

# Summary Prospectus

July 29, 2024

## GOLDMAN SACHS HIGH YIELD MUNICIPAL FUND

Class A: GHYAX Class C: GHYCX Institutional: GHYIX Investor: GYIRX Class R6: GHYSX

Before you invest, you may want to review the Goldman Sachs High Yield Municipal Fund (the “Fund”) Prospectus, which contains more information about the Fund and its risks. You can find the Fund’s Prospectus, reports to shareholders and other information about the Fund online at [www.dfview.com/GoldmanSachs](http://www.dfview.com/GoldmanSachs). You can also get this information at no cost by calling 800-621-2550 for Institutional and Class R6 shareholders, 800-526-7384 for all other shareholders or by sending an e-mail request to [gs-funds-document-requests@gs.com](mailto:gs-funds-document-requests@gs.com). The Fund’s Prospectus and Statement of Additional Information (“SAI”), both dated July 29, 2024, are incorporated by reference into this Summary Prospectus.

### INVESTMENT OBJECTIVE

The Goldman Sachs High Yield Municipal Fund (the “Fund”) seeks a high level of current income that is exempt from regular federal income tax and may also consider the potential for capital appreciation.

### 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 financial intermediaries,**

**which are not reflected in the table and Example below.** You may qualify for sales charge discounts on purchases of Class A Shares if you invest at least \$100,000 in Goldman Sachs Funds. More information about these and other discounts is available from your financial professional and in “Shareholder Guide—Common Questions Applicable to the Purchase of Class A Shares” beginning on page 41 and in “Appendix C—Additional Information About Sales Charge Variations, Waivers and Discounts” on page 82 of the Prospectus and “Other Information Regarding Maximum Sales Charge, Purchases, Redemptions, Exchanges and Dividends” beginning on page B-187 of the Fund’s Statement of Additional Information (“SAI”).

### Shareholder Fees

(fees paid directly from your investment)

|  | Class A | Class C | Institutional | Investor | Class R6 |
|--|---------|---------|---------------|----------|----------|
| Maximum Sales Charge (Load) Imposed on Purchases (as a percentage of offering price)   | 4.50%   | None    | None          | None     | None     |
| Maximum Deferred Sales Charge (Load) (as a percentage of the lower of original purchase price or sale proceeds) <sup>1</sup> | None    | 1.00%   | None          | None     | None     |

### Annual Fund Operating Expenses

(expenses that you pay each year as a percentage of the value of your investment)

|   | Class A      | Class C      | Institutional | Investor     | Class R6     |
|---|--------------|--------------|---------------|--------------|--------------|
| Management Fees   | 0.50%        | 0.50%        | 0.50%         | 0.50%        | 0.50%        |
| Distribution and/or Service (12b-1) Fees  | 0.25%        | 0.75%        | None          | None         | None         |
| Other Expenses  | 0.14%        | 0.39%        | 0.06%         | 0.14%        | 0.05%        |
| Service Fees  | None         | 0.25%        | None          | None         | None         |
| All Other Expenses  | 0.14%        | 0.14%        | 0.06%         | 0.14%        | 0.05%        |
| <b>Total Annual Fund Operating Expenses</b>   | <b>0.89%</b> | <b>1.64%</b> | <b>0.56%</b>  | <b>0.64%</b> | <b>0.55%</b> |
| Fee Waiver and Expense Limitation <sup>2</sup>                                      | (0.04)%      | (0.04)%      | (0.02)%       | (0.04)%      | (0.02)%      |
| <b>Total Annual Fund Operating Expenses After Fee Waiver and Expense Limitation</b> | <b>0.85%</b> | <b>1.60%</b> | <b>0.54%</b>  | <b>0.60%</b> | <b>0.53%</b> |

<sup>1</sup> A contingent deferred sales charge (“CDSC”) of 1% is imposed on Class C Shares redeemed within 12 months of purchase.

