

EATON VANCE SENIOR FLOATING RATE TRUST

Form 497

February 24, 2014

Prospectus Supplement

(To Prospectus dated February 24, 2014)

(EATON VANCE LOGO)

Eaton Vance Senior Floating-Rate Trust

Up to 1,690,275 Common Shares

Eaton Vance Senior Floating-Rate Trust (the Trust, we, or our) has entered into a distribution agreement dated March 11, 2013 (the Distribution Agreement) with Eaton Vance Distributors, Inc. (Distributor) relating to the Trust's common shares of beneficial interest, \$0.01 par value (Common Shares), offered by this Prospectus Supplement and the accompanying Prospectus dated February 24, 2014. The Distributor has entered into a dealer agreement, dated March 15, 2013, (the Dealer Agreement) with UBS Securities LLC (the Dealer) with respect to the Trust relating to the Common Shares offered by this Prospectus Supplement and the accompanying Prospectus. In accordance with the terms of the Dealer Agreement, we may offer and sell our Common Shares, \$0.01 par value per share, from time to time through the Dealer as sub-placement agent for the offer and sale of the Common Shares. Under the Investment Company Act of 1940, as amended (the 1940 Act), the Trust may not sell any Common Shares at a price below the current net asset value of such Common Shares, exclusive of any distributing commission or discount. The Trust is a diversified, closed-end management investment company that commenced investment operations in November 2003. Our investment objective is to provide a high level of current income. We may, as a secondary objective, also seek preservation of capital to the extent consistent with our primary goal of high current income.

Our Common Shares are listed on the New York Stock Exchange (NYSE) under the symbol EFR. As of February 20, 2014, the last reported sale price for our Common Shares on the NYSE was \$15.26 per share.

Sales of our Common Shares, if any, under this Prospectus Supplement and the accompanying Prospectus may be made in negotiated transactions or transactions that are deemed to be at the market as defined in Rule 415 under the Securities Act of 1933, as amended (the 1933 Act), including sales made directly on the NYSE or sales made to or through a market maker other than on an exchange.

The Trust will compensate the Distributor with respect to sales of the Common Shares at a commission rate of 1% of the gross proceeds of the sale of Common Shares. The Distributor will compensate the Dealer out of this commission at a certain percentage rate of the gross proceeds of the sale of Common Shares sold under the Dealer Agreement, with the exact amount of such compensation to be mutually agreed upon by the Distributor and the Dealer from time to time. In connection with the sale of the Common Shares on the Trust's behalf, the Distributor may be deemed to be an underwriter within the meaning of the 1933 Act and the compensation of the Dealer may be deemed to be underwriting commissions or discounts.

The Common Shares have traded both at a premium and a discount to net asset value (NAV). The Trust cannot predict whether Common Shares will trade in the future at a premium or discount to NAV. The provisions of the 1940 Act generally require that the public offering price of common shares (less any underwriting commissions and discounts) must equal or exceed the NAV per share of a company's common stock (calculated within 48 hours of pricing). The Trust's issuance of Common Shares may have an adverse effect on prices in the secondary market for the Trust's Common Shares by increasing the number of Common Shares available, which may put downward pressure on the market price for the Trust's Common Shares. Shares of common stock of closed-end investment companies frequently trade at a discount from NAV, which may increase investors' risk of loss.

Investing in our securities involves certain risks. You could lose some or all of your investment. See Investment objectives, policies and risks beginning on page 22 of the accompanying Prospectus. You should consider carefully these risks together with all of the other information contained in this Prospectus Supplement and the accompanying Prospectus before making a decision to purchase our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this Prospectus Supplement or the accompanying Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Prospectus Supplement dated February 24, 2014

This Prospectus Supplement, together with the accompanying Prospectus, sets forth concisely the information about the Trust that you should know before investing. You should read this Prospectus Supplement and the accompanying Prospectus, which contain important information, before deciding whether to invest in our securities. You should retain the accompanying Prospectus and this Prospectus Supplement for future reference. A Statement of Additional Information, dated February 24, 2014 as supplemented from time to time, containing additional information about the Trust, has been filed with the Securities and Exchange Commission (SEC) and is incorporated by reference in its entirety into this Prospectus Supplement and the accompanying Prospectus. This Prospectus Supplement, the accompanying Prospectus and the Statement of Additional Information are part of a shelf registration statement that we filed with the SEC. This Prospectus Supplement describes the specific details regarding this offering, including the method of distribution. If information in this Prospectus Supplement is inconsistent with the accompanying Prospectus or the Statement of Additional Information, you should rely on this Prospectus Supplement. You may request a free copy of the Statement of Additional Information, the table of contents of which is on page 51 of the accompanying Prospectus, request a free copy of our annual and semi-annual reports, request other information or make shareholder inquiries, by calling toll-free 1-800-262-1122 or by writing to the Trust at Two International Place, Boston, Massachusetts 02110. The Trust's annual and semi-annual reports also are available on our website at <http://www.eatonvance.com> and on the SEC's website, as described below, where the Trust's Statement of Additional Information can be obtained. Information included on our website does not form part of this Prospectus Supplement or the accompanying Prospectus. You can review and copy documents we have filed at the SEC's Public Reference Room in Washington, D.C. Call 1-202-551-8090 for information. The SEC charges a fee for copies. You can get the same information free from the SEC's website (<http://www.sec.gov>). You may also e-mail requests for these documents to publicinfo@sec.gov or make a request in writing to the SEC's Public Reference Section, Washington, D.C. 20549-0102.

Our securities do not represent a deposit or obligation of, and are not guaranteed or endorsed by, any bank or other insured depository institution and are not federally insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board or any other government agency.

TABLE OF CONTENTS

You should rely only on the information contained in, or incorporated by reference into, this Prospectus Supplement and the accompanying Prospectus in making your investment decisions. The Trust has not authorized any person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. The Trust is not making an offer to sell the securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this Prospectus Supplement and the accompanying Prospectus is accurate only as of the dates on their covers. The Trust's business, financial condition and prospects may have changed since the date of its description in this Prospectus Supplement or the date of its description in the accompanying Prospectus.

Prospectus Supplement

| | |
|--|---|
| Prospectus supplement summary | 1 |
| Capitalization | 2 |
| Summary of Trust expenses | 3 |
| Market and net asset value information | 4 |
| Use of proceeds | 5 |
| Plan of distribution | 5 |
| Legal matters | 6 |
| Available information | 6 |

Prospectus

| | |
|---|----|
| Prospectus summary | 5 |
| Summary of Trust expenses | 16 |
| Financial highlights and investment performance | 17 |
| The Trust | 21 |
| Use of proceeds | 21 |
| Portfolio composition | 21 |
| Investment objectives, policies and risks | 22 |
| Management of the Trust | 40 |
| Plan of Distribution | 41 |
| Distributions | 42 |
| Federal income tax matters | 43 |
| Dividend reinvestment plan | 45 |
| Description of capital structure | 45 |
| Custodian and Transfer Agent | 49 |
| Legal opinions | 49 |
| Reports to Shareholders | 50 |
| Independent registered public accounting firm | 50 |
| Additional information | 50 |
| Table of contents for the Statement of | 51 |

| | |
|----------------------------|----|
| Additional Information | |
| The Trust's privacy policy | 52 |

Until March 21, 2014 (25 days after the date of this Prospectus Supplement), all dealers that buy, sell or trade the Common Shares, whether or not participating in this offering, may be required to deliver the Prospectus and this Prospectus Supplement. This requirement is in addition to the dealers' obligation to deliver the Prospectus and this Prospectus Supplement when acting as underwriters and with respect to their unsold allotments or subscriptions.

CAUTIONARY NOTICE REGARDING FORWARD-LOOKING STATEMENTS

This Prospectus Supplement, the accompanying Prospectus and the Statement of Additional Information contain forward-looking statements. Forward-looking statements can be identified by the words *may*, *will*, *intend*, *expect*, *estimate*, *continue*, *plan*, *anticipate*, and similar terms and the negative of such terms. Such forward-looking statements may be contained in this Prospectus Supplement as well as in the accompanying Prospectus. By their nature, all forward-looking statements involve risks and uncertainties, and actual results could differ materially from those contemplated by the forward-looking statements. Several factors that could materially affect our actual results are the performance of the portfolio of securities we hold, the price at which our shares will trade in the public markets and other factors discussed in our periodic filings with the SEC.

Although we believe that the expectations expressed in our forward-looking statements are reasonable, actual results could differ materially from those projected or assumed in our forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to change and are subject to inherent risks and uncertainties, such as those disclosed in the *Investment objectives, policies and risks* section of the accompanying Prospectus. All forward-looking statements contained or incorporated by reference in this Prospectus Supplement or the accompanying Prospectus are made as of the date of this Prospectus Supplement or the accompanying Prospectus, as the case may be. Except for our ongoing obligations under the federal securities laws, we do not intend, and we undertake no obligation, to update any forward-looking statement. The forward-looking statements contained in this Prospectus Supplement, the accompanying Prospectus and the Statement of Additional Information are excluded from the safe harbor protection provided by section 27A of the Securities Act of 1933, as amended (the *1933 Act*).

Currently known risk factors that could cause actual results to differ materially from our expectations include, but are not limited to, the factors described in the *Investment objectives, policies and risks* section of the accompanying Prospectus. We urge you to review carefully that section for a more detailed discussion of the risks of an investment in our securities.

Prospectus supplement summary

The following summary is qualified in its entirety by reference to the more detailed information included elsewhere in this Prospectus Supplement and in the accompanying Prospectus and in the Statement of Additional Information.

THE TRUST

Eaton Vance Senior Floating-Rate Trust (the Trust, we, or our) is a diversified, closed-end management investment company, which commenced operations in November 2003. The Trust offers investors the opportunity to receive a high level of current income, through a professionally managed portfolio investing primarily in senior, secured floating rate loans ("Senior Loans"), which are normally accessible only to financial institutions and large corporate and institutional investors, and are not widely available to individual investors. To the extent consistent with this objective, the Trust may also offer an opportunity for preservation of capital. Investments are based on Eaton Vance Management's ("Eaton Vance" or the "Adviser") internal research and ongoing credit analysis, which is generally not available to individual investors. An investment in the Trust may not be appropriate for all investors. There is no assurance that the Trust will achieve its investment objectives.

THE ADVISER

Eaton Vance acts as the Trust's investment adviser under an Investment Advisory Agreement (the "Advisory Agreement"). The Adviser's principal office is located at Two International Place, Boston, MA 02110. Eaton Vance, its affiliates and predecessor companies have been managing assets of individuals and institutions since 1924 and of investment companies since 1931. As of January 31, 2014, Eaton Vance and its affiliates managed approximately \$278.6 billion of fund and separate account assets on behalf of clients, including approximately \$44.1 billion in floating-rate income assets. Eaton Vance is a wholly-owned subsidiary of Eaton Vance Corp., a publicly-held holding company, which through its subsidiaries and affiliates engages primarily in investment management, administration and marketing activities.

Under the general supervision of the Trust's Board, the Adviser will carry out the investment and reinvestment of the assets of the Trust, will furnish continuously an investment program with respect to the Trust, will determine which securities should be purchased, sold or exchanged, and will implement such determinations. The Adviser will furnish to the Trust investment advice and office facilities, equipment and personnel for servicing the investments of the Trust. The Adviser will compensate all Trustees and officers of the Trust who are members of the Adviser's organization and who render investment services to the Trust, and will also compensate all other Adviser personnel who provide research and investment services to the Trust. In return for these services, facilities and payments, the Trust has agreed to pay the Adviser as compensation under the Advisory Agreement a fee in the amount of 0.75% of the average daily gross assets of the Trust. Gross assets of the Trust shall be calculated by deducting accrued liabilities of the Trust not including the amount of any preferred shares outstanding or the principal amount of any indebtedness for money borrowed. During periods in which the Trust is using leverage, the fees paid to Eaton Vance for investment advisory services will be higher than if the Trust did not use leverage because the fees paid will be calculated on the basis of the Trust's gross assets, including proceeds from any borrowings and from the issuance of preferred shares.

THE OFFERING

The Trust has entered into a distribution agreement dated March 11, 2013 (the Distribution Agreement) with Eaton Vance Distributors, Inc. (Distributor) relating to the Trust's common shares of beneficial interest, \$0.01 par value (Common Shares), offered by this Prospectus Supplement and the accompanying Prospectus dated February 24, 2014 (Offering). The Distributor has entered into a dealer agreement dated March 15, 2013 (the Dealer Agreement) with UBS Securities LLC (the Dealer) with respect to the Trust relating to the Common Shares offered by this Prospectus Supplement and the accompanying Prospectus. In accordance with the terms of the Dealer Agreement, the Trust may offer and sell up to 1,690,275 Common Shares, par value \$0.01 per Share, from time to time through the Dealer as

sub-placement agent for the offer and sale of the Common Shares.

Offerings of the Common Shares will be subject to the provisions of the Investment Company Act of 1940, as amended (the 1940 Act), which generally require that the public offering price of common shares of a closed-end investment company (exclusive of distribution commissions and discounts) must equal or exceed the net asset value per share of the company s common shares (calculated within 48 hours of pricing), absent shareholder approval or under certain other circumstances.

Sales of the Common Shares, if any, under this Prospectus Supplement and the accompanying Prospectus may be made in negotiated transactions or transactions that are deemed to be at the market as defined in Rule 415 under the Securities Act of 1933 (the 1933 Act), including sales made directly on the New York Stock Exchange (NYSE) or sales made to or through a market maker other than on an exchange. The Common Shares may not be sold through agents, underwriters or dealers without delivery or deemed delivery of a Prospectus and an accompanying Prospectus Supplement describing the method and terms of the offering of Common Shares.

LISTING AND SYMBOL

The Trust's currently outstanding Common Shares are listed on the NYSE under the symbol EFR. Any new Common Shares offered and sold hereby are expected to be listed on the NYSE and trade under this symbol. The net asset value of the Common Shares on February 20, 2014 was \$15.76 per share. As of February 20, 2014, the last reported sale price for the Common Shares was \$15.26.

USE OF PROCEEDS

The Trust currently intends to invest substantially all of the net proceeds of any sales of Common Shares pursuant to this Prospectus Supplement in accordance with its investment objectives and policies as described in the accompanying Prospectus under "Investment objectives, policies and risks" within three months of receipt of such proceeds. Such investments may be delayed up to three months if suitable investments are unavailable at the time or for other reasons, such as market volatility and lack of liquidity in the markets of suitable investments. Pending such investment, the Trust anticipates that it will invest the proceeds in short-term money market instruments, securities with remaining maturities of less than one year, cash or cash equivalents. A delay in the anticipated use of proceeds could lower returns and reduce the Trust's distribution to the holders of Common Shares ("Common Shareholders") or result in a distribution consisting principally of a return of capital.

Capitalization

We may offer and sell up to 1,690,275 of our Common Shares, \$0.01 par value per share, from time to time through the Dealer as sub-placement agent under this Prospectus Supplement and the accompanying Prospectus. There is no guarantee that there will be any sales of our Common Shares pursuant to this Prospectus Supplement and the accompanying Prospectus. The table below assumes that we will sell 1,690,275 Common Shares at a price of \$15.26 per share (the last reported sale price per share of our Common Shares on the NYSE on February 20, 2014). Actual sales, if any, of our Common Shares under this Prospectus Supplement and the accompanying Prospectus may be greater or less than \$15.26 per share, depending on the market price of our Common Shares at the time of any such sale. To the extent that the market price per share of our Common Shares on any given day is less than the net asset value per share on such day, we will instruct the Dealer not to make any sales on such day.

The following table sets forth our capitalization:

on a historical basis as of October 31, 2013 (audited); and

on a pro forma as adjusted basis to reflect the assumed sale of 1,690,275 Common Shares at \$15.26 per share (the last reported sale price for our Common Shares on the NYSE on February 20, 2014), in an offering under this Prospectus Supplement and the accompanying Prospectus, after deducting the assumed commission of \$257,936 (representing an estimated commission to the Distributor of 1 % of the gross proceeds of the sale of Common Shares, of which a certain percentage will be paid to the Dealer in connection with sales of Common Shares effected in this offering).

| | As of October 31, 2013 (audited) <u>Actual</u> | Pro Forma (unaudited) <u>As adjusted</u> |
|---|---|--|
| Net Assets | \$582,523,293 | \$608,058,954 |
| Common shares outstanding, \$0.01 par value per share | 36,841,535 | 38,531,810 |
| Paid-in capital | \$685,043,788 | \$710,579,449 |
| Undistributed net investment income | 3,073,969 | 3,073,969 |

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

| | | |
|---|---------------|---------------|
| Accumulated net realized loss on investments, futures contracts and foreign currency transactions | (112,835,752) | (112,835,752) |
| Net unrealized appreciation (depreciation) on investments, futures contracts and swap contracts | 7,241,288 | 7,241,288 |
| Net Assets | \$582,523,293 | \$608,058,954 |
| Net asset value per share | \$15.81 | \$15.78 |

Summary of Trust expenses

The purpose of the table below is to help you understand all fees and expenses that you, as a Common Shareholder, would bear directly or indirectly. The table reflects the issuance of preferred shares in an amount equal to 14.8% of the Trust's total assets and borrowings in an amount equal to 21.6% of the Trust's total assets (including the proceeds of all such leverage) and shows Trust expenses as a percentage of net assets attributable to Common Shares⁽¹⁾ as of October 31, 2013.

Common Shareholder transaction expenses

| | |
|--|---------------------|
| Sales load paid by you (as a percentage of offering price) | 1% ⁽²⁾ |
| Offering expenses (as a percentage of offering price) | None ⁽¹⁾ |
| Dividend reinvestment plan fees | None ⁽³⁾ |

| | Percentage of net assets attributable to common shares (assuming the issuance of preferred shares and/or borrowings) ⁽⁴⁾ |
|---|---|
| Annual expenses | |
| Investment advisory fee | 1.18% ⁽⁵⁾ |
| Interest payments on borrowed funds | 0.40% ⁽⁶⁾ |
| Other expenses | 0.19% |
| Total annual expenses | 1.77% |
| Dividends on preferred shares | 0.04% ⁽⁶⁾ |
| Total annual Trust operating expenses and dividends on preferred shares | 1.81% |

EXAMPLE

The following example illustrates the expenses that Common Shareholders would pay on a \$1,000 investment in Common Shares, assuming (i) total annual expenses of 1.81% of net assets attributable to Common Shares in years 1 through 10; (ii) a 5% annual return; and (iii) all distributions are reinvested at NAV:

| 1 Year | 3 Years | 5 Years | 10 Years |
|--------|---------|---------|----------|
| \$28 | \$66 | \$107 | \$221 |

The above table and example and the assumption in the example of a 5% annual return are required by regulations of the SEC that are applicable to all investment companies; the assumed 5% annual return is not a prediction of, and does not represent, the projected or actual performance of the Trust's Common Shares. For more complete descriptions of certain of the Trust's costs and expenses, see Management of the Trust. In addition, while the example assumes reinvestment of all dividends and distributions at net asset value (NAV), participants in the Trust's dividend reinvestment plan may receive Common Shares purchased or issued at a price or value different from NAV. See Distributions and Dividend Reinvestment Plan. The example does not include sales load or estimated offering costs, which would cause the expenses shown in the example to increase.

The example should not be considered a representation of past or future expenses, and the Trust's actual expenses may be greater or less than those shown. Moreover, the Trust's actual rate of return may be greater or less than the hypothetical 5% return shown in the example.

- (1) Eaton Vance will pay the expenses of the Offering (other than the applicable commissions), therefore offering expenses are not included in the Summary of Trust Expenses. Offering expenses generally include, but are not limited to, the preparation, review and filing with the Securities and Exchange Commission (SEC) of the Trust's registration statement (including this Prospectus Supplement and the accompanying Prospectus and the Statement of Additional Information), the preparation, review and filing of any associated marketing or similar materials, costs associated with the printing, mailing or other distribution of the Prospectus Supplement, the accompanying Prospectus, the Statement of Additional Information and/or marketing materials, associated filing fees, NYSE listing fees, and legal and auditing fees associated with the Offering.

- (2) Represents the estimated commission with respect to the Trust's Common Shares being sold in this offering. There is no guarantee that there will be any sales of the Trust's Common Shares pursuant to this Prospectus Supplement and the accompanying Prospectus. Actual sales of the Trust's Common Shares under this Prospectus Supplement and the accompanying Prospectus, if any, may be less than as set forth under "Capitalization" above. In addition, the price per share of any such sale may be greater or less than the price set forth under "Capitalization" above, depending on market price of the Trust's Common Shares at the time of any such sale.
 - (3) You will be charged a \$5.00 service charge and pay brokerage charges if you direct the plan agent to sell your Common Shares held in a dividend reinvestment account.
 - (4) Stated as percentage of average net assets attributable to Common Shares for the year ended October 31, 2013.
 - (5) The advisory fee paid by the Trust to the Adviser is based on the average weekly gross assets of the Trust, including all assets attributable to any form of investment leverage that the Trust may utilize. Accordingly, if the Trust were to increase investment leverage in the future, the advisory fee will increase as a percentage of net assets.
 - (6) As of October 31, 2013 the outstanding borrowings and APS represented approximately 36.94% leverage.
- Market and net asset value information

Our Common Shares are listed on the NYSE under the symbol EFR. Our Common Shares commenced trading on the NYSE in 2003.

Our Common Shares have traded both at a premium and a discount to net asset value or NAV. We cannot predict whether our shares will trade in the future at a premium or discount to NAV. The provisions of the 1940 Act generally require that the public offering price of Common Shares (less any underwriting commissions and discounts) must equal or exceed the NAV per share of a company's common stock (calculated within 48 hours of pricing). Our issuance of Common Shares may have an adverse effect on prices in the secondary market for our Common Shares by increasing the number of Common Shares available, which may put downward pressure on the market price for our Common Shares. Shares of Common Stock of closed-end investment companies frequently trade at a discount from NAV. See "Prospectus Summary Special Risk Considerations Discount from or premium to NAV" on page 11 of the accompanying Prospectus.

The following table sets forth for each of the periods indicated the high and low closing market prices for Common Shares on the NYSE, and the corresponding NAV per share and the premium or discount to NAV per share at which the Trust's Common Shares were trading as of such date. NAV is determined no less frequently than daily, generally on each day of the week that the NYSE is open for trading. See "Determination of net asset value" on page 30 of the accompanying Statement of Additional Information for information as to the determination of the Trust's net asset value.

| Quarter Ended | Market Price | | NAV per Share on Date of Market Price High and Low | | NAV Premium/(Discount) on Date of Market Price High and Low | |
|---------------|--------------|-------|--|-------|---|---------|
| | High | Low | High | Low | High | Low |
| 1/31/2014 | 15.71 | 15.00 | 15.82 | 15.73 | (0.70)% | (4.64)% |

The last reported sale price, NAV per Common Share and percentage discount to NAV per Common Share on February 20, 2014, were \$15.26, \$15.76 and (3.17)%, respectively. As of February 20, 2014, we had 36,841,535 Common Shares outstanding and net assets of approximately \$580,674,912.

The following table provides information about our outstanding Common Shares as of February 20, 2014:

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

| Title of Class | Amount Authorized | Amount Held by the Trust or for its Account | Amount Outstanding |
|----------------|-------------------|--|--------------------|
| Common Shares | Unlimited | 0 | 36,841,535 |

4

Use of proceeds

Sales of our Common Shares, if any, under this Prospectus Supplement and the accompanying Prospectus may be made in negotiated transactions or transactions that are deemed to be at the market as defined in Rule 415 under the 1933 Act, including sales made directly on the NYSE or sales made to or through a market maker other than on an exchange. There is no guarantee that there will be any sales of our Common Shares pursuant to this Prospectus Supplement and the accompanying Prospectus. Actual sales, if any, of our Common Shares under this Prospectus Supplement and the accompanying Prospectus may be less than as set forth below in this paragraph. In addition, the price per share of any such sale may be greater or less than the price set forth in this paragraph, depending on the market price of our Common Shares at the time of any such sale. As a result, the actual net proceeds we receive may be more or less than the amount of net proceeds estimated in this Prospectus Supplement. Assuming the sale of all of the Common Shares offered under this Prospectus Supplement and the accompanying Prospectus, at the last reported sale price of \$15.26 per share for our Common Shares on the NYSE as of February 20, 2014, we estimate that the net proceeds of this offering will be approximately \$25,535,661 after deducting the estimated sales load and the estimated offering expenses payable by the Trust.

Subject to the remainder of this section, the Trust currently intends to invest substantially all of the net proceeds of any sales of Common Shares pursuant to this Prospectus Supplement in accordance with its investment objectives and policies as described in the accompanying Prospectus under Investment objectives, policies and risks within three months of receipt of such proceeds. Such investments may be delayed up to three months if suitable investments are unavailable at the time or for other reasons, such as market volatility and lack of liquidity in the markets of suitable investments. Pending such investment, the Trust anticipates that it will invest the proceeds in short-term money market instruments, securities with remaining maturities of less than one year, cash or cash equivalents. A delay in the anticipated use of proceeds could lower returns and reduce the Trust's distribution to Common Shareholders or result in a distribution consisting principally of a return of capital.

Plan of distribution

Under the Dealer Agreement between the Distributor and the Dealer, upon written instructions from the Distributor, the Dealer will use its reasonable best efforts, to sell, as sub-placement agent, the Common Shares under the terms and subject to the conditions set forth in the Dealer Agreement. The Dealer's solicitation will continue until the Distributor instructs the Dealer to suspend the solicitations and offers. The Distributor will instruct the Dealer as to the amount of Common Shares to be sold by the Dealer. The Distributor may instruct the Dealer not to sell Common Shares if the sales cannot be effected at or above the price designated by the Distributor in any instruction. To the extent that the market price per share of the Trust's Common Shares on any given day is less than the net asset value per share on such day, the Distributor will instruct the Dealer not to make any sales on such day. The Distributor or the Dealer may suspend the offering of Common Shares upon proper notice and subject to other conditions.

The Dealer will provide written confirmation to the Distributor following the close of trading on the day on which Common Shares are sold under the Dealer Agreement. Each confirmation will include the number of shares sold on the preceding day, the net proceeds to the Trust and the compensation payable by the Distributor to the Dealer in connection with the sales.

The Trust will compensate the Distributor with respect to sales of the Common Shares at a commission rate of 1.00% of the gross proceeds of the sale of Common Shares. The Distributor will compensate the Dealer for its services in acting as sub-placement agent in the sale of Common Shares out of this commission at a certain percentage rate of the gross proceeds of the sale of Common Shares sold under the Dealer Agreement, with the exact amount of such compensation to be mutually agreed upon by the Distributor and the Dealer from time to time. There is no guarantee that there will be any sales of the Common Shares pursuant to this Prospectus Supplement and the accompanying

Prospectus. Actual sales, if any, of the Common Shares under this Prospectus Supplement and the accompanying Prospectus may be greater or less than the price set forth in this paragraph, depending on the market price of Common Shares at the time of any such sale. Eaton Vance will pay the expenses of the Offering (other than the applicable commissions).

Settlement for sales of Common Shares will occur on the third trading day following the date on which such sales are made, in return for payment of the net proceeds to the Trust. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

The Distributor has agreed to provide indemnification and contribution to the Dealer against certain civil liabilities, including liabilities under the 1933 Act.

The Dealer Agreement will remain in full force and effect unless terminated by either party upon 30 days written notice to the other party.

The principal business address of the Dealer is 1285 Avenue of the Americas, New York, NY 10019.

The Dealer and its affiliates hold or may hold in the future, directly or indirectly, investment interests in the Distributor and its funds. The interests held by the Dealer or its affiliates are not attributable to, and no investment discretion is held by, the Dealer or its affiliates.

Legal matters

Certain legal matters in connection with the Common Shares will be passed upon for the Trust by internal counsel for Eaton Vance.

Available information

We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the Exchange Act), and the 1940 Act and are required to file reports, including annual and semi-annual reports, proxy statements and other information with the SEC. These documents are available on the SEC's EDGAR system and can be inspected and copied for a fee at the SEC's public reference room, 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Additional information about the operation of the public reference room facilities may be obtained by calling the SEC at (202) 551-5850.

This Prospectus Supplement, the accompanying Prospectus and the Statement of Additional Information do not contain all of the information in our registration statement, including amendments, exhibits, and schedules that the Trust has filed with the SEC (file No. 333-172870). Statements in this Prospectus Supplement and the accompanying Prospectus about the contents of any contract or other document are not necessarily complete and in each instance reference is made to the copy of the contract or other document filed as an exhibit to the registration statement, each such statement being qualified in all respects by this reference.

Additional information about us can be found in our registration statement (including amendments, exhibits, and schedules) on Form N-2 filed with the SEC. The SEC maintains a web site (<http://www.sec.gov>) that contains our registration statement, other documents incorporated by reference, and other information we have filed electronically with the SEC, including proxy statements and reports filed under the Exchange Act.

