

Summary Prospectus

BlackRock Funds VII, Inc. | Class K Shares

- **BlackRock Sustainable U.S. Growth Equity Fund**

Class K: BSGKX

Before you invest, you may want to review the Fund's prospectus, which contains more information about the Fund and its risks. You can find the Fund's prospectus (including amendments and supplements), reports to shareholders and other information about the Fund, including the Fund's statement of additional information, online at <http://www.blackrock.com/prospectus>. You can also get this information at no cost by calling (800) 537-4942 or by sending an e-mail request to prospectus.request@blackrock.com, or from your financial professional. The Fund's prospectus and statement of additional information, both dated August 28, 2023, as amended and supplemented from time to time, are incorporated by reference into (legally made a part of) this Summary Prospectus.

This Summary Prospectus contains information you should know before investing, including information about risks. Please read it before you invest and keep it for future reference.

The Securities and Exchange Commission has not approved or disapproved these securities or passed upon the adequacy of this Summary Prospectus. Any representation to the contrary is a criminal offense.

Not FDIC Insured • May Lose Value • No Bank Guarantee

Summary Prospectus

Key Facts About BlackRock Sustainable U.S. Growth Equity Fund

Investment Objective

The investment objective of BlackRock Sustainable U.S. Growth Equity Fund (the “Fund”), a series of BlackRock Funds VII, Inc. (the “Corporation”), is to seek to maximize total return while seeking to maintain certain environmental, social and governance (“ESG”) characteristics, climate risk exposure and climate opportunities relative to the Fund’s benchmark.

Fees and Expenses of the Fund

This table describes the fees and expenses that you may pay if you buy, hold and sell Class K Shares of the Fund. **You may pay other fees, such as brokerage commissions and other fees to your financial professional or your selected securities dealer, broker, investment adviser, service provider or industry professional (including BlackRock Advisors, LLC (“BlackRock”) and its affiliates) (each, a “Financial Intermediary”), which are not reflected in the table and example below.**

Annual Fund Operating Expenses (expenses that you pay each year as a percentage of the value of your investment)	Class K Shares
Management Fee ¹	0.62%
Distribution and/or Service (12b-1) Fees	None
Other Expenses ²	6.48%
Total Annual Fund Operating Expenses	7.10%
Fee Waivers and/or Expense Reimbursements ^{1,3}	(6.48)%
Total Annual Fund Operating Expenses After Fee Waivers and/or Expense Reimbursements ^{1,3}	0.62%

¹ As described in the “Management of the Funds” section of the Fund’s prospectus beginning on page 46, BlackRock has contractually agreed to waive the management fee with respect to any portion of the Fund’s assets estimated to be attributable to investments in other equity and fixed-income mutual funds and exchange-traded funds managed by BlackRock or its affiliates that have a contractual management fee, through June 30, 2025. In addition, BlackRock has contractually agreed to waive its management fees by the amount of investment advisory fees the Fund pays to BlackRock indirectly through its investment in money market funds managed by BlackRock or its affiliates, through June 30, 2025. The contractual agreements may be terminated upon 90 days’ notice by a majority of the non-interested directors of the Corporation or by a vote of a majority of the outstanding voting securities of the Fund.

² Other Expenses have been restated to reflect current fees.

³ As described in the “Management of the Funds” section of the Fund’s prospectus beginning on page 46, BlackRock has contractually agreed to waive and/or reimburse fees or expenses in order to limit Total Annual Fund Operating Expenses After Fee Waivers and/or Expense Reimbursements (excluding Dividend Expense, Interest Expense, Acquired Fund Fees and Expenses and certain other Fund expenses) to 0.62% of average daily net assets through June 30, 2025. The Fund may have to repay some of these waivers and/or reimbursements to BlackRock in the two years following such waivers and/or reimbursements. Any such repayment obligation will terminate on October 19, 2028. The contractual agreement may be terminated upon 90 days’ notice by a majority of the non-interested directors of the Corporation or by a vote of a majority of the outstanding voting securities of the Fund.

