
BST	\$0.1000
BUI	\$0.1210

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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 monthly basis, the Trusts will distribute long-term capital gains and/or return of capital to shareholders in order to maintain a level distribution. Each monthly 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 each 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 level distributions. 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.

Table of Contents

	Page
<u>Section 19(a) Notices</u>	2
<u>Section 19(b) Disclosure</u>	2
<u>The Markets in Review</u>	4
Annual Report:	
<u>The Benefits and Risks of Option Over-Writing</u>	5
<u>Trust Summaries</u>	6
<u>Derivative Financial Instruments</u>	24
Financial Statements:	
<u>Schedules of Investments</u>	25
<u>Statements of Assets and Liabilities</u>	83
<u>Statements of Operations</u>	85
<u>Statements of Changes in Net Assets</u>	88
<u>Statements of Cash Flows</u>	93
<u>Financial Highlights</u>	96
<u>Notes to Financial Statements</u>	105
<u>Report of Independent Registered Public Accounting Firm</u>	126
<u>Important Tax Information</u>	127
<u>Disclosure of Investment Advisory Agreement and Sub-Advisory Agreement</u>	128
<u>Automatic Dividend Reinvestment Plans</u>	132
<u>Officers and Trustees</u>	133
<u>Additional Information</u>	137

ANNUAL REPORT

DECEMBER 31, 2014

3

The Markets in Review

Dear Shareholder,

After an extended period of calm, market volatility increased over the course of 2014, driven largely by higher valuations in risk assets (such as equities and high yield bonds), rising geopolitical risks and expectations around global central bank policies. Several key trends drove strong performance in U.S. markets, particularly large-cap stocks, Treasuries and municipal bonds, while markets outside the U.S. were more challenged.

Investors began the year in search of relatively safer assets due to heightened risks in emerging markets, slowing growth in China and weakening U.S. economic data. As a result, equities globally declined in January while bond markets strengthened despite the expectation that interest rates would rise as the U.S. Federal Reserve had begun reducing its asset purchase programs. Strong demand for relatively safer assets pushed U.S. Treasury bond prices higher and thus kept rates low in the United States. This surprising development, as well as increasing evidence that the soft patch in U.S. economic data had been temporary and weather-related, brought equity investors racing back to the market in February.

In the months that followed, interest rates trended lower in a modest growth environment and more investors turned to equities in search of yield. Markets remained relatively calm despite rising tensions in Russia and Ukraine and further signs of decelerating growth in China. Strong corporate earnings, increased merger and acquisition activity and signs of a strengthening recovery in the U.S. and other developed economies kept equity prices moving higher. Not all segments benefited from these trends, however, as investors ultimately became wary of high valuations, resulting in a broad rotation into cheaper assets.

Volatility ticked up in the summer as geopolitical tensions escalated and investors feared that better U.S. economic indicators may compel the Fed to increase short-term interest rates sooner than previously anticipated. Global credit markets tightened as the U.S. dollar strengthened, ultimately putting a strain on investor flows, and financial markets broadly weakened in the third quarter.

Several themes dominated the markets in the fourth quarter, resulting in higher levels of volatility and the outperformance of U.S. markets versus other areas of the world. Economic growth strengthened considerably in the United States while the broader global economy showed signs of slowing. The European Central Bank and the Bank of Japan took aggressive measures to stimulate growth while the Fed moved toward tighter policy. This divergence in central bank policy caused further strengthening in the U.S. dollar versus other currencies. Oil prices, which had been falling gradually since the summer, plummeted in the fourth quarter due to a global supply-and-demand imbalance. Energy stocks sold off sharply and oil-exporting economies suffered, resulting in the poor performance of emerging market stocks.

At BlackRock, we believe investors need to think globally, extend their scope across a broad array of asset classes and be prepared to move freely as market conditions change over time. We encourage you to talk with your financial advisor and visit blackrock.com for further insight about investing in today's markets.