SFRTPRO

BASE PROSPECTUS

3,380,550 Shares

Eaton Vance Senior Floating-Rate Trust

Common Shares

Investment objectives and policies. Eaton Vance Senior Floating-Rate Trust (the Trust) is a diversified, closed-end management investment company, which commenced operations in November 2003. The Trust's investment objective is to provide a high level of current income. The Trust may, as a secondary objective, also seek preservation of capital to the extent consistent with its primary goal of high current income. The Trust will seek to achieve its investment objectives by investing primarily in senior, secured floating rate loans (Senior Loans). Floating rate loans are loans in which the interest rate paid fluctuates based on a reference rate. Under normal market conditions, Eaton Vance Management, the Trust's investment adviser, expects the Trust to maintain an average duration of less than one year (including the effect of anticipated leverage).

Investment Adviser. The Trust's investment adviser is Eaton Vance Management (Eaton Vance or the Adviser). As of January 31, 2014, Eaton Vance and its affiliates managed approximately \$278.6 billion of fund and separate account assets on behalf of clients, including approximately \$44.1 billion in floating-rate income assets.

The Offering. The Trust may offer, from time to time, in one or more offerings (each, an Offering), the Trust's common shares of beneficial interest, \$0.01 par value (Common Shares). Common Shares may be offered at prices and on terms to be set forth in one or more supplements to this Prospectus (each, a Prospectus Supplement). You should read this Prospectus and the applicable Prospectus Supplement carefully before you invest in Common Shares. Common Shares may be offered directly to one or more purchasers, through agents designated from time to time by us, or to or through underwriters or dealers. The Prospectus Supplement relating to the Offering will identify any agents, underwriters or dealers involved in the offer or sale of Common Shares, and will set forth any applicable offering price, sales, load, fee, commission or discount arrangement between the Trust and its agents or underwriters, or among its underwriters, or the basis upon which such amount may be calculated, net proceeds and use of proceeds, and the terms of any sale. The Trust may not sell any Common Shares through agents, underwriters or dealers without delivery of a Prospectus Supplement describing the method and terms of the particular Offering of the Common Shares.

Portfolio contents. The Trust will pursue its objectives by investing its assets primarily in Senior Loans. Under normal market conditions, the Trust will invest at least 80% of its total assets in Senior Loans of domestic and foreign borrowers that are denominated in U.S. dollars, Euros, British pounds, Swiss francs, Canadian dollars and Australian dollars (each an Authorized Foreign Currency). Senior Loans are made to corporations, partnerships and other business entities (Borrowers) which operate in various industries and geographical regions, including foreign

Borrowers. Senior Loans pay interest at rates which are redetermined periodically on the basis of a floating base lending rate plus a premium. Senior Loans typically are of below investment grade quality and have below investment grade credit ratings, which ratings are associated with securities having high risk, speculative characteristics (sometimes referred to as junk). Because of the protective features of Senior Loans (being both senior in a Borrower's capital structure and secured by specific collateral), the Adviser believes, based on its experience, that Senior Loans tend to have more favorable loss recovery rates compared to most other types of below investment grade obligations which are subordinated and unsecured. *(continued on inside cover page)*

The Common Shares have traded both at a premium and a discount to net asset value (NAV). The Trust cannot predict whether Common Shares will trade in the future at a premium or discount to NAV. The provisions of the 1940 Act generally require that the public offering price of common shares (less any underwriting commissions and discounts) must equal or exceed the NAV per share of a company's common stock (calculated within 48 hours of pricing). The Trust's issuance of Common Shares may have an adverse effect on prices in the secondary market for the Trust's Common Shares by increasing the number of Common Shares available, which may put downward pressure on the market price for the Trust's Common Shares. Shares of common stock of closed-end investment companies frequently trade at a discount from NAV, which may increase investors' risk of loss.

Investing in shares involves certain risks, including that the Trust will invest substantial portions of its assets in below investment grade quality securities with speculative characteristics. See "Investment objectives, policies and risks" beginning at page 22.

Neither the Securities and Exchange Commission (SEC) nor any state securities commission has approved or disapproved of these securities or determined if this Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

(continued from previous page)

Leverage. The Trust currently uses leverage created by issuing auction preferred shares (APS) as well as by loans acquired with borrowings. On January 26, 2004, the Trust issued 3,940 Series A APS, 3,940 Series B APS, 3,940 Series C APS and 3,940 Series D APS, with a liquidation preference per share of \$25,000 plus accumulated but unpaid dividends. In addition, the Trust has entered into a credit agreement (the Agreement) with a bank to borrow up to a limit of \$210 million (\$185 million prior to March 26, 2013) pursuant to a 364-day revolving line of credit. The Trust is required to maintain certain net asset levels during the term of the Agreement. As of October 31, 2013, the Trust had \$210 million in outstanding borrowings, at an interest rate of 0.93%, in addition to outstanding APS.

The Adviser anticipates that the use of leverage (from the issuance of APS and borrowings) will result in higher income to holders of Common Shares (Common Shareholders) over time. Use of financial leverage creates an opportunity for increased income but, at the same time, creates special risks. There can be no assurance that a leveraging strategy will be successful. The fee paid to Eaton Vance will be calculated on the basis of the Trust's gross assets, including proceeds from the issuance of APS and borrowings, so the fees will be higher when leverage is utilized. In this regard, holders of debt or preferred securities do not bear the investment advisory fee. Rather, Common Shareholders bear the portion of the investment advisory fee attributable to the assets purchased with the proceeds, which means that Common Shareholders effectively bear the entire advisory fee. See "Investment objectives, policies and risks" Use of leverage and related risks at page 33, "Investment objectives, policies and risks" Additional risk considerations at page 35 and "Description of capital structure" at page 45.

Exchange listing. As of February 20, 2014, the Trust had 36,841,535 Common Shares outstanding as well as 5,252 APS outstanding. The Trust's Common Shares are traded on the New York Stock Exchange (NYSE) under the symbol EFR. As of February 20, 2014, the last reported sales price of a Common Share of the Trust on the NYSE was \$15.26. Common Shares offered and sold pursuant to this Registration Statement will also be listed on the NYSE and trade under this symbol.

Eaton Vance Senior Floating-Rate Trust

This Prospectus, together with any applicable Prospectus Supplement, sets forth concisely information you should know before investing in the shares of the Trust. Please read and retain this Prospectus for future reference. A Statement of Additional Information dated February 24, 2014, has been filed with the SEC and can be obtained without charge by calling 1-800-262-1122 or by writing to the Trust. A table of contents to the Statement of Additional Information is located at page 51 of this Prospectus. This Prospectus incorporates by reference the entire Statement of Additional Information. The Statement of Additional Information is available along with other Trust-related materials: at the SEC's public reference room in Washington, DC (call 1-202-942-8090 for information on the operation of the reference room); the EDGAR database on the SEC's internet site (<http://www.sec.gov>); upon payment of copying fees by writing to the SEC's public reference section, Washington, DC 20549-0102; or by electronic mail at publicinfo@sec.gov. The Trust's principal office is located at Two International Place, Boston, MA 02110, and its telephone number is 1-800-262-1122.

The Trust's shares do not represent a deposit or obligation of, and are not guaranteed or endorsed by, any bank or other insured depository institution, and are not federally insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board or any other government agency.

You should rely only on the information contained or incorporated by reference in this Prospectus. The Trust has not authorized anyone to provide you with different information. The Trust is not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information contained in this Prospectus is accurate as of any date other than the date on the front of this Prospectus.

CAUTIONARY NOTICE REGARDING FORWARD-LOOKING STATEMENTS

This Prospectus, any accompanying Prospectus Supplement and the Statement of Additional Information contain forward-looking statements. Forward-looking statements can be identified by the words may, will, intend, expect, estimate, continue, plan, anticipate, and similar terms and the negative of such terms. Such forward-looking statements may be contained in this Prospectus as well as in any accompanying Prospectus Supplement. By their nature, all forward-looking statements involve risks and uncertainties, and actual results could differ materially from those contemplated by the forward-looking statements. Several factors that could materially affect our actual results are the performance of the portfolio of securities we hold, the price at which our shares will trade in the public markets and other factors discussed in our periodic filings with the SEC.

Although we believe that the expectations expressed in our forward-looking statements are reasonable, actual results could differ materially from those projected or assumed in our forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to change and are subject to inherent risks and uncertainties, such as those disclosed in the Investment objectives, policies and risks section of this Prospectus. All forward-looking statements contained or incorporated by reference in this Prospectus or any accompanying Prospectus Supplement are made as of the date of this Prospectus or the accompanying Prospectus Supplement, as the case may be. Except for our ongoing obligations under the federal securities laws, we do not intend, and we undertake no obligation, to update any forward-looking statement. The forward-looking statements contained in this Prospectus, any accompanying prospectus supplement and the statement of additional information are excluded from the safe harbor protection provided by section 27A of the Securities Act of 1933, as amended (the 1933 Act).

Currently known risk factors that could cause actual results to differ materially from our expectations include, but are not limited to, the factors described in the Investment objectives, policies and risks section of this Prospectus. We urge you to review carefully that section for a more detailed discussion of the risks of an investment in our securities.

Prospectus dated February 24, 2014

Eaton Vance Senior Floating-Rate Trust

3

Prospectus dated February 24, 2014

Table of Contents

| | |
|---|----|
| Prospectus summary | 5 |
| Summary of Trust expenses | 16 |
| Financial highlights and investment performance | 17 |
| The Trust | 21 |
| Use of proceeds | 21 |
| Portfolio composition | 21 |
| Investment objectives, policies and risks | 22 |
| Management of the Trust | 40 |
| Plan of Distribution | 41 |
| Distributions | 42 |
| Federal income tax matters | 43 |
| Dividend reinvestment plan | 45 |
| Description of capital structure | 45 |
| Custodian and Transfer Agent | 49 |
| Legal opinions | 49 |
| Reports to Shareholders | 50 |
| Independent registered public accounting firm | 50 |
| Additional information | 50 |
| Table of contents for the Statement of Additional Information | 51 |
| The Trust's privacy policy | 52 |

Eaton Vance Senior Floating-Rate Trust

4

Prospectus dated February 24, 2014

Prospectus summary

The following summary is qualified in its entirety by reference to the more detailed information included elsewhere in this Prospectus, in any related Prospectus Supplement, and in the Statement of Additional Information.

THE TRUST

Eaton Vance Senior Floating-Rate Trust (the Trust) is a diversified, closed-end management investment company, which commenced operations in November 2003. The Trust offers investors the opportunity to receive a high level of current income, through a professionally managed portfolio investing primarily in senior, secured floating rate loans (Senior Loans), which are normally accessible only to financial institutions and large corporate and institutional investors, and are not widely available to individual investors. To the extent consistent with this objective, the Trust may also offer an opportunity for preservation of capital. Investments are based on Eaton Vance Management's (Eaton Vance or the Adviser) internal research and ongoing credit analysis, which is generally not available to individual investors. An investment in the Trust may not be appropriate for all investors. There is no assurance that the Trust will achieve its investment objectives.

THE OFFERING

The Trust may offer, from time to time, in one or more offerings (each, an Offering), up to 3,380,550 of the Trust's common shares of beneficial interest, \$0.01 par value (Common Shares), on terms to be determined at the time of the Offering. The Common Shares may be offered at prices and on terms to be set forth in one or more Prospectus Supplements. You should read this Prospectus and the applicable Prospectus Supplement carefully before you invest in Common Shares. Common Shares may be offered directly to one or more purchasers, through agents designated from time to time by the Trust, or to or through underwriters or dealers. The Prospectus Supplement relating to the Offering will identify any agents, underwriters or dealers involved in the offer or sale of Common Shares, and will set forth any applicable offering price, sales load, fee, commission or discount arrangement between the Trust and its agents or underwriters, or among its underwriters, or the basis upon which such amount may be calculated, net proceeds and use of proceeds, and the terms of any sale. See Plan of Distribution. The Trust may not sell any of Common Shares through agents, underwriters or dealers without delivery of a Prospectus Supplement describing the method and terms of the particular Offering of Common Shares.

INVESTMENT OBJECTIVES, POLICIES AND RISKS

The Trust's investment objective is to provide a high level of current income. The Trust may, as a secondary objective, also seek preservation of capital to the extent consistent with its primary goal of high current income. Under normal market conditions, Eaton Vance expects the Trust to maintain a duration of less than one year (including the effect of anticipated leverage). The Trust pursues its objectives by investing primarily in Senior Loans. Senior Loans are loans in which the interest rate paid fluctuates based on a reference rate. Senior Loans are made to corporations, partnerships and other business entities (Borrowers) which operate in various industries and geographical regions. Senior Loans pay interest at rates that are reset periodically by reference to a base lending rate, primarily the London Interbank Offered Rate (LIBOR), plus a premium. Under normal market conditions, at least 80% of the Trust's total assets will be invested in interests in Senior Loans of domestic and foreign borrowers that are denominated in U.S. dollars, Euros, British pounds, Swiss francs, Canadian dollars and Australian dollars (each an Authorized Foreign Currency). It is anticipated that the proceeds of the Senior Loans in which the Trust will acquire interests primarily will be used to finance leveraged buyouts, recapitalizations, mergers, acquisitions, stock repurchases, refinancing, and internal growth and for other corporate purposes of Borrowers.

Eaton Vance Senior Floating-Rate Trust

5

Prospectus dated February 24, 2014

The Trust may invest up to 20% of its total assets in: (i) loan interests which are not secured by any, or that have a lower than senior claim on, collateral, (ii) other income producing securities such as investment and non-investment grade corporate debt securities and U.S. government and U.S. dollar-denominated foreign government or supranational debt securities, and (iii) warrants and equity securities issued by a Borrower or its affiliates as part of a package of investments in the Borrower or its affiliates. Corporate bonds of below investment grade quality (Non-Investment Grade Bonds), commonly referred to as junk bonds, are bonds that are rated below investment grade by each of the nationally recognized statistical rating agencies (Rating Agencies) who cover the security, or, if unrated, are determined to be of comparable quality by the Adviser. Standard & Poor's Financial Services LLC (S&P) and Fitch Ratings (Fitch) consider securities rated below BBB- to be below investment grade and Moody's Investors Service, Inc. (Moody's) considers securities rated below Baa3 to be below investment grade. The Trust's credit quality policies apply only at the time a security is purchased, and the Trust is not required to dispose of a security in the event of a downgrade of an assessment of credit quality or the withdrawal of a rating. Securities rated in the lowest investment grade rating (BBB- or Baa3) may have certain speculative characteristics. Below investment grade quality securities are considered to be predominantly speculative because of the credit risk of the issuers. See Investment objectives, policies and risks Special risk considerations Non-Investment Grade Bonds risk.

Under normal market conditions, the Trust expects to maintain an average duration of less than one year (including the effect of anticipated leverage). In comparison to maturity (which is the date on which a debt instrument ceases and the issuer is obligated to repay the principal amount), duration is a measure of the price volatility of a debt instrument as a result of changes in market rates of interest, based on the weighted average timing of the instrument's expected principal and interest payments. Duration differs from maturity in that it considers a security's yield, coupon payments, principal payments and call features in addition to the amount of time until the security finally matures. As the value of a security changes over time, so will its duration. Prices of securities with longer durations tend to be more sensitive to interest rate changes than securities with shorter durations. In general, a portfolio of securities with a longer duration can be expected to be more sensitive to interest rate changes than a portfolio with a shorter duration.

Investing in Senior Loans involves investment risk. Some Borrowers default on their Senior Loan payments. The Trust attempts to manage this credit risk through portfolio diversification and ongoing analysis and monitoring of Borrowers. The Trust also is subject to market, liquidity, interest rate and other risks.

Scott H. Page, Craig P. Russ, and Peter M. Campo are co-portfolio managers of the Trust. Mr. Page has been an Eaton Vance portfolio manager since 1996 and is a Vice President of Eaton Vance. He is head of Eaton Vance's Bank Loan Investment Group. Mr. Russ has been an Eaton Vance portfolio manager since 2001 and is a Vice President of Eaton Vance. Mr. Campo joined Eaton Vance in 2003 and is a Vice President of Eaton Vance.

The Trust's investments are actively managed, and Senior Loans and other securities may be bought or sold on a daily basis. The Adviser's staff monitors the credit quality and price of Senior Loans and other securities held by the Trust, as well as other securities that are available to the Trust. The Trust may invest in individual Senior Loans and other securities of any credit quality. Although the Adviser considers ratings when making investment decisions, it performs its own credit and investment analysis and does not rely primarily on the ratings assigned by the Rating Agencies. In evaluating the quality of particular Senior Loans or other securities, whether rated or unrated, the Adviser will normally take into consideration, among other things, the issuer's financial resources and operating history, its sensitivity to economic conditions and trends, the ability of its management, its debt maturity schedules and borrowing requirements, and relative values based on anticipated cash flow, interest and asset coverage, and earnings prospects.

The Trust may invest up to 15% of net assets in Senior Loans denominated in Authorized Foreign Currencies and may invest in other securities of non-United States issuers. The Trust's investments may have significant exposure to certain sectors of the economy and thus may react differently to political or economic developments than the market as a whole. The Trust may accept equity securities in connection with a debt restructuring or reorganization of a Borrower either inside or outside of bankruptcy. The Trust may hold equity securities issued in exchange for a Senior Loan or

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

issued in connection with the debt restructuring or reorganization of a Borrower. The Trust may also acquire additional equity securities of such Borrower or its affiliates if, in the

Eaton Vance Senior Floating-Rate Trust

6

Prospectus dated February 24, 2014

judgment of the Adviser, such an investment may enhance the value of a Senior Loan held or would otherwise be consistent with the Trust's investment policies.

The Trust may purchase or sell derivative instruments (which derive their value from another instrument, security or index) for risk management purposes, such as hedging against fluctuations in Senior Loans and other securities prices or interest rates; diversification purposes; changing the duration of the Trust; or leveraging the Trust. Transactions in derivative instruments may include the purchase or sale of futures contracts on securities, indices and other financial instruments, credit-linked notes, tranches of collateralized loan obligations and/or collateralized debt obligations, options on futures contracts, and exchange-traded and over-the-counter options on securities or indices, and interest rate, total return and credit default swaps. Guidelines of any rating organization that rates any preferred shares issued by the Trust may limit the Trust's ability to engage in such transactions. Subject to the Trust's policy of investing at least 80% of its total assets in Senior Loans and subject to the limitations on the use of futures contracts and related options imposed by Rule 4.5 of the Commodity Futures Trading Commission (the "CFTC"), the Trust may invest, without limitation, in the foregoing derivative instruments for the purposes stated herein.

LISTING

As of February 20, 2014, the Trust had 36,841,535 Common Shares outstanding as well as 5,252 auction preferred shares ("APS") outstanding. The Trust's Common Shares are traded on the New York Stock Exchange ("NYSE") under the symbol "EFR." As of February 20, 2014, the last reported sales price of a Common Share of the Trust on the NYSE was \$15.26. Common Shares offered and sold pursuant to this Registration Statement will also be listed on the NYSE and trade under this symbol.

LEVERAGE

The Trust currently uses leverage created by issuing APS as well as by loans acquired with borrowings. On January 26, 2004, the Trust issued 3,940 Series A APS, 3,940 Series B APS, 3,940 Series C APS and 3,940 Series D APS, with a liquidation preference per share of \$25,000 plus accumulated but unpaid dividends. As of December 31, 2012, 2,627 Series A APS, 2,627 Series B APS, 2,627 Series C APS and 2,627 Series D APS had been redeemed. The APS have seniority over the Common Shares. In addition, the Trust has entered into a credit agreement (the "Agreement") with a bank to borrow up to a limit of \$210 million (\$185 million prior to March 26, 2013) pursuant to a 364-day revolving line of credit. Borrowings under the Agreement are secured by the assets of the Trust. Interest is charged at a rate above LIBOR and is payable monthly. Under the terms of the Agreement, the Trust pays a commitment fee of 0.15% on the borrowing limit. The Trust is required to maintain certain net asset levels during the term of the Agreement. As of October 31, 2013, the Trust had \$210 million in outstanding borrowings, at an interest rate of 0.93%, in addition to outstanding APS. The Adviser anticipates that the use of leverage (from such issuance of APS and borrowings) may result in higher income to holders of Common Shares ("Common Shareholders") over time. Use of financial leverage creates an opportunity for increased income but, at the same time, creates special risks. There can be no assurance that a leveraging strategy will be successful.

The costs of the financial leverage program (from any issuance of preferred shares and any borrowings) are borne by Common Shareholders and consequently result in a reduction of the net asset value ("NAV") of Common Shares. During periods in which the Trust is using leverage, the fees paid to Eaton Vance for investment advisory services will be higher than if the Trust did not use leverage because the fees paid will be calculated on the basis of the Trust's gross assets, which include proceeds from the issuance of preferred shares and borrowings. In this regard, holders of debt or preferred securities do not bear the investment advisory fee. Rather, Common Shareholders bear the portion of the investment advisory fee attributable to the assets purchased with the proceeds, which means that Common Shareholders effectively bear the entire advisory fee. See "Investment objectives, policies and risks" Use of leverage and related risks and "Management of the Trust" The Adviser.

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Financial leverage may also be achieved through the purchase of certain derivative instruments. The Trust's use of derivative instruments exposes the Trust to special risks. See Investment objectives, policies and risks Additional investment practices and Investment objectives, policies and risks Additional risk considerations.

Eaton Vance Senior Floating-Rate Trust

7

Prospectus dated February 24, 2014

INVESTMENT ADVISER AND ADMINISTRATOR

Eaton Vance, a wholly-owned subsidiary of Eaton Vance Corp., is the Trust's investment adviser and administrator. As of January 31, 2014, Eaton Vance and its affiliates managed approximately \$278.6 billion of fund and separate account assets on behalf of clients, including approximately \$44.1 billion in floating-rate income assets. See Management of the Trust.

PLAN OF DISTRIBUTION

The Trust may sell the Common Shares being offered under this Prospectus in any one or more of the following ways: (i) directly to purchasers; (ii) through agents; (iii) to or through underwriters; or (iv) through dealers. The Prospectus Supplement relating to the Offering will identify any agents, underwriters or dealers involved in the offer or sale of Common Shares, and will set forth any applicable offering price, sales load, fee, commission or discount arrangement between the Trust and its agents or underwriters, or among its underwriters, or the basis upon which such amount may be calculated, net proceeds and use of proceeds, and the terms of any sale.

The Trust may distribute Common Shares from time to time in one or more transactions at: (i) a fixed price or prices that may be changed; (ii) market prices prevailing at the time of sale; (iii) prices related to prevailing market prices; or (iv) negotiated prices; provided, however, that in each case the offering price per Common Share (less any underwriting commission or discount) must equal or exceed the NAV per Common Share.

The Trust from time to time may offer its Common Shares through or to certain broker-dealers, including UBS Securities LLC, that have entered into selected dealer agreements relating to at-the-market offerings.

The Trust may directly solicit offers to purchase Common Shares, or the Trust may designate agents to solicit such offers. The Trust will, in a Prospectus Supplement relating to such Offering, name any agent that could be viewed as an underwriter under the Securities Act of 1933, as amended (the 1933 Act), and describe any commissions the Trust must pay to such agent(s). Any such agent will be acting on a reasonable best efforts basis for the period of its appointment or, if indicated in the applicable Prospectus Supplement or other offering materials, on a firm commitment basis. Agents, dealers and underwriters may be customers of, engage in transactions with, or perform services for the Trust in the ordinary course of business.

If any underwriters or agents are used in the sale of Common Shares in respect of which this Prospectus is delivered, the Trust will enter into an underwriting agreement or other agreement with them at the time of sale to them, and the Trust will set forth in the Prospectus Supplement relating to such Offering their names and the terms of the Trust's agreement with them.

If a dealer is utilized in the sale of Common Shares in respect of which this Prospectus is delivered, the Trust will sell such Common Shares to the dealer, as principal. The dealer may then resell such Common Shares to the public at varying prices to be determined by such dealer at the time of resale.

The Trust may engage in at-the-market offerings to or through a market maker or into an existing trading market, on an exchange or otherwise, in accordance with Rule 415(a)(4) under the 1933 Act. An at-the-market offering may be through an underwriter or underwriters acting as principal or agent for the Trust.

Agents, underwriters and dealers may be entitled under agreements which they may enter into with the Trust to indemnification by the Trust against certain civil liabilities, including liabilities under the 1933 Act, and may be customers of, engage in transactions with or perform services for the Trust in the ordinary course of business.

Eaton Vance Senior Floating-Rate Trust

8

Prospectus dated February 24, 2014

In order to facilitate the Offering of Common Shares, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of Common Shares or any other Common Shares the prices of which may be used to determine payments on the Common Shares. Specifically, any underwriters may over-allot in connection with the Offering, creating a short position for their own accounts. In addition, to cover over-allotments or to stabilize the price of Common Shares or of any such other Common Shares, the underwriters may bid for, and purchase, Common Shares or any such other Common Shares in the open market. Finally, in any Offering of Common Shares through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing Common Shares in the Offering if the syndicate repurchases previously distributed Common Shares in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of Common Shares above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

The Trust may enter into derivative transactions with third parties, or sell Common Shares not covered by this Prospectus to third parties in privately negotiated transactions. If the applicable Prospectus Supplement indicates, in connection with those derivatives, the third parties may sell Common Shares covered by this Prospectus and the applicable Prospectus Supplement or other offering materials, including in short sale transactions. If so, the third parties may use Common Shares pledged by the Trust or borrowed from the Trust or others to settle those sales or to close out any related open borrowings of securities, and may use Common Shares received from the Trust in settlement of those derivatives to close out any related open borrowings of securities. The third parties in such sale transactions will be underwriters and, if not identified in this Prospectus, will be identified in the applicable Prospectus Supplement or other offering materials (or a post-effective amendment).

The Trust or one of the Trust's affiliates may loan or pledge Common Shares to a financial institution or other third party that in turn may sell Common Shares using this Prospectus. Such financial institution or third party may transfer its short position to investors in Common Shares or in connection with a simultaneous Offering of other Common Shares offered by this Prospectus or otherwise.

The maximum amount of compensation to be received by any member of the Financial Industry Regulatory Authority, Inc. will not exceed 8% of the initial gross proceeds from the sale of any security being sold with respect to each particular Offering of Common Shares made under a single Prospectus Supplement.

Any underwriter, agent or dealer utilized in the initial Offering of Common Shares will not confirm sales to accounts over which it exercises discretionary authority without the prior specific written approval of its customer.

DISTRIBUTIONS

The Trust intends to make monthly distributions of net investment income to Common Shareholders, after payment of any dividends on any outstanding APS. The amount of each monthly distribution will vary depending on a number of factors, including dividends payable on the Trust's preferred shares or other costs of financial leverage. As portfolio and market conditions change, the rate of dividends on the Common Shares and the Trust's dividend policy could change. Over time, the Trust will distribute all of its net investment income (after it pays accrued dividends on any outstanding preferred shares) or other costs of financial leverage. In addition, at least annually, the Trust intends to distribute all or substantially all of its net realized capital gains (reduced by available capital loss carryforwards from prior years, if any). Distributions to Common Shareholders are recorded on the ex-dividend date. Distributions to preferred shareholders are recorded daily and are payable at the end of each dividend period.

Beginning February 13, 2008 and consistent with the patterns in the broader market for auction-rate securities, the Trust's APS auctions were unsuccessful in clearing due to an imbalance of sell orders over bids to buy the APS. As a result, the dividend rates of the APS were reset to the maximum applicable rates.

Eaton Vance Senior Floating-Rate Trust

9

Prospectus dated February 24, 2014

The Trust distinguishes between distributions on a tax basis and a financial reporting basis. Accounting principles generally accepted in the United States of America require that only distributions in excess of tax basis earnings and profits be reported in the financial statements as a return of capital. Permanent differences between book and tax accounting relating to distributions are reclassified to paid-in capital. For tax purposes, distributions from short-term capital gains are considered to be from ordinary income.

Common Shareholders may elect automatically to reinvest some or all of their distributions in additional Common Shares under the Trust's dividend reinvestment plan. See [Distributions](#) and [Dividend reinvestment plan](#).

DIVIDEND REINVESTMENT PLAN

The Trust has established a dividend reinvestment plan (the [Plan](#)). Under the Plan, a Common Shareholder may elect to have all dividend and capital gain distributions automatically reinvested in additional Common Shares either purchased in the open market, or newly issued by the Trust if the Common Shares are trading at or above their net asset value. Common Shareholders may elect to participate in the Plan by completing the dividend reinvestment plan application form. Common Shareholders who do not elect to participate in the Plan will receive all distributions in cash paid by check mailed directly to them by American Stock Transfer & Trust Company, LLC, as dividend paying agent. Common Shareholders who intend to hold their Common Shares through a broker or nominee should contact such broker or nominee to determine whether or how they may participate in the Plan. See [Dividend reinvestment plan](#).