Example:

This Example is intended to help you compare the cost of investing in the Fund with the cost of investing in other mutual funds. The Example assumes that you invest \$10,000 in the Fund for the time periods indicated and then redeem all of your shares at the end of those periods. The Example also assumes that your investment has a 5% return each year and that the Fund’s operating expenses remain the same. Although your actual costs may be higher or lower, based on these assumptions your costs would be:

	1 Year	3 Years	5 Years	10 Years
Class K Shares	\$63	\$1,515	\$2,906	\$6,135

Portfolio Turnover:

The Fund pays transaction costs, such as commissions, when it buys and sells securities (or “turns over” its portfolio). A higher portfolio turnover rate may indicate higher transaction costs and may result in higher taxes when shares are held in a taxable account. These costs, which are not reflected in annual fund operating expenses or in the Example, affect the Fund’s performance. For the fiscal year ended April 30, 2023, the Fund’s portfolio turnover rate was 17% of the average value of its portfolio.

Principal Investment Strategies of the Fund

Under normal circumstances, the Fund seeks to invest at least 80% of its net assets, plus the amount of any borrowings for investment purposes, in equity securities of U.S. issuers and derivatives with similar economic characteristics.

Generally, the Fund will invest in equities or other financial instruments that are components of, or have market capitalizations similar to, the securities included in, the Russell 1000® Growth Index (the “Benchmark”). Equity securities include common stock, preferred stock and convertible securities. The Fund primarily seeks to buy common stock and may also invest in preferred stock and convertible securities. The Fund generally invests in equity securities that Fund management believes have above average growth potential. The Fund may invest in equity securities of any market capitalization. From time to time, the Fund may invest in shares of companies through “new issues” or initial public offerings (“IPOs”).

The Fund may invest up to 20% of its net assets in securities of foreign issuers.

To determine the Fund’s investable universe, Fund management will first seek to screen out certain issuers based on ESG criteria determined by BlackRock, subject to the considerations noted below.

Such screening criteria principally includes: (i) issuers that derive more than zero percent of revenue from the production of controversial weapons; (ii) issuers that derive more than zero percent of revenue from the production of civilian firearms; (iii) issuers that derive more than zero percent of revenue from the production of tobacco-related products; (iv) issuers that derive more than five percent of revenue from thermal coal generation, unless such issuers either (a) have made certain commitments to reduce climate impact or (b) derive at least fifty percent of revenue from alternative energy sources; (v) issuers that derive more than five percent of revenue from thermal coal mining; (vi) issuers that derive more than five percent of revenue from oil sands extraction; and (vii) issuers identified as violators of the United Nations Global Compact, which are globally accepted principles covering corporate behavior in the areas of human rights, labor, environment, and anti-corruption.

Notwithstanding the foregoing, the Fund may invest in green bonds of issuers that exceed the thresholds stated in (iv), (v) or (vi) above. The Fund relies on one or more third-party ratings agencies to identify issuers for purposes of the above screening criteria. Third-party rating agencies may base the above screening criteria on an estimate when revenue for a covered business activity is not disclosed by the issuer or publicly available.

The Fund’s screening criteria is measured at the time of investment and is dependent upon information and data that may be incomplete, inaccurate, unavailable or estimated. Where the Fund’s criteria looks solely to third-party ratings or data, issuers are only screened to the extent such ratings or data have been assigned or made available by the third parties. This screening criteria is subject to change over time at BlackRock’s discretion. In addition, the Fund may gain indirect exposure (through, including but not limited to, derivatives and investments in other investment companies) to issuers with exposures that are inconsistent with the ESG related criteria used by BlackRock.

The Fund will seek to invest in companies with sustainable business models which have a strong consideration for ESG risks and opportunities. Investment decisions are based on BlackRock’s fundamental research focusing on bottom up (i.e., company-specific) analysis that seeks to identify and select equity and equity-related securities that can, as a portfolio, deliver the Fund’s investment objective. BlackRock’s company-specific research uses techniques to assess equity characteristics such as strength of earnings, quality of balance sheet, cashflow trends, and relative valuation, as well as assessing companies’ ESG practices. BlackRock has a flexible allocation strategy with a focus on ESG principles which means that it does not have a persistent bias towards particular categories of investment, such as specific industries or style factors (i.e., specific characteristics of companies that it is considered may drive returns), but it may make allocation decisions based on such categories at particular times and will have a bias towards investments with strong or improving ESG practices.

The Fund seeks to maintain certain ESG characteristics, climate risk exposure and climate opportunities relative to the Benchmark. Specifically, the Fund generally seeks to invest in a portfolio of equity securities that, in BlackRock’s view, (i) has an aggregate ESG assessment that is better than that of the Benchmark, (ii) has an aggregate carbon emissions assessment that is lower than that of the Benchmark, and (iii) in the aggregate, includes issuers that BlackRock believes are better positioned to capture climate opportunities relative to the issuers in the Benchmark. The Fund may invest in other sectors that are not included in such assessments.