<sup>2</sup> The Investment Adviser has agreed to reduce or limit “Other Expenses” (excluding acquired fund fees and expenses, transfer agency fees and expenses, service fees, taxes, interest, brokerage fees, expenses of shareholder meetings, litigation and indemnification, and extraordinary expenses) to 0.004% of the Fund’s average daily net assets. Additionally, Goldman Sachs & Co. LLC (“Goldman Sachs”), the Fund’s transfer agent, has agreed to waive a portion of its transfer agency fee (a component of “Other Expenses”) equal to 0.02% as an annual percentage rate of the average daily net assets attributable to Class A, Class C and Investor Shares of the Fund. These arrangements will remain in effect through at least July 29, 2025, and prior to such date, the Investment Adviser and Goldman Sachs may not terminate the arrangements without the approval of the Board of Trustees.

### EXPENSE 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 Class A, Class C, Institutional, Investor and/or Class R6 Shares of the Fund for the time periods indicated and then redeem all of your Class A, Class C, Institutional, Investor and/or Class R6 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 (except that the Example incorporates any applicable fee waiver and/or expense limitations arrangements for only the first year). 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 A Shares                          | \$533  | \$717   | \$917   | \$1,493  |
| Class C Shares                          | \$263  | \$513   | \$888   | \$1,940  |
| Institutional Shares                    | \$55   | \$177   | \$311   | \$700    |
| Investor Shares                         | \$61   | \$201   | \$353   | \$795    |
| Class R6 Shares                         | \$54   | \$174   | \$305   | \$687    |
| Class C Shares – Assuming no redemption | \$163  | \$513   | \$888   | \$1,940  |

### PORTFOLIO TURNOVER

The Fund pays transaction costs when it buys and sells securities or instruments (*i.e.*, “turns over” its portfolio). A high rate of portfolio turnover may result in increased transaction costs, which must be borne by the Fund and its shareholders, and is also likely to result in higher short-term capital gains for taxable shareholders. These costs are not reflected in the annual fund operating expenses or in the expense example above, but are reflected in the Fund's performance. The Fund's portfolio turnover rate for the fiscal year ended March 31, 2024 was 38% of the average value of its portfolio.

### PRINCIPAL STRATEGY

The Fund invests, under normal circumstances, at least 80% of its net assets plus any borrowings for investment purposes (measured at the time of purchase) (“Net Assets”) in fixed income securities issued by or on behalf of states, territories and possessions of the United States (including the District of Columbia) and the political subdivisions, agencies and instrumentalities thereof (“Municipal Securities”), the interest on which is exempt from regular federal income tax (*i.e.*, excluded from gross income for federal income tax purposes). The Fund invests, under normal circumstances, a majority of its total assets measured at the time of purchase (“Total Assets”) in high-yield Municipal Securities. High-yield securities are securities that, at the time of purchase, are medium quality or non-investment grade. Medium quality securities are rated BBB or Baa by a nationally recognized statistical rating organization (“NRSRO”), and non-investment grade securities are securities rated BB+, Ba1 or below by an NRSRO. Non-investment grade securities are commonly known as “junk bonds.” The Fund may also invest in unrated securities determined by the Investment Adviser to be of comparable credit quality. The Fund may purchase the securities of issuers that are in default.

Under normal circumstances, the Fund may also invest the remainder of its Total Assets in higher grade fixed income securities. In pursuing its principal investment strategy, the Investment Adviser will assess the relative value in the Municipal Securities market from both a credit and yield curve perspective. As part of the Investment Adviser's fundamental investment process, the Investment Adviser may integrate environmental, social and governance (“ESG”) factors alongside traditional fundamental factors. In addition, individual securities will be considered for purchase or sale based on credit profile, risk, structure, pricing, and portfolio impact, as well as duration management, restructuring, opportunistic trading and tax loss harvesting. No one

factor or consideration is determinative in the fundamental investment process. Tax-exempt securities offering the high current income sought by the Fund may be predominantly in the lower rating categories of NRSROs (BB+/Ba1 or lower).