CLOSED-END STRUCTURE

Closed-end funds differ from open-end management investment companies (commonly referred to as mutual funds) in that closed-end funds generally list their shares for trading on a securities exchange and do not redeem their shares at the option of the shareholder. By comparison, mutual funds issue securities redeemable at net asset value at the option of the shareholder and typically engage in a continuous offering of their shares. Mutual funds are subject to continuous asset in-flows and out-flows that can complicate portfolio management, whereas closed-end funds generally can stay more fully invested in securities consistent with the closed-end fund's investment objectives and policies. In addition, in comparison to open-end funds, closed-end funds have greater flexibility in the employment of financial leverage and in the ability to make certain types of investments, including investments in illiquid securities.

However, shares of closed-end funds frequently trade at a discount from their net asset value. Since inception, the market price of the Common Shares has fluctuated and at times traded below the Trust's NAV, and at times has traded above NAV. In recognition of the possibility that the Common Shares might trade at a discount to net asset value and that any such discount may not be in the interest of Common Shareholders, the Trust's Board of Trustees (the [Board](#)), in consultation with Eaton Vance, from time to time may review possible actions to reduce any such discount. The Board might consider open market repurchases or tender offers for Common Shares at net asset value. There can be no assurance that the Board will decide to undertake any of these actions or that, if undertaken, such actions would result in the Common Shares trading at a price equal to or close to net asset value per Common Share. The Board might also consider the conversion of the Trust to an open-end mutual fund. The Board believes, however, that the closed-end structure is desirable, given the Trust's investment objectives and policies. Investors should assume, therefore, that it is highly unlikely that the Board would vote to convert the Trust to an open-end investment company. Investors should note that the Trust's preferred shares could make a conversion to open-end form more difficult because of the voting rights of preferred shareholders, the costs of redeeming preferred shares and other factors. See [Description of capital structure](#).

SPECIAL RISK CONSIDERATIONS

Risk is inherent in all investing. Investing in any investment company security involves risk, including the risk that you may receive little or no return on your investment or even that you may lose part or all of your investment.

Eaton Vance Senior Floating-Rate Trust

10

Prospectus dated February 24, 2014

Discount from or premium to NAV

The Offering will be conducted only when Common Shares of the Trust are trading at a price equal to or above the Trust's NAV per Common Share plus the per Common Share amount of commissions. As with any security, the market value of the Common Shares may increase or decrease from the amount initially paid for the Common Shares.

The Trust's Common Shares have traded both at a premium and at a discount relative to net asset value. The shares of closed-end management investment companies frequently trade at a discount from their NAV. This is a risk separate and distinct from the risk that the Trust's NAV may decrease.

Secondary market for the Common Shares

The issuance of Common Shares through the Offering may have an adverse effect on the secondary market for the Common Shares. The increase in the amount of the Trust's outstanding Common Shares resulting from the Offering may put downward pressure on the market price for the Common Shares of the Trust. Common Shares will not be issued pursuant to the Offering at any time when Common Shares are trading at a price lower than a price equal to the Trust's NAV per Common Share plus the per Common Share amount of commissions.

The Trust also issues Common Shares of the Trust through its dividend reinvestment plan. See Dividend reinvestment plan. Common Shares may be issued under the plan at a discount to the market price for such Common Shares, which may put downward pressure on the market price for Common Shares of the Trust.

When the Common Shares are trading at a premium, the Trust may also issue Common Shares of the Trust that are sold through transactions effected on the NYSE. The increase in the amount of the Trust's outstanding Common Shares resulting from that offering may also put downward pressure on the market price for the Common Shares of the Trust.

The voting power of current shareholders will be diluted to the extent that such shareholders do not purchase shares in any future Common Share offerings or do not purchase sufficient shares to maintain their percentage interest. In addition, if the Adviser is unable to invest the proceeds of such offering as intended, the Trust's per share distribution may decrease (or may consist of return of capital) and the Trust may not participate in market advances to the same extent as if such proceeds were fully invested as planned.

Income risk

The income investors receive from the Trust is based primarily on the interest it earns from its investments, which can vary widely over the short and long-term. If prevailing market interest rates drop, investors' income from the Trust could drop as well. The Trust's income could also be affected adversely when prevailing short-term interest rates increase and the Trust is utilizing leverage, although this risk is mitigated by the Trust's investment in Senior Loans, which pay floating rates of interest.

Credit risk

Loans and other income investments are subject to the risk of non-payment of scheduled principal and interest. Changes in economic conditions or other circumstances may reduce the capacity of the party obligated to make principal and interest payments on such instruments and may lead to defaults. Such non-payments and defaults may reduce the value of Trust shares and income distributions. The value of a fixed income security also may decline because of concerns about the issuer's ability to make principal and interest payments. In addition, the credit ratings of loans or other income investments may be lowered if the financial condition of the party obligated to make payments with respect to such instruments changes. In the event of bankruptcy of the issuer of loans or other income investments, the Trust could experience delays or limitations with respect to its ability to realize the benefits of any collateral securing the instrument. In order to enforce its rights in the event of a default, bankruptcy or similar

situation, the Trust may be required to retain legal or similar counsel.

Eaton Vance Senior Floating-Rate Trust

11

Prospectus dated February 24, 2014

Prepayment risk

During periods of declining interest rates or for other purposes, Borrowers may exercise their option to prepay principal earlier than scheduled. For fixed-income securities, such payments often occur during periods of declining interest rates, forcing the Trust to reinvest in lower yielding securities. This is known as call or prepayment risk. Non-Investment Grade Bonds frequently have call features that allow the issuer to redeem the security at dates prior to its stated maturity at a specified price (typically greater than par) only if certain prescribed conditions are met (call protection). An issuer may redeem a Non-Investment Grade Bond if, for example, the issuer can refinance the debt at a lower cost due to declining interest rates or an improvement in the credit standing of the issuer. Senior Loans typically have no such call protection. For premium bonds (bonds acquired at prices that exceed their par or principal value) purchased by the Trust, prepayment risk may be enhanced.

Issuer risk

The value of corporate income-producing securities may decline for a number of reasons which directly relate to the issuer, such as management performance, financial leverage and reduced demand for the issuer's goods and services.

Senior Loans risk

The risks associated with Senior Loans are similar to the risks of Non-Investment Grade Bonds (discussed below), although Senior Loans are typically senior and secured in contrast to Non-Investment Grade Bonds, which are often subordinated and unsecured. Senior Loans' higher standing has historically resulted in generally higher recoveries in the event of a corporate reorganization. In addition, because their interest rates are adjusted for changes in short-term interest rates, Senior Loans generally have less interest rate risk than Non-Investment Grade Bonds, which are typically fixed rate. The Trust's investments in Senior Loans are typically below investment grade and are considered speculative because of the credit risk of their issuers. Such companies are more likely to default on their payments of interest and principal owed to the Trust, and such defaults could reduce the Trust's net asset value and income distributions. An economic downturn generally leads to a higher non-payment rate, and a debt obligation may lose significant value before a default occurs. Moreover, any specific collateral used to secure a loan may decline in value or become illiquid, which would adversely affect the loan's value.

Economic and other events (whether real or perceived) can reduce the demand for certain Senior Loans or Senior Loans generally, which may reduce market prices and cause the Trust's net asset value per share to fall. The frequency and magnitude of such changes cannot be predicted.

Loans and other debt securities are also subject to the risk of price declines and to increases in prevailing interest rates, although floating-rate debt instruments are less exposed to this risk than fixed-rate debt instruments. Interest rate changes may also increase prepayments of debt obligations and require the Trust to invest assets at lower yields. No active trading market may exist for certain loans, which may impair the ability of the Trust to realize full value in the event of the need to liquidate such assets. Adverse market conditions may impair the liquidity of some actively traded loans.

Non-Investment Grade Bonds risk

The Trust's investments in Non-Investment Grade Bonds, commonly referred to as junk bonds, are predominantly speculative because of the credit risk of their issuers. While offering a greater potential opportunity for capital appreciation and higher yields, Non-Investment Grade Bonds typically entail greater potential price volatility and may be less liquid than higher-rated securities. Issuers of Non-Investment Grade Bonds are more likely to default on their payments of interest and principal owed to the Trust, and such defaults will reduce the Trust's net asset value and income distributions. The prices of these lower rated obligations are more sensitive to negative developments than higher rated securities. Adverse business conditions, such as a decline in the issuer's revenues or an economic

downturn, generally lead to a higher non-payment rate. In addition, a security may lose significant value before a default occurs as the market adjusts to expected higher non-payment rates.

Eaton Vance Senior Floating-Rate Trust

12

Prospectus dated February 24, 2014

Derivatives risk

The use of derivatives can lead to losses because of adverse movements in the price or value of the asset, index, rate or instrument underlying a derivative, due to failure of a counterparty or due to tax or regulatory constraints. Derivatives may create investment leverage in the Trust, which magnifies the Trust's exposure to the underlying investment. Derivative risks may be more significant when they are used to enhance return or as a substitute for a position or security, rather than solely to hedge the risk of a position or security held by the Trust. Derivatives for hedging purposes may not reduce risk if they are not sufficiently correlated to the position being hedged. A decision as to whether, when and how to use derivatives involves the exercise of specialized skill and judgment, and even a well-conceived transaction may be unsuccessful to some degree because of market behavior or unexpected events. Derivative instruments may be difficult to value, may be illiquid, and may be subject to wide swings in valuation caused by changes in the value of the underlying instrument. The loss on derivative transactions may substantially exceed the initial investment.

Leverage risk

As discussed above, the Trust currently uses leverage created by issuing APS and borrowings. On January 26, 2004, the Trust issued 3,940 Series A APS, 3,940 Series B APS, 3,940 Series C APS and 3,940 Series D APS, with a liquidation preference per share of \$25,000 plus accumulated but unpaid dividends. As of December 31, 2012, 2,627 Series A APS, 2,627 Series B APS, 2,627 Series C APS and 2,627 Series D APS had been redeemed. In addition, the Trust has entered into an Agreement with a bank to borrow up to a limit of \$210 million (\$185 million prior to March 26, 2013) pursuant to a 364-day revolving line of credit. The Trust is required to maintain certain net asset levels during the term of the Agreement. As of October 31, 2013, the Trust had \$210 million in outstanding borrowings, at an interest rate of 0.93%, in addition to outstanding APS.

The Adviser anticipates that the use of leverage (from the issuance of APS and borrowings) may result in higher income to Common Shareholders over time. Leverage creates risks for Common Shareholders, including the likelihood of greater volatility of NAV and market price of the Common Shares and the risk that fluctuations in dividend rates on APS and costs of borrowings may affect the return to Common Shareholders. To the extent the income derived from investments purchased with funds received from leverage exceeds the cost of leverage, the Trust's distributions will be greater than if leverage had not been used. Conversely, if the income from the investments purchased with such funds is not sufficient to cover the cost of leverage, the amount available for distribution to Common Shareholders will be less than if leverage had not been used. In the latter case, Eaton Vance, in its best judgment, may nevertheless determine to maintain the Trust's leveraged position if it deems such action to be appropriate. While the Trust has preferred shares outstanding, an increase in short-term rates would also result in an increased cost of leverage, which would adversely affect the Trust's income available for distribution. There can be no assurance that a leveraging strategy will be successful.

In addition, under current federal income tax law, the Trust is required to allocate a portion of any net realized capital gains or other taxable income to APS holders. The terms of the Trust's APS require the Trust to pay to any APS holders additional dividends intended to compensate the APS holders for taxes payable on any capital gains or other taxable income allocated to APS. Any such additional dividends will reduce the amount available for distribution to Common Shareholders. As discussed under Management of the Trust, the fee paid to Eaton Vance is calculated on the basis of the Trust's gross assets, including proceeds from the issuance of APS and borrowings, so the fees will be higher when leverage is utilized. In this regard, holders of APS do not bear the investment advisory fee. Rather, Common Shareholders bear the portion of the investment advisory fee attributable to the assets purchased with the proceeds, which means that Common Shareholders effectively bear the entire advisory fee.

Eaton Vance Senior Floating-Rate Trust

13

Prospectus dated February 24, 2014

The APS have been rated AA by Fitch and Aa3 by Moody's. The Trust currently intends to seek to maintain this rating or an equivalent credit rating from other Rating Agencies on the APS or any preferred shares it issues. The Trust is subject to investment restrictions of the Rating Agencies as a result. Any bank lender in connection with a credit facility or commercial paper program may also impose specific restrictions as a condition to borrowing. Such restrictions imposed by a Rating Agency or lender may include asset coverage or portfolio composition requirements that are more stringent than those imposed on the Trust by the Investment Company Act of 1940, as amended (the 1940 Act). These covenants or guidelines do not currently and are not expected to impede Eaton Vance in managing the Trust's portfolio in accordance with its investment objectives and policies and it is not anticipated that they will so impede Eaton Vance in the future. See Description of capital structure Preferred shares.

Financial leverage may also be achieved through the purchase of certain derivative instruments. The Trust's use of derivative instruments exposes the Trust to special risks. See Investment objectives, policies and risks Additional investment practices and Investment objectives, policies, and risks Additional risk considerations.

Interest rate risk

When interest rates decline, the value of a portfolio invested in Senior Loans may rise. Conversely, when interest rates rise, the value of a portfolio invested in Senior Loans may decline. Interest rates are at historical lows and, as a result, it is likely that they will rise. Because floating or variable rates on Senior Loans only reset periodically, changes in prevailing interest rates may cause some fluctuations in the Trust's net asset value. Similarly, a sudden and significant increase in market interest rates may cause a decline in the Trust's net asset value. A material decline in the Trust's net asset value may impair the Trust's ability to maintain required levels of asset coverage.

Foreign securities risk

Investments in foreign issuers could be affected by factors not present in the United States, including expropriation, armed conflict, confiscatory taxation, lack of uniform accounting and auditing standards, less publicly available financial and other information, and potential difficulties in enforcing contractual obligations. Because foreign issuers may not be subject to uniform accounting, auditing and financial reporting standards, practices and requirements and regulatory measures comparable to those in the United States, there may be less publicly available information about such foreign issuers. Settlements of securities transactions in foreign countries are subject to risk of loss, may be delayed and are generally less frequent than in the United States, which could affect the liquidity of the Trust's assets.

Liquidity risk

The Trust may invest without limitation in Senior Loans and other securities for which there is no readily available trading market or which are otherwise illiquid. The Trust may not be able to dispose readily of such securities at prices that approximate those at which the Trust could sell such securities if they were more widely traded and, as a result of such illiquidity, the Trust may have to sell other investments or engage in borrowing transactions if necessary to raise cash to meet its obligations. In addition, the limited liquidity could affect the market price of the securities, thereby adversely affecting the Trust's net asset value and ability to make dividend distributions.

Some Senior Loans are not readily marketable and may be subject to restrictions on resale. Senior Loans generally are not listed on any national securities exchange or automated quotation system and no active trading market may exist for some of the Senior Loans in which the Trust will invest. Where a secondary market exists, such market for some Senior Loans may be subject to irregular activity, wide bid/ask spreads and extended trade settlement periods. Senior Loans that are illiquid may impair the Trust's ability to realize the full value of its assets in the event of a voluntary or involuntary liquidation of such assets and thus may cause a decline in the Trust's net asset value. The Trust has no limitation on the amount of its assets which may be invested in securities which are not readily marketable or are subject to restrictions on resale.

Eaton Vance Senior Floating-Rate Trust

14

Prospectus dated February 24, 2014

Reinvestment risk

Income from the Trust's portfolio will decline if and when the Trust invests the proceeds from matured, traded or called debt obligations into lower yielding instruments.

Inflation risk

Inflation risk is the risk that the value of assets or income from investment will be worth less in the future as inflation decreases the value of money. As inflation increases, the real value of the Common Shares and distributions thereon can decline. In addition, during any periods of rising inflation, dividend rates of preferred shares would likely increase, which would tend to further reduce returns to Common Shareholders. This risk is mitigated to some degree by the Trust's investments in Senior Loans.

Management risk

The Trust is subject to management risk because it is an actively managed portfolio. Eaton Vance and the individual portfolio managers will apply investment techniques and risk analyses in making investment decisions for the Trust, but there can be no guarantee that these will produce the desired results.

Regulatory risk

To the extent that legislation or state or federal regulators that regulate certain financial institutions impose additional requirements or restrictions with respect to the ability of such institutions to make loans, particularly in connection with highly leveraged transactions, the availability of Senior Loans for investment may be adversely affected. Further, such legislation or regulation could depress the market value of Senior Loans.

Market disruption

Instability in the Middle East, the wars in Afghanistan, Iraq and Libya, geopolitical tensions elsewhere and terrorist attacks in the U.S. and around the world have resulted in market volatility and may have long-term effects on the U.S. and worldwide financial markets and may cause further economic uncertainties in the U.S. and worldwide. The Trust cannot predict the effects of significant future events on the global economy and securities markets. A similar disruption of the financial markets could impact interest rates, auctions, secondary trading, ratings, credit risk, inflation and other factors relating to the Common Shares. In particular, Non-Investment Grade Bonds and Senior Loans tend to be more volatile than higher rated fixed income securities so that these events and any actions resulting from them may have a greater impact on the prices and volatility on Non-Investment Grade Bonds and Senior Loans than on higher rated fixed income securities.

Anti-takeover provisions

The Trust's Agreement and Declaration of Trust includes provisions that could have the effect of limiting the ability of other persons or entities to acquire control of the Trust or to change the composition of its Board. See Certain provisions of the Declaration of Trust Anti-takeover provisions in the Declaration of Trust.

Eaton Vance Senior Floating-Rate Trust

Summary of Trust expenses

The purpose of the table below is to help you understand all fees and expenses that you, as a holder of Common Shares (Common Shareholder), would bear directly or indirectly. The table reflects the issuance of preferred shares in an amount equal to 14.8% of the Trust's total assets and borrowings in an amount equal to 21.6% of the Trust's total assets (including the proceeds of all such leverage) and shows Trust expenses as a percentage of net assets attributable to Common Shares⁽¹⁾ as of October 31, 2013.

Common Shareholder transaction expenses

| | |
|--|---------------------|
| Sales load paid by you (as a percentage of offering price) | --%(²) |
| Offering expenses (as a percentage of offering price) | None ⁽¹⁾ |
| Dividend reinvestment plan fees | None ⁽³⁾ |

Percentage of net assets
attributable to common shares
(assuming the issuance of
preferred
shares and/or borrowings) ⁽⁴⁾

Annual expenses

| | |
|---|----------------------|
| Investment advisory fee | 1.18% ⁽⁵⁾ |
| Interest payments on borrowed funds | 0.40% ⁽⁶⁾ |
| Other expenses | 0.19% |
| Total annual expenses | 1.77% |
| Dividends on preferred shares | 0.04% ⁽⁶⁾ |
| Total annual Trust operating expenses and dividends on preferred shares | 1.81% |

EXAMPLE

The following example illustrates the expenses that Common Shareholders would pay on a \$1,000 investment in Common Shares, assuming (i) total annual expenses of 1.81% of net assets attributable to Common Shares in years 1 through 10; (ii) a 5% annual return; and (iii) all distributions are reinvested at NAV:

| | | | |
|--------|---------|---------|----------|
| 1 Year | 3 Years | 5 Years | 10 Years |
| \$18 | \$57 | \$98 | \$213 |

The above table and example and the assumption in the example of a 5% annual return are required by regulations of the SEC that are applicable to all investment companies; the assumed 5% annual return is not a prediction of, and does not represent, the projected or actual performance of the Trust's Common Shares. For more complete descriptions of certain of the Trust's costs and expenses, see Management of the Trust. In addition, while the example assumes reinvestment of all dividends and distributions at net asset value (NAV), participants in the Trust's dividend reinvestment plan may receive Common Shares purchased or issued at a price or value different from NAV. See Distributions and Dividend Reinvestment Plan. The example does not include sales load or estimated offering costs, which would cause the expenses shown in the example to increase.

The example should not be considered a representation of past or future expenses, and the Trust's actual expenses may be greater or less than those shown. Moreover, the Trust's actual rate of return may be greater or less than the hypothetical 5% return shown in the example.

(1)

The Adviser will pay the expenses of the Offering (other than the applicable commissions); therefore, Offering expenses are not included in the Summary of Trust Expenses. Offering expenses generally include, but are not limited

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

to, the preparation, review and filing with the Securities and Exchange Commission (SEC) of the Trust s registration statement (including this Prospectus and the Statement of Additional Information), the preparation, review and filing of any associated marketing or similar materials, costs associated with the printing, mailing or other distribution of this Prospectus, the Statement of Additional Information and/or marketing materials, associated filing fees, NYSE listing fees, and legal and auditing fees associated with the Offering.

(2)

If Common Shares are sold to or through underwriters, the Prospectus Supplement will set forth any applicable sales load.

(3)

You will be charged a \$5.00 service charge and pay brokerage charges if you direct the plan agent to sell your Common Shares held in a dividend reinvestment account.

Eaton Vance Senior Floating-Rate Trust

16

Prospectus dated February 24, 2014

(4)

Stated as percentage of average net assets attributed to Common Shares for the year ended October 31, 2013.

(5)

The advisory fee paid by the Trust to the Adviser is based on the average daily gross assets of the Trust, including all assets attributable to any form of investment leverage that the Trust may utilize. Accordingly, if the Trust were to increase investment leverage in the future, the advisory fee will increase as a percentage of net assets.

(6)

As of October 31, 2013 the outstanding borrowings and APS represented approximately 36.94% leverage.

Financial highlights and investment performance

FINANCIAL HIGHLIGHTS

This table details the financial performance of the Common Shares, including total return information showing how much an investment in the Trust has increased or decreased each period.

The financial statements of the Trust as of October 31, 2013 have been audited by Deloitte & Touche LLP, the Trust's independent registered public accounting firm. The report of Deloitte & Touche LLP along with the financial statements of the Trust, including the financial highlights for each of the periods indicated therein, are included in the Trust's October 31, 2013 annual report, which have been incorporated by reference into the SAI and are available upon request.

Selected data for a common share outstanding during the periods stated.

| | Year Ended October 31, | | | | | | | | | | Period Ended October 31, 2004 ⁽¹²⁾ |
|---|------------------------|----------|----------|----------|----------|-----------|----------|----------|----------|----------------------|--|
| | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 ⁽¹²⁾ | |
| Net asset value Beginning of year (Common shares) | \$15.630 | \$14.910 | \$14.980 | \$13.700 | \$10.190 | \$17.800 | \$18.690 | \$18.740 | \$18.970 | \$19.100 | ⁽¹³⁾ |
| Income (Loss) From Operations | | | | | | | | | | | |
| Net investment income ⁽¹⁾ | \$1.009 | \$1.097 | \$1.014 | \$1.025 | \$0.978 | \$1.665 | \$2.177 | \$2.053 | \$1.547 | \$0.968 | |
| Net realized and unrealized gain (loss) | 0.145 | 0.681 | (0.013) | 1.374 | 3.423 | (7.647) | (0.861) | (0.026) | (0.193) | 0.080 | |
| Distributions to preferred shareholders | | | | | | | | | | | |
| From net investment income ⁽¹⁾ | (0.006) | (0.006) | (0.009) | (0.011) | (0.028) | (0.367) | (0.634) | (0.558) | (0.354) | (0.132) | |
| Total income from operations | \$1.148 | \$1.772 | \$0.992 | \$2.388 | \$4.373 | \$(6.349) | \$0.682 | \$1.469 | \$1.000 | \$0.916 | |

(See footnotes on last page.)

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Financial Highlights (continued)

| | Year Ended October 31, | | | | | | | | | Period |
|---|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | Ended October 31, 2004 ⁽¹²⁾ |
| Less Distributions to Common Shareholders From net investment income | \$(1.038) | \$(1.052) | \$(1.062) | \$(1.108) | \$(0.863) | \$(1.142) | \$(1.542) | \$(1.519) | \$(1.230) | \$(0.900) |
| Tax return of capital | | | | | | (0.119) | (0.030) | | | |
| Total distributions to common shareholders | \$(1.038) | \$(1.052) | \$(1.062) | \$(1.108) | \$(0.863) | \$(1.261) | \$(1.572) | \$(1.519) | \$(1.230) | \$(0.900) |
| Preferred and common shares offering costs charged to paid-in capital ⁽¹⁾ | | | | | | | | | | (0.027) |
| Preferred shares underwriting discounts ⁽¹⁾ | | | | | | | | | | (0.119) |
| Premium from common shares sold through shelf offering (see Note 6) ⁽¹⁾ | \$0.070 | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Net asset value End of year (Common shares) | \$15.810 | \$15.630 | \$14.910 | \$14.980 | \$13.700 | \$10.190 | \$17.800 | \$18.690 | \$18.740 | \$18.970 |
| Market value End of year (Common shares) | \$15.800 | \$16.250 | \$14.550 | \$15.640 | \$12.980 | \$9.480 | \$16.200 | \$18.240 | \$17.210 | \$19.940 |
| Total Investment Return on Net Asset Value ⁽²⁾ | 7.98% | 12.31% | 6.69% | 17.93% | 46.90% | (37.33)% | 3.93% | 8.47% | 5.57% | 4.13% ⁽³⁾⁽¹⁴⁾ |
| Total Investment Return on Market Value ⁽²⁾ | 3.79% | 19.66% | (0.28)% | 29.96% | 49.61% | (35.90)% | (3.13)% | 15.27% | (7.77)% | 9.45% ⁽³⁾⁽¹⁴⁾ |

(See footnotes on last page.)

Eaton Vance Senior Floating-Rate Trust

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Financial Highlights (continued)

| | Year Ended October 31, | | | | | | | | | Period Ended October 31, 2004 ⁽¹²⁾ |
|---|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---|
| | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | |
| Ratios/Supplemental Data | | | | | | | | | | |
| Net assets applicable to common shares, end of period (000 \$ omitted) | \$582,523 | \$528,465 | \$503,383 | \$505,197 | \$460,700 | \$342,457 | \$598,214 | \$625,925 | \$627,586 | \$633,584 |
| Ratios (as a percentage of average daily net assets applicable to common shares): ⁽⁴⁾ | | | | | | | | | | |
| Expenses excluding interest and fees ⁽⁵⁾ | 1.37% | 1.38% | 1.29% | 1.22% | 1.21% | 1.18% | 1.18% | 1.17% | 1.16% | 1.08% ⁽⁶⁾ |
| Interest and fee expense ⁽⁷⁾ | 0.40% | 0.42% | 0.44% | 0.49% | 1.15% | 0.99% | | | | |
| Total expenses | 1.77% | 1.80% | 1.73% | 1.71% | 2.36% | 2.17% | 1.18% | 1.17% | 1.16% | 1.08% ⁽⁶⁾ |
| Net investment income | 6.38% | 7.20% | 6.69% | 7.11% | 9.21% | 10.66% | 11.79% | 10.95% | 8.18% | 5.51% ⁽⁶⁾ |
| Portfolio Turnover | 45% | 54% | 49% | 36% | 42% | 21% | 58% | 51% | 64% | 95% ⁽³⁾ |
| The ratios reported above are based on net assets applicable solely to common shares. The ratios based on net assets, including amounts related to preferred shares and borrowings, are as follows: | | | | | | | | | | |
| Ratios (as a percentage of average daily net assets applicable to common shares plus preferred shares and borrowings): ⁽⁴⁾ | | | | | | | | | | |
| Expenses excluding interest and fees ⁽⁵⁾ | 0.87% | 0.87% | 0.83% | 0.77% | 0.74% | 0.68% | 0.72% | 0.72% | 0.72% | 0.71% ⁽⁶⁾ |
| Interest and fee expense ⁽⁷⁾ | 0.25% | 0.27% | 0.28% | 0.31% | 0.70% | 0.57% | | | | |
| Total expenses | 1.12% | 1.14% | 1.11% | 1.08% | 1.44% | 1.25% | 0.72% | 0.72% | 0.72% | 0.71% ⁽⁶⁾ |
| Net investment income | 4.06% | 4.54% | 4.28% | 4.50% | 5.63% | 6.12% | 7.21% | 6.73% | 5.04% | 3.63% ⁽⁶⁾ |
| Senior Securities: | | | | | | | | | | |
| Total notes payable outstanding (in 000 \$) | \$210,000 | \$175,000 | \$165,000 | \$150,000 | \$150,000 | \$154,200 | \$- | \$- | \$- | \$- |
| Asset coverage per \$1,000 of notes payable ⁽⁸⁾ | \$4,399 | \$4,770 | \$4,847 | \$5,243 | \$4,947 | \$4,074 | \$- | \$- | \$- | \$- |
| | 5,252 | 5,252 | 5,252 | 5,252 | 5,252 | 5,252 | 15,760 | 15,760 | 15,760 | 15,760 |

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

| | | | | | | | | | | | |
|--|----------|----------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------|
| Total preferred shares outstanding | | | | | | | | | | | |
| Asset coverage per preferred share ⁽⁸⁾ | \$67,670 | \$68,133 | \$67,473 ⁽⁹⁾ | \$69,900 ⁽⁹⁾ | \$65,945 ⁽⁹⁾ | \$55,060 ⁽⁹⁾ | \$63,001 ⁽¹⁰⁾ | \$64,753 ⁽¹⁰⁾ | \$64,853 ⁽¹⁰⁾ | \$65,223 ⁽¹⁰⁾ | |
| Involuntary liquidation preference per preferred share ⁽¹¹⁾ | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 |
| Approximate market value per preferred share ⁽¹¹⁾ | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 | \$25,000 |

Eaton Vance Senior Floating-Rate Trust

19

Prospectus dated February 24, 2014

(1)

Computed using average shares outstanding.