The Fund may use derivatives, including options, futures, swaps (including, but not limited to, total return swaps, some of which may be referred to as contracts for difference) and forward contracts, both to seek to increase the return of the Fund and to hedge (or protect) the value of its assets against adverse movements in currency exchange rates, interest rates and movements in the securities markets. In order to manage cash flows into or out of the Fund effectively, the Fund may buy and sell financial futures contracts or options on such contracts. Derivatives are financial

instruments whose value is derived from another security, a currency or an index, including, but not limited to, the Benchmark. The use of options, futures, swaps and forward contracts can be effective in protecting or enhancing the value of the Fund's assets.

The Fund is classified as non-diversified under the Investment Company Act of 1940, as amended (the "Investment Company Act").

Principal Risks of Investing in the Fund

Risk is inherent in all investing. The value of your investment in the Fund, as well as the amount of return you receive on your investment, may fluctuate significantly from day to day and over time. You may lose part or all of your investment in the Fund or your investment may not perform as well as other similar investments. The following is a summary description of the principal risks of investing in the Fund. The relative significance of each risk factor below may change over time and you should review each risk factor carefully.

■ **Equity Securities Risk** — Stock markets are volatile. The price of equity securities fluctuates based on changes in a company's financial condition and overall market and economic conditions.

■ **ESG Investing Risk** — The Fund intends to screen out particular issuers pursuant to certain criteria established by BlackRock, and to measure ESG characteristics, including characteristics related to climate, with respect to certain investments pursuant to a methodology determined by BlackRock. This may affect the Fund's exposure to certain issuers and the Fund may forego certain investment opportunities. The Fund's results may be lower than other funds that do not seek to invest in issuers based on ESG criteria, or that use a different methodology to screen out issuers or evaluate ESG criteria. The Fund seeks to identify issuers that it believes are better positioned to manage ESG risks and opportunities related to their businesses and to avoid certain companies and industries with ESG related risks, but investors may differ in their views of what constitutes positive or negative ESG criteria. As a result, the Fund may invest in issuers that do not reflect the beliefs and values of any particular investor. In evaluating a security or issuer based on ESG criteria, BlackRock is dependent upon certain information and data from third party providers of ESG research, which may be incomplete, inaccurate or unavailable. As a result, there is a risk that BlackRock may incorrectly assess a security or issuer. There is also a risk that BlackRock may not apply the relevant ESG criteria correctly or that a Fund could have indirect exposure to issuers who do not meet the relevant ESG criteria used by such Fund. Neither the Fund nor BlackRock make any representation or warranty, express or implied, with respect to the fairness, correctness, accuracy, reasonableness or completeness of such ESG assessment. There may be limitations with respect to availability of ESG data in certain sectors, as well as limited availability of investments with positive ESG assessments in certain sectors. BlackRock's evaluation of ESG criteria is subjective and may change over time.

The Fund may not include all instruments in its ESG-related assessments, and may place weight on other factors when selecting investments. In addition, the Fund may not be successful in its ESG-related objectives. There is no guarantee that these objectives will be achieved, and such assessments are at BlackRock's discretion.

■ **Investment Style Risk** — Under certain market conditions, growth investments have performed better during the later stages of economic expansion. Therefore, this investment style may over time go in and out of favor. At times when the investment style used by the Fund is out of favor, the Fund may underperform other equity funds that use different investment styles.

■ **Non-Diversification Risk** — The Fund is a non-diversified fund. Because the Fund may invest in securities of a smaller number of issuers, it may be more exposed to the risks associated with and developments affecting an individual issuer than a fund that invests more widely.

■ **Convertible Securities Risk** — The market value of a convertible security performs like that of a regular debt security; that is, if market interest rates rise, the value of a convertible security usually falls. In addition, convertible securities are subject to the risk that the issuer will not be able to pay interest, principal or dividends when due, and their market value may change based on changes in the issuer's credit rating or the market's perception of the issuer's creditworthiness. Since it derives a portion of its value from the common stock into which it may be converted, a convertible security is also subject to the same types of market and issuer risks that apply to the underlying common stock, including the potential for increased volatility in the price of the convertible security.