The Fund may focus its investments in issuers within the same state or economic sector.

The Fund may invest up to 100% of its Net Assets in private activity bonds, the interest on which (including the Fund's distributions of such interest) may be a preference item for purposes of the federal alternative minimum tax. 100% of the Fund's portfolio will be invested in U.S. dollar-denominated securities.

The Fund may also seek to obtain exposure to fixed income investments through investments in affiliated or unaffiliated investment companies, including exchange-traded funds (“ETFs”). In addition, the Fund may invest in securities of other investment companies (specifically, registered money market funds) to manage uninvested cash in the portfolio.

Under normal interest rate conditions, the Fund's duration is expected to approximate that of the Goldman Sachs High Yield Municipal Fund Composite Index (comprised of 40% Bloomberg Municipal Bond Index and 60% Bloomberg Municipal High Yield Bond Index), plus or minus two years. (Historically over the last five years, the duration of the Goldman Sachs High Yield Municipal Fund Composite Index has ranged between 5.06 and 9.32 years). “Duration” is a measure of a debt security's price sensitivity to changes in interest rates. The longer the duration of the Fund (or an individual debt security), the more sensitive its market price to changes in interest rates. For example, if market interest rates increase by 1%, the market price of a debt security with a positive duration of 3 years will generally decrease by approximately 3%. Conversely, a 1% decline in market interest rates will generally result in an increase of approximately 3% of that security's market price.

The Investment Adviser measures the Fund's performances against the Goldman Sachs High Yield Municipal Fund Composite Index, which is composed of the Bloomberg Municipal High Yield Bond Index (60%) and the Bloomberg Municipal Bond Index (40%) (with distributions reinvested).

### PRINCIPAL RISKS OF THE FUND

**Loss of money is a risk of investing in the Fund. An investment in the Fund is not a bank deposit and is not insured or guaranteed by the Federal Deposit Insurance Corporation (“FDIC”) or any government agency. The Fund should not be relied upon as a complete investment program. There can be no assurance that the Fund will achieve its investment objective. Investments in the Fund involve substantial risks which prospective investors should consider carefully before investing. The Fund's principal risks are presented below in alphabetical order, and not in the order of importance or potential exposure.**

**Credit/Default Risk.** An issuer or guarantor of fixed income securities or instruments held by the Fund (which may have low credit ratings) may default on its obligation to pay interest and repay principal or default on any other obligation. Additionally, the credit quality of securities or instruments may deteriorate rapidly, which may impair the Fund's liquidity and cause significant deterioration in net asset value (“NAV”). These risks are heightened in market environments where interest rates are rising as well as in connection with the Fund's investments in non-investment grade fixed income securities.

**Geographic and Sector Risk.** If the Fund invests a significant portion of its total assets in certain issuers within the same state, geographic region or economic sector, an adverse economic, business, political, environmental or other development affecting that state, region or sector may affect the value of the Fund's investments more than if its investments were not so focused.

**Interest Rate Risk.** When interest rates increase, fixed income securities or instruments held by the Fund will generally decline in value. Long-term fixed income securities or instruments will normally have more price volatility because of this risk than short-term fixed income securities or instruments. Changing interest rates may have unpredictable effects on the markets, may result in heightened market volatility and may detract from Fund performance. In addition, changes in monetary policy may exacerbate the risks associated with changing interest rates. Funds with longer average portfolio durations will generally be more sensitive to changes in interest rates than funds with a shorter average portfolio duration. Fluctuations in interest rates may also affect the liquidity of fixed income securities and instruments held by the Fund.