(2)

Returns are historical and are calculated by determining the percentage change in net asset value or market value with all distributions reinvested. Distributions are assumed to be reinvested at prices obtained under the Trust's dividend reinvestment plan.

(3)

Not annualized.

(4)

Ratios do not reflect the effect of dividend payments to preferred shareholders.

(5)

Excludes the effect of custody fee credits, if any, of less than 0.005%.

(6)

Annualized.

(7)

Interest and fee expense relates to the notes payable incurred to partially redeem the Trust's APS.

(8)

Calculated by subtracting the Trust's total liabilities (not including the notes payable and preferred shares) from the Trust's total assets, and dividing the result by the notes payable balance in thousands.

(9)

Calculated by subtracting the Trust's total liabilities (not including the notes payable and preferred shares) from the Trust's total assets, dividing the result by the sum of the value of the notes payable and liquidation value of preferred shares, and multiplying the result by the liquidation value of one preferred share. Such amount equates to 271%, 273%, 270%, 280%, 264% and 220% at October 31, 2013, 2012, 2011, 2010, 2009 and 2008, respectively.

(10)

Calculated by subtracting the Trust's total liabilities (not including the preferred shares) from the Trust's total assets, and dividing the result by the number of preferred shares outstanding.

(11)

Plus accumulated and unpaid dividends.

(12)

For the period from the start of business, November 28, 2003, to October 31, 2004.

(13)

Net asset value at beginning of period reflects the deduction of the sales load of \$0.90 per share paid by the shareholder from the \$20.00 offering price.

(14)

Total investment return on net asset value is calculated assuming a purchase at the offering price of \$20.00 less the sales load of \$0.90 per share paid by the shareholder on the first day and a sale at the net asset value on the last day of the period reported with all distributions reinvested. Total investment return on market value is calculated assuming a purchase at the offering price of \$20.00 less the sales load of \$0.90 per share paid by the shareholder on the first day and a sale at the current market price on the last day of the period reported with all distributions reinvested.

TRADING AND NAV INFORMATION

The following table sets forth for each of the periods indicated the high and low closing market prices for Common Shares on the NYSE, and the corresponding NAV per share and the premium or discount to NAV per share at which the Trust's Common Shares were trading as of such date.

| Fiscal Quarter Ended | Market Price | | NAV per Share on Date of Market Price High and Low | | NAV Premium/(Discount) on Date of Market Price High and Low | |
|----------------------|--------------|-------|--|-------|---|---------|
| | High | Low | High | Low | High | Low |
| 1/31/2012 | 15.33 | 13.67 | 15.14 | 14.78 | 1.25% | (7.51)% |
| 4/30/2012 | 15.80 | 15.12 | 15.36 | 15.25 | 2.86% | (0.85)% |
| 7/31/2012 | 15.83 | 14.85 | 15.35 | 15.12 | 3.13% | (1.79)% |
| 10/31/2012 | 16.88 | 15.54 | 15.63 | 15.42 | 8.00% | 0.78% |
| 1/31/2013 | 16.75 | 15.66 | 15.86 | 15.64 | 5.61% | 0.13% |
| 4/30/2013 | 17.62 | 16.54 | 15.96 | 15.84 | 10.40% | 4.42% |
| 7/31/2013 | 17.29 | 15.70 | 16.01 | 15.71 | 8.00% | -0.06% |
| 10/31/2013 | 16.23 | 15.25 | 15.87 | 15.77 | 2.27% | -3.30% |
| 1/31/2014 | 15.71 | 15.00 | 15.82 | 15.73 | (0.70)% | (4.64)% |

The last reported sale price, NAV per share and percentage discount to NAV per share of the Common Shares as of February 20, 2014 were \$15.26, \$15.76 and (3.17)%, respectively. As of February 20, 2014, the Trust had 36,841,535 Common Shares outstanding and net assets of the Trust were \$580,674,912.

Eaton Vance Senior Floating-Rate Trust

20

Prospectus dated February 24, 2014

The Trust

The Trust is a diversified, closed-end management investment company registered under the Investment Company Act of 1940 (the "1940 Act"). The Trust was organized as a Massachusetts business trust on August 5, 2003, pursuant to a Declaration of Trust, as amended August 11, 2008, governed by the laws of The Commonwealth of Massachusetts. The Trust's principal office is located at Two International Place, Boston, MA 02110, and its telephone number is 1-800-262-1122.

Use of proceeds

Subject to the remainder of this section, and unless otherwise specified in a Prospectus Supplement, the Trust currently intends to invest substantially all of the net proceeds of any sales of Common Shares pursuant to this Prospectus in accordance with its investment objectives and policies within three months of receipt of such proceeds. Such investments may be delayed up to three months if suitable investments are unavailable at the time or for other reasons, such as market volatility and lack of liquidity in the markets of suitable investments. Pending such investment, the Trust anticipates that it will invest the proceeds in short-term money market instruments, securities with remaining maturities of less than one year, cash or cash equivalents. A delay in the anticipated use of proceeds could lower returns and reduce the Trust's distribution to Common Shareholders or result in a distribution consisting principally of a return of capital.

Portfolio composition

As of October 31, 2013, the following table indicates the approximate percentage of the Trust's portfolio invested in long-term and short-term obligations. Also included in this table is other information with respect to the composition of the Trust's investment portfolio as of the same date.

| Moody's ⁽¹⁾ | Number of issues | Market Value | Percent |
|------------------------------|---------------------|-------------------|---------|
| Aaa | | - | 0.00% |
| Baa | 10 | \$11,997,549 | 1.31% |
| Ba | 222 | \$409,342,221 | 44.60% |
| B | 307 | \$326,405,052,827 | 44.13% |
| Caa | 62 | \$25,412,062 | 2.77% |
| Ca | | | 0.00% |
| D | | | 0.00% |
| Unrated | 57 | \$59,950,581 | 6.53% |
| Cash and cash equivalents | | \$6,115,071 | 0.67% |
| Total | 658 | \$917,870,311 | 100% |

(1)

Ratings: Using the higher of S&P's, Moody's or Fitch's ratings on the Trust's investments. S&P and Fitch rating categories may be modified further by a plus (+) or minus (—) in AA, A, BBB, BB, B, and CCC ratings. Moody's rating categories may be modified further by a 1, 2 or 3 in Aa, A, Baa, Ba, B, and Caa ratings.

Eaton Vance Senior Floating-Rate Trust

21

Prospectus dated February 24, 2014

Investment objectives, policies and risks

INVESTMENT OBJECTIVES

The Trust's investment objective is to provide shareholders with a high level of current income. The Trust may, as a secondary objective, also seek preservation of capital to the extent consistent with its investment objective of high current income. Under normal market conditions, Eaton Vance expects the Trust to maintain an average duration of less than one year (including the effect of anticipated leverage). The Trust pursues its objectives by investing its assets primarily in senior, secured floating rate loans (Senior Loans). Senior Loans are loans in which the interest rate paid fluctuates based on a reference rate. Investment in such floating rate instruments is expected to minimize changes in the underlying principal value of the Senior Loans, and therefore the Trust's net asset value, resulting from changes in market interest rates. The borrowers of such loans will be corporations, partnerships and other business entities (Borrowers) which operate in a variety of industries and geographical regions. Senior Loans pay interest at rates that are reset periodically by reference to a base lending rate, primarily the London Interbank Offered Rate (LIBOR), plus a premium.

PRIMARY INVESTMENT POLICIES

General composition of the Trust

Under normal market conditions, the Trust will invest at least 80% of its total assets in Senior Loans of domestic and foreign Borrowers that are denominated in U.S. dollars, Euros, British pounds, Swiss francs, Canadian dollars and Australian dollars (each, an Authorized Foreign Currency). The Trust may invest up to 20% of its total assets in: (i) loan interests which are not secured by any, or that have a lower than senior claim on, collateral, (ii) other income producing securities such as investment and non-investment grade corporate debt securities and U.S. government and U.S. dollar-denominated foreign government or supranational debt securities, and (iii) warrants and equity securities issued by a Borrower or its affiliates as part of a package of investments in the Borrower or its affiliates. If the Adviser determines that market conditions temporarily warrant a defensive investment policy, the Trust may invest up to 100% of its assets in cash and/or high quality, short-term debt securities, which would not be consistent with the Trust's investment objectives. While temporarily invested, the Trust may not achieve its investment objectives. Corporate bonds of below investment grade quality (Non-Investment Grade Bonds), commonly referred to as junk bonds, are bonds that are rated below investment grade by each of the Rating Agencies who cover the security, or, if unrated, are determined to be of comparable quality by the Adviser. S&P and Fitch consider securities rated below BBB- to be below investment grade and Moody's considers securities rated below Baa3 to be below investment grade. The Trust's credit quality policies apply only at the time a security is purchased, and the Trust is not required to dispose of a security in the event of a downgrade of an assessment of credit quality, the withdrawal of a rating, or in the event of a default. In determining whether to retain or sell such a security, Eaton Vance may consider such factors as Eaton Vance's assessment of the credit quality of the issuers of such security, the price at which such security could be sold and the rating, if any, assigned to such security by other Rating Agencies. Securities rated in the lowest investment grade rating (BBB- or Baa3) may have certain speculative characteristics. Below investment grade quality securities are considered to be predominantly speculative because of the credit risk of the issuers. See Investment objectives, policies and risks Special risk considerations Non-investment grade bonds risk.

The Trust's policy of investing, under normal market conditions, at least 80% of its total assets in Senior Loans is not considered to be fundamental by the Trust and can be changed without a vote of the Trust's shareholders. However, this policy may only be changed by the Trust's Board following the provision of 60 days prior written notice to the Trust's shareholders.

Eaton Vance Senior Floating-Rate Trust

22

Prospectus dated February 24, 2014

Under normal market conditions, the Adviser expects to maintain an average duration of less than one year (including the effect of anticipated leverage). In comparison to maturity (which is the date on which a debt instrument ceases and the issuer is obligated to repay the principal amount), duration is a measure of the price volatility of a debt instrument as a result of changes in market rates of interest, based on the weighted average timing of the instrument's expected principal and interest payments. Duration differs from maturity in that it considers a security's yield, coupon payments, principal payments and call features in addition to the amount of time until the security finally matures. As the value of a security changes over time, so will its duration. Prices of securities with longer durations tend to be more sensitive to interest rate changes than securities with shorter durations. In general, a portfolio of securities with a longer duration can be expected to be more sensitive to interest rate changes than a portfolio with a shorter duration.

The Adviser's staff monitors the credit quality and the price of Senior Loans and other securities held by the Trust, as well as other securities that are available to the Trust. The Trust may invest in Senior Loans and other securities of any credit quality.

Although the Adviser considers ratings when making investment decisions, it performs its own credit and investment analysis and does not rely primarily on the ratings assigned by the Rating Agencies. In evaluating the quality of a particular security, whether rated or unrated, the Adviser will normally take into consideration, among other things, the issuer's financial resources and operating history, its sensitivity to economic conditions and trends, the ability of its management, its debt maturity schedules and borrowing requirements, and relative values based on anticipated cash flow, interest and asset coverage, and earnings prospects. The Adviser will attempt to reduce the risks of investing in lower rated or unrated debt instruments through active portfolio management, credit analysis and attention to current developments and trends in the economy and the financial markets.

The Trust is not required to dispose of a security in the event that a Rating Agency downgrades its assessment of the credit characteristics of a particular issue or withdraws its assessment, including in the event of a default. In determining whether to retain or sell such a security, Eaton Vance may consider such factors as Eaton Vance's assessment of the credit quality of the issuers of such security, the price at which such security could be sold and the rating, if any, assigned to such security by other Rating Agencies.

The Trust may invest up to 15% of net assets in Senior Loans denominated in Authorized Foreign Currencies and may invest in other securities of non-United States issuers. The Trust's investments may have significant exposure to certain sectors of the economy and thus may react differently to political or economic developments than the market as a whole. The Trust may accept equity securities in connection with a debt restructuring or reorganization of a Borrower either inside or outside of bankruptcy. The Trust may hold equity securities issued in exchange for a Senior Loan or issued in connection with the debt restructuring or reorganization of a Borrower. The Trust may also acquire additional equity securities of such Borrower or its affiliates if, in the judgment of the Adviser, such an investment may enhance the value of a Senior Loan held or would otherwise be consistent with the Trust's investment policies.

The Trust may purchase shares of other investment companies with a similar investment objective and policies as permitted under the 1940 Act. Such investments are limited to 10% of total assets overall, with no more than 5% invested in any one issuer. The value of shares of other closed-end investment companies is affected by risks similar to those of the Trust, such as demand for those securities regardless of the demand for the underlying portfolio assets. Investment companies bear fees and expenses that the Trust will bear indirectly, so investors in the Trust will be subject to duplication of fees. The Trust also may invest up to 5% of its total assets in structured notes with rates of return determined by reference to the total rate of return on one or more Senior Loans referenced in such notes. The rate of return on the structured note may be determined by applying a multiplier to the rate of total return on the referenced Senior Loan or Loans. Application of a multiplier is comparable to the use of financial leverage, a speculative technique. Leverage magnifies the potential for gain and the risk of loss; as a result, a relatively small decline in the value of a referenced Loan could result in a relatively large loss in the value of a structured note. Shares of other investment companies that invest in Senior Loans and structured notes will be treated as Senior Loans for purposes of the Trust's policy of normally investing at least 80% of its assets in Senior Loans, and may be subject to

the Trust's leverage limitations.

Eaton Vance Senior Floating-Rate Trust

23

Prospectus dated February 24, 2014

Senior Loans

Senior Loans hold the most senior position in the capital structure of a Borrower, are typically secured with specific collateral and have a claim on the assets and/or stock of the Borrower that is senior to that held by subordinated debt holders and stockholders of the Borrower. The capital structure of a Borrower may include Senior Loans, senior and junior subordinated debt, preferred stock and common stock issued by the Borrower, typically in descending order of seniority with respect to claims on the Borrower's assets (discussed below). Senior Loans are typically secured by specific collateral. As also discussed above, the proceeds of Senior Loans primarily are used to finance leveraged buyouts, recapitalizations, mergers, acquisitions, stock repurchases, refinancings and internal growth and for other corporate purposes.

Senior Loans in which the Trust will invest generally pay interest at rates, which are redetermined periodically by reference to a base lending rate, plus a premium. Senior Loans typically have rates of interest which are redetermined either daily, monthly, quarterly or semi-annually by reference to a base lending rate, plus a premium or credit spread. These base lending rates are primarily LIBOR, and secondarily the prime rate offered by one or more major United States banks (the Prime Rate) and the certificate of deposit (CD) rate or other base lending rates used by commercial lenders. As floating rate loans, the frequency of how often a loan resets its interest rate will impact how closely such loans track current market interest rate. The Senior Loans held by the Trust will have a dollar-weighted average period until the next interest rate adjustment of approximately 90 days or less. As a result, as short-term interest rates increase, interest payable to the Trust from its investments in Senior Loans should increase, and as short-term interest rates decrease, interest payable to the Trust from its investments in Senior Loans should decrease. The Trust may utilize derivative instruments to shorten the effective interest rate redetermination period of Senior Loans in its portfolio. Senior Loans typically have a stated term of between one and ten years. In the experience of the Adviser over the last decade, however, the average life of Senior Loans has been two to four years because of prepayments.

The Trust expects primarily to purchase Senior Loans by assignment from a participant in the original syndicate of lenders or from subsequent assignees of such interests. The Trust may also purchase participations in the original syndicate making Senior Loans. Such indebtedness may be secured or unsecured. Loan participations typically represent direct participations in a loan to a corporate borrower, and generally are offered by banks or other financial institutions or lending syndicates. The Trust may participate in such syndications, or can buy part of a loan, becoming a part lender. When purchasing loan participations, the Trust assumes the credit risk associated with the corporate borrower and may assume the credit risk associated with an interposed bank or other financial intermediary. The participation interests in which the Trust intends to invest may not be rated by any Rating Agency.

The Trust may purchase and retain in its portfolio Senior Loans where the Borrowers have experienced, or may be perceived to be likely to experience, credit problems, including involvement in or recent emergence from bankruptcy reorganization proceedings or other forms of debt restructuring. Such investments may provide opportunities for enhanced income as well as capital appreciation. At times, in connection with the restructuring of a Senior Loan either outside of bankruptcy court or in the context of bankruptcy court proceedings, the Trust may determine or be required to accept equity securities or junior debt securities in exchange for all or a portion of a Senior Loan.

The Trust may also purchase unsecured loans, other floating rate debt securities such as notes, bonds and asset-backed securities (such as special purpose trusts investing in bank loans), credit-linked notes, tranches of collateralized loan obligations, investment grade fixed income debt obligations and money market instruments, such as commercial paper.

Senior Loans and other floating-rate debt instruments are subject to the risk of non-payment of scheduled interest or principal. Such non-payment would result in a reduction of income to the Trust, a reduction in the value of the investment and a potential decrease in the net asset value of the Trust. There can be no assurance that the liquidation of any collateral securing a loan would satisfy the Borrower's obligation in the event of non-payment of scheduled interest or principal payments, or that such collateral could be readily liquidated. In the event of bankruptcy of a

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Borrower, the Trust could experience delays or limitations with respect to its ability to realize the benefits of the collateral securing a Senior Loan. The collateral securing a Senior Loan may lose all or substantially all of its value in the event of bankruptcy of a Borrower. Some Senior Loans are subject to the risk

Eaton Vance Senior Floating-Rate Trust

24

Prospectus dated February 24, 2014

that a court, pursuant to fraudulent conveyance or other similar laws, could subordinate such Senior Loans to presently existing or future indebtedness of the Borrower or take other action detrimental to the holders of Senior Loans, including, in certain circumstances, invalidating such Senior Loans or causing interest previously paid to be refunded to the Borrower. If interest were required to be refunded, it could negatively affect the Trust's performance.

Many Senior Loans in which the Trust will invest may not be rated by a Rating Agency, will not be registered with the SEC or any state securities commission and will not be listed on any national securities exchange. The amount of public information available with respect to Senior Loans will generally be less extensive than that available for registered or exchange listed securities. In evaluating the creditworthiness of Borrowers, the Adviser will consider, and may rely in part, on analyses performed by others. Borrowers may have outstanding debt obligations that are rated below investment grade by a Rating Agency. Many of the Senior Loans in the Trust will have been assigned ratings below investment grade by independent rating agencies. In the event Senior Loans are not rated, they are likely to be the equivalent of below investment grade quality. Because of the protective features of Senior Loans, the Adviser believes that Senior Loans tend to have more favorable loss recovery rates as compared to more junior types of below investment grade debt obligations. The Adviser does not view ratings as the determinative factor in its investment decisions and relies more upon its credit analysis abilities than upon ratings.

No active trading market may exist for some loans and some loans may be subject to restrictions on resale. A secondary market may be subject to irregular trading activity, wide bid/ask spreads and extended trade settlement periods, which may impair the ability to realize full value and thus cause a material decline in the Trust's net asset value. During periods of limited supply and liquidity of Senior Loans, the Trust's yield may be lower.

When interest rates decline, the value of a fund invested in fixed-rate obligations can be expected to rise. Conversely, when interest rates rise, the value of a fund invested in fixed-rate obligations can be expected to decline. Although changes in prevailing interest rates can be expected to cause some fluctuations in the value of Senior Loans (due to the fact that floating rates on Senior Loans only reset periodically), the value of Senior Loans is substantially less sensitive to changes in market interest rates than fixed-rate instruments. As a result, the Adviser expects the Trust's policy of investing a portion of its assets in floating-rate Senior Loans will make the Trust less volatile and less sensitive to changes in market interest rates than if the Trust invested exclusively in fixed-rate obligations. Similarly, a sudden and significant increase in market interest rates may cause a decline in the value of these investments and in the Trust's net asset value. Other factors (including, but not limited to, rating downgrades, credit deterioration, a large downward movement in stock prices, a disparity in supply and demand of certain Senior Loans and other securities or market conditions that reduce liquidity) can reduce the value of Senior Loans and other debt obligations, impairing the Trust's net asset value.

The Adviser uses an independent pricing service to value most loans and other debt securities at their market value. The Adviser may use the fair value method to value loans or other securities if market quotations for them are not readily available or are deemed unreliable, or if events occurring after the close of a securities market and before the Trust values its assets would materially affect net asset value. A security that is fair valued may be valued at a price higher or lower than actual market quotations or the value determined by other funds using their own fair valuation procedures. Because foreign securities trade on days when the Common Shares are not priced, net asset value can change at times when Common Shares cannot be sold.

Eaton Vance Senior Floating-Rate Trust

ADDITIONAL INVESTMENT PRACTICES

Collateralized loan obligations (CLOs)

The Trust may invest in certain asset-backed securities as discussed below. Asset-backed securities are payment claims that are securitized in the form of negotiable paper that is issued by a financing company (generically called a Special Purpose Vehicle or SPV). These securitized payment claims are, as a rule, corporate financial assets brought into a pool according to specific diversification rules. The SPV is a company founded solely for the purpose of securitizing these claims and its only asset is the risk arising out of this diversified asset pool. On this basis, marketable securities are issued which, due to the diversification of the underlying risk, generally represent a lower level of risk than the original assets. The redemption of the securities issued by the SPV takes place at maturity out of the cash flow generated by the collected claims.

A CLO is a structured credit security issued by an SPV that was created to reapportion the risk and return characteristics of a pool of assets. The assets, typically Senior Loans, are used as collateral supporting the various debt tranches issued by the SPV. The key feature of the CLO structure is the prioritization of the cash flows from a pool of debt securities among the several classes of CLO holders, thereby creating a series of obligations with varying rates and maturities appealing to a wide range of investors. CLOs generally are secured by an assignment to a trustee under the indenture pursuant to which the bonds are issued of collateral consisting of a pool of debt instruments, usually, non-investment grade bank loans. Payments with respect to the underlying debt securities generally are made to the trustee under the indenture. CLOs are designed to be retired as the underlying debt instruments are repaid. In the event of sufficient early prepayments on such debt instruments, the class or series of CLO first to mature generally will be retired prior to maturity. Therefore, although in most cases the issuer of CLOs will not supply additional collateral in the event of such prepayments, there will be sufficient collateral to secure their priority with respect to other CLO tranches that remain outstanding. The credit quality of these securities depends primarily upon the quality of the underlying assets, their priority with respect to other CLO tranches and the level of credit support and/or enhancement provided.

The underlying assets (*e.g.*, loans) are subject to prepayments which shorten the securities' weighted average maturity and may lower their return. If the credit support or enhancement is exhausted, losses or delays in payment may result if the required payments of principal and interest are not made. The value of these securities also may change because of changes in market value, that is changes in the market's perception of the creditworthiness of the servicing agent for the pool, the originator of the pool, or the financial institution or fund providing the credit support or enhancement.

Collateralized debt obligations (CDOs)

The Trust may invest in CDOs. A CDO is a structured credit security issued by an SPV that was created to reapportion the risk and return characteristics of a pool of assets. The assets, typically non-investment grade bonds, leveraged loans, and other asset-backed obligations, are used as collateral supporting the various debt and equity tranches issued by the SPV. The key feature of the CDO structure is the prioritization of the cash flows from a pool of debt securities among the several classes of CDO holders, thereby creating a series of obligations with varying rates and maturities appealing to a wide range of investors. CDOs generally are secured by an assignment to a trustee under the indenture pursuant to which the bonds are issued of collateral consisting of a pool of debt securities, usually, non-investment grade bonds. Payments with respect to the underlying debt securities generally are made to the trustee under the indenture. CDOs are designed to be retired as the underlying debt securities are repaid. In the event of sufficient early prepayments on such debt securities, the class or series of CDO first to mature generally will be retired prior to maturity. Therefore, although in most cases the issuer of CDOs will not supply additional collateral in the event of such prepayments, there will be sufficient collateral to secure CDOs that remain outstanding. The credit quality of these securities depends primarily upon the quality of the underlying assets and the level of credit support and/or enhancement provided. CDOs operate similarly to CLOs and are subject to the same inherent risks.

Eaton Vance Senior Floating-Rate Trust

26

Prospectus dated February 24, 2014

Foreign securities

The Trust may invest in Senior Loans and other debt securities of non-U.S. issuers. Investment in securities of non-U.S. issuers involves special risks, including that non-U.S. issuers may be subject to less rigorous accounting and reporting requirements than U.S. issuers, less rigorous regulatory requirements, differing legal systems and laws relating to creditors' rights, the potential inability to enforce legal judgments and the potential for political, social and economic adversity. The willingness and ability of sovereign issuers to pay principal and interest on government securities depends on various economic factors, including among others the issuer's balance of payments, overall debt level, and cash flow considerations related to the availability of tax or other revenues to satisfy the issuer's obligations. The securities of some foreign issuers are less liquid and at times more volatile than securities of comparable U.S. issuers. Foreign settlement procedures and trade regulations may involve certain risks (such as delay in the payment or delivery of securities and interest or in the recovery of assets held abroad) and expenses not present in the settlement of domestic investments. Investments may include securities issued by the governments of lesser-developed countries, which are sometimes referred to as emerging markets. There may be a possibility of nationalization or expropriation of assets, imposition of currency exchange controls, confiscatory taxation, political or financial instability, armed conflict and diplomatic developments which could affect the value of the Trust's investments in certain foreign countries.

Corporate bonds and other debt securities

The Trust may invest in a wide variety of bonds, debentures and similar debt securities of varying maturities and durations issued by corporations and other business entities, including limited liability companies. Debt securities in which the Trust may invest may pay fixed or variable rates of interest. Bonds and other debt securities generally are issued by corporations and other issuers to borrow money from investors. The issuer pays the investor a fixed or variable rate of interest and normally must repay the amount borrowed on or before maturity. Certain debt securities are *perpetual* in that they have no maturity date. The Trust may invest in bonds and other debt securities of any quality. As discussed below, Non-Investment Grade Bonds, commonly known as junk bonds, are considered to be predominantly speculative in nature because of the because of the credit risk of the issuers.

Non-Investment Grade Bonds

As indicated above, Non-Investment Grade Bonds are those rated lower than investment grade (*i.e.*, bonds rated lower than Baa3 by Moody's and lower than BBB- by S&P and Fitch) or are unrated and of comparable quality as determined by the Adviser. Non-Investment Grade Bonds rated BB and Ba have speculative characteristics, while lower rated Non-Investment Grade Bonds are predominantly speculative.

The Trust may hold securities that are unrated or in the lowest rating categories (rated C by Moody's or D by S&P or Fitch). Bonds rated C by Moody's are regarded as having extremely poor prospects of ever attaining any real investment standing. Bonds rated D by S&P or Fitch are in payment default or a bankruptcy petition has been filed and debt service payments are jeopardized. In order to enforce its rights with defaulted securities, the Trust may be required to retain legal counsel and/or a financial adviser. This may increase the Trust's operating expenses and adversely affect net asset value.

The credit quality of most securities held by the Trust reflects a greater than average possibility that adverse changes in the financial condition of an issuer, or in general economic conditions, or both, may impair the ability of the issuer to make payments of interest and principal. The inability (or perceived inability) of issuers to make timely payment of interest and principal would likely make the values of securities held by the Trust more volatile and could limit the Trust's ability to sell its securities at favorable prices. In the absence of a liquid trading market for securities held by it, the Trust may have difficulties determining the fair market value of such securities.