■ **Derivatives Risk** — The Fund's use of derivatives may increase its costs, reduce the Fund's returns and/or increase volatility. Derivatives involve significant risks, including:

Leverage Risk — The Fund's use of derivatives can magnify the Fund's gains and losses. Relatively small market movements may result in large changes in the value of a derivatives position and can result in losses that greatly exceed the amount originally invested.

Market Risk — Some derivatives are more sensitive to interest rate changes and market price fluctuations than other securities. The Fund could also suffer losses related to its derivatives positions as a result of unanticipated market movements, which losses are potentially unlimited. Finally, BlackRock may not be able to predict correctly the direction of securities prices, interest rates and other economic factors, which could cause the Fund's derivatives positions to lose value.

Counterparty Risk — Derivatives are also subject to counterparty risk, which is the risk that the other party in the transaction will be unable or unwilling to fulfill its contractual obligation, and the related risks of having concentrated exposure to such a counterparty.

Illiquidity Risk — The possible lack of a liquid secondary market for derivatives and the resulting inability of the Fund to sell or otherwise close a derivatives position could expose the Fund to losses and could make derivatives more difficult for the Fund to value accurately.

Operational Risk — The use of derivatives includes the risk of potential operational issues, including documentation issues, settlement issues, systems failures, inadequate controls and human error.

Legal Risk — The risk of insufficient documentation, insufficient capacity or authority of counterparty, or legality or enforceability of a contract.

Volatility and Correlation Risk — Volatility is defined as the characteristic of a security, an index or a market to fluctuate significantly in price within a short time period. A risk of the Fund's use of derivatives is that the fluctuations in their values may not correlate with the overall securities markets.

Valuation Risk — Valuation for derivatives may not be readily available in the market. Valuation may be more difficult in times of market turmoil since many investors and market makers may be reluctant to purchase complex instruments or quote prices for them.

Hedging Risk — Hedges are sometimes subject to imperfect matching between the derivative and the underlying security, and there can be no assurance that the Fund's hedging transactions will be effective. The use of hedging may result in certain adverse tax consequences.

Tax Risk — Certain aspects of the tax treatment of derivative instruments, including swap agreements and commodity-linked derivative instruments, are currently unclear and may be affected by changes in legislation, regulations or other legally binding authority. Such treatment may be less favorable than that given to a direct investment in an underlying asset and may adversely affect the timing, character and amount of income the Fund realizes from its investments.

- **Foreign Securities Risk** — Foreign investments often involve special risks not present in U.S. investments that can increase the chances that the Fund will lose money. These risks include:
 - The Fund generally holds its foreign securities and cash in foreign banks and securities depositories, which may be recently organized or new to the foreign custody business and may be subject to only limited or no regulatory oversight.
 - Changes in foreign currency exchange rates can affect the value of the Fund's portfolio.
 - The economies of certain foreign markets may not compare favorably with the economy of the United States with respect to such issues as growth of gross national product, reinvestment of capital, resources and balance of payments position.
 - The governments of certain countries, or the U.S. Government with respect to certain countries, may prohibit or impose substantial restrictions through capital controls and/or sanctions on foreign investments in the capital markets or certain industries in those countries, which may prohibit or restrict the ability to own or transfer currency, securities, derivatives or other assets.
 - Many foreign governments do not supervise and regulate stock exchanges, brokers and the sale of securities to the same extent as does the United States and may not have laws to protect investors that are comparable to U.S. securities laws.
 - Settlement and clearance procedures in certain foreign markets may result in delays in payment for or delivery of securities not typically associated with settlement and clearance of U.S. investments.
 - The Fund's claims to recover foreign withholding taxes may not be successful, and if the likelihood of recovery of foreign withholding taxes materially decreases, due to, for example, a change in tax regulation or approach in the foreign country, accruals in the Fund's net asset value for such refunds may be written down partially or in full, which will adversely affect the Fund's net asset value.
- **Leverage Risk** — Some transactions may give rise to a form of economic leverage. These transactions may include, among others, derivatives, and may expose the Fund to greater risk and increase its costs. The use of leverage may cause the Fund to liquidate portfolio positions when it may not be advantageous to do so to satisfy its obligations or

to meet the applicable requirements of the Investment Company Act and the rules thereunder. Increases and decreases in the value of the Fund's portfolio will be magnified when the Fund uses leverage.