Sincerely,

Rob Kapito

President, BlackRock Advisors, LLC

Rob Kapito

President, BlackRock Advisors, LLC

Total Returns as of December 31, 2014

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	6-month	12-month
U.S. large cap equities (S&P 500® Index)	6.12%	13.69%
U.S. small cap equities (Russell 2000® Index)	1.65	4.89
International equities (MSCI Europe, Australasia, Far East Index)	(9.24)	(4.90)
Emerging market equities (MSCI Emerging Markets Index)	(7.84)	(2.19)
3-month Treasury bill (BofA Merrill Lynch 3-Month Treasury Bill Index)	0.01	0.03
U.S. Treasury securities (BofA Merrill Lynch 10- Year U.S. Treasury Index)	4.33	10.72
U.S. investment grade bonds (Barclays U.S. Aggregate Bond Index)	1.96	5.97
Tax-exempt municipal bonds (S&P Municipal Bond Index)	3.00	9.25
U.S. high yield bonds (Barclays U.S. Corporate High Yield 2% Issuer Capped Index)	(2.84)	2.46

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

The Benefits and Risks of Option Over-Writing

In general, the goal of each of the Trusts is to provide total return through a combination of current income and realized and unrealized gains (capital appreciation). The Trusts seek to pursue this goal primarily by investing in a portfolio of equity securities and utilizing an option over-writing strategy in an effort to enhance distribution yield and total return performance. However, these objectives cannot be achieved in all market conditions.

The Trusts primarily write single stock covered call options, and may also from time to time write single stock put options. When writing (selling) a covered call option, the Trust holds an underlying equity security and enters into an option transaction which allows the counterparty to purchase the equity security at an agreed-upon price (strike price) within an agreed-upon time period. The Trusts receive cash premiums from the counterparties upon writing (selling) the option, which along with net investment income and net realized gains, if any, are generally available to support current or future distributions paid by the Trusts. During the option term, the counterparty may elect to exercise the option if the market value of the equity security rises above the strike price, and the Trust is obligated to sell the equity security to the counterparty at the strike price, realizing a gain or loss. Premiums received increase gains or reduce losses realized on the sale of the equity security. If the option remains unexercised upon its expiration, the Trusts realize gains equal to the premiums received. Alternatively, an option may be closed out by an offsetting purchase or sale of an option prior to expiration. The Trust realizes a capital gain from a closing purchase or sale transaction if the premium paid is less than the premium received from writing the option. The Trust realizes a capital loss from a closing purchase or sale transaction if the premium received is less than the premium paid to purchase the option.

Writing covered call options entails certain risks, which include, but are not limited to, the following: an increase in the value of the underlying equity security above the strike price can result in the exercise of a written option (sale by the Trust to the counterparty) when the Trust might not otherwise have sold the security; exercise of the option by the counterparty may result in a sale below the current market value and a gain or loss being realized by the Trust; and writing covered call options limits the potential appreciation that could be realized on the underlying equity security to the extent of the strike price of the option. As such, an option over-writing strategy may outperform the general equity market in flat or falling markets but underperform in rising markets.

Each Trust employs a plan to support a level distribution of income, capital gains and/or return of capital. The goal of the plan is to provide shareholders with consistent and predictable cash flows by setting distribution rates based on expected long-term returns of the Trusts. Such distributions, under certain circumstances, may exceed a Trust's total return performance. When total distributions exceed total return performance for the period, the difference reduces the Trust's total assets and net asset value per share (NAV) and, therefore, could have the effect of increasing the Trust's expense ratio and reducing the amount of assets the Trust has available for long term investment. In order to make these distributions, a Trust may have to sell portfolio securities at less than opportune times.

The final tax characterization of distributions is determined after the fiscal year and is reported in the Trust's annual report to shareholders. Distributions can be characterized as ordinary income, capital gains and/or return of capital. The Trust's taxable net investment income or net realized capital gains (taxable income) may not be sufficient to support the level of distributions paid. To the extent that distributions exceed the Trust's current and accumulated earnings and profits, the excess may be treated as a non-taxable return of capital. Distributions that exceed a Trust's taxable income but do not exceed the Trust's current and accumulated earnings and profits, may be classified as ordinary income which are taxable to shareholders. Such distributions are reported as distributions in excess of net investment income.

A return of capital distribution does not necessarily reflect a Trust's investment performance and should not be confused with yield or income. A return of capital is a return of a portion of an investor's original investment. A return of capital is not taxable, but it reduces a shareholder's tax basis in his or her shares, thus reducing any loss or increasing any gain on a subsequent disposition by the shareholder of his or her shares. It is possible that a substantial portion of the distributions paid during a calendar year may ultimately be classified as return of capital or as distributions in excess of net investment income for income tax purposes when the final determination of the source and character of the distributions is made.