Although the Adviser considers security ratings when making investment decisions, it performs its own credit and investment analysis and does not rely primarily on the ratings assigned by the Rating Agencies. In evaluating the quality of a particular security, whether rated or unrated, the Adviser will normally take into consideration, among other things, the issuer's financial resources and operating history, its sensitivity to economic conditions and trends, the ability of its management, its debt maturity schedules and borrowing requirements, and relative values based on anticipated cash flow, interest and asset coverage, and earnings

Eaton Vance Senior Floating-Rate Trust

27

Prospectus dated February 24, 2014

prospects. Because of the greater number of investment considerations involved in investing in high yield, high risk bonds, the achievement of the Trust's objectives depends more on the Adviser's judgment and analytical abilities than would be the case if the Trust invested primarily in securities in the higher rating categories. While the Adviser will attempt to reduce the risks of investing in lower rated or unrated securities through active Trust management, diversification, credit analysis and attention to current developments and trends in the economy and the financial markets, there can be no assurance that a broadly diversified fund of such securities would substantially lessen the risk of defaults brought about by an economic downturn or recession. In recent years, issuances of Non-Investment Grade Bonds by companies in various sectors have increased. Accordingly, the Trust's investments may have significant exposure to certain sectors of the economy and thus may react differently to political or economic developments than the market as a whole.

The Trust's high yield securities may have fixed or variable principal payments and all types of interest rate and dividend payment and reset terms, including fixed rate, adjustable rate, zero coupon, contingent, deferred, and payment in kind features.

Convertible securities

The Trust may invest in convertible securities. A convertible security is a debt security or preferred stock that is exchangeable for an equity security of the issuer at a predetermined price. Depending upon the relationship of the conversion price to the market value of the underlying security, a convertible security may trade more like an equity security than a debt instrument. The Trust may invest in convertible securities of any rating.

Government securities

U.S. Government securities include (1) U.S. Treasury obligations, which differ in their interest rates, maturities and times of issuance: U.S. Treasury bills (maturities of one year or less), U.S. Treasury notes (maturities of one year to ten years) and U.S. Treasury bonds (generally maturities of greater than ten years) and (2) obligations issued or guaranteed by U.S. Government agencies and instrumentalities that are supported by any of the following: (a) the full faith and credit of the U.S. Treasury, (b) the right of the issuer to borrow an amount limited to a specific line of credit from the U.S. Treasury, (c) discretionary authority of the U.S. Government to purchase certain obligations of the U.S. Government agency or instrumentality or (d) the credit of the agency or instrumentality. The Trust may also invest in any other security or agreement collateralized or otherwise secured by U.S. Government securities. Agencies and instrumentalities of the U.S. Government include but are not limited to: Federal Land Banks, Federal Financing Banks, Banks for Cooperatives, Federal Intermediate Credit Banks, Farm Credit Banks, Federal Home Loan Banks, Federal Home Loan Mortgage Corporation, Federal National Mortgage Association, Government National Mortgage Association, Student Loan Marketing Association, United States Postal Service, Small Business Administration, Tennessee Valley Authority and any other enterprise established or sponsored by the U.S. Government. Because the U.S. Government generally is not obligated to provide support to its instrumentalities, the Trust will invest in obligations issued by these instrumentalities only if the Adviser determines that the credit risk with respect to such obligations is minimal.

The principal of and/or interest on certain U.S. Government securities which may be purchased by the Trust could be (a) payable in foreign currencies rather than U.S. dollars or (b) increased or diminished as a result of changes in the value of the U.S. dollar relative to the value of foreign currencies. The value of such portfolio securities may be affected favorably by changes in the exchange rate between foreign currencies and the U.S. dollar.

Commercial paper

Commercial paper represents short-term unsecured promissory notes issued in bearer form by corporations such as banks or bank holding companies and finance companies. The rate of return on commercial paper may be linked or indexed to the level of exchange rates between the U.S. dollar and a foreign currency or currencies.

Eaton Vance Senior Floating-Rate Trust

28

Prospectus dated February 24, 2014

When-issued securities and forward commitments

Securities may be purchased on a forward commitment or when-issued basis (meaning securities are purchased or sold with payment and delivery taking place in the future) in order to secure what is considered to be an advantageous price and yield at the time of entering into the transaction. However, the yield on a comparable security when the transaction is consummated may vary from the yield on the security at the time that the forward commitment or when-issued transaction was made. From the time of entering into the transaction until delivery and payment is made at a later date, the securities that are the subject of the transaction are subject to market fluctuations. In forward commitment or when-issued transactions, if the seller or buyer, as the case may be, fails to consummate the transaction, the counterparty may miss the opportunity of obtaining a price or yield considered to be advantageous. Forward commitment or when-issued transactions may be expected to occur a month or more before delivery is due. However, no payment or delivery is made until payment is received or delivery is made from the other party to the transaction. Forward commitment or when-issued transactions are not entered into for the purpose of investment leverage.

Illiquid securities

The Trust may invest without limitation in Senior Loans and other securities for which there is no readily available trading market or are otherwise illiquid. Illiquid securities include securities legally restricted as to resale, such as commercial paper issued pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended (the 1933 Act), and securities eligible for resale pursuant to Rule 144A thereunder. Section 4(a)(2) and Rule 144A securities may, however, be treated as liquid by the Adviser pursuant to procedures adopted by the Board, which require consideration of factors such as trading activity, availability of market quotations and number of dealers willing to purchase the security. If the Trust invests in Rule 144A securities, the level of portfolio illiquidity may be increased to the extent that eligible buyers become uninterested in purchasing such securities.

It may be difficult to sell such securities at a price representing the fair value until such time as such securities may be sold publicly. Where registration is required, a considerable period may elapse between a decision to sell the securities and the time when it would be permitted to sell. Thus, the Trust may not be able to obtain as favorable a price as that prevailing at the time of the decision to sell. The Trust may also acquire securities through private placements under which it may agree to contractual restrictions on the resale of such securities. Such restrictions might prevent their sale at a time when such sale would otherwise be desirable.

Derivatives

As described more specifically below, the Trust may purchase or sell derivative instruments (which are instruments that derive their value from another instrument, security or index) to seek to hedge against fluctuations in securities prices or interest rates or for the purpose of leveraging the Trust. The Trust's transactions in derivative instruments may include the purchase or sale of futures contracts on securities, credit-linked notes, securities indices, other indices or other financial instruments; options on futures contracts; exchange-traded and over-the-counter options on securities or indices; index-linked securities; and interest rate swaps. The Trust's transactions in derivative instruments involve a risk of loss or depreciation due to: unanticipated adverse changes in securities prices, interest rates, the other financial instruments' prices; the inability to close out a position; default by the counterparty; imperfect correlation between a position and the desired hedge; tax constraints on closing out positions; and portfolio management constraints on securities subject to such transactions. The loss on derivative instruments (other than purchased options) may substantially exceed the Trust's initial investment in these instruments. In addition, the Trust may lose the entire premium paid for purchased options that expire before they can be profitably exercised by the Trust. Transaction costs will be incurred in opening and closing positions in derivative instruments. There can be no assurance that Eaton Vance's use of derivative instruments will be advantageous to the Trust.

Eaton Vance Senior Floating-Rate Trust

29

Prospectus dated February 24, 2014

Credit-linked notes

The Trust may invest in credit-linked notes (CLN) for risk management purposes, including diversification. A CLN is a derivative instrument. It is a synthetic obligation between two or more parties where the payment of principal and/or interest is based on the performance of some obligation (a reference obligation). In this type of investment, the Trust is subject to credit risks, including, but not limited to, default risks, associated with the issuer of the CLN's reference obligation. Material events or circumstances impacting the issuer of the CLN's reference obligation will affect the payments between the derivative instrument's parties because such events or circumstances will impact the performance of the reference obligation. The reference obligation may be loan obligations such as Senior Loans and other debt obligations. In addition to credit risk of the reference obligation and interest rate risk, the buyer/seller of the CLN is subject to counterparty risk.

Swaps

Swap contracts may be purchased or sold to hedge against fluctuations in securities prices, interest rates or market conditions, to change the duration of the overall portfolio, or to mitigate default risk. In a standard swap transaction, two parties agree to exchange the returns (or differentials in rates of return) to be exchanged or swapped between the parties, which returns are calculated with respect to a notional amount, *i.e.*, the return on or increase in value of a particular dollar amount invested at a particular interest rate or in a basket of securities representing a particular index.

Interest Rate Swaps. The Trust will enter into interest rate and total return swaps only on a net basis, *i.e.*, the two payment streams are netted out, with the Trust receiving or paying, as the case may be, only the net amount of the two payments. Interest rate swaps involve the exchange by the Trust with another party of their respective commitments to pay or receive interest (e.g., an exchange of fixed rate payments for floating rate payments). The Trust will only enter into interest rate swaps on a net basis. If the other party to an interest rate swap defaults, the Trust's risk of loss consists of the net amount of payments that the Trust is contractually entitled to receive. The net amount of the excess, if any, of the Trust's obligations over its entitlements will be maintained in a segregated account by the Trust's custodian. The Trust will not enter into any interest rate swap unless the claims-paying ability of the other party thereto is considered to be investment grade by the Adviser. If there is a default by the other party to such a transaction, the Trust will have contractual remedies pursuant to the agreements related to the transaction. These instruments have traditionally been traded in the over-the-counter market and were not cleared. However, the Dodd-Frank Wall Street Reform and Consumer Protection Act has required clearing and exchange trading of many over-the-counter derivative transactions. The CFTC has recently issued a final determination that certain interest rate and credit default swaps are required to be cleared.

The Trust may use interest rate swaps for risk management purposes only and not as a speculative investment and would typically use interest rate swaps to shorten the average interest rate reset time of the Trust's holdings. Interest rate swaps involve the exchange by the Trust with another party of their respective commitments to pay or receive interests (e.g., an exchange of fixed rate payments for floating rate payments). The use of interest rate swaps is a highly specialized activity which involves investment techniques and risks different from those associated with ordinary portfolio securities transactions. If the Adviser is incorrect in its forecasts of market values, interest rates and other applicable factors, the investment performance of the Trust would be unfavorably affected.

Total Return Swaps. As stated above, the Trust will enter into total return swaps only on a net basis. Total return swaps are contracts in which one party agrees to make payments of the total return from the underlying asset(s), which may include securities, baskets of securities, or securities indices during the specified period, in return for payments equal to a fixed or floating rate of interest or the total return from other underlying asset(s).

Eaton Vance Senior Floating-Rate Trust

30

Prospectus dated February 24, 2014

Credit Default Swaps. The Trust may enter into credit default swap contracts for risk management purposes, including diversification. When the Trust is the buyer of a credit default swap contract, the Trust is entitled to receive the par (or other agreed-upon) value of a referenced debt obligation from the counterparty to the contract in the event of a default by a third party, such as a U.S. or foreign corporate issuer, on the debt obligation. In return, the Trust would pay the counterparty a periodic stream of payments over the term of the contract provided that no event of default has occurred. If no default occurs, the Trust would have spent the stream of payments and received no benefit from the contract. When the Trust is the seller of a credit default swap contract, it receives the stream of payments, but is obligated to pay upon default of the referenced debt obligation. As the seller, the Trust would effectively add leverage to its portfolio because, in addition to its total net assets, the Trust would be subject to investment exposure on the notional amount of the swap. The Trust will segregate assets in the form of cash and cash equivalents in an amount equal to the aggregate market value of the credit default swaps of which it is the seller, marked to market on a daily basis. These transactions involve certain risks, including the risk that the seller may be unable to fulfill the transaction.

Futures and options on futures

The Trust may purchase and sell various kinds of financial futures contracts and options thereon to seek to hedge against changes in interest rates or for other risk management purposes. Futures contracts may be based on various debt securities and securities indices. Such transactions involve a risk of loss or depreciation due to unanticipated adverse changes in securities prices, which may exceed the Trust's initial investment in these contracts. The Trust will only purchase or sell futures contracts or related options in compliance with the rules of the CFTC. These transactions involve transaction costs. There can be no assurance that Eaton Vance's use of futures will be advantageous to the Trust. Rating Agency guidelines on any preferred shares issued by the Trust, including the APS, may limit use of these transactions.

Securities lending

The Trust may seek to earn income by lending portfolio securities to broker-dealers or other institutional borrowers. As with other extensions of credit, there are risks of delay in recovery or even loss of rights in the securities loaned if the borrower of the securities fails financially. In the judgment of the Adviser, the loans will be made only to organizations whose credit quality or claims paying ability is considered to be at least investment grade and when the expected returns, net of administrative expenses and any finders' fees, justifies the attendant risk. Securities loans currently are required to be secured continuously by collateral in cash, cash equivalents (such as money market instruments) or other liquid securities held by the custodian and maintained in an amount at least equal to the market value of the securities loaned. The financial condition of the borrower will be monitored by the Adviser on an ongoing basis.

Borrowings

The Trust may borrow money to the extent permitted under the 1940 Act as interpreted, modified or otherwise permitted by regulatory authority having jurisdiction, from time to time. Subject to Rating Agency guidelines regarding the APS and the Trust's ability to maintain a rating of AAA/Aa3 on the APS, the Trust may from time to time borrow money to add leverage to the portfolio. Under the 1940 Act, the Trust is not permitted to incur indebtedness, including through the issuance of debt securities, unless immediately thereafter the total asset value of the Trust's portfolio is at least 300% of the liquidation value of the outstanding indebtedness (i.e., such liquidation value may not exceed 33 1/3% of the Trust's total assets). The Trust may from time to time borrow money to add leverage to the portfolio. The Trust may also borrow money for temporary administrative purposes.

Eaton Vance Senior Floating-Rate Trust

31

Prospectus dated February 24, 2014

The Trust has entered into a credit agreement (the Agreement) with a bank to borrow up to a limit of \$210 million (\$185 million prior to March 26, 2013) pursuant to a 364-day revolving line of credit. Borrowings under the Agreement are secured by the assets of the Trust. Interest is charged at a rate above LIBOR and is payable monthly. Under the terms of the Agreement, the Trust pays a commitment fee of 0.15% on the borrowing limit. The Trust is required to maintain certain net asset levels during the term of the Agreement. As of October 31, 2013, the Trust had borrowings outstanding under the Agreement of \$210,000,000 at an interest rate of 0.93%. The carrying amount of the borrowings at October 31, 2013 approximated its fair value. For the year ended October 31, 2013, the average borrowings under the Agreement and the average interest rate (excluding fees) were \$192,041,096 and 1.00%, respectively. In addition, the credit facility may in the future be replaced or refinanced by one or more credit facilities having substantially different terms or by the issuance of preferred shares or debt securities.

Repurchase agreements

The Trust may enter into repurchase agreements (the purchase of a security coupled with an agreement to resell at a higher price) with respect to its permitted investments. In the event of the bankruptcy of the other party to a repurchase agreement, the Trust might experience delays in recovering its cash. To the extent that, in the meantime, the value of the securities the Trust purchased may have decreased, the Trust could experience a loss. The Trust's repurchase agreements will provide that the value of the collateral underlying the repurchase agreement will always be at least equal to the repurchase price, including any accrued interest earned on the agreement, and will be marked to market daily. Repurchase agreements are considered by the staff of the SEC to be loans by the fund that enters into them.

Reverse repurchase agreements

While the Trust has no current intention to enter into reverse repurchase agreements, the Trust reserves the right to enter into reverse repurchase agreements in the future, at levels that may vary over time. Under a reverse repurchase agreement, the Trust temporarily transfers possession of a portfolio instrument to another party, such as a bank or broker-dealer, in return for cash. At the same time, the Trust agrees to repurchase the instrument at an agreed upon time (normally within seven days) and price, which reflects an interest payment. The Trust may enter into such agreements when it is able to invest the cash acquired at a rate higher than the cost of the agreement, which would increase earned income.

When the Trust enters into a reverse repurchase agreement, any fluctuations in the market value of either the securities transferred to another party or the securities in which the proceeds may be invested would affect the market value of the Trust's assets. As a result, such transactions may increase fluctuations in the market value of the Trust's assets. While there is a risk that large fluctuations in the market value of the Trust's assets could affect net asset value, this risk is not significantly increased by entering into reverse repurchase agreements, in the opinion of the Adviser. Because reverse repurchase agreements may be considered to be the practical equivalent of borrowing funds, they constitute a form of leverage. The SEC views reverse repurchase transactions as collateralized borrowings by a fund. Such agreements will be treated as subject to investment restrictions regarding borrowings. If the Trust reinvests the proceeds of a reverse repurchase agreement at a rate lower than the cost of the agreement, entering into the agreement will lower the Trust's yield.

Portfolio turnover

The Trust cannot accurately predict its portfolio turnover rate, but the annual turnover rate may exceed 100% (excluding turnover of securities having a maturity of one year or less). A high turnover rate (100% or more) necessarily involves greater expenses to the Trust. The portfolio turnover rates for the Trust for the fiscal years ended October 31, 2012 and 2013 were 54% and 45%, respectively.

Eaton Vance Senior Floating-Rate Trust

32

Prospectus dated February 24, 2014

USE OF LEVERAGE AND RELATED RISKS

The Trust currently uses leverage created by issuing APS as well as by loans acquired with borrowings. On January 26, 2004, the Trust issued 3,940 Series A APS, 3,940 Series B APS, 3,940 Series C APS and 3,940 Series D APS, with a liquidation preference per share of \$25,000 plus accumulated but unpaid dividends. As of December 31, 2012, 2,627 Series A APS, 2,627 Series B APS, 2,627 Series C APS and 2,627 Series D APS had been redeemed. The APS have seniority over the Common Shares. In addition, the Trust has entered into an Agreement with a bank to borrow up to a limit of \$210 million (\$185 million prior to March 26, 2013) pursuant to a 364-day revolving line of credit. Borrowings under the Agreement are secured by the assets of the Trust. Interest is charged at a rate above LIBOR and is payable monthly. Under the terms of the Agreement, the Trust pays a commitment fee of 0.15% on the borrowing limit. The Trust is required to maintain certain net asset levels during the term of the Agreement. As of October 31, 2013, the Trust had \$210 million in outstanding borrowings, at an interest rate of 0.93%, in addition to outstanding APS. The Adviser anticipates that the use of leverage (from such issuance of APS and any borrowings) may result in higher income to Common Shareholders over time. Use of financial leverage creates an opportunity for increased income but, at the same time, creates special risks. There can be no assurance that a leveraging strategy will be successful.

The costs of the financial leverage program (from any issuance of preferred shares and any borrowings) are borne by Common Shareholders and consequently result in a reduction of the NAV of Common Shares. During periods in which the Trust is using leverage, the fees paid to Eaton Vance for investment advisory services will be higher than if the Trust did not use leverage because the fees paid will be calculated on the basis of the Trust's gross assets, including proceeds from the issuance of preferred shares and borrowings. In this regard, holders of debt or preferred securities do not bear the investment advisory fee. Rather, Common Shareholders bear the portion of the investment advisory fee attributable to the assets purchased with the proceeds, which means that Common Shareholders effectively bear the entire advisory fee.

Leverage creates risks for holders of the Common Shares, including the likelihood of greater volatility of NAV and market price of the Common Shares. There is a risk that fluctuations in the distribution rates on any outstanding preferred shares may adversely affect the return to the holders of the Common Shares. If the income from the investments purchased with such Trusts is not sufficient to cover the cost of leverage, the return on the Trust will be less than if leverage had not been used, and, therefore, the amount available for distribution to Common Shareholders will be reduced. The Adviser in its best judgment nevertheless may determine to maintain the Trust's leveraged position if it deems such action to be appropriate in the circumstances.

Changes in the value of the Trust's investment portfolio (including investments bought with the proceeds of leverage) will be borne entirely by the Common Shareholders. If there is a net decrease (or increase) in the value of the Trust's investment portfolio, the leverage will decrease (or increase) the NAV per Common Share to a greater extent than if the Trust were not leveraged. During periods in which the Trust is using leverage, the fees paid to Eaton Vance for investment advisory services will be higher than if the Trust did not use leverage because the fees paid will be calculated on the basis of the Trust's gross assets, including the proceeds from the issuance of preferred shares and borrowings. As discussed under Description of capital structure, the Trust's issuance of preferred shares may alter the voting power of Common Shareholders.

Capital raised through leverage will be subject to distribution and/or interest payments, which may exceed the income and appreciation on the assets purchased. The issuance of preferred shares involves offering expenses and other costs and may limit the Trust's freedom to pay distributions on Common Shares or to engage in other activities. The issuance of a class of preferred shares having priority over the Common Shares creates an opportunity for greater return per Common Share, but at the same time such leveraging is a speculative technique that will increase the Trust's exposure to capital risk. Unless the income and appreciation, if any, on assets acquired with offering proceeds exceed the cost of issuing additional classes of securities (and other Trust expenses), the use of leverage will diminish the investment performance of the Common Shares compared with what it would have been without leverage.

Eaton Vance Senior Floating-Rate Trust

33

Prospectus dated February 24, 2014

The Trust is subject to certain restrictions on investments imposed by guidelines of one or more Rating Agencies that issued ratings for preferred shares issued by the Trust. These guidelines impose asset coverage or Trust composition requirements that are more stringent than those imposed on the Trust by the 1940 Act. These covenants or guidelines do not currently and are not expected to impede Eaton Vance in managing the Trust's portfolio in accordance with its investment objectives and policies and it is not anticipated that they will so impeded Eaton Vance in the future.

Under the 1940 Act, the Trust is not permitted to issue preferred shares unless immediately after such issuance the total asset value of the Trust's portfolio is at least 200% of the liquidation value of the outstanding preferred shares plus the amount of any senior security representing indebtedness (i.e., such liquidation value and amount of indebtedness may not exceed 50% of the Trust's total assets). In addition, the Trust is not permitted to declare any cash distribution on its Common Shares unless, at the time of such declaration, the NAV of the Trust's portfolio (determined after deducting the amount of such distribution) is at least 200% of such liquidation value plus amount of indebtedness. The Trust intends, to the extent possible, to purchase or redeem preferred shares, from time to time, to maintain coverage of any preferred shares of at least 200%. As of October 31, 2013, the outstanding APS and the outstanding borrowings represented 36.94% leverage, and there was an asset coverage of the APS of 270.48%.

Holders of preferred shares, voting as a class, shall be entitled to elect two of the Trust's Trustees. The holders of both the Common Shares and the preferred shares (voting together as a single class with each share entitling its holder to one vote) shall be entitled to elect the remaining Trustees of the Trust. In the event the Trust fails to pay distributions on its preferred shares for two years, preferred shareholders would be entitled to elect a majority of the Trustees until the preferred distributions in arrears are paid.

Under the 1940 Act, the Trust is not permitted to incur indebtedness, including through the issuance of debt securities, unless immediately thereafter the total asset value of the Trust's portfolio is at least 300% of the liquidation value of the outstanding indebtedness (i.e., such liquidation value may not exceed 33 1/3% of the Trust's total assets). In addition, the Trust is not permitted to declare any cash distribution on its Common Shares unless, at the time of such declaration, the NAV of the Trust's portfolio (determined after deducting the amount of such distribution) is at least 300% of such liquidation value. If the Trust borrows money or enters into a commercial paper program, the Trust intends, to the extent possible, to retire outstanding debt, from time to time, to maintain coverage of any outstanding indebtedness of at least 300%. As of October 31, 2013, there were \$210 million in outstanding borrowings.

To qualify for federal income taxation as a regulated investment company, the Trust must distribute in each taxable year at least 90% of its net investment income (including net interest income and net short-term gain). The Trust also will be required to distribute annually substantially all of its income and capital gain, if any, to avoid imposition of a nondeductible 4% federal excise tax. If the Trust is precluded from making distributions on the Common Shares because of any applicable asset coverage requirements, the terms of the preferred shares may provide that any amounts so precluded from being distributed, but required to be distributed for the Trust to meet the distribution requirements for qualification as a regulated investment company, will be paid to the holders of the preferred shares as a special distribution. This distribution can be expected to decrease the amount that holders of preferred shares would be entitled to receive upon redemption or liquidation of the shares.

Successful use of a leveraging strategy may depend on the Adviser's ability to predict correctly interest rates and market movements, and there is no assurance that a leveraging strategy will be successful during any period in which it is employed.

Assuming the utilization of leverage in the amount of 36.94% of the Trust's gross assets and an annual dividend rate on preferred shares of 0.31% and an annual interest rate of 1.08% on borrowings payable on such leverage based on market rates as of the date of this Prospectus, the additional income that the Trust must earn (net of expenses) in order to cover such dividend payments is 0.29%. The Trust's actual cost of leverage will be based on market rates at the time the Trust undertakes a leveraging strategy, and such actual costs of leverage may be higher or lower than that assumed in the previous example.

The following table is designed to illustrate the effect on the return to a holder of the Common Shares of leverage in the amount of approximately 36.94% of the Trust's gross assets, assuming hypothetical annual returns of the Trust's portfolio of minus 10% to plus 10%. As the table shows, leverage generally increases the return to Common Shareholders when portfolio return is positive and greater than the cost of leverage and decreases the return when the portfolio return is negative or less than the cost of leverage. The figures appearing in the table are hypothetical and actual returns may be greater or less than those appearing in the table.

| | | | | | |
|--|----------|---------|---------|-------|--------|
| Assumed portfolio return (net of expenses) | (10)% | (5)% | 0% | 5% | 10% |
| Corresponding Common Share return assuming 36.94% leverage | (16.32)% | (8.39)% | (0.46)% | 7.47% | 15.40% |

ADDITIONAL RISK CONSIDERATIONS

Discount from or premium to NAV

The Offering will be conducted only when Common Shares of the Trust are trading at a price equal to or above the Trust's NAV per Common Share plus the per Common Share amount of commissions. As with any security, the market value of the Common Shares may increase or decrease from the amount initially paid for the Common Shares. The Trust's Common Shares have traded both at a premium and at a discount relative to net asset value. The shares of closed-end management investment companies frequently trade at a discount from their NAV. This is a risk separate and distinct from the risk that the Trust's NAV may decrease.

Secondary market for the Common Shares

The issuance of Common Shares through the Offering may have an adverse effect on the secondary market for the Common Shares. The increase in the amount of the Trust's outstanding Common Shares resulting from the Offering may put downward pressure on the market price for the Common Shares of the Trust. Common Shares will not be issued pursuant to the Offering at any time when Common Shares are trading at a price lower than a price equal to the Trust's NAV per Common Share plus the per Common Share amount of commissions.

The Trust also issues Common Shares of the Trust through its dividend reinvestment plan. See Dividend reinvestment plan. Common Shares may be issued under the plan at a discount to the market price for such Common Shares, which may put downward pressure on the market price for Common Shares of the Trust.

When the Common Shares are trading at a premium, the Trust may also issue Common Shares of the Trust that are sold through transactions effected on the NYSE. The increase in the amount of the Trust's outstanding Common Shares resulting from that offering may also put downward pressure on the market price for the Common Shares of the Trust.

The voting power of current shareholders will be diluted to the extent that such shareholders do not purchase shares in any future Common Share offerings or do not purchase sufficient shares to maintain their percentage interest. In addition, if the Adviser is unable to invest the proceeds of such offering as intended, the Trust's per share distribution may decrease (or may consist of return of capital) and the Trust may not participate in market advances to the same extent as if such proceeds were fully invested as planned.

Eaton Vance Senior Floating-Rate Trust

35

Prospectus dated February 24, 2014

Income risk

The income investors receive from the Trust is based primarily on the interest it earns from its investments, which can vary widely over the short and long-term. If prevailing market interest rates drop, investors' income from the Trust could drop as well. The Trust's income could also be affected adversely when prevailing short-term interest rates increase and the Trust is utilizing leverage, although this risk is mitigated by the Trust's investment in Senior Loans, which pay floating rates of interest.

Credit risk

Loans and other income investments are subject to the risk of non-payment of scheduled principal and interest. Changes in economic conditions or other circumstances may reduce the capacity of the party obligated to make principal and interest payments on such instruments and may lead to defaults. Such non-payments and defaults may reduce the value of Trust shares and income distributions. The value of a fixed income security also may decline because of concerns about the issuer's ability to make principal and interest payments. In addition, the credit ratings of loans or other income investments may be lowered if the financial condition of the party obligated to make payments with respect to such instruments changes. In the event of bankruptcy of the issuer of loans or other income investments, the Trust could experience delays or limitations with respect to its ability to realize the benefits of any collateral securing the instrument. In order to enforce its rights in the event of a default, bankruptcy or similar situation, the Trust may be required to retain legal or similar counsel.

Prepayment risk

During periods of declining interest rates or for other purposes, Borrowers may exercise their option to prepay principal earlier than scheduled. For fixed-income securities, such payments often occur during periods of declining interest rates, forcing the Trust to reinvest in lower yielding securities. This is known as call or prepayment risk. Non-Investment Grade Bonds frequently have call features that allow the issuer to redeem the security at dates prior to its stated maturity at a specified price (typically greater than par) only if certain prescribed conditions are met (call protection). An issuer may redeem a Non-Investment Grade Bond if, for example, the issuer can refinance the debt at a lower cost due to declining interest rates or an improvement in the credit standing of the issuer. Senior Loans typically have no such call protection. For premium bonds (bonds acquired at prices that exceed their par or principal value) purchased by the Trust, prepayment risk may be enhanced.