- **Market Risk and Selection Risk** — Market risk is the risk that one or more markets in which the Fund invests will go down in value, including the possibility that the markets will go down sharply and unpredictably. The value of a security or other asset may decline due to changes in general market conditions, economic trends or events that are not specifically related to the issuer of the security or other asset, or factors that affect a particular issuer or issuers, exchange, country, group of countries, region, market, industry, group of industries, sector or asset class. Local, regional or global events such as war, acts of terrorism, the spread of infectious illness or other public health issues like pandemics or epidemics, recessions, or other events could have a significant impact on the Fund and its investments. Selection risk is the risk that the securities selected by Fund management will underperform the markets, the relevant indices or the securities selected by other funds with similar investment objectives and investment strategies. This means you may lose money.

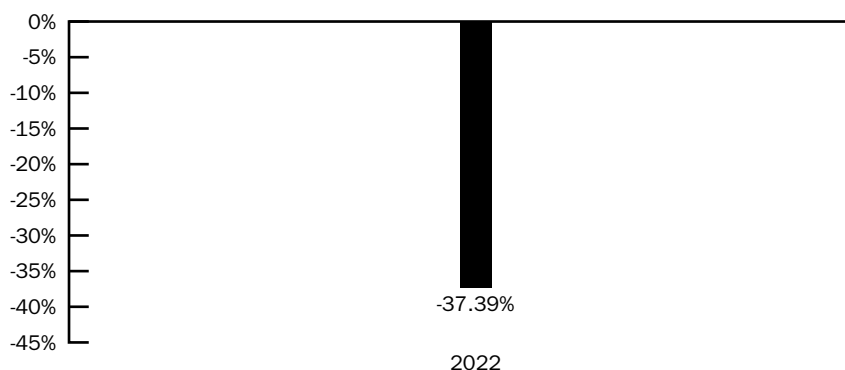
An outbreak of an infectious coronavirus (COVID-19) that was first detected in December 2019 developed into a global pandemic that has resulted in numerous disruptions in the market and has had significant economic impact leaving general concern and uncertainty. Although vaccines have been developed and approved for use by various governments, the duration of the pandemic and its effects cannot be predicted with certainty. The impact of this coronavirus, and other epidemics and pandemics that may arise in the future, could affect the economies of many nations, individual companies and the market in general ways that cannot necessarily be foreseen at the present time.

- **“New Issues” Risk** — “New issues” are IPOs of equity securities. Securities issued in IPOs have no trading history, and information about the companies may be available for very limited periods. In addition, the prices of securities sold in IPOs may be highly volatile or may decline shortly after the IPO.
- **Preferred Securities Risk** — Preferred securities may pay fixed or adjustable rates of return. Preferred securities are subject to issuer-specific and market risks applicable generally to equity securities. In addition, a company's preferred securities generally pay dividends only after the company makes required payments to holders of its bonds and other debt. For this reason, the value of preferred securities will usually react more strongly than bonds and other debt to actual or perceived changes in the company's financial condition or prospects. Preferred securities of smaller companies may be more vulnerable to adverse developments than preferred securities of larger companies.
- **Small and Mid-Capitalization Company Risk** — Companies with small or mid-size market capitalizations will normally have more limited product lines, markets and financial resources and will be dependent upon a more limited management group than larger capitalized companies. In addition, it is more difficult to get information on smaller companies, which tend to be less well known, have shorter operating histories, do not have significant ownership by large investors and are followed by relatively few securities analysts.

Performance Information

The information provides some indication of the risks of investing in the Fund. The table compares the Fund's performance to that of the Russell 1000[®] Growth Index. To the extent that dividends and distributions have been paid by the Fund, the performance information for the Fund in the chart and table assumes reinvestment of the dividends and distributions. As with all such investments, past performance (before and after taxes) is not an indication of future results. The table includes all applicable fees. If BlackRock and its affiliates had not waived or reimbursed certain Fund expenses during these periods, the Fund's returns would have been lower. Information on the Fund's performance, including its current net asset value, can be obtained by visiting <http://www.blackrock.com> or can be obtained by phone at (800) 882-0052.

Class K Shares
ANNUAL TOTAL RETURNS
BlackRock Sustainable U.S. Growth Equity Fund
As of 12/31



During the period shown in the bar chart, the highest return for a quarter was -0.84% (quarter ended December 31, 2022) and the lowest return for a quarter was -23.92% (quarter ended June 30, 2022). The year-to-date return as of June 30, 2023 was 33.18%.