To illustrate these concepts, assume the following: (1) a common stock purchased at and currently trading at \$37.15 per share; (2) a three-month call option is written by a Trust with a strike price of \$40 (i.e., 7.7% higher than the current market price); and (3) the Trust receives \$2.45, or 6.6% of the common stock's value, as a premium. If the stock price remains unchanged, the option expires and there would be a 6.6% return for the three-month period. If the stock were to decline in price by 6.6% (i.e., decline to \$34.70 per share), the option strategy would break-even from an economic perspective resulting in neither a gain nor a loss. If the stock were to climb to a price of \$40 or above, the option would be exercised and the stock would return 7.7% coupled with the option premium received of 6.6% for a total return of 14.3%. Under this scenario, the Trust loses the benefit of any appreciation of the stock above \$40, and thus is limited to a 14.3% total return. The premium from writing the call option serves to offset some of the unrealized loss on the stock in the event that the price of the stock declines, but if the stock were to decline more than 6.6% under this scenario, the Trust's downside protection is eliminated and the stock could eventually become worthless.

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Each Trust intends to write covered call options to varying degrees depending upon market conditions. Please refer to each Trust's Schedule of Investments and the Notes to Financial Statements for details of written options.

ANNUAL REPORT

DECEMBER 31, 2014

5

Trust Summary as of December 31, 2014

BlackRock Energy and Resources Trust

Trust Overview

BlackRock Energy and Resources Trust s (BGR) (the Trust) investment objective is to provide total return through a combination of current income, current gains and long-term capital appreciation. The Trust seeks to achieve its investment objective by investing, under normal market conditions, at least 80% of its total assets in equity securities of energy and natural resources companies and equity derivatives with exposure to the energy and natural resources industry. The Trust may invest directly in such securities or synthetically through the use of derivatives. The Trust seeks to pursue this goal primarily by investing in a portfolio of equity securities and utilizing an option over-writing strategy in an effort to seek total return performance and enhance distributions.

The Board of the Trust approved a change of the fiscal year of the Trust from October 31st to December 31st.

No assurance can be given that the Trust s investment objective will be achieved.

Portfolio Management Commentary

How did the Trust perform?

For the two-month period ended December 31, 2014, the Trust returned (10.18)% based on market price and (9.06)% based on NAV. For the same period, the closed-end Lipper Natural Resources Funds category posted an average return of (6.82)% based on market price and (6.75)% based on NAV. All returns reflect reinvestment of dividends and/or distributions. 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 following discussion relates to performance based on NAV.

What factors influenced performance?

The price of oil fell sharply during the two-month period due to the combination of falling demand, weaker economic growth expectations, continued supply strength and OPEC s announcement that it would not cut production. The Trust s holding in Encana Corp. was the largest detractor from returns as the company s growth rate appeared to be at risk from the lower oil price.

The Trust s investment in the energy distribution company Enbridge, Inc. was the largest contributor to absolute performance. The market reacted favorably to the company s announcement of a \$17 billion restructuring program and a 33% increase in its quarterly dividend.

The Trust s holding in Cairn Energy PLC also benefited absolute returns, as the company announced a second discovery off the coast of Senegal during the period.

The Trust made use of options, principally written call options on individual stocks, in order to seek enhanced returns while continuing to participate in the performance of the underlying equities. The Trust s option writing strategy did not have a material impact on performance during the period.

The Trust held an above-average cash balance at the close of the period in order to manage risk in the weak market. Given the decline in the resources sector during the period, the elevated cash position had a positive impact on absolute performance.

Describe recent portfolio activity.

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The Trust initiated a position in the U.S.-focused oil producer Marathon Oil Corp. during the period. The Trust sold its positions in the coal producer Consol Energy, Inc. and the energy distribution company TransCanada Corp. based on valuation. It also exited its position in the offshore oil-service company Cameron International Corp. due to concerns that the company's business model will be particularly challenged by the environment of lower oil prices.

Describe portfolio positioning at period end.

As of period end, the Trust held its largest allocations in the integrated oil & gas and exploration & production sub-industries, with smaller allocations to oil services, distribution, and refining & marketing stocks. The Trust was underweight in the oil services industry, which stands to suffer from producers' reduced spending on capital expenditures. The Trust continued to emphasize companies with strong balance sheets, high-quality assets and low costs of production.

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.

BlackRock Energy and Resources Trust

Trust Information

Symbol on NYSE	BGR
Initial Offering Date	December 29, 2004
Current Distribution Rate on Closing Market Price as of December 31, 2014 (\$19.95) ¹	8.12%
Current Monthly Distribution per Common Share	