Issuer risk

The value of corporate income-producing securities held by the Trust may decline for a number of reasons which directly relate to the issuer, such as management performance, financial leverage and reduced demand for the issuer's goods and services.

Senior Loans risk

The risks associated with Senior Loans are similar to the risks of Non-Investment Grade Bonds (discussed below), although Senior Loans are typically senior and secured in contrast to Non-Investment Grade Bonds, which are often subordinated and unsecured. Senior Loans' higher standing has historically resulted in generally higher recoveries in the event of a corporate reorganization or other restructuring. In addition, because their interest rates are adjusted for changes in short-term interest rates, Senior Loans generally have less interest rate risk than Non-Investment Grade Bonds, which are typically fixed rate. The Trust's investments in Senior Loans are typically below investment grade and are considered speculative because of the credit risk of their issuers. Such companies are more likely to default on their payments of interest and principal owed to the Trust, and such defaults could reduce the Trust's net asset value and income distributions. An economic downturn generally leads to a higher non-payment rate, and a debt obligation may lose significant value before a default occurs. Moreover, any specific collateral used to secure a loan may decline

in value, lose all of its value or become illiquid, which would adversely affect the loan's value.

Economic and other events (whether real or perceived) can reduce the demand for certain Senior Loans or Senior Loans generally, which may reduce market prices and cause the Trust's net asset value per share to fall. The frequency and magnitude of such changes cannot be predicted.

Eaton Vance Senior Floating-Rate Trust

36

Prospectus dated February 24, 2014

Loans and other debt securities are also subject to the risk of price declines and to increases in prevailing interest rates, although floating-rate debt instruments are less exposed to this risk than fixed-rate debt instruments. Interest rate changes may also increase prepayments of debt obligations and require the Trust to invest assets at lower yields. No active trading market may exist for certain loans, which may impair the ability of the Trust to realize full value in the event of the need to liquidate such assets. Adverse market conditions may impair the liquidity of some actively traded loans.

Non-Investment Grade Bonds risk

The Trust's investments in Non-Investment Grade Bonds, commonly referred to as junk bonds, are predominantly speculative because of the credit risk of their issuers. While offering a greater potential opportunity for capital appreciation and higher yields, Non-Investment Grade Bonds typically entail greater potential price volatility and may be less liquid than higher-rated securities. Issuers of Non-Investment Grade Bonds are more likely to default on their payments of interest and principal owed to the Trust, and such defaults will reduce the Trust's net asset value and income distributions. The prices of these lower rated obligations are more sensitive to negative developments than higher rated securities. Adverse business conditions, such as a decline in the issuer's revenues or an economic downturn, generally lead to a higher non-payment rate. In addition, a security may lose significant value before a default occurs as the market adjusts to expected higher non-payment rates.

Derivatives risk

The use of derivatives can lead to losses because of adverse movements in the price or value of the asset, index, rate or instrument underlying a derivative, due to failure of a counterparty or due to tax or regulatory constraints. Derivatives may create investment leverage in the Trust, which magnifies the Trust's exposure to the underlying investment. Derivative risks may be more significant when they are used to enhance return or as a substitute for a position or security, rather than solely to hedge the risk of a position or security held by the Trust. Derivatives for hedging purposes may not reduce risk if they are not sufficiently correlated to the position being hedged. A decision as to whether, when and how to use derivatives involves the exercise of specialized skill and judgment, and even a well-conceived transaction may be unsuccessful to some degree because of market behavior or unexpected events. Derivative instruments may be difficult to value, may be illiquid, and may be subject to wide swings in valuation caused by changes in the value of the underlying instrument. The loss on derivative transactions may substantially exceed the initial investment.

Leverage risk

As discussed above, the Trust currently uses leverage created by issuing APS and borrowings. On January 26, 2004, the Trust issued 3,940 Series A APS, 3,940 Series B APS, 3,940 Series C APS and 3,940 Series D APS, with a liquidation preference per share of \$25,000 plus accumulated but unpaid dividends. As of December 31, 2012, 2,627 Series A APS, 2,627 Series B APS, 2,627 Series C APS and 2,627 Series D APS had been redeemed. In addition, the Trust has entered into an Agreement with a bank to borrow up to a limit of \$210 million (\$185 million prior to March 26, 2013) pursuant to a 364-day revolving line of credit. The Trust is required to maintain certain net asset levels during the term of the Agreement. As of October 31, 2013, the Trust had \$210 million in outstanding borrowings, at an interest rate of 0.93%, in addition to outstanding APS.

The Adviser anticipates that the use of leverage (from the issuance of APS and borrowings) may result in higher income to Common Shareholders over time. Leverage creates risks for Common Shareholders, including the likelihood of greater volatility of NAV and market price of the Common Shares and the risk that fluctuations in dividend rates on APS and costs of borrowings may affect the return to Common Shareholders. To the extent the income derived from investments purchased with funds received from leverage exceeds the cost of leverage, the Trust's distributions will be greater than if leverage had not been used. Conversely, if the income from the investments purchased with such funds is not sufficient to cover the cost of leverage, the amount available for distribution to

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Common Shareholders will be less than if leverage had not been used. In the latter case, Eaton Vance, in its best judgment, may nevertheless determine to maintain the Trust's leveraged position if it deems such action to be appropriate. While the Trust has preferred shares outstanding, an increase in short-term rates would also result in an increased cost of leverage, which would adversely affect the Trust's income available for distribution. There can be no assurance that a leveraging strategy will be successful.

Eaton Vance Senior Floating-Rate Trust

37

Prospectus dated February 24, 2014

In addition, under current federal income tax law, the Trust is required to allocate a portion of any net realized capital gains or other taxable income to APS holders. The terms of the Trust's APS require the Trust to pay to any APS holders additional dividends intended to compensate the APS holders for taxes payable on any capital gains or other taxable income allocated to APS. Any such additional dividends will reduce the amount available for distribution to Common Shareholders. As discussed under Management of the Trust, the fee paid to Eaton Vance is calculated on the basis of the Trust's gross assets, including proceeds from the issuance of APS and borrowings, so the fees will be higher when leverage is utilized. In this regard, holders of APS do not bear the investment advisory fee. Rather, Common Shareholders bear the portion of the investment advisory fee attributable to the assets purchased with the proceeds, which means that Common Shareholders effectively bear the entire advisory fee.

The APS have been rated AA by Fitch and Aa3 by Moody's. The Trust currently intends to seek to maintain this rating or an equivalent credit rating from other Rating Agencies on the APS or any preferred shares it issues. The Trust is subject to investment restrictions of the Rating Agencies as a result. Any bank lender in connection with a credit facility or commercial paper program may also impose specific restrictions as a condition to borrowing. Such restrictions imposed by a Rating Agency or lender may include asset coverage or portfolio composition requirements that are more stringent than those imposed on the Trust by the 1940 Act. These covenants or guidelines do not currently and are not expected to impede Eaton Vance in managing the Trust's portfolio in accordance with its investment objectives and policies and it is not anticipated that they will so impeded Eaton Vance in the future. See Description of capital structure Preferred shares.

Financial leverage may also be achieved through the purchase of certain derivative instruments. The Trust's use of derivative instruments exposes the Trust to special risks. See Investment objectives, policies and risks Additional investment practices and Investment objectives, policies, and risks Additional risk considerations.

Interest rate risk

When interest rates decline, the value of a portfolio invested in Senior Loans may rise. Conversely, when interest rates rise, the value of a portfolio invested in Senior Loans may decline. Interest rates are at historical lows and, as a result, it is likely that they will rise. Because floating or variable rates on Senior Loans only reset periodically, changes in prevailing interest rates may cause some fluctuations in the Trust's net asset value. Similarly, a sudden and significant increase in market interest rates may cause a decline in the Trust's net asset value. A material decline in the Trust's net asset value may impair the Trust's ability to maintain required levels of asset coverage.

Foreign securities risk

Investments in foreign issuers could be affected by factors not present in the United States, including expropriation, armed conflict, confiscatory taxation, lack of uniform accounting and auditing standards, less publicly available financial and other information, and potential difficulties in enforcing contractual obligations. Because foreign issuers may not be subject to uniform accounting, auditing and financial reporting standards, practices and requirements and regulatory measures comparable to those in the United States, there may be less publicly available information about such foreign issuers. Settlements of securities transactions in foreign countries are subject to risk of loss, may be delayed and are generally less frequent than in the United States, which could affect the liquidity of the Trust's assets.

Liquidity risk

The Trust may invest without limitation in Senior Loans and other securities for which there is no readily available trading market or which are otherwise illiquid. The Trust may not be able to dispose readily of such securities at prices that approximate those at which the Trust could sell such securities if they were more widely traded and, as a result of such illiquidity, the Trust may have to sell other investments or engage in borrowing transactions if necessary to raise cash to meet its obligations. In addition, the limited liquidity could affect the market price of the securities, thereby adversely affecting the Trust's net asset value and ability to make dividend distributions.

Eaton Vance Senior Floating-Rate Trust

38

Prospectus dated February 24, 2014

Some Senior Loans are not readily marketable and may be subject to restrictions on resale. Senior Loans generally are not listed on any national securities exchange or automated quotation system and no active trading market may exist for some of the Senior Loans in which the Trust will invest. Where a secondary market exists, such market for some Senior Loans may be subject to irregular activity, wide bid/ask spreads and extended trade settlement periods. Senior Loans that are illiquid may impair the Trust's ability to realize the full value of its assets in the event of a voluntary or involuntary liquidation of such assets and thus may cause a decline in the Trust's net asset value. The Trust has no limitation on the amount of its assets which may be invested in securities which are not readily marketable or are subject to restrictions on resale.

Reinvestment risk

Income from the Trust's portfolio will decline if and when the Trust invests the proceeds from matured, traded or called debt obligations into lower yielding instruments.

Inflation risk

Inflation risk is the risk that the value of assets or income from investment will be worth less in the future as inflation decreases the value of money. As inflation increases, the real value of the Common Shares and distributions thereon can decline. In addition, during any periods of rising inflation, dividend rates of preferred shares would likely increase, which would tend to further reduce returns to Common Shareholders. This risk is mitigated to some degree by the Trust's investments in Senior Loans.

Management risk

The Trust is subject to management risk because it is an actively managed portfolio. Eaton Vance and the individual portfolio managers will apply investment techniques and risk analyses in making investment decisions for the Trust, but there can be no guarantee that these will produce the desired results.

Regulatory risk

To the extent that legislation or state or federal regulators that regulate certain financial institutions impose additional requirements or restrictions with respect to the ability of such institutions to make loans, particularly in connection with highly leveraged transactions, the availability of Senior Loans for investment may be adversely affected. Further, such legislation or regulation could depress the market value of Senior Loans.

Market disruption

Instability in the Middle East, the wars in Afghanistan, Iraq and Libya, geopolitical tensions elsewhere and terrorist attacks in the U.S. and around the world have resulted in market volatility and may have long-term effects on the U.S. and worldwide financial markets and may cause further economic uncertainties in the U.S. and worldwide. The Trust cannot predict the effects of significant future events on the global economy and securities markets. A similar disruption of the financial markets could impact interest rates, auctions, secondary trading, ratings, credit risk, inflation and other factors relating to the Common Shares. In particular, Non-Investment Grade Bonds and Senior Loans tend to be more volatile than higher rated fixed income securities so that these events and any actions resulting from them may have a greater impact on the prices and volatility on Non-Investment Grade Bonds and Senior Loans than on higher rated fixed income securities.

Anti-takeover provisions

The Trust's Agreement and Declaration of Trust includes provisions that could have the effect of limiting the ability of other persons or entities to acquire control of the Trust or to change the composition of its Board. See Certain

provisions of the Declaration of Trust Anti-takeover provisions in the Declaration of Trust.

Eaton Vance Senior Floating-Rate Trust

39

Prospectus dated February 24, 2014

Management of the Trust

BOARD OF TRUSTEES

The management of the Trust, including general supervision of the duties performed by the Adviser under the Advisory Agreement (as defined below), is the responsibility of the Trust's Board under the laws of The Commonwealth of Massachusetts and the 1940 Act.

THE ADVISER

Eaton Vance acts as the Trust's investment adviser under an Investment Advisory Agreement (the Advisory Agreement). The Adviser's principal office is located at Two International Place, Boston, MA 02110. Eaton Vance, its affiliates and predecessor companies have been managing assets of individuals and institutions since 1924 and of investment companies since 1931. As of January 31, 2014, Eaton Vance and its affiliates managed approximately \$278.6 billion of fund and separate account assets on behalf of clients, including approximately \$44.1 billion in floating-rate income assets. Eaton Vance is a wholly-owned subsidiary of Eaton Vance Corp., a publicly-held holding company, which through its subsidiaries and affiliates engages primarily in investment management, administration and marketing activities.

Under the general supervision of the Trust's Board, the Adviser will carry out the investment and reinvestment of the assets of the Trust, will furnish continuously an investment program with respect to the Trust, will determine which securities should be purchased, sold or exchanged, and will implement such determinations. The Adviser will furnish to the Trust investment advice and office facilities, equipment and personnel for servicing the investments of the Trust. The Adviser will compensate all Trustees and officers of the Trust who are members of the Adviser's organization and who render investment services to the Trust, and will also compensate all other Adviser personnel who provide research and investment services to the Trust. In return for these services, facilities and payments, the Trust has agreed to pay the Adviser as compensation under the Advisory Agreement a fee in the amount of 0.75% of the average daily gross assets of the Trust. Gross assets of the Trust shall be calculated by deducting accrued liabilities of the Trust not including the amount of any preferred shares outstanding or the principal amount of any indebtedness for money borrowed. During periods in which the Trust is using leverage, the fees paid to Eaton Vance for investment advisory services will be higher than if the Trust did not use leverage because the fees paid will be calculated on the basis of the Trust's gross assets, including proceeds from any borrowings and from the issuance of preferred shares.

Scott H. Page, Craig P. Russ, Peter M. Campo and other Eaton Vance investment professionals comprise the investment team responsible for the overall and day-to-day management of the Trust's investments as well as allocations of the Trust's assets between common and preferred stocks. Messrs. Page, Russ and Campo are the portfolio managers responsible for the day-to-day management of the Trust's investments. Mr. Page has been an Eaton Vance portfolio manager since 1996 and is a Vice President of Eaton Vance. He is head of Eaton Vance's Bank Loan Investment Group. Mr. Russ has been an Eaton Vance portfolio manager since 2001 and is a Vice President of Eaton Vance. Mr. Campo joined Eaton Vance in 2003 and is a Vice President of Eaton Vance.

Additional Information Regarding Portfolio Managers

The Statement of Additional Information provides additional information about the portfolio managers' compensation, other accounts managed by the portfolio managers, and the portfolio managers' ownership of securities in the Trust. The Statement of Additional Information is available free of charge by calling 1-800-225-6265 or by visiting the Trust's website at <http://www.eatonvance.com>. The information contained in, or that can be accessed through, the Trust's website is not part of this Prospectus or the Statement of Additional Information.

The Trust and the Adviser have adopted a Code of Ethics relating to personal securities transactions. The Code permits Adviser personnel to invest in securities (including securities that may be purchased or held by the Trust) for

their own accounts, subject to certain pre-clearance, reporting and other restrictions and procedures contained in such Code.

Eaton Vance Senior Floating-Rate Trust

40

Prospectus dated February 24, 2014

THE ADMINISTRATOR

Eaton Vance serves as administrator of the Trust but currently receives no compensation for providing administrative services to the Trust. Under an Administration Agreement with the Trust (Administration Agreement), Eaton Vance is responsible for managing the business affairs of the Trust, subject to the supervision of the Trust's Board. Eaton Vance will furnish to the Trust all office facilities, equipment and personnel for administering the affairs of the Trust. Eaton Vance's administrative services include recordkeeping, preparation and filing of documents required to comply with federal and state securities laws, supervising the activities of the Trust's custodian and transfer agent, providing assistance in connection with the Trustees' and shareholders' meetings, providing service in connection with any repurchase offers and other administrative services necessary to conduct the Trust's business.

Plan of distribution

The Trust may sell the Common Shares being offered under this Prospectus in any one or more of the following ways: (i) directly to purchasers; (ii) through agents; (iii) to or through underwriters; or (iv) through dealers. The Prospectus Supplement relating to the Offering will identify any agents, underwriters or dealers involved in the offer or sale of Common Shares, and will set forth any applicable offering price, sales load, fee, commission or discount arrangement between the Trust and its agents or underwriters, or among its underwriters, or the basis upon which such amount may be calculated, net proceeds and use of proceeds, and the terms of any sale.

The Trust may distribute Common Shares from time to time in one or more transactions at: (i) a fixed price or prices that may be changed; (ii) market prices prevailing at the time of sale; (iii) prices related to prevailing market prices; or (iv) negotiated prices; provided, however, that in each case the offering price per Common Share (less any underwriting commission or discount) must equal or exceed the NAV per Common Share.

The Trust from time to time may offer its Common Shares through or to certain broker-dealers, including UBS Securities LLC, that have entered into selected dealer agreements relating to at-the-market offerings.

The Trust may directly solicit offers to purchase Common Shares, or the Trust may designate agents to solicit such offers. The Trust will, in a Prospectus Supplement relating to such Offering, name any agent that could be viewed as an underwriter under the 1933 Act, and describe any commissions the Trust must pay to such agent(s). Any such agent will be acting on a reasonable best efforts basis for the period of its appointment or, if indicated in the applicable Prospectus Supplement or other offering materials, on a firm commitment basis. Agents, dealers and underwriters may be customers of, engage in transactions with, or perform services for the Trust in the ordinary course of business.

If any underwriters or agents are used in the sale of Common Shares in respect of which this Prospectus is delivered, the Trust will enter into an underwriting agreement or other agreement with them at the time of sale to them, and the Trust will set forth in the Prospectus Supplement relating to such Offering their names and the terms of the Trust's agreement with them.

If a dealer is utilized in the sale of Common Shares in respect of which this Prospectus is delivered, the Trust will sell such Common Shares to the dealer, as principal. The dealer may then resell such Common Shares to the public at varying prices to be determined by such dealer at the time of resale.

The Trust may engage in at-the-market offerings to or through a market maker or into an existing trading market, on an exchange or otherwise, in accordance with Rule 415(a)(4) under the 1933 Act. An at-the-market offering may be through an underwriter or underwriters acting as principal or agent for the Trust.

Agents, underwriters and dealers may be entitled under agreements which they may enter into with the Trust to indemnification by the Trust against certain civil liabilities, including liabilities under the 1933 Act, and may be customers of, engage in transactions with or perform services for the Trust in the ordinary course of business.

Eaton Vance Senior Floating-Rate Trust

41

Prospectus dated February 24, 2014

In order to facilitate the Offering of Common Shares, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of Common Shares or any other Common Shares the prices of which may be used to determine payments on the Common Shares. Specifically, any underwriters may over-allot in connection with the Offering, creating a short position for their own accounts. In addition, to cover over-allotments or to stabilize the price of Common Shares or of any such other Common Shares, the underwriters may bid for, and purchase, Common Shares or any such other Common Shares in the open market. Finally, in any Offering of Common Shares through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing Common Shares in the Offering if the syndicate repurchases previously distributed Common Shares in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of Common Shares above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

The Trust may enter into derivative transactions with third parties, or sell Common Shares not covered by this Prospectus to third parties in privately negotiated transactions. If the applicable Prospectus Supplement indicates, in connection with those derivatives, the third parties may sell Common Shares covered by this Prospectus and the applicable Prospectus Supplement or other offering materials, including in short sale transactions. If so, the third parties may use Common Shares pledged by the Trust or borrowed from the Trust or others to settle those sales or to close out any related open borrowings of securities, and may use Common Shares received from the Trust in settlement of those derivatives to close out any related open borrowings of securities. The third parties in such sale transactions will be underwriters and, if not identified in this Prospectus, will be identified in the applicable Prospectus Supplement or other offering materials (or a post-effective amendment).

The Trust or one of the Trust's affiliates may loan or pledge Common Shares to a financial institution or other third party that in turn may sell Common Shares using this Prospectus. Such financial institution or third party may transfer its short position to investors in Common Shares or in connection with a simultaneous Offering of other Common Shares offered by this Prospectus or otherwise.

The maximum amount of compensation to be received by any member of the Financial Industry Regulatory Authority, Inc. will not exceed 8% of the initial gross proceeds from the sale of any security being sold with respect to each particular Offering of Common Shares made under a single Prospectus Supplement.

Any underwriter, agent or dealer utilized in the initial Offering of Common Shares will not confirm sales to accounts over which it exercises discretionary authority without the prior specific written approval of its customer.

Distributions

The Trust intends to make monthly distributions of net investment income to Common Shareholders, after payment of any dividends on any outstanding APS. The amount of each monthly distribution will vary depending on a number of factors, including dividends payable on the Trust's preferred shares or other costs of financial leverage. As portfolio and market conditions change, the rate of dividends on the Common Shares and the Trust's dividend policy could change. Over time, the Trust will distribute all of its net investment income (after it pays accrued dividends on any outstanding preferred shares) or other costs of financial leverage. In addition, at least annually, the Trust intends to distribute all or substantially all of its net realized capital gains (reduced by available capital loss carryforwards from prior years, if any). Distributions to Common Shareholders are recorded on the ex-dividend date. Distributions to preferred shareholders are recorded daily and are payable at the end of each dividend period.

Beginning February 13, 2008 and consistent with the patterns in the broader market for auction-rate securities, the Trust's APS auctions were unsuccessful in clearing due to an imbalance of sell orders over bids to buy the APS. As a result, the dividend rates of the APS were reset to the maximum applicable rates.

Eaton Vance Senior Floating-Rate Trust

42

Prospectus dated February 24, 2014

The Trust distinguishes between distributions on a tax basis and a financial reporting basis. Accounting principles generally accepted in the United States of America require that only distributions in excess of tax basis earnings and profits be reported in the financial statements as a return of capital. Permanent differences between book and tax accounting relating to distributions are reclassified to paid-in capital. For tax purposes, distributions from short-term capital gains are considered to be from ordinary income.

Common Shareholders may elect automatically to reinvest some or all of their distributions in additional Common Shares under the Trust's dividend reinvestment plan. See [Dividend reinvestment plan](#).

While there are any borrowings or preferred shares outstanding, the Trust may not be permitted to declare any cash dividend or other distribution on its Common Shares in certain circumstances. See [Description of capital structure](#).

Federal income tax matters

The Trust intends to qualify each year as a regulated investment company (a RIC) under the Internal Revenue Code of 1986, as amended (the Code). Accordingly, the Trust intends to satisfy certain requirements relating to sources of its income and diversification of its assets and to distribute substantially all of its net income (including both investment company taxable income and net tax-exempt interest income) and net short-term and long-term capital gains (after reduction by any available capital loss carryforwards) in accordance with the timing requirements imposed by the Code, so as to maintain its RIC status and generally to avoid paying federal income or excise tax thereon. If it qualifies for treatment as a RIC and satisfies the above-mentioned distribution requirements, the Trust will not be subject to federal income tax on income paid to its shareholders in the form of dividends or capital gains distributions.

To qualify as a RIC for federal income tax purposes, the Trust must derive at least 90% of its annual gross income from dividends, interest, payments with respect to securities loans, gains from the sale or other disposition of stock, securities or foreign currencies, or other income (including, but not limited to, gains from options, futures or forward contracts) derived with respect to its business of investing in stock, securities and currencies, and net income derived from an interest in a qualified publicly traded partnership. The Trust must also distribute to its shareholders at least the sum of 90% of its investment company taxable income and 90% of its net tax-exempt interest income for each taxable year.

The Trust must also satisfy certain requirements with respect to the diversification of its assets. The Trust must have, at the close of each quarter of its taxable year, at least 50% of the value of its total assets represented by cash and cash items, U.S. government securities, securities of other RICs, and other securities that, in respect of any one issuer, do not represent more than 5% of the value of the assets of the Trust or more than 10% of the voting securities of that issuer. In addition, at those times, not more than 25% of the value of the Trust's assets may be invested in securities (other than U.S. Government securities or the securities of other RICs) of any one issuer, or of two or more issuers that the Trust controls and which are engaged in the same or similar trades or businesses or related trades or businesses, or of one or more qualified publicly traded partnerships.

If the Trust does not qualify as a RIC for any taxable year, the Trust's taxable income will be subject to corporate income taxes, and all distributions from earnings and profits, including distributions of net capital gain (if any), will be taxable to the shareholder as ordinary income. Such distributions will be treated as qualified dividend income with respect to shareholders who are individuals and will be eligible for the dividends received deduction in the case of shareholders taxed as corporations, provided certain holding period requirements are met. In order to requalify for taxation as a RIC, the Trust may be required to recognize unrealized gains, pay substantial taxes and interest, and make substantial distributions.

The Trust intends to make monthly distributions of net investment income after payment of dividends on any outstanding preferred shares or interest on any outstanding borrowings. The Trust will distribute annually any net short-term capital gain (which is taxable as ordinary income) and any net capital gain. Distributions of the Trust's net

capital gains (capital gain dividends), if any, are taxable to shareholders as long-term capital gains, regardless of the length of time shares have been held by shareholders. Dividends paid to shareholders out of the Trust's current and accumulated earnings and profits, except in the case of capital gain dividends and certain dividends received by individuals, will be taxable as ordinary income. Dividends with respect to the

Eaton Vance Senior Floating-Rate Trust

43

Prospectus dated February 24, 2014

shares generally will not constitute qualified dividends for federal income tax purposes and thus will not be eligible for the favorable long-term capital gains tax rates. Distributions, if any, in excess of the Trust's earnings and profits will first reduce the adjusted tax basis of a holder's shares and, after that basis has been reduced to zero, will constitute capital gains to the shareholder (assuming the shares are held as a capital asset). See below for a summary of the maximum tax rates applicable to capital gains (including capital gain dividends). Dividends will not qualify for a dividends received deduction generally available to corporate shareholders.

Gains or losses attributable to fluctuations in exchange rates between the time the Trust accrues income or receivables or expenses or other liabilities denominated in a foreign currency and the time the Trust actually collects such income or receivables or pays such expenses or liabilities are generally treated as ordinary income or loss. Transactions in foreign currencies, foreign currency-denominated debt securities and certain foreign currency options, futures contracts, forward contracts and similar instruments (to the extent permitted) may give rise to ordinary income or loss to the extent such income or loss results from fluctuations in the value of the foreign currency concerned.

The Trust may be subject to foreign withholding or other foreign taxes with respect to income (possibly including, in some cases, capital gains) on certain foreign securities. These taxes may be reduced or eliminated under the terms of an applicable U.S. income tax treaty. If more than 50% of the value of the total assets of the Trust consists of securities issued by foreign issuers, the Trust may be eligible to pass through to shareholders its proportionate share of any foreign taxes paid by the Trust, in which event shareholders will include in income, and will be entitled to take any foreign tax credits or deductions for, such foreign taxes.

The Trust will inform shareholders of the source and tax status of all distributions promptly after the close of each calendar year.

Selling shareholders will generally recognize gain or loss in an amount equal to the difference between the shareholder's adjusted tax basis in the shares sold and the amount received. If the shares are held as a capital asset, the gain or loss will be a capital gain or loss.

The maximum tax rate applicable to net capital gains recognized by individuals and other non-corporate taxpayers is (i) the same as the maximum ordinary income tax rate for gains recognized on the sale of capital assets held for one year or less (39.6%), or (ii) 15% for gains recognized on the sale of capital assets held for more than one year (as well as certain capital gain dividends) (0% for individuals in the 10% and 15% tax brackets, and 20% for individuals in the 39.6% tax bracket). Any loss on a disposition of shares held for six months or less will be treated as a long-term capital loss to the extent of any capital gain dividends received with respect to those shares. For purposes of determining whether shares have been held for six months or less, the holding period is suspended for any periods during which the shareholder's risk of loss is diminished as a result of holding one or more other positions in substantially similar or related property, or through certain options or short sales. Any loss realized on a sale or exchange of shares will be disallowed to the extent those shares are replaced by other shares within a period of 61 days beginning 30 days before and ending 30 days after the date of disposition of the shares (whether through the reinvestment of distributions, which could occur, for example, if the shareholder is a participant in the Plan (as defined below) or otherwise). In that event, the basis of the replacement shares will be adjusted to reflect the disallowed loss.

An investor should be aware that, if shares are purchased shortly before the record date for any taxable dividend (including a capital gain dividend), the purchase price likely will reflect the value of the dividend and the investor then would receive a taxable distribution likely to reduce the trading value of such shares, in effect resulting in a taxable return of some of the purchase price. Taxable distributions to individuals and certain other non-corporate shareholders, including those who have not provided their correct taxpayer identification number and other required certifications, may be subject to backup federal income tax withholding at the fourth lowest rate of tax applicable to a single individual (currently 28%).