**Large Shareholder Transactions Risk.** The Fund may experience adverse effects when certain large shareholders purchase or redeem large amounts of shares of the Fund. Such large shareholder redemptions, which may occur rapidly or unexpectedly, may cause the Fund to sell portfolio securities at times when it would not otherwise do so, which may negatively impact the Fund's NAV and liquidity. Similarly, large Fund share purchases may adversely affect the Fund's performance to the extent that the Fund is delayed in investing new cash or otherwise maintains a larger cash position than it ordinarily would. These transactions may also accelerate the realization of taxable income to shareholders if such sales of investments resulted in gains, and may also increase transaction costs. In addition, a large redemption could result in the Fund's current expenses being allocated over a smaller asset base, leading to an increase in the Fund's expense ratio.

**Liquidity Risk.** The Fund may make investments that are illiquid or that may become less liquid in response to market developments or adverse investor perceptions. Illiquid investments may be more difficult to value. Liquidity risk may also refer to the risk that the Fund will not be able to pay redemption proceeds within the allowable time period because of unusual market conditions, declining prices of the securities sold, an unusually high volume of redemption requests, or other reasons. To meet redemption requests, the Fund may be forced to sell securities at an unfavorable time and/or under unfavorable conditions. Liquidity risk may be the result of, among other things, the reduced number and capacity of traditional market participants to make a market in fixed income securities or the lack of an active market. The potential for liquidity risk may be magnified by a rising interest rate environment or other circumstances where investor redemptions from fixed income funds may be higher than normal, potentially causing increased supply in the market due to selling activity. Redemptions by large shareholders may have a negative impact on the Fund's liquidity.

**Market Risk.** The market value of the securities in which the Fund invests may go up or down in response to the prospects of individual companies, particular sectors or governments and/or general economic conditions throughout the world due to increasingly interconnected global economies and financial markets. Events such as war, military conflict, acts of terrorism, social unrest, natural disasters, recessions, inflation, rapid interest rate changes, supply chain disruptions, sanctions, the spread of infectious illness or other public health threats could also significantly impact the Fund and its investments.

**Municipal Securities Risk.** Municipal Securities are subject to credit/default risk, interest rate risk and certain additional risks. The Fund may be more sensitive to adverse economic, business, political, environmental or other developments if it invests a substantial portion of its assets in the bonds of similar projects (such as those relating to education, health care, housing, transportation, and utilities), industrial development bonds, or in particular types of municipal securities (such as general obligation bonds, private activity bonds and moral obligation bonds). While interest earned on Municipal Securities is generally not subject to federal tax, any interest earned on taxable Municipal Securities is fully taxable at the federal level and may be subject to tax at the state level.

**Non-Investment Grade Fixed Income Securities Risk.** Non-investment grade fixed income securities and unrated securities of comparable credit quality (commonly known as "junk bonds") are considered speculative and are subject to the increased risk of an issuer's inability to meet principal and interest payment obligations. These securities may be subject to greater price volatility due to such factors as specific issuer developments, interest rate sensitivity, negative perceptions of the junk bond markets generally and less liquidity. The Fund may purchase the securities of issuers that are in default.

**Other Investment Companies Risk.** By investing in other investment companies (including ETFs) indirectly through the Fund, investors will incur a proportionate share of the expenses of the other investment companies held by the Fund (including operating costs and investment management fees) in addition to the fees regularly borne by the Fund. In addition, the Fund will be affected by the investment policies, practices and performance of such investment companies in direct proportion to the amount of assets the Fund invests therein.

**State/Territory Specific Risk.** The Fund's investments in municipal obligations of issuers located in a particular state or U.S. territory may be adversely affected by political, economic and regulatory developments within that state or U.S. territory. Such developments may affect the financial condition of a state's or territory's political subdivisions, agencies, instrumentalities and public authorities and heighten the risks associated with investing in bonds issued by such parties, which could, in turn, adversely affect the Fund's income, NAV, liquidity, and/or ability to preserve or realize capital appreciation.

**Tax Risk.** Any proposed or actual changes in income tax rates or the tax-exempt status of interest income from Municipal Securities can significantly affect the demand for and supply, liquidity and marketability of Municipal Securities. Such changes may affect the Fund's net asset value and ability to acquire and dispose of Municipal Securities at desirable yield and price levels.

