

Summary Prospectus

BlackRock Funds III | Investor P Shares

- **iShares U.S. Aggregate Bond Index Fund**

Investor P: BMOPX

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) 441-7762 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 April 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 iShares U.S. Aggregate Bond Index Fund

Investment Objective

iShares U.S. Aggregate Bond Index Fund (the “Fund”), a series of BlackRock Funds III (the “Trust”), seeks to provide investment results that correspond to the total return performance of fixed-income securities in the aggregate, as represented by the Bloomberg U.S. Aggregate Bond Index (the “Bloomberg U.S. Aggregate Index” 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. **You may pay other fees, such as brokerage commissions and other fees to your Financial Intermediary (as defined below), which are not reflected in the table and example below.** You may qualify for sales charge discounts if you and your family invest, or agree to invest in the future, at least \$25,000 in the fund complex advised by BlackRock Fund Advisors (“BFA”) or its affiliates. More information about these and other discounts is available from your Financial Intermediary and in the “Details About the Share Class” section on page 18 of the Fund’s prospectus and in the “Purchase of Shares” section on page II-91 of Part II of the Fund’s Statement of Additional Information.

Shareholder Fees (fees paid directly from your investment)	Investor P Shares
Maximum Sales Charge (Load) Imposed on Purchases (as a percentage of offering price)	4.00%
Maximum Deferred Sales Charge (Load) (as a percentage of offering price of redemption proceeds, whichever is lower)	None
Annual Fund Operating Expenses (expenses that you pay each year as a percentage of the value of your investment)¹	
Management Fee ^{1,2,3}	0.04%
Distribution and/or Service (12b-1) Fees	0.25%
Other Expenses ⁴	0.06%
Administration Fees	0.06%
Independent Expenses ⁴	—
Acquired Fund Fees and Expenses ⁵	0.01%
Total Annual Fund Operating Expenses ⁵	0.36%
Fee Waivers and/or Expense Reimbursements ^{2,3,4}	(0.01)%
Total Annual Fund Operating Expenses After Fee Waivers and/or Expense Reimbursements ^{2,3,4}	0.35%

¹ The fees and expenses shown in the table above and the example that follows include both the expenses of the Fund and the Fund’s share of the allocated expenses of U.S. Total Bond Index Master Portfolio (the “Master Portfolio”), a series of Master Investment Portfolio (“MIP”). Management fees are paid by the Master Portfolio.

² BFA, the investment adviser for the Master Portfolio, has contractually agreed to waive its management fee by the amount of investment advisory fees the Master Portfolio pays to BFA indirectly through its investment in affiliated money market funds through June 30, 2024. The agreement may be terminated upon 90 days’ notice by a majority of the non-interested trustees of MIP or by a vote of a majority of the outstanding voting securities of the Master Portfolio.

³ As described in the “Management of the Fund” section of the Fund’s prospectus beginning on page 29, BFA has contractually agreed to waive the management fee with respect to any portion of the Master Portfolio’s assets estimated to be attributable to investments in other equity and fixed-income mutual funds and exchange-traded funds managed by BFA or its affiliates that have a contractual management fee, through June 30, 2024. The contractual agreement may be terminated upon 90 days’ notice by a majority of the non-interested trustees of MIP or by a vote of a majority of the outstanding voting securities of the Master Portfolio.

⁴ Independent Expenses consist of the Fund’s allocable portion of the fees and expenses of the independent trustees of the Trust and MIP, counsel to such independent trustees and the independent registered public accounting firm that provides audit services to the Fund and the Master Portfolio. BlackRock Advisors, LLC (“BAL”), the administrator for the Fund, and BFA have contractually agreed to reimburse, or provide offsetting credits to, the Fund and the Master Portfolio, as applicable, for Independent Expenses through June 30, 2024. After giving effect to such contractual arrangements, Independent Expenses will be 0.00%. Such contractual arrangements may not be terminated prior to July 1, 2024 without the consent of the Boards of Trustees of the Trust and of MIP.