For the periods ended 12/31/22
Average Annual Total Returns

	1 Year	Since Inception (October 19, 2021)
BlackRock Sustainable U.S. Growth Equity Fund — Class K Shares		
Return Before Taxes	(37.39)%	(31.29)%
Return After Taxes on Distributions	(37.41)%	(31.31)%
Return After Taxes on Distributions and Sale of Fund Shares	(22.12)%	(23.62)%
Russell 1000® Growth Index (Reflects no deduction for fees, expenses or taxes)	(29.14)%	(21.03)%

After-tax returns are calculated using the historical highest individual federal marginal income tax rates and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown, and the after-tax returns shown are not relevant to investors who hold their shares through tax-deferred arrangements, such as 401(k) plans or individual retirement accounts.

Investment Manager

The Fund's investment manager is BlackRock Advisors, LLC (previously defined as "BlackRock").

Portfolio Managers

Name	Portfolio Manager of the Fund Since	Title
Saverio Console	2021	Director of BlackRock, Inc.
Caroline Bottinelli	2022	Director of BlackRock, Inc.

Purchase and Sale of Fund Shares

Class K Shares of the Fund are available only to (i) certain employee benefit plans, such as health savings accounts, and certain employer-sponsored retirement plans (not including SEP IRAs, SIMPLE IRAs and SARSEPs) (collectively, "Employer-Sponsored Retirement Plans"), (ii) collective trust funds, investment companies and other pooled investment vehicles, each of which may purchase shares of the Fund through a Financial Intermediary that has entered into an agreement with the Fund's distributor to purchase such shares, (iii) "Institutional Investors," which include, but are not limited to, endowments, foundations, family offices, banks and bank trusts, local, city, and state governmental institutions, corporations and insurance company separate accounts, each of which may purchase shares of the Fund through a Financial Intermediary that has entered into an agreement with the Fund's distributor to purchase such shares, (iv) clients of private banks that purchase shares of the Fund through a Financial Intermediary that has entered into an agreement with the Fund's distributor to sell such shares; (v) fee-based advisory platforms of a

Financial Intermediary that (a) has specifically acknowledged in a written agreement with the Fund's distributor and/or its affiliate(s) that the Financial Intermediary shall offer such shares to fee-based advisory clients through an omnibus account held at the Fund or (b) transacts in the Fund's shares through another intermediary that has executed such an agreement and (vi) any other investors who met the eligibility criteria for BlackRock Shares or Class K Shares prior to August 15, 2016 and have continually held Class K Shares of the Fund in the same account since August 15, 2016.

You may purchase or redeem shares of the Fund each day the New York Stock Exchange is open. Purchase orders may also be placed by calling (800) 537-4942, by mail (c/o BlackRock Funds, P.O. Box 534429, Pittsburgh, Pennsylvania 15253-4429), or online at www.blackrock.com. Institutional Investors are subject to a \$5 million minimum initial investment requirement. Other investors, including Employer-Sponsored Retirement Plans, have no minimum initial investment requirement. There is no minimum investment amount for additional purchases.

Tax Information

Different income tax rules apply depending on whether you are invested through a qualified tax-exempt plan described in section 401(a) of the Internal Revenue Code of 1986, as amended. If you are invested through such a plan (and Fund shares are not "debt-financed property" to the plan), then the dividends paid by the Fund and the gain realized from a redemption or exchange of Fund shares will generally not be subject to U.S. federal income taxes until you withdraw or receive distributions from the plan. If you are not invested through such a plan, then the Fund's dividends and gain from a redemption or exchange may be subject to U.S. federal income taxes and may be taxed as ordinary income or capital gains, unless you are a tax-exempt investor.

Payments to Broker/Dealers and Other Financial Intermediaries

If you purchase shares of the Fund through a Financial Intermediary, the Fund and BlackRock Investments, LLC, the Fund's distributor, or its affiliates may pay the Financial Intermediary for the sale of Fund shares and related services. These payments may create a conflict of interest by influencing the Financial Intermediary and your individual financial professional to recommend the Fund over another investment.

Class K Shares are only available through a Financial Intermediary if the Financial Intermediary will not receive from Fund assets, or the Fund's distributor's or an affiliate's resources, any commission payments, shareholder servicing fees (including sub-transfer agent and networking fees), or distribution fees (including Rule 12b-1 fees) with respect to assets invested in Class K Shares.

Ask your individual financial professional or visit your Financial Intermediary's website for more information.

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