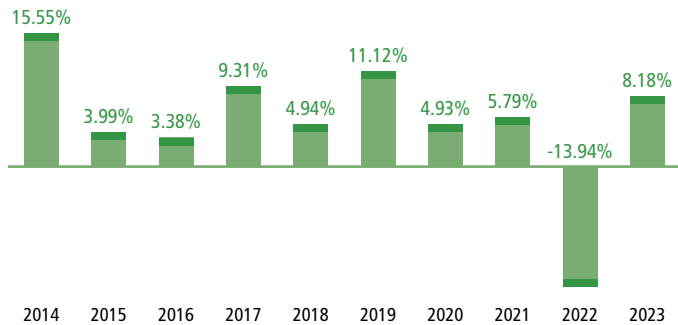
## PERFORMANCE

The bar chart and table below provide an indication of the risks of investing in the Fund by showing: (a) changes in the performance of the Fund's Institutional Shares from year to year; and (b) how the average annual total returns of the Fund's Class A, Class C, Institutional, Investor and Class R6 Shares compare to those of a regulatorily required broad-based securities market index (Bloomberg U.S. Aggregate Bond Index) (the "Regulatory Benchmark") and the Goldman Sachs High Yield Municipal Fund Composite Index (the "Performance Benchmark"), a custom benchmark comprised of the Bloomberg Municipal High Yield Bond Index (60%) and the Bloomberg Municipal Bond Index (40%) (with distributions reinvested). The Performance Benchmark is generally more representative of the market sectors and/or types of investments in which the Fund invests or to which the Fund has exposure and which the Investment Adviser uses to measure the Fund's performance. The Fund has included in the table below the performance

of the Regulatory Benchmark, which represents a broader measure of market performance, to comply with new regulatory requirements. For additional information about these benchmark indices, please see “Additional Performance and Benchmark Information” on page 22 of the Prospectus. The Fund’s past performance, before and after taxes, is not necessarily an indication of how the Fund will perform in the future. Updated performance information is available at no cost at [www.gsamfunds.com/performance](http://www.gsamfunds.com/performance) or by calling the appropriate phone number on the back cover of the Prospectus.

Performance reflects applicable fee waivers and/or expense limitations in effect during the periods shown.

### CALENDAR YEAR (INSTITUTIONAL)



|   | Returns        | Quarter ended        |
|---|----------------|----------------------|
| Year-to-Date Return                                 | 3.31%          | June 30, 2024        |
| <b>During the periods shown in the chart above:</b> | <b>Returns</b> | <b>Quarter ended</b> |
| Best Quarter Return                                 | 9.02%          | December 31, 2023    |
| Worst Quarter Return                                | -7.02%         | March 31, 2022       |

### AVERAGE ANNUAL TOTAL RETURN

| For the period ended December 31, 2023  | 1 Year | 5 Years | 10 Years | Inception Date |
|---|--------|---------|----------|----------------|
| <b>Class A Shares</b>   |        |         |          | 4/3/2000       |
| Returns Before Taxes  | 2.96%  | 1.56%   | 4.27%    |                |
| Returns After Taxes on Distributions  | 2.85%  | 1.44%   | 4.17%    |                |
| Returns After Taxes on Distributions and Sale of Fund Shares                                  | 3.29%  | 1.88%   | 4.15%    |                |
| <b>Class C Shares</b>   |        |         |          | 4/3/2000       |
| Returns Before Taxes  | 6.01%  | 1.73%   | 3.97%*   |                |
| <b>Institutional Shares</b>   |        |         |          | 4/3/2000       |
| Returns Before Taxes  | 8.18%  | 2.81%   | 5.05%    |                |
| <b>Investor Shares</b>  |        |         |          | 7/30/2010      |
| Returns Before Taxes  | 8.11%  | 2.75%   | 5.01%    |                |
| <b>Class R6 Shares</b>  |        |         |          | 11/30/2017     |
| Returns Before Taxes  | 8.19%  | 2.79%   | 5.04%**  |                |
| Goldman Sachs High Yield Municipal Fund Composite Index                                       | 8.08%  | 3.01%   | 4.22%    |                |
| Bloomberg Municipal Bond Index (reflects no deduction for fees, expenses or taxes)            | 6.40%  | 2.25%   | 3.03%    |                |
| Bloomberg Municipal High Yield Bond Index (reflects no deduction for fees, expenses or taxes) | 9.21%  | 3.49%   | 5.00%    |                |
| Bloomberg U.S. Aggregate Bond Index (reflects no deduction for fees or expenses)              | 5.53%  | 1.10%   | 1.81%    |                |