⁵ The Total Annual Fund Operating Expenses do not correlate to the ratio of expenses to average net assets given in the Fund’s most recent annual report, which does not include Acquired Fund Fees and Expenses.

Example:

This Example is intended to help you compare the cost of investing in shares of the Fund with the cost of investing in other mutual funds. The Example assumes that you invest \$10,000 in shares of 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
Investor P Shares	\$434	\$510	\$593	\$836

Portfolio Turnover:

The Master Portfolio 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. During the most recent fiscal year, the Master Portfolio's portfolio turnover rate was 161% of the average value of its portfolio.

Principal Investment Strategies of the Fund

The Fund pursues its investment objective by seeking to match the total return performance of the Bloomberg U.S. Aggregate Index, which is composed of approximately 10,000 fixed-income securities. The fixed-income securities that comprise the Bloomberg U.S. Aggregate Index include U.S. Government securities and corporate bonds, as well as mortgage-backed securities, asset-backed securities and commercial mortgage-backed securities. All securities in the Bloomberg U.S. Aggregate Index are investment-grade. The Fund maintains a weighted average maturity consistent with that of the Bloomberg U.S. Aggregate Index, which generally ranges between 5 and 10 years. The Fund invests in a representative sample of these securities. Securities are selected for investment by the Fund in accordance with their relative proportion within the Bloomberg U.S. Aggregate Index as well as based on credit quality, issuer sector, maturity structure, coupon rates and callability, among other factors. BFA, the investment adviser to the Master Portfolio in which the Fund invests, considers investments that provide substantially similar exposure to securities in the Bloomberg U.S. Aggregate Index to be investments comprising the Fund's benchmark index. For example, the Fund may invest in mortgage dollar rolls and participate in to-be-announced ("TBA") transactions on a regular basis to obtain exposure to mortgage-backed securities.

The Fund is managed by determining which securities are to be purchased or sold to reflect, to the extent feasible, the investment characteristics of its benchmark index. Under normal circumstances, at least 90% of the value of the Fund's assets, plus the amount of any borrowing for investment purposes, is invested in securities comprising the Bloomberg U.S. Aggregate Index, which, for the Fund, are considered bonds.

The Fund is a "feeder" fund that invests all of its assets in the Master Portfolio of MIP, which has the same investment objective and strategies as the Fund. All investments are made at the Master Portfolio level. This structure is sometimes called a "master/feeder" structure. The Fund's investment results will correspond directly to the investment results of the Master Portfolio. For simplicity, the prospectus uses the name of the Fund or the term "Fund" (as applicable) to include the Master Portfolio.

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. An investment in the Fund is not a bank deposit and is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. 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.

■ **Debt Securities Risk** — Debt securities, such as bonds, involve interest rate risk, credit risk, extension risk, and prepayment risk, among other things.

Interest Rate Risk — The market value of bonds and other fixed-income securities changes in response to interest rate changes and other factors. Interest rate risk is the risk that prices of bonds and other fixed-income securities will increase as interest rates fall and decrease as interest rates rise.

The Fund may be subject to a greater risk of rising interest rates due to the recent period of historically low interest rates. For example, if interest rates increase by 1%, assuming a current portfolio duration of ten years, and all other

factors being equal, the value of the Fund's investments would be expected to decrease by 10%. (Duration is a measure of the price sensitivity of a debt security or portfolio of debt securities to relative changes in interest rates.) The magnitude of these fluctuations in the market price of bonds and other fixed-income securities is generally greater for those securities with longer maturities. Fluctuations in the market price of the Fund's investments will not affect interest income derived from instruments already owned by the Fund, but will be reflected in the Fund's net asset value. The Fund may lose money if short-term or long-term interest rates rise sharply in a manner not anticipated by Fund management.