Eaton Vance Senior Floating-Rate Trust

44

Prospectus dated February 24, 2014

An investor should also be aware that the benefits of the reduced tax rate applicable to long-term capital gains may be impacted by the application of the alternative minimum tax to individual shareholders.

The foregoing briefly summarizes some of the important federal income tax consequences to shareholders of investing in shares, reflects the federal tax law as of the date of this Prospectus, and does not address special tax rules applicable to certain types of investors, such as corporate and foreign investors. A more complete discussion of the tax rules applicable to the Trust and the shareholders can be found in the Statement of Additional Information that is incorporated by reference into this Prospectus. Unless otherwise noted, this discussion assumes that an investor is a United States person for federal income tax purposes and holds shares as a capital asset. This discussion is based upon current provisions of the Code, the regulations promulgated thereunder, and judicial and administrative ruling authorities, all of which are subject to change or differing interpretations by the courts or the Internal Revenue Service retroactively or prospectively. Investors should consult their tax advisors regarding other federal, state or local tax considerations that may be applicable in their particular circumstances, as well as any proposed tax law changes.

Dividend reinvestment plan

The Trust offers a dividend reinvestment plan (the Plan) pursuant to which Common Shareholders may elect to have distributions automatically reinvested in Common Shares of the Trust. You may elect to participate in the Plan by completing the Dividend Reinvestment Plan Application Form. If you do not participate, you will receive all distributions in cash paid by check mailed directly to you by American Stock Transfer & Trust Company, LLC (AST or the Plan Agent) as dividend paying agent. On the distribution payment date, if the net asset value per Common Share is equal to or less than the market price per Common Share plus estimated brokerage commissions, then new Common Shares will be issued. The number of Common Shares shall be determined by the greater of the net asset value per Common Share or 95% of the market price. Otherwise, Common Shares generally will be purchased on the open market by the Plan Agent. Distributions subject to income tax (if any) are taxable whether or not shares are reinvested.

If your shares are in the name of a brokerage firm, bank, or other nominee, you can ask the firm or nominee to participate in the Plan on your behalf. If the nominee does not offer the Plan, you will need to request that your shares be re-registered in your name with the Trust's transfer agent, AST, or you will not be able to participate.

The Plan Agent's service fee for handling distributions will be paid by the Trust. Each participant will be charged their pro-rata share of brokerage commissions on all open-market purchases.

Plan participants may withdraw from the Plan at any time by writing to the Plan Agent at the address noted on the following page. If you withdraw, you will receive shares in your name for all Common Shares credited to your account under the Plan. If a participant elects by written notice to the Plan Agent to have the Plan Agent sell part or all of his or her Common Shares and remit the proceeds, the Plan Agent is authorized to deduct a \$5.00 fee plus brokerage commissions from the proceeds.

Any inquiries regarding the Plan can be directed to the Plan Agent, AST, at 1-866-439-6787.

Description of capital structure

The Trust is an unincorporated business trust established under the laws of The Commonwealth of Massachusetts by an Agreement and Declaration of Trust dated August 5, 2003 and filed with the Secretary of The Commonwealth on August 6, 2003, as amended August 11, 2008 (the Declaration of Trust). The Declaration of Trust provides that the Trustees of the Trust may authorize separate classes of shares of beneficial interest. The Trustees have authorized an unlimited number of Common Shares. The Trust intends to hold annual meetings of shareholders in compliance with the requirements of the NYSE.

Eaton Vance Senior Floating-Rate Trust

45

Prospectus dated February 24, 2014

COMMON SHARES

The Declaration of Trust permits the Trust to issue an unlimited number of full and fractional Common Shares. Each Common Share represents an equal proportionate interest in the assets of the Trust with each other Common Share in the Trust. Holders of Common Shares will be entitled to the payment of dividends when, as and if declared by the Board. The 1940 Act or the terms of any borrowings or preferred shares may limit the payment of dividends to the holders of Common Shares. Each whole Common Share shall be entitled to one vote as to matters on which it is entitled to vote pursuant to the terms of the Declaration of Trust on file with the SEC. Upon liquidation of the Trust, after paying or adequately providing for the payment of all liabilities of the Trust and the liquidation preference with respect to any outstanding preferred shares, and upon receipt of such releases, indemnities and refunding agreements as they deem necessary for their protection, the Trustees may distribute the remaining assets of the Trust among the holders of the Common Shares. The Declaration of Trust provides that shareholders are not liable for any liabilities of the Trust and permits inclusion of a clause to that effect in every agreement entered into by the Trust and in coordination with the Trust's By-Laws indemnifies shareholders against any such liability. Although shareholders of an unincorporated business trust established under Massachusetts law, in certain limited circumstances, may be held personally liable for the obligations of the Trust as though they were general partners, the provisions of the Declaration of Trust and By-Laws described in the foregoing sentence make the likelihood of such personal liability remote.

While there are any borrowings or preferred shares outstanding, the Trust may not be permitted to declare any cash dividend or other distribution on its Common Shares, unless at the time of such declaration, (i) all accrued dividends on preferred shares or accrued interest on borrowings have been paid and (ii) the value of the Trust's total assets (determined after deducting the amount of such dividend or other distribution), less all liabilities and indebtedness of the Trust not represented by senior securities, is at least 300% of the aggregate amount of such securities representing indebtedness and at least 200% of the aggregate amount of securities representing indebtedness plus the aggregate liquidation value of the outstanding preferred shares (expected to equal the aggregate original purchase price of the outstanding preferred shares plus redemption premium, if any, together with any accrued and unpaid dividends thereon, whether or not earned or declared and on a cumulative basis). In addition to the requirements of the 1940 Act, the Trust may be required to comply with other asset coverage requirements as a condition of the Trust obtaining a rating of the preferred shares from a Rating Agency. These requirements may include an asset coverage test more stringent than under the 1940 Act. This limitation on the Trust's ability to make distributions on its Common Shares could in certain circumstances impair the ability of the Trust to maintain its qualification for taxation as a regulated investment company for federal income tax purposes. The Trust intends, however, to the extent possible to purchase or redeem preferred shares or reduce borrowings from time to time to maintain compliance with such asset coverage requirements and may pay special dividends to the holders of the preferred shares in certain circumstances in connection with any such impairment of the Trust's status as a regulated investment company. See Investment objectives, policies and risks, Distributions and Federal income tax matters. Depending on the timing of any such redemption or repayment, the Trust may be required to pay a premium in addition to the liquidation preference of the preferred shares to the holders thereof.

The Trust has no present intention of offering additional Common Shares, except as described herein. Other offerings of its Common Shares, if made, will require approval of the Board. Any additional offering will not be sold at a price per Common Share below the then current net asset value (exclusive of underwriting discounts and commissions) except in connection with an offering to existing shareholders or with the consent of a majority of the Trust's outstanding Common Shares. The Common Shares have no preemptive rights.

The Trust generally will not issue Common Share certificates. However, upon written request to the Trust's transfer agent, a share certificate will be issued for any or all of the full Common Shares credited to an investor's account. Common Share certificates that have been issued to an investor may be returned at any time.

Eaton Vance Senior Floating-Rate Trust

46

Prospectus dated February 24, 2014

CREDIT FACILITY

The Trust currently leverages through borrowings, and has entered into an Agreement with a bank to borrow up to a limit of \$210 million (\$185 million prior to March 26, 2013) pursuant to a 364-day revolving line of credit. Borrowings under the Agreement are secured by the assets of the Trust. Interest is charged at a rate above LIBOR and is payable monthly. Under the terms of the Agreement, the Trust pays a commitment fee of 0.15% on the borrowing limit. The Trust is required to maintain certain net asset levels during the term of the Agreement. As of October 31, 2013, the Trust had borrowings outstanding under the Agreement of \$210,000,000 at an interest rate of 0.93%. The carrying amount of the borrowings as of December 31, 2013 approximated its fair value. For the year ended October 31, 2013, the average borrowings under the Agreement and the average interest rate (excluding fees) were \$192,041,096 and 1.00%, respectively.

In addition, the credit facility/program contains covenants that, among other things, limit the Trust's ability to pay dividends in certain circumstances, incur additional debt, change its fundamental investment policies and engage in certain transactions, including mergers and consolidations, and may require asset coverage ratios in addition to those required by the 1940 Act. The Trust is required to pledge its assets and to maintain a portion of its assets in cash or high-grade securities as a reserve against interest or principal payments and expenses. The credit facility/program contains customary covenant, negative covenant and default provisions. In addition, any such credit facility/program entered into in the future may be replaced or refinanced by one or more credit facilities having substantially different terms or by the issuance of preferred shares or debt securities.

REPURCHASE OF COMMON SHARES AND OTHER DISCOUNT MEASURES

Because shares of closed-end management investment companies frequently trade at a discount to their net asset values, the Board has determined that from time to time it may be in the interest of shareholders for the Trust to take corrective actions. The Board, in consultation with Eaton Vance, will review at least annually the possibility of open market repurchases and/or tender offers for the Common Shares and will consider such factors as the market price of the Common Shares, the net asset value of the Common Shares, the liquidity of the assets of the Trust, effect on the Trust's expenses, whether such transactions would impair the Trust's status as a regulated investment company or result in a failure to comply with applicable asset coverage requirements, general economic conditions and such other events or conditions which may have a material effect on the Trust's ability to consummate such transactions. There are no assurances that the Board will, in fact, decide to undertake either of these actions or if undertaken, that such actions will result in the Trust's Common Shares trading at a price which is equal to or approximates their net asset value. In recognition of the possibility that the Common Shares might trade at a discount to net asset value and that any such discount may not be in the interest of shareholders, the Board, in consultation with Eaton Vance, from time to time may review possible actions to reduce any such discount.

On November 11, 2013, the Board of Trustees of the Trust authorized the repurchase by the Trust of up to 10% of its then-currently outstanding Common Shares in open-market transactions at a discount to net asset value. The repurchase program does not obligate the Trust to purchase a specific amount of shares. Results of the repurchase program will be disclosed in the Trust's annual and semiannual reports to shareholders.

PREFERRED SHARES

The Declaration of Trust authorizes the issuance of an unlimited number of shares of beneficial interest with preference rights, including preferred shares, having a par value of \$0.01 per share, in one or more series, with rights as determined by the Board, by action of the Board without the approval of the Common Shareholders. On January 26, 2004, the Trust issued 3,940 Series A APS, 3,940 Series B APS, 3,940 Series C APS and 3,940 Series D APS, with a liquidation preference per share of \$25,000 plus accumulated but unpaid dividends. As of December 31, 2012, 2,627 Series A APS, 2,627 Series B APS, 2,627 Series C APS and 2,627 Series D APS had been redeemed. The APS have seniority over the Common Shares.

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Under the requirements of the 1940 Act, the Trust must, immediately after the issuance of any preferred shares, have an asset coverage of at least 200%. Asset coverage means the ratio which the value of the total assets of the Trust, less all liability and indebtedness not represented by senior securities (as defined in the 1940 Act), bears to the aggregate amount of senior securities representing indebtedness of the Trust, if any, plus the aggregate liquidation preference of the preferred shares. The liquidation value of the preferred shares is

Eaton Vance Senior Floating-Rate Trust

47

Prospectus dated February 24, 2014

expected to equal their aggregate original purchase price plus the applicable redemption premium, if any, together with any accrued and unpaid distributions thereon (on a cumulative basis), whether or not earned or declared. The terms of the preferred shares, including their distribution rate, voting rights, liquidation preference and redemption provisions, are determined by the Board (subject to applicable law and the Trust's Declaration of Trust). The Trust may issue preferred shares that provide for the periodic redetermination of the distribution rate at relatively short intervals through an auction or remarketing procedure, although the terms of the preferred shares may also enable the Trust to lengthen such intervals. At times, the distribution rate on the Trust's preferred shares may exceed the Trust's return after expenses on the investment of proceeds from the preferred shares and the Trust's leverage structure, resulting in a lower rate of return to Common Shareholders than if the preferred shares were not outstanding.

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Trust, the terms of any preferred shares may entitle the holders of preferred shares to receive a preferential liquidating distribution (expected to equal the original purchase price per share plus the applicable redemption premium, if any, together with accrued and unpaid distributions, whether or not earned or declared and on a cumulative basis) before any distribution of assets is made to holders of Common Shares. After payment of the full amount of the liquidating distribution to which they are entitled, the preferred shareholders would not be entitled to any further participation in any distribution of assets by the Trust.

Holders of preferred shares, voting as a class, shall be entitled to elect two of the Trust's Trustees. The holders of both the Common Shares and the preferred shares (voting together as a single class with each share entitling its holder to one vote) shall be entitled to elect the remaining Trustees of the Trust. Under the 1940 Act, if at any time distributions on the preferred shares are unpaid in an amount equal to two full years' distributions thereon, the holders of all outstanding preferred shares, voting as a class, will be allowed to elect a majority of the Trust's Trustees until all distributions in arrears have been paid or declared and set apart for payment. In addition, if required by a Rating Agency rating the preferred shares or if the Board determines it to be in the best interests of the Common Shareholders, issuance of the preferred shares may result in more restrictive provisions than required by the 1940 Act being imposed. In this regard, holders of the preferred shares may be entitled to elect a majority of the Trust's Board in other circumstances, for example, if one payment on the preferred shares is in arrears. The differing rights of the holders of preferred and Common Shares with respect to the election of Trustees do not affect the obligation of all Trustees to take actions they believe to be consistent with the best interests of the Trust. All such actions must be consistent with (i) the obligations of the Trust with respect to the holders of preferred shares (which obligations arise primarily from the contractual terms of the preferred shares, as specified in the Declaration of Trust and By-laws of the Trust) and (ii) the fiduciary duties owed to the Trust, which include the duties of loyalty and care.

The APS have been rated AA by Fitch and Aa3 by Moody's. The Trust currently intends to seek to maintain this rating or an equivalent credit rating from other Rating Agencies on the APS or any preferred shares it issues. The Trust is subject to investment restrictions of the Rating Agencies as a result. Any bank lender in connection with a credit facility or commercial paper program may also impose specific restrictions as a condition to borrowing. Such restrictions imposed by a Rating Agency or lender may include asset coverage or portfolio composition requirements that are more stringent than those imposed on the Trust by the 1940 Act. These covenants or guidelines do not currently and are not expected to impede Eaton Vance in managing the Trust's portfolio in accordance with its investment objectives and policies and it is not anticipated that they will so impede Eaton Vance in the future.

CERTAIN PROVISIONS OF THE DECLARATION OF TRUST

Anti-Takeover Provisions in the Declaration of Trust

The Declaration of Trust includes provisions that could have the effect of limiting the ability of other entities or persons to acquire control of the Trust or to change the composition of its Board, and could have the effect of depriving holders of Common Shares of an opportunity to sell their shares at a premium over prevailing market prices by discouraging a third party from seeking to obtain control of the Trust. These provisions may have the effect of

discouraging attempts to acquire control of the Trust, which attempts could have the effect of increasing the expenses of the Trust and interfering with the normal operation of the Trust. The Board is divided into three classes, with the term of one class expiring at each annual meeting of holders of Common Shares and preferred shares. At each annual meeting, one class of Trustees is elected to a three-year term. This provision

Eaton Vance Senior Floating-Rate Trust

48

Prospectus dated February 24, 2014

could delay for up to two years the replacement of a majority of the Board. A Trustee may be removed from office only for cause by a written instrument signed by the remaining Trustees or by a vote of the holders of at least two-thirds of the class of shares of the Trust that elected such Trustee and are entitled to vote on the matter.

In addition, the Declaration of Trust requires the favorable vote of the holders of at least 75% of the outstanding shares of each class of the Trust, voting as a class, then entitled to vote to approve, adopt or authorize certain transactions with 5%-or-greater holders of a class of shares and their associates, unless the Board shall by resolution have approved a memorandum of understanding with such holders, in which case normal voting requirements would be in effect. For purposes of these provisions, a 5%-or-greater holder of a class of shares (a Principal Shareholder) refers to any person who, whether directly or indirectly and whether alone or together with its affiliates and associates, beneficially owns 5% or more of the outstanding shares of any class of beneficial interest of the Trust. The transactions subject to these special approval requirements are: (i) the merger or consolidation of the Trust or any subsidiary of the Trust with or into any Principal Shareholder; (ii) the issuance of any securities of the Trust to any Principal Shareholder for cash; (iii) the sale, lease or exchange of all or any substantial part of the assets of the Trust to any Principal Shareholder (except assets having an aggregate fair market value of less than \$1,000,000, aggregating for the purpose of such computation all assets sold, leased or exchanged in any series of similar transactions within a twelve-month period); or (iv) the sale, lease or exchange to the Trust or any subsidiary thereof, in exchange for securities of the Trust, of any assets of any Principal Shareholder (except assets having an aggregate fair market value of less than \$1,000,000, aggregating for the purposes of such computation all assets sold, leased or exchanged in any series of similar transactions within a twelve-month period).

The Board has determined that provisions with respect to the Board and the 75% voting requirements described above, which voting requirements are greater than the minimum requirements under Massachusetts law or the 1940 Act, are in the best interest of holders of Common Shares and preferred shares generally. Reference should be made to the Declaration of Trust on file with the SEC for the full text of these provisions.

CONVERSION TO OPEN-END FUND

The Trust may be converted to an open-end investment company at any time if approved by the lesser of (i) two-thirds or more of the Trust's then outstanding Common Shares and preferred shares, each voting separately as a class, or (ii) more than 50% of the then outstanding Common Shares and preferred shares, voting separately as a class if such conversion is recommended by at least 75% of the Trustees then in office. If approved in the foregoing manner, conversion of the Trust could not occur until 90 days after the Common Shareholders' meeting at which such conversion was approved and would also require at least 30 days' prior notice to all Common Shareholders. Conversion of the Trust to an open-end investment company also would require the redemption of any outstanding preferred shares, including the APS, and could require the repayment of borrowings. The Board believes that the closed-end structure is desirable, given the Trust's investment objectives and policies. Investors should assume, therefore, that it is unlikely that the Board would vote to convert the Trust to an open-end investment company.

Custodian and Transfer Agent

State Street Bank and Trust Company (State Street), 200 Clarendon Street, Boston, MA 02116, is the custodian of the Trust and maintains custody of the securities and cash of the Trust. State Street maintains the Trust's general ledger and computes net asset value per share at least weekly. State Street also attends to details in connection with the sale, exchange, substitution, transfer and other dealings with the Trust's investments, and receives and disburses all funds. State Street also assists in preparation of shareholder reports and the electronic filing of such reports with the SEC.

American Stock Transfer & Trust Company, LLC, 6201 15th Avenue, Brooklyn, New York 11219 is the transfer agent and dividend disbursing agent of the Trust.

Eaton Vance Senior Floating-Rate Trust

49

Prospectus dated February 24, 2014

Legal Opinions

Certain legal matters in connection with the Common Shares will be passed upon for the Trust by internal counsel for Eaton Vance.

Reports to Shareholders

The Trust will send to Common Shareholders unaudited semi-annual and audited annual reports, including a list of investments held.

Independent registered public accounting firm

Deloitte & Touche LLP, is the independent registered public accounting firm for the Trust and audits the Trust's financial statements.

Additional information

The Prospectus and the Statement of Additional Information do not contain all of the information set forth in the Registration Statement that the Trust has filed with the SEC. The complete Registration Statement may be obtained from the SEC upon payment of the fee prescribed by its rules and regulations. The Statement of Additional Information can be obtained without charge by calling 1-800-262-1122.

Statements contained in this Prospectus as to the contents of any contract or other documents referred to are not necessarily complete, and, in each instance, reference is made to the copy of such contract or other document filed as an exhibit to the Registration Statement of which this Prospectus forms a part, each such statement being qualified in all respects by such reference.

Eaton Vance Senior Floating-Rate Trust

50

Prospectus dated February 24, 2014

Table of contents for the Statement of Additional Information

| | Page |
|--|------|
| Additional investment information and restrictions | 2 |
| Trustees and officers | 16 |
| Investment advisory and other services | 26 |
| Determination of net asset value | 30 |
| Portfolio trading | 32 |
| Taxes | 34 |
| Other information | 38 |
| Independent registered public accounting firm | 39 |
| Financial statements | 39 |
| APPENDIX A: Ratings | 40 |
| APPENDIX B: Proxy Voting Policy and Procedures | 50 |

Eaton Vance Senior Floating-Rate Trust

51

Prospectus dated February 24, 2014

The Trust's privacy policy

The Eaton Vance organization is committed to ensuring your financial privacy. Each of the financial institutions identified below has in effect the following policy (Privacy Policy) with respect to nonpublic personal information about its customers:

Only such information received from you, through application forms or otherwise, and information about your Eaton Vance fund transactions will be collected. This may include information such as name, address, social security number, tax status, account balances and transactions.

None of such information about you (or former customers) will be disclosed to anyone, except as permitted by law (which includes disclosure to employees necessary to service your account). In the normal course of servicing a customer's account, Eaton Vance may share information with unaffiliated third parties that perform various required services such as transfer agents, custodians and broker/dealers.

Policies and procedures (including physical, electronic and procedural safeguards) are in place that are designed to protect the confidentiality of such information.

We reserve the right to change our Privacy Policy at any time upon proper notification to you. Customers may want to review our Policy periodically for changes by accessing the link on our homepage: www.eatonvance.com.

Our pledge of privacy applies to the following entities within the Eaton Vance organization: the Eaton Vance Family of Funds, Eaton Vance Management, Eaton Vance Investment Counsel, Eaton Vance Distributors, Inc., Eaton Vance Trust Company, Eaton Vance Management's Real Estate Investment Group and Boston Management and Research.

In addition, our Privacy Policy applies only to those Eaton Vance customers who are individuals and who have a direct relationship with us. If a customer's account (i.e., fund shares) is held in the name of a third-party financial adviser/broker-dealer, it is likely that only such adviser's privacy policies apply to the customer. This notice supersedes all previously issued privacy disclosures.

For more information about Eaton Vance's Privacy Policy, please call 1-800-262-1122.

Eaton Vance Senior Floating-Rate Trust

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

3,380,550 Shares

Eaton Vance Senior Floating-Rate Trust

Common Shares

Prospectus February 24, 2014

Eaton Vance Senior Floating-Rate Trust

53

Prospectus dated February 24, 2014

SFRTSAI

STATEMENT OF ADDITIONAL INFORMATION

FEBRUARY 24, 2014

EATON VANCE SENIOR FLOATING-RATE TRUST

Two International Place

Boston, MA 02110

1-800-262-1122

Table of Contents

| | Page |
|--|------|
| Additional investment information and restrictions | 2 |
| Trustees and officers | 16 |
| Investment advisory and other services | 26 |
| Determination of net asset value | 30 |
| Portfolio trading | 32 |
| Taxes | 34 |
| Other information | 38 |
| Independent registered public accounting firm | 39 |
| Financial statements | 39 |
| APPENDIX A: Ratings | 40 |
| APPENDIX B: Proxy Voting Policy and Procedures | 50 |

THIS STATEMENT OF ADDITIONAL INFORMATION (SAI) IS NOT A PROSPECTUS AND IS AUTHORIZED FOR DISTRIBUTION TO PROSPECTIVE INVESTORS ONLY IF PRECEDED OR ACCOMPANIED BY THE PROSPECTUS OF EATON VANCE SENIOR FLOATING-RATE TRUST (THE TRUST) DATED FEBRUARY 24, 2014, AS SUPPLEMENTED FROM TIME TO TIME, WHICH IS INCORPORATED HEREIN BY REFERENCE. THIS SAI SHOULD BE READ IN CONJUNCTION WITH SUCH PROSPECTUS, A COPY OF WHICH MAY BE OBTAINED WITHOUT CHARGE BY CONTACTING YOUR FINANCIAL INTERMEDIARY OR CALLING THE TRUST AT 1-800-262-1122.

Capitalized terms used in this SAI and not otherwise defined have the meanings given them in the Trust's Prospectus and any related Prospectus Supplements.

ADDITIONAL INVESTMENT INFORMATION AND RESTRICTIONS

Primary investment strategies are described in the Prospectus. The following is a description of the various investment policies that may be engaged in, whether as a primary or secondary strategy, and a summary of certain attendant risks. Eaton Vance may not buy any of the following instruments or use any of the following techniques unless it believes that doing so will help to achieve the Trust's investment objectives.

SENIOR LOANS

Structure of Senior Loans

A Senior Loan is typically originated, negotiated and structured by a U.S. or foreign commercial bank, insurance company, finance company or other financial institution (the Agent) for a group of loan investors (Loan Investors). The Agent typically administers and enforces the Senior Loan on behalf of the other Loan Investors in the syndicate. In addition, an institution, typically but not always the Agent, holds any collateral on behalf of the Loan Investors.

Senior Loans primarily include senior floating rate loans to corporations and secondarily institutionally traded senior floating rate debt obligations issued by an asset-backed pool, and interests therein. Loan interests primarily take the form of assignments purchased in the primary or secondary market. Loan interests may also take the form of participation interests in a Senior Loan. Such loan interests may be acquired from U.S. or foreign commercial banks, insurance companies, finance companies or other financial institutions who have made loans or are Loan Investors or from other investors in loan interests.

The Trust typically purchases Assignments from the Agent or other Loan Investors. The purchaser of an Assignment typically succeeds to all the rights and obligations under the Loan Agreement of the assigning Loan Investor and becomes a Loan Investor under the Loan Agreement with the same rights and obligations as the assigning Loan Investor. Assignments may, however, be arranged through private negotiations between potential assignees and potential assignors, and the rights and obligations acquired by the purchaser of an Assignment may differ from, and be more limited than, those held by the assigning Loan Investor.

The Trust also may invest in Participations. Participations by the Trust in a Loan Investor's portion of a Senior Loan typically will result in the Trust having a contractual relationship only with such Loan Investor, not with the Borrower. As a result, the Trust may have the right to receive payments of principal, interest and any fees to which it is entitled only from the Loan Investor selling the Participation and only upon receipt by such Loan Investor of such payments from the Borrower. In connection with purchasing Participations, the Trust generally will have no right to enforce compliance by the Borrower with the terms of the loan agreement, nor any rights with respect to any funds acquired by other Loan Investors through set-off against the Borrower and the Trust may not directly benefit from the collateral supporting the Senior Loan in which it has purchased the Participation. As a result, the Trust may assume the credit risk of both the Borrower and the Loan Investor selling the Participation. In the event of the insolvency of the Loan Investor selling a Participation, the Trust may be treated as a general creditor of such Loan Investor. The selling Loan Investors and other persons interpositioned between such Loan Investors and the Trust with respect to such Participations will likely conduct their principal business activities in the banking, finance and financial services industries. Persons engaged in such industries may be more susceptible to, among other things, fluctuations in interest rates, changes in the Federal Open Market Committee's monetary policy, governmental regulations concerning such industries and concerning capital raising activities generally and fluctuations in the financial markets generally.

The Trust will only acquire Participations if the Loan Investor selling the Participation, and any other persons interpositioned between the Trust and the Loan Investor, at the time of investment has outstanding debt or deposit

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

obligations rated investment grade (BBB or A-3 or higher by Standard & Poor's Financial Services LLC (S&P) or Baa or P-3 or higher by Moody's Investors Service, Inc. (Moody's) or comparably rated by another nationally recognized rating agency) or determined by the Adviser to be of comparable quality. Securities rated Baa by Moody's have speculative characteristics. Long-term debt rated BBB by S&P is regarded by S&P as having adequate capacity to pay interest and repay principal and debt rated Baa by Moody's is regarded by

Eaton Vance Senior Floating-Rate Trust

2

SAI dated February 24, 2014

Moody's as a medium grade obligation, *i.e.*, it is neither highly protected nor poorly secured. Commercial paper rated A-3 by S&P indicates that S&P believes such obligations exhibit adequate protection parameters but that adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation and issues of commercial paper rated P-3 by Moody's are considered by Moody's to have an acceptable ability for repayment of senior short-term obligations. The effect of industry characteristics and market compositions may be more pronounced. Indebtedness of companies whose creditworthiness is poor involves substantially greater risks, and may be highly speculative. Some companies may never pay off their indebtedness, or may pay only a small fraction of the amount owed. Consequently, when investing in indebtedness of companies with poor credit, the Trust bears a substantial risk of losing the entire amount invested.

The following table is intended to provide investors with a comparison of short-term money market rates, a representative base commercial lending rate, and a representative indicator of the premium over such base lending rate for Senior Loans. This comparison should not be considered a representation of future money market rates, spreads of Senior Loans over base reference rates nor what an investment in the Trust may earn or what an investor's yield or total return may be in the future.