\* Class C Shares automatically convert into Class A Shares eight years after the purchase date. The 10-Year performance for Class C Shares does not reflect the conversion to Class A Shares after the first eight years of performance.

\*\* Class R6 Shares commenced operations on November 30, 2017. Prior to that date, the performance of Class R6 Shares shown in the table above is that of Institutional Shares. Performance has not been adjusted to reflect the lower expenses of Class R6 Shares. Class R6 Shares would have had higher returns because: (i) Institutional Shares and Class R6 Shares represent interests in the same portfolio of securities; and (ii) Class R6 Shares have lower expenses.

The after-tax returns are for Class A Shares only. The after-tax returns for Class C, Institutional, Investor and Class R6 Shares will vary. 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 an investor's tax situation and may differ from those shown. In addition, the after-tax returns shown are not relevant to investors who hold Fund Shares through tax-deferred arrangements such as 401(k) plans or individual retirement accounts.

#### PORTFOLIO MANAGEMENT

Goldman Sachs Asset Management, L.P. is the investment adviser for the Fund (the "Investment Adviser" or "GSAM").

*Portfolio Managers:* Scott Diamond, Managing Director, has managed the Fund since 2002; Joseph Wenzel, Vice President, has managed the Fund since 2019; and Sylvia Yeh, Managing Director, has managed the Fund since 2021.

#### BUYING AND SELLING FUND SHARES

The minimum initial investment for Class A and Class C Shares is, generally, \$1,000. The minimum initial investment for Institutional Shares is, generally, \$1,000,000 for individual or certain institutional investors, alone or in combination with other assets under the management of the Investment Adviser and its affiliates. There is no minimum for initial purchases of Investor and Class R6 Shares, except for certain institutional investors who purchase Class R6 Shares directly with the Fund's transfer agent for which the minimum initial investment is \$5,000,000. Those share classes with a minimum initial investment requirement do not impose it on certain employee benefit plans, and Institutional Shares do not impose it on certain investment advisers investing on behalf of other accounts.

The minimum subsequent investment for Class A and Class C shareholders is \$50, except for certain employee benefit plans, for which there is no minimum. There is no minimum subsequent investment for Institutional, Investor or Class R6 shareholders.

You may purchase and redeem (sell) shares of the Fund on any business day through certain intermediaries that have a relationship with Goldman Sachs, including banks, trust companies, brokers, registered investment advisers and other financial institutions ("Intermediaries").

#### TAX INFORMATION

The Fund's distributions of interest on municipal obligations generally are not subject to federal income tax; however the Fund may distribute taxable dividends, including distributions of short-term capital gains, and long-term capital gains. In addition, interest on certain obligations may be subject to the federal alternative minimum tax. To the extent that the Fund's distributions are derived from interest on obligations that are not exempt from applicable state and local taxes, such distributions will be subject to such state and local taxes.

#### PAYMENTS TO BROKER-DEALERS AND OTHER FINANCIAL INTERMEDIARIES

If you purchase the Fund through an Intermediary, the Fund and/or its related companies may pay the Intermediary for the sale of Fund shares and related services. These payments may create a conflict of interest by influencing the Intermediary and your salesperson to recommend the Fund over another investment. Ask your salesperson or visit your Intermediary's website for more information.

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