To the extent the Fund invests in debt securities that may be prepaid at the option of the obligor (such as mortgage-backed securities), the sensitivity of such securities to changes in interest rates may increase (to the detriment of the Fund) when interest rates rise. Moreover, because rates on certain floating rate debt securities typically reset only periodically, changes in prevailing interest rates (and particularly sudden and significant changes) can be expected to cause some fluctuations in the net asset value of the Fund to the extent that it invests in floating rate debt securities.

These basic principles of bond prices also apply to U.S. Government securities. A security backed by the "full faith and credit" of the U.S. Government is guaranteed only as to its stated interest rate and face value at maturity, not its current market price. Just like other fixed-income securities, government-guaranteed securities will fluctuate in value when interest rates change.

A general rise in interest rates has the potential to cause investors to move out of fixed-income securities on a large scale, which may increase redemptions from funds that hold large amounts of fixed-income securities. Heavy redemptions could cause the Fund to sell assets at inopportune times or at a loss or depressed value and could hurt the Fund's performance.

Credit Risk — Credit risk refers to the possibility that the issuer of a debt security (i.e., the borrower) will not be able to make payments of interest and principal when due. Changes in an issuer's credit rating or the market's perception of an issuer's creditworthiness may also affect the value of the Fund's investment in that issuer. The degree of credit risk depends on both the financial condition of the issuer and the terms of the obligation.

Extension Risk — When interest rates rise, certain obligations will be paid off by the obligor more slowly than anticipated, causing the value of these obligations to fall.

Prepayment Risk — When interest rates fall, certain obligations will be paid off by the obligor more quickly than originally anticipated, and the Fund may have to invest the proceeds in securities with lower yields.

- **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 Underlying Index 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 BFA 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 ("NAV")), 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.

- **Dollar Rolls Risk** — Dollar rolls involve the risk that the market value of the securities that the Fund is committed to buy may decline below the price of the securities the Fund has sold. These transactions may involve leverage.
- **High Portfolio Turnover Risk** — The Fund may engage in active and frequent trading of its portfolio securities. High portfolio turnover (more than 100%) may result in increased transaction costs to the Fund, including brokerage commissions, dealer mark-ups and other transaction costs on the sale of the securities and on reinvestment in other securities. The sale of Fund portfolio securities may result in the realization and/or distribution to shareholders of higher capital gains or losses as compared to a fund with less active trading policies. These effects of higher than normal portfolio turnover may adversely affect Fund performance. In addition, investment in mortgage dollar rolls and participation in TBA transactions may significantly increase the Fund's portfolio turnover rate. A TBA transaction is a method of trading mortgage-backed securities where the buyer and seller agree upon general trade parameters such as agency, settlement date, par amount and price at the time the contract is entered into but the mortgage-backed securities are delivered in the future, generally 30 days later.
- **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.

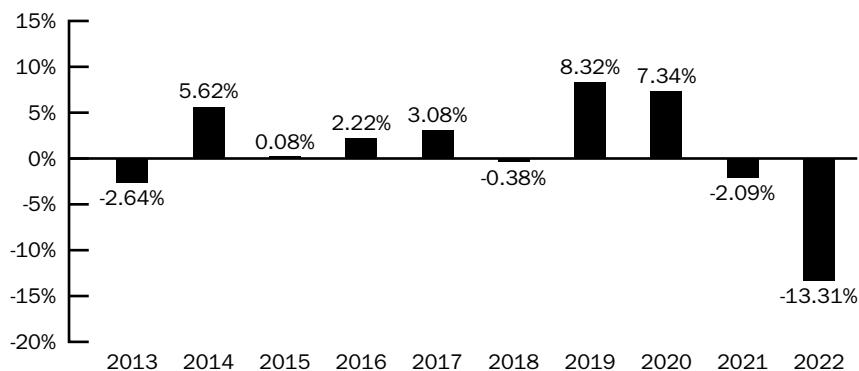
- **Mortgage- and Asset-Backed Securities Risks** — Mortgage- and asset-backed securities represent interests in "pools" of mortgages or other assets, including consumer loans or receivables held in trust. Mortgage- and asset-backed securities are subject to credit, interest rate, prepayment and extension risks. These securities also are subject to risk of default on the underlying mortgage or asset, particularly during periods of economic downturn. Small movements in interest rates (both increases and decreases) may quickly and significantly reduce the value of certain mortgage-backed securities.
- **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.
- **U.S. Government Obligations Risk** — Certain securities in which the Fund may invest, including securities issued by certain U.S. Government agencies and U.S. Government sponsored enterprises, are not guaranteed by the U.S. Government or supported by the full faith and credit of the United States.

