

Summary Prospectus

BlackRock Variable Series Funds, Inc.

- **BlackRock S&P 500 Index V.I. Fund (Class I, Class II, Class III)**

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/insurance>. 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 May 1, 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 S&P 500 Index V.I. Fund

Investment Objective

The investment objective of BlackRock S&P 500 Index V.I. Fund (the “Fund”) is to seek investment results that, before expenses, correspond to the aggregate price and yield performance of the Standard & Poor’s 500 Index (the “S&P 500” or the “Underlying Index”).

Fees and Expenses of the Fund

This table describes the fees and expenses that you may pay if you buy, hold and sell shares of the Fund. **The table and example below do not include separate account fees and expenses, and expenses would be higher if these fees and expenses were included.** Please refer to your variable annuity or insurance contract (the “Contract”) prospectus for information on the separate account fees and expenses associated with your Contract.

Shareholder Fees (fees paid directly from your investment)

The Fund is not subject to any shareholder fees.

Annual Fund Operating Expenses (expenses that you pay each year as a percentage of the value of your investment)	Class I Shares	Class II Shares	Class III Shares
Management Fees ¹	0.07%	0.07%	0.07%
Distribution and/or Service (12b-1) Fees	None	0.15%	0.25%
Other Expenses	0.07%	0.07%	0.07%
Total Annual Fund Operating Expenses	0.14%	0.29%	0.39%
Fee Waivers and/or Expense Reimbursements ^{1,2}	—	—	—
Total Annual Fund Operating Expenses After Fee Waivers and/or Expense Reimbursements ^{1,2}	0.14%	0.29%	0.39%

¹ As described in the “Management of the Funds” section of the Fund’s prospectus, BlackRock Advisors, LLC (“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, 2024. 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, 2024. The contractual agreements may be terminated upon 90 days’ notice by a majority of the non-interested directors of BlackRock Variable Series Funds, Inc. (the “Company”) or by a vote of a majority of the outstanding voting securities of the Fund.

² As described in the “Management of the Funds” section of the Fund’s prospectus, 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 0.15% (for Class I Shares), 0.30% (for Class II Shares) and 0.40% (for Class III Shares) of average daily net assets through June 30, 2024. BlackRock has also contractually agreed to reimburse fees in order to limit certain operational and recordkeeping fees to 0.05% (for Class I Shares), 0.05% (for Class II Shares) and 0.05% (for Class III Shares) of average daily net assets through June 30, 2024. Each of these contractual agreements may be terminated upon 90 days’ notice by a majority of the non-interested directors of the Company 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. The Example does not reflect charges imposed by the Contract. See the Contract prospectus for information on such charges. Although your actual costs may be higher or lower, based on these assumptions and the net expenses shown in the fee table, your costs would be:

	1 Year	3 Years	5 Years	10 Years
Class I Shares	\$14	\$ 45	\$ 79	\$179
Class II Shares	\$30	\$ 93	\$163	\$368
Class III Shares	\$40	\$125	\$219	\$493

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. These costs, which are not reflected in annual fund operating expenses or in the Example, affect the Fund’s performance. During the most recent fiscal year, the Fund’s portfolio turnover rate was 2% of the average value of its portfolio.

Principal Investment Strategies of the Fund

The Fund tries to match the performance of the S&P 500 as closely as possible before the deduction of Fund expenses. The S&P 500 is a market-weighted index composed of approximately 500 common stocks issued by large-capitalization U.S. companies in a wide range of businesses and which collectively represent a substantial portion of all common stocks publicly traded in the United States. A market-weighted index is an index in which the weighting of each security is based on its market capitalization.

Under normal circumstances, the Fund invests at least 80% of its assets in the common stocks represented in the S&P 500 and in derivative instruments linked to the S&P 500. The Fund will generally invest substantially all of its assets in such common stocks and instruments. The Fund employs a “passive” approach that attempts to remain invested at all times in a portfolio of assets the performance of which is expected to match approximately that of the S&P 500.

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 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.