Performance Information

The information shows how the Fund's performance has varied year by year and provides some indication of the risks of investing in the Fund. Investor P Shares of the Fund commenced operations on August 6, 2018. As a result, the returns shown below in the bar chart and table for Investor P Shares, prior to the commencement of operations on August 6, 2018, are based on the Fund's Class K Shares, which are offered in a separate prospectus, adjusted to reflect the fees and expenses applicable to Investor P Shares and, in the case of the table, the front-end sales charges applicable to Investor P Shares. The average annual total returns table (before and after taxes) compares the Fund's performance to that of the Bloomberg U.S. Aggregate 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 necessarily an indication of future results. Sales charges are not reflected in the bar chart. If they were, returns would be less than those shown. However, the table includes all applicable fees and sales charges. If BFA, BAL and their affiliates

had not waived or reimbursed certain Fund expenses during these periods, the Fund's returns would have been lower. Updated 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.

Investor P Shares
ANNUAL TOTAL RETURNS
iShares U.S. Aggregate Bond Index Fund
As of 12/31



During the ten-year period shown in the bar chart, the highest return for a quarter was 3.22% (quarter ended March 31, 2020) and the lowest return for a quarter was -5.90% (quarter ended March 31, 2022).

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

	1 Year	5 Years	10 Years
iShares U.S. Aggregate Bond Index Fund — Investor P Shares			
Return Before Taxes	(16.77)%	(1.15)%	0.24%
Return After Taxes on Distributions	(17.51)%	(2.06)%	(0.84)%
Return After Taxes on Distributions and Sale of Fund Shares	(9.91)%	(1.21)%	(0.27)%
Bloomberg U.S. Aggregate Bond Index (Reflects no deduction for fees, expenses or taxes)	(13.01)%	0.02%	1.06%

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 Adviser

The Master Portfolio's investment adviser is BlackRock Fund Advisors (previously defined as "BFA").

Portfolio Managers

Name	Portfolio Manager of the Master Portfolio Since	Title
James Mauro	2011	Managing Director of BlackRock, Inc.
Karen Uyehara	2020	Managing Director of BlackRock, Inc.

Purchase and Sale of Fund Shares

You may purchase or redeem shares of the Fund each day the New York Stock Exchange is open. Investor P Shares are only available to investors purchasing shares through registered representatives of an insurance company's broker-dealer that has entered into an agreement with the Fund's distributor to offer such shares (the "Financial Intermediary"). The Fund's initial and subsequent investment minimums generally are as follows, although the Fund may reduce or waive the minimums in some cases:

Minimum Initial Investment	\$1,000 for all accounts except: <ul style="list-style-type: none"> • \$50, if establishing an Automatic Investment Plan. • There is no investment minimum for employer-sponsored retirement plans (not including SEP IRAs, SIMPLE IRAs or SARSEPs). • There is no investment minimum for certain fee-based programs.
Minimum Additional Investment	\$50 for all accounts (with the exception of certain employer-sponsored retirement plans which may have a lower minimum).

Tax Information

The Fund's dividends and distributions 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 or are investing through a qualified tax-exempt plan described in section 401(a) of the Internal Revenue Code of 1986, as amended, in which case you may be subject to U.S. federal income tax when distributions are received from such tax-deferred arrangements.

Payments to Broker/Dealers and Other Financial Intermediaries

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

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

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