■ **Index-Related Risk** — There is no guarantee that the Fund’s investment results will have a high degree of correlation to those of the Underlying Index or that the Fund will achieve its investment objective. Market disruptions or high volatility, other unusual market circumstances and regulatory restrictions could have an adverse effect on the Fund’s ability to adjust its exposure to the required levels in order to track the Underlying Index. Errors in index data, index computations or the construction of the Underlying Index in accordance with its methodology may occur from time to time and may not be identified and corrected by the index provider for a period of time or at all, which may have an adverse impact on the Fund and its shareholders. Unusual market conditions or other unforeseen circumstances (such as natural disasters, political unrest or war) may impact the index provider or a third-party data provider and could cause the Index Provider to postpone a scheduled rebalance. This could cause the Underlying Index to vary from its normal or expected composition.

An index fund has operating and other expenses while an index does not. As a result, while the Fund will attempt to track the S&P 500 as closely as possible, it will tend to underperform the Underlying Index to some degree over time. If an index fund is properly correlated to its stated index, the fund will perform poorly when the index performs poorly.

■ **Passive Investment Risk** — Because BlackRock does not select individual companies in the index that the Fund tracks, the Fund may hold securities of companies that present risks that an investment adviser researching individual securities might seek to avoid.

■ **Tracking Error Risk** — The Fund may be subject to tracking error, which is the divergence of the Fund’s performance from that of the Underlying Index. Tracking error may occur because of differences between the securities and other instruments held in the Fund’s portfolio and those included in the Underlying Index, pricing differences (including, as applicable, differences between a security’s price at the local market close and the Fund’s valuation of a security at the time of calculation of the Fund’s net asset value), differences in transaction costs, the Fund’s holding of uninvested cash, differences in timing of the accrual of or the valuation of dividends or other distributions, interest, the requirements to maintain pass-through tax treatment, portfolio transactions carried out to minimize the distribution of capital gains to shareholders, changes to the Underlying Index and the cost to the Fund of complying with various new or existing regulatory requirements. These risks may be heightened during times of increased market volatility or other unusual market conditions. In addition, tracking error may result because the Fund incurs fees and expenses, while the Underlying Index does not.

■ **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.

Regulatory Risk — Derivative contracts are subject to regulation under the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") in the United States and under comparable regimes in Europe, Asia and other non-U.S. jurisdictions. Under the Dodd-Frank Act, with respect to uncleared swaps, swap dealers are required to collect variation margin from the Fund and may be required by applicable regulations to collect initial margin from the Fund. Both initial and variation margin may be comprised of cash and/or securities, subject to applicable regulatory haircuts. Shares of investment companies (other than certain money market funds) may not be posted as collateral under applicable regulations. In addition, regulations adopted by global prudential regulators that are now in effect require certain bank-regulated counterparties and certain of their affiliates to include in certain financial contracts, including many derivatives contracts, terms that delay or restrict the rights of counterparties, such as the Fund, to terminate such contracts, foreclose upon collateral, exercise other default rights or restrict transfers of credit support in the event that the counterparty and/or its affiliates are subject to certain types of resolution or insolvency proceedings. The implementation of these requirements with respect to derivatives, as well as regulations under the Dodd-Frank Act regarding clearing, mandatory trading and margining of other derivatives, may increase the costs and risks to the Fund of trading in these instruments and, as a result, may affect returns to investors in the Fund.

■ **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 of 1940, as amended (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.

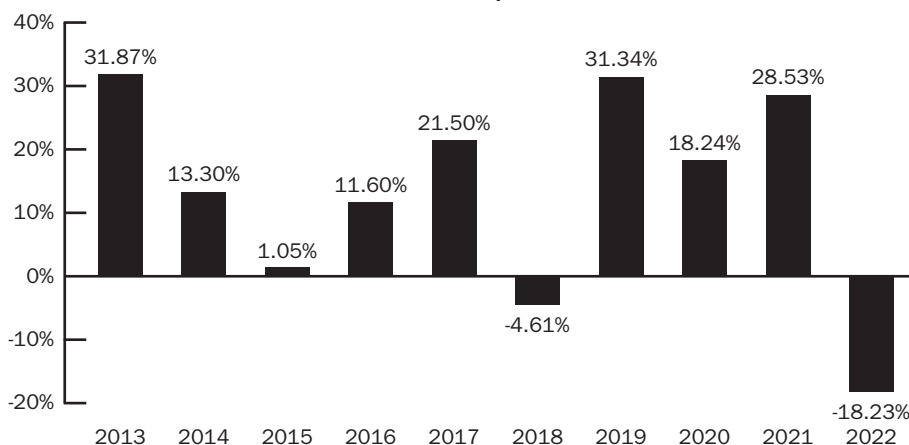
An outbreak of an infectious coronavirus (COVID-19) that was first detected in December 2019 developed into a global pandemic that has resulted in numerous disruptions in the market and has had significant economic impact leaving general concern and uncertainty. Although vaccines have been developed 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.

- **Representative Sampling Risk** — Representative sampling is a method of indexing that involves investing in a representative sample of securities that collectively have a similar investment profile to the Underlying Index and resemble the Underlying Index in terms of risk factors and other key characteristics. The Fund may or may not hold every security in the Underlying Index. When the Fund deviates from a full replication indexing strategy to utilize a representative sampling strategy, the Fund is subject to an increased risk of tracking error, in that the securities selected in the aggregate for the Fund may not have an investment profile similar to those of the Underlying Index.
- **Risk of Investing in the United States** — Certain changes in the U.S. economy, such as when the U.S. economy weakens or when its financial markets decline, may have an adverse effect on the securities to which the Fund has exposure.

Performance Information

The information shows you how the Fund’s performance has varied year by year and provides some indication of the risks of investing in the Fund. The table compares the Fund’s performance to that of the S&P 500® Index. Separate account fees and expenses are not reflected in the bar chart. If they did, returns would be less than those shown. The returns for Class III Shares prior to February 14, 2018, the recommencement of Class III Shares, are based upon performance of the Fund’s Class I Shares, as adjusted to reflect the distribution and/or service (12b-1) fees applicable to Class III Shares. This information may be considered when assessing the performance of Class III Shares, but does not represent the actual performance of Class III Shares. 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 is not an indication of future results. If the Fund’s investment manager and its affiliates had not waived or reimbursed certain Fund expenses during these periods, the Fund’s returns would have been lower.

**Class I Shares
ANNUAL TOTAL RETURNS
BlackRock S&P 500 Index V.I. Fund
As of 12/31**



During the ten-year period shown in the bar chart, the highest return for a quarter was 20.51% (quarter ended June 30, 2020) and the lowest return for a quarter was -19.65% (quarter ended March 31, 2020).

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

	1 Year	5 Years	10 Years
BlackRock S&P 500 Index V.I. Fund: Class I Shares	(18.23)%	9.26%	12.29%
BlackRock S&P 500 Index V.I. Fund: Class II Shares	(18.36)%	9.09%	12.12%
BlackRock S&P 500 Index V.I. Fund: Class III Shares	(18.42)%	8.99%	12.01%
S&P 500® Index (Reflects no deduction for fees, expenses or taxes)	(18.11)%	9.42%	12.56%

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
Paul Whitehead	2022	Managing Director of BlackRock, Inc.
Jennifer Hsui, CFA	2016	Managing Director of BlackRock, Inc.

Purchase and Sale of Fund Shares

Shares of the Fund currently are sold either directly or indirectly (through other variable insurance funds) to separate accounts of insurance companies (the "Insurance Companies") and certain accounts administered by the Insurance Companies (the "Accounts") to fund benefits under the Contracts issued by the Insurance Companies. Shares of the Fund may be purchased or sold each day the New York Stock Exchange is open.

The Fund does not have any initial or subsequent investment minimums. However, your Contract may require certain investment minimums. See your Contract prospectus for more information.

Tax Information

Distributions made by the Fund to an Account, and exchanges and redemptions of Fund shares made by an Account, ordinarily do not cause the corresponding Contract holder to recognize income or gain for U.S. federal income tax purposes. See the Contract prospectus for information regarding the U.S. federal income tax treatment of the distributions to Accounts and the holders of the Contracts.

Payments to Broker/Dealers and Other Financial Intermediaries

BlackRock and its affiliates may make payments relating to distribution and sales support activities to the Insurance Companies and other financial intermediaries for the sale of Fund shares and related services. These payments may create a conflict of interest by influencing the Insurance Company or other financial intermediary and your individual financial professional to recommend the Fund over another investment. Visit your Insurance Company's website, which may have more information.

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BlackRock

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