Loan collateral

In order to borrow money pursuant to a Senior Loan, a Borrower will frequently, for the term of the Senior Loan, pledge collateral, including but not limited to, (i) working capital assets, such as accounts receivable and inventory; (ii) tangible fixed assets, such as real property, buildings and equipment; (iii) intangible assets, such as trademarks and patent rights (but excluding goodwill); and (iv) security interests in shares of stock of subsidiaries or affiliates. In the case of Senior Loans made to non-public companies, the company's shareholders or owners may provide collateral in the form of secured guarantees and/or security interests in assets that they own. In many instances, a Senior Loan may be secured only by stock in the Borrower or its subsidiaries. Collateral may consist of assets that may not be readily liquidated, and there is no assurance that the liquidation of such assets would satisfy fully a Borrower's obligations under a Senior Loan.

Certain fees paid to the Trust

In the process of buying, selling and holding Senior Loans, the Trust may receive and/or pay certain fees. These fees are in addition to interest payments received and may include facility fees, commitment fees, amendment fees, commissions and prepayment penalty fees. When the Trust buys a Senior Loan it may receive a facility fee and when it sells a Senior Loan it may pay a facility fee. On an ongoing basis, the Trust may receive a commitment fee based on the undrawn portion of the underlying line of credit portion of a Senior Loan. In certain circumstances, the Trust may receive a prepayment penalty fee upon the prepayment of a Senior Loan by a Borrower. Other fees received by the Trust may include covenant waiver fees and covenant modification fees.

Borrower covenants

A Borrower must comply with various restrictive covenants contained in a loan agreement or note purchase agreement between the Borrower and the holders of the Senior Loan (the *Loan Agreement*). Such covenants, in addition to requiring the scheduled payment of interest and principal, may include restrictions on dividend payments and other distributions to stockholders, provisions requiring the Borrower to maintain specific minimum financial ratios, and limits on total debt. In addition, the *Loan Agreement* may contain a covenant requiring the Borrower to prepay the Loan with any free cash flow. Free cash flow is generally defined as net cash flow after scheduled debt service payments and permitted capital expenditures, and includes the proceeds from asset dispositions or sales of securities. A breach of a covenant that is not waived by the Agent, or by the Loan Investors directly, as the case may be, is normally an event of acceleration; *i.e.*, the Agent, or the Loan Investors directly, as the case may be, has the right to call the outstanding Senior Loan. The typical practice of an Agent or a Loan Investor in relying exclusively or primarily on reports from the Borrower to monitor the Borrower's compliance with covenants may involve a risk of

fraud by the Borrower. In the case of a Senior Loan in the form of Participation, the agreement between the buyer and seller may limit the rights of the holder to vote on certain changes that may be made to the Loan Agreement, such as waiving a breach of a covenant. However, the holder of the Participation will, in almost all cases, have the right to vote on certain fundamental issues such as changes in principal amount, payment dates and interest rate.

Eaton Vance Senior Floating-Rate Trust

3

SAI dated February 24, 2014

Administration of loans

In a typical Senior Loan, the Agent administers the terms of the Loan Agreement. In such cases, the Agent is normally responsible for the collection of principal and interest payments from the Borrower and the apportionment of these payments to the credit of all institutions that are parties to the Loan Agreement. The Trust will generally rely upon the Agent or an intermediate participant to receive and forward to the Trust its portion of the principal and interest payments on the Senior Loan. Furthermore, unless under the terms of a Participation Agreement the Trust has direct recourse against the Borrower, the Trust will rely on the Agent and the other Loan Investors to use appropriate credit remedies against the Borrower. The Agent is typically responsible for monitoring compliance with covenants contained in the Loan Agreement based upon reports prepared by the Borrower. The seller of the Senior Loan usually does, but is often not obligated to, notify holders of Senior Loans of any failures of compliance. The Agent may monitor the value of the collateral and, if the value of the collateral declines, may accelerate the Senior Loan, may give the Borrower an opportunity to provide additional collateral or may seek other protection for the benefit of the participants in the Senior Loan. The Agent is compensated by the Borrower for providing these services under a Loan Agreement, and such compensation may include special fees paid upon structuring and funding the Senior Loan and other fees paid on a continuing basis. With respect to Senior Loans for which the Agent does not perform such administrative and enforcement functions, the Trust will perform such tasks on its own behalf, although a collateral bank will typically hold any collateral on behalf of the Trust and the other Loan Investors pursuant to the applicable Loan Agreement.

A financial institution's appointment as Agent may usually be terminated in the event that it fails to observe the requisite standard of care or becomes insolvent, enters Federal Deposit Insurance Corporation (FDIC) receivership, or, if not FDIC insured, enters into bankruptcy proceedings. A successor Agent would generally be appointed to replace the terminated Agent, and assets held by the Agent under the Loan Agreement should remain available to holders of Senior Loans. However, if assets held by the Agent for the benefit of the Trust were determined to be subject to the claims of the Agent's general creditors, the Trust might incur certain costs and delays in realizing payment on a Senior Loan, or suffer a loss of principal and/or interest. In situations involving intermediate participants, similar risks may arise.

Prepayments

Senior Loans will usually require, in addition to scheduled payments of interest and principal, the prepayment of the Senior Loan from a portion of free cash flow, as defined above. The degree to which Borrowers prepay Senior Loans, whether as a contractual requirement or at their election, may be affected by general business conditions, the financial condition of the Borrower and competitive conditions among Loan Investors, among other factors. As such, prepayments cannot be predicted with accuracy. Upon a prepayment, either in part or in full, the actual outstanding debt on which the Trust derives interest income will be reduced. However, the Trust may receive both a prepayment penalty fee from the prepaying Borrower and a facility fee upon the purchase of a new Senior Loan with the proceeds from the prepayment of the former. Prepayments generally will not materially affect the Trust's performance because the Trust typically is able to reinvest prepayments in other Senior Loans that have similar yields and because receipt of such fees may mitigate any adverse impact on the Trust's yield.

Other information regarding Senior Loans

From time to time the Adviser and its affiliates may borrow money from various banks in connection with their business activities. Such banks may also sell interests in Senior Loans to or acquire them from the Trust or may be intermediate participants with respect to Senior Loans in which the Trust owns interests. Such banks may also act as Agents for Senior Loans held by the Trust.

The Trust may acquire interests in Senior Loans that are designed to provide temporary or bridge financing to a Borrower pending the sale of identified assets or the arrangement of longer-term loans or the issuance and sale of debt

obligations. The Trust may also invest in Senior Loans of Borrowers that have obtained bridge loans from other parties. A Borrower's use of bridge loans involves a risk that the Borrower may be unable to locate permanent financing to replace the bridge loan, which may impair the Borrower's perceived creditworthiness.

The Trust will be subject to the risk that collateral securing a loan will decline in value or have no value. Such a decline, whether as a result of bankruptcy proceedings or otherwise, could cause the Senior Loan to be

Eaton Vance Senior Floating-Rate Trust

4

SAI dated February 24, 2014

undercollateralized or unsecured. In most credit agreements, there is no formal requirement to pledge additional collateral. In addition, the Trust may invest in Senior Loans guaranteed by, or secured by assets of, shareholders or owners, even if the Senior Loans are not otherwise collateralized by assets of the Borrower; provided, however, that such guarantees are fully secured. There may be temporary periods when the principal asset held by a Borrower is the stock of a related company, which may not legally be pledged to secure a Senior Loan. On occasions when such stock cannot be pledged, the Senior Loan will be temporarily unsecured until the stock can be pledged or is exchanged for or replaced by other assets, which will be pledged as security for the Senior Loan. However, the Borrower's ability to dispose of such securities, other than in connection with such pledge or replacement, will be strictly limited for the protection of the holders of Senior Loans and, indirectly, Senior Loans themselves.

If a Borrower becomes involved in bankruptcy proceedings, a court may invalidate the Trust's security interest in the loan collateral or subordinate the Trust's rights under the Senior Loan to the interests of the Borrower's unsecured creditors or cause interest previously paid to be refunded to the Borrower. If a court required interest to be refunded, it could negatively affect the Trust's performance. Such action by a court could be based, for example, on a fraudulent conveyance claim to the effect that the Borrower did not receive fair consideration for granting the security interest in the loan collateral to the Trust. For Senior Loans made in connection with a highly leveraged transaction, consideration for granting a security interest may be deemed inadequate if the proceeds of the Loan were not received or retained by the Borrower, but were instead paid to other persons (such as shareholders of the Borrower) in an amount that left the Borrower insolvent or without sufficient working capital. There are also other events, such as the failure to perfect a security interest due to faulty documentation or faulty official filings, which could lead to the invalidation of the Trust's security interest in loan collateral. If the Trust's security interest in loan collateral is invalidated or the Senior Loan is subordinated to other debt of a Borrower in bankruptcy or other proceedings, the Trust would have substantially lower recovery, and perhaps no recovery on the full amount of the principal and interest due on the Loan.

The Trust may acquire warrants and other equity securities as part of a unit combining a Senior Loan and equity securities of a Borrower or its affiliates. The acquisition of such equity securities will only be incidental to the Trust's purchase of a Senior Loan. The Trust may also acquire equity securities or debt securities (including non-dollar denominated debt securities) issued in exchange for a Senior Loan or issued in connection with the debt restructuring or reorganization of a Borrower, or if such acquisition, in the judgment of the Adviser, may enhance the value of a Senior Loan or would otherwise be consistent with the Trust's investment policies.

Debtor-in-possession financing

The Trust may invest in debtor-in-possession financings (commonly called DIP financings). DIP financings are arranged when an entity seeks the protections of the bankruptcy court under chapter 11 of the U.S. Bankruptcy Code. These financings allow the entity to continue its business operations while reorganizing under chapter 11. Such financings are senior liens on unencumbered security (*i.e.*, security not subject to other creditors' claims). There is a risk that the entity will not emerge from chapter 11 and be forced to liquidate its assets under chapter 7 of the Bankruptcy Code. In such event, the Trust's only recourse will be against the property securing the DIP financing.

Regulatory changes

To the extent that legislation or state or federal regulators that regulate certain financial institutions impose additional requirements or restrictions with respect to the ability of such institutions to make loans, particularly in connection with highly leveraged transactions, the availability of Senior Loans for investment may be adversely affected. Further, such legislation or regulation could depress the market value of Senior Loans.

Junior Loans

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

The Trust may invest in secured and unsecured subordinated loans, second lien loans and subordinated bridge loans (Junior Loans). Second lien loans are generally second in line in terms of repayment priority. A second lien loan may have a claim on the same collateral pool as the first lien or it may be secured by a separate set of assets, such as property, plants, or equipment. Second lien loans generally give investors priority over general unsecured creditors in the event of an asset sale.

Eaton Vance Senior Floating-Rate Trust

5

SAI dated February 24, 2014

Junior Loans are subject to the same general risks inherent to any loan investment, including credit risk, market and liquidity risk, and interest rate risk. Due to their lower place in the Borrower's capital structure and possible unsecured status, Junior Loans involve a higher degree of overall risk than Senior Loans of the same Borrower.

The Trust may purchase Junior Loan interests either in the form of an assignment or a loan participation. As the purchaser of an assignment, the Trust would typically succeed to all of the rights and obligations of the assigning investor under the loan documents. In contrast, loan participations typically result in the purchaser having a contractual relationship only with the seller of the loan interest, not with the Borrower. As a result, the loan is not transferred to the loan participant. The loan participant's right to receive payments from the Borrower derives from the seller of the loan participation. The loan participant will generally have no right to enforce compliance by the Borrower with the terms of the loan agreement. Lastly, the loan participant's voting rights may be limited.

Bridge Loans

Bridge loans or bridge facilities are short-term loan arrangements (e.g., 12 to 18 months) typically made by a Borrower in anticipation of intermediate-term or long-term permanent financing. Most bridge loans are structured as floating-rate debt with step-up provisions under which the interest rate on the bridge loan rises the longer the loan remains outstanding. In addition, bridge loans commonly contain a conversion feature that allows the bridge loan investor to convert its loan interest into senior exchange notes if the loan has not been prepaid in full on or prior to its maturity date. Bridge loans may be subordinate to other debt and may be secured or unsecured. Like any loan, bridge loans involve credit risk. Bridge loans are generally made with the expectation that the Borrower will be able to obtain permanent financing in the near future. Any delay in obtaining permanent financing subjects the bridge loan investor to increased risk. A Borrower's use of bridge loans also involves the risk that the Borrower may be unable to locate permanent financing to replace the bridge loan, which may impair the Borrower's perceived creditworthiness. From time to time, the Trust may make a commitment to participate in a bridge loan facility, obligating itself to participate in the facility if it funds. In return for this commitment, the Trust receives a fee.

Credit quality

Many Senior Loans in which the Trust may invest are of below investment grade credit quality. Accordingly, these Senior Loans are subject to similar or identical risks and other characteristics described below in relation to Non-Investment Grade Bonds.

NON-INVESTMENT GRADE BONDS

Investments in Non-Investment Grade Bonds generally provide greater income and increased opportunity for capital appreciation than investments in higher quality securities, but they also typically entail greater price volatility and principal and income risk, including the possibility of issuer default and bankruptcy. Non-Investment Grade Bonds are regarded as predominantly speculative with respect to the issuer's continuing ability to meet principal and interest payments. Debt securities in the lowest investment grade category also may be considered to possess some speculative characteristics by certain rating agencies. In addition, analysis of the creditworthiness of issuers of Non-Investment Grade Bonds may be more complex than for issuers of higher quality securities.

Non-Investment Grade Bonds may be more susceptible to real or perceived adverse economic and competitive industry conditions than investment grade securities. A projection of an economic downturn or of a period of rising interest rates, for example, could cause a decline in Non-Investment Grade Bond prices because the advent of recession could lessen the ability of an issuer to make principal and interest payments on its debt obligations. If an issuer of Non-Investment Grade Bonds defaults, in addition to risking payment of all or a portion of interest and principal, the Trust may incur additional expenses to seek recovery. In the case of Non-Investment Grade Bonds structured as zero-coupon, step-up or payment-in-kind securities, their market prices will normally be affected to a greater extent by interest rate changes, and therefore tend to be more volatile than securities that pay interest currently

and in cash. Eaton Vance seeks to reduce these risks through diversification, credit analysis and attention to current developments in both the economy and financial markets.

Eaton Vance Senior Floating-Rate Trust

6

SAI dated February 24, 2014

The secondary market on which Non-Investment Grade Bonds are traded may be less liquid than the market for investment grade securities. Less liquidity in the secondary trading market could adversely affect the net asset value of the Shares. Adverse publicity and investor perceptions, whether or not based on fundamental analysis, may decrease the values and liquidity of Non-Investment Grade Bonds, especially in a thinly traded market. When secondary markets for Non-Investment Grade Bonds are less liquid than the market for investment grade securities, it may be more difficult to value the securities because such valuation may require more research, and elements of judgment may play a greater role in the valuation because there is no reliable, objective data available. During periods of thin trading in these markets, the spread between bid and asked prices is likely to increase significantly and the Trust may have greater difficulty selling these securities. The Trust will be more dependent on Eaton Vance's research and analysis when investing in Non-Investment Grade Bonds. Eaton Vance seeks to minimize the risks of investing in all securities through in-depth credit analysis and attention to current developments in interest rate and market conditions.

A general description of the ratings of securities by S&P, Fitch and Moody's is set forth in Appendix A to this SAI. Such ratings represent these rating organizations' opinions as to the quality of the securities they rate. It should be emphasized, however, that ratings are general and are not absolute standards of quality. Consequently, debt obligations with the same maturity, coupon and rating may have different yields while obligations with the same maturity and coupon may have the same yield. For these reasons, the use of credit ratings as the sole method of evaluating Non-Investment Grade Bonds can involve certain risks. For example, credit ratings evaluate the safety or principal and interest payments, not the market value risk of Non-Investment Grade Bonds. Also, credit rating agencies may fail to change credit ratings in a timely fashion to reflect events since the security was last rated. Eaton Vance does not rely solely on credit ratings when selecting securities for the Trust, and develops its own independent analysis of issuer credit quality.

In the event that a rating agency or Eaton Vance downgrades its assessment of the credit characteristics of a particular issue, the Trust is not required to dispose of such security. In determining whether to retain or sell a downgraded security, Eaton Vance may consider such factors as Eaton Vance's assessment of the credit quality of the issuer of such security, the price at which such security could be sold and the rating, if any, assigned to such security by other rating agencies. However, analysis of the creditworthiness of issuers of Non-Investment Grade Bonds may be more complex than for issuers of high quality debt securities.

Convertible securities

The Trust may invest in convertible securities. Convertible securities include any corporate debt security or preferred stock that may be converted into underlying shares of common stock. The common stock underlying convertible securities may be issued by a different entity than the issuer of the convertible securities. Convertible securities entitle the holder to receive interest payments paid on corporate debt securities or the dividend preference on a preferred stock until such time as the convertible security matures or is redeemed or until the holder elects to exercise the conversion privilege. As a result of the conversion feature, however, the interest rate or dividend preference on a convertible security is generally less than would be the case if the securities were issued in non-convertible form.

The value of convertible securities is influenced by both the yield of non-convertible securities of comparable issuers and by the value of the underlying common stock. The value of a convertible security viewed without regard to its conversion feature (*i.e.*, strictly on the basis of its yield) is sometimes referred to as its investment value. The investment value of the convertible security typically will fluctuate inversely with changes in prevailing interest rates. However, at the same time, the convertible security will be influenced by its conversion value, which is the market value of the underlying common stock that would be obtained if the convertible security were converted. Conversion value fluctuates directly with the price of the underlying common stock.

Eaton Vance Senior Floating-Rate Trust

7

SAI dated February 24, 2014

If, because of a low price of the common stock, the conversion value is substantially below the investment value of the convertible security, the price of the convertible security is governed principally by its investment value. If the conversion value of a convertible security increases to a point that approximates or exceeds its investment value, the value of the security will be principally influenced by its conversion value. A convertible security will sell at a premium over its conversion value to the extent investors place value on the right to acquire the underlying common stock while holding a fixed income security. Holders of convertible securities have a claim on the assets of the issuer prior to the common stockholders, but may be subordinated to holders of similar non-convertible securities of the same issuer.

OTHER INVESTMENTS

Fixed income securities

Fixed income securities include preferred, preference and convertible securities, equipment lease certificates, equipment trust certificates and conditional sales contracts. Preference stocks are stocks that have many characteristics of preferred stocks, but are typically junior to an existing class of preferred stocks. Equipment lease certificates are debt obligations secured by leases on equipment (such as railroad cars, airplanes or office equipment), with the issuer of the certificate being the owner and lessor of the equipment. Equipment trust certificates are debt obligations secured by an interest in property (such as railroad cars or airplanes), the title of which is held by a trustee while the property is being used by the borrower. Conditional sales contracts are agreements under which the seller of property continues to hold title to the property until the purchase price is fully paid or other conditions are met by the buyer.

Fixed-rate bonds may have a demand feature allowing the holder to redeem the bonds at specified times. These bonds are more defensive than conventional long-term bonds (protecting to some degree against a rise in interest rates) while providing greater opportunity than comparable intermediate term bonds, since they may be retained if interest rates decline. Acquiring these kinds of bonds provides the contractual right to require the issuer of the bonds to purchase the security at an agreed upon price, which right is contained in the obligation itself rather than in a separate agreement or instrument. Since this right is assignable only with the bond, it will not be assigned any separate value.

Certain securities may permit the issuer at its option to call, or redeem, the securities. If an issuer were to redeem securities during a time of declining interest rates, the Trust may not be able to reinvest the proceeds in securities providing the same investment return as the securities redeemed.

The rating assigned to a security by a rating agency does not reflect assessment of the volatility of the security's market value or of the liquidity of an investment in the securities. Credit ratings are based largely on the issuer's historical financial condition and the rating agency's investment analysis at the time of rating, and the rating assigned to any particular security is not necessarily a reflection of the issuer's current financial condition. Credit quality in the high yield, high risk bond market can change from time to time, and recently issued credit ratings may not fully reflect the actual risks posed by a particular high yield security. In addition to lower rated securities, the Trust also may invest in higher rated securities. For a description of corporate bond ratings, see Appendix A.

Repurchase agreements

The Trust may enter into repurchase agreements (the purchase of a security coupled with an agreement to resell at a higher price) with respect to its permitted investments. In the event of the bankruptcy of the other party to a repurchase agreement, the Trust might experience delays in recovering its cash. To the extent that, in the meantime, the value of the securities the Trust purchased may have decreased, the Trust could experience a loss. Repurchase agreements that mature in more than seven days will be treated as illiquid. The Trust's repurchase agreements will provide that the value of the collateral underlying the repurchase agreement will always be at least equal to the repurchase price, including any accrued interest earned on the agreement, and will be marked to market daily.

Eaton Vance Senior Floating-Rate Trust

8

SAI dated February 24, 2014

Reverse repurchase agreements

While the Trust has no current intention to enter into reverse repurchase agreements, the Trust reserves the right to enter into reverse repurchase agreements in the future, at levels that may vary over time. Under a reverse repurchase agreement, the Trust temporarily transfers possession of a portfolio instrument to another party, such as a bank or broker-dealer, in return for cash. At the same time, the Trust agrees to repurchase the instrument at an agreed upon time (normally within seven days) and price, which reflects an interest payment. The Trust may enter into such agreements when it is able to invest the cash acquired at a rate higher than the cost of the agreement, which would increase earned income.

When the Trust enters into a reverse repurchase agreement, any fluctuations in the market value of either the securities transferred to another party or the securities in which the proceeds may be invested would affect the market value of the Trust's assets. As a result, such transactions may increase fluctuations in the market value of the Trust's assets. While there is a risk that large fluctuations in the market value of the Trust's assets could affect net asset value, this risk is not significantly increased by entering into reverse repurchase agreements, in the opinion of the Adviser. Because reverse repurchase agreements may be considered to be the practical equivalent of borrowing funds, they constitute a form of leverage. The SEC views reverse repurchase transactions as collateralized borrowings by a fund. Such agreements will be treated as subject to investment restrictions regarding borrowings. If the Trust reinvests the proceeds of a reverse repurchase agreement at a rate lower than the cost of the agreement, entering into the agreement will lower the Trust's yield.

Zero coupons bonds

Zero coupon bonds are debt obligations that do not require the periodic payment of interest and are issued at a significant discount from face value. The discount approximates the total amount of interest the bonds will accrue and compound over the period until maturity at a rate of interest reflecting the market rate of the security at the time of issuance. The Trust is required to accrue income from zero coupon bonds on a current basis, even though it does not receive that income currently in cash and the Trust is required to distribute its income for each taxable year. Thus, the Trust may have to sell other investments to obtain cash needed to make income distributions.

Indexed securities

The Trust may invest in securities that fluctuate in value with an index. Such securities generally will either be issued by the U.S. Government or one of its agencies or instrumentalities or, if privately issued, collateralized by mortgages that are insured, guaranteed or otherwise backed by the U.S. Government, its agencies or instrumentalities. The interest rate or, in some cases, the principal payable at the maturity of an indexed security may change positively or inversely in relation to one or more interest rates, financial indices, securities prices or other financial indicators (reference prices). An indexed security may be leveraged to the extent that the magnitude of any change in the interest rate or principal payable on an indexed security is a multiple of the change in the reference price. Thus, indexed securities may decline in value due to adverse market changes in reference prices. Because indexed securities derive their value from another instrument, security or index, they are considered derivative debt securities, and are subject to different combinations of prepayment, extension, interest rate and/or other market risks.

Short sales

The Trust may utilize short sales for hedging purposes. A short sale is affected by selling a security which the Trust does not own, or, if the Trust does own the security, is not to be delivered upon consummation of the sale. The Trust may engage in short sales against the box (*i.e.*, short sales of securities the Trust already owns) for hedging purposes. If the price of the security in the short sale decreases, the Trust will realize a profit to the extent that the short sale price for the security exceeds the market price. If the price of the security increases, the Trust will realize a loss to the extent that the market price exceeds the short sale price. Selling securities short runs the risk of losing an amount

greater than the initial investment therein.

Purchasing securities to close out the short position can itself cause the price of the securities to rise further, thereby exacerbating the loss. Short-selling exposes the Trust to unlimited risk with respect to that security due to the lack of an upper limit on the price to which an instrument can rise. Although the Trust reserves the right to utilize short sales, the Adviser is under no obligation to utilize shorts at all.

Eaton Vance Senior Floating-Rate Trust

9

SAI dated February 24, 2014

Foreign investments

The Trust may invest in U.S. dollar denominated securities of non-U.S. issuers. Because foreign companies are not subject to uniform accounting, auditing and financial reporting standards, practices and requirements comparable to those applicable to U.S. companies, there may be less publicly available information about a foreign company than about a domestic company. Volume and liquidity in most foreign debt markets is less than in the United States and securities of some foreign companies are less liquid and more volatile than securities of comparable U.S. companies. There is generally less government supervision and regulation of securities exchanges, broker-dealers and listed companies than in the United States. Mail service between the United States and foreign countries may be slower or less reliable than within the United States, thus increasing the risk of delayed settlements of portfolio transactions or loss of certificates for portfolio securities. Payment for securities before delivery may be required. In addition, with respect to certain foreign countries, there is the possibility of expropriation or confiscatory taxation, political or social instability, or diplomatic developments that could affect investments in those countries. Moreover, individual foreign economies may differ favorably or unfavorably from the U.S. economy in such respects as growth of gross national product, rate of inflation, capital reinvestment, resource self-sufficiency and balance of payments position. Foreign securities markets, while growing in volume and sophistication, are generally not as developed as those in the United States, and securities of some foreign issuers (particularly those located in developing countries) may be less liquid and more volatile than securities of comparable U.S. companies.

American Depositary Receipts (ADRs), European Depositary Receipts (EDRs) and Global Depositary Receipts (GDRs) may be purchased. ADRs, EDRs and GDRs are certificates evidencing ownership of shares of a foreign issuer and are alternatives to purchasing directly the underlying foreign securities in their national markets and currencies. However, they continue to be subject to many of the risks associated with investing directly in foreign securities. These risks include foreign exchange risk as well as the political and economic risks of the underlying issuer's country. ADRs, EDRs and GDRs may be sponsored or unsponsored. Unsponsored receipts are established without the participation of the issuer. Unsponsored receipts may involve higher expenses, they may not pass-through voting or other shareholder rights, and they may be less liquid.

Derivative Instruments

Derivative instruments (which are instruments that derive their value from another instrument, security, index or currency) may be used to enhance income (in the case of written options), to hedge against fluctuations in securities prices, currency exchange rates, to change the duration of the overall portfolio, or as a substitute for the purchase or sale of securities or currencies. Such transactions may be in the U.S. or abroad and may include the purchase or sale of forward or futures contracts securities (such as U.S. Government securities), indices, other financial instruments (such as certificates of deposit, Eurodollar time deposits and economic indices); options on futures contracts; exchange-traded and over-the-counter options on securities, indices or currencies; interest rate swaps, credit default swaps, and credit linked notes (described below); and forward foreign currency exchange contracts. The Trust may enter into derivatives transactions with respect to any security or other instrument in which it is permitted to invest. The Trust incurs costs in opening and closing derivatives positions.

The Trust may use derivative instruments and trading strategies, including the following:

Options on Securities Indices and Currencies. The Trust may engage in transactions in exchange traded and over-the-counter (OTC) options. In general, exchange-traded options have standardized exercise prices and expiration dates and require the parties to post margin against their obligations, and the performance of the parties' obligations in connection with such options is guaranteed by the exchange or a related clearing corporation. OTC options have more flexible terms negotiated between the buyer and the seller, but generally do not require the parties to post margin and are subject to greater credit risk. OTC options also involve greater liquidity risk. The Staff of the SEC takes the position that certain purchased OTC options, and assets used as cover for written OTC options, are illiquid.

Eaton Vance Senior Floating-Rate Trust

10

SAI dated February 24, 2014

Call Options. A purchased call option gives the Trust the right to buy, and obligates the seller to sell, the underlying instrument at the exercise price at any time during the option period. The Trust also may purchase and sell call options on indices. Index options are similar to options on securities except that, rather than taking or making delivery of securities underlying the option at a specified price upon exercise, an index option gives the holder the right to receive cash upon exercise of the option if the level of the index upon which the option is based is greater than the exercise price of the option.

The Trust also is authorized to write (i.e., sell) call options and to enter into closing purchase transactions with respect to certain of such options. A covered call option is an option in which the Trust, in return for a premium, gives another party a right to buy specified securities owned by the Trust at a specified future date and price set at the time of the contract.

The principal reason for writing call options is the attempt to realize, through the receipt of premiums, a greater return than would be realized on the securities alone. By writing covered call options, the Trust gives up the opportunity, while the option is in effect, to profit from any price increase in the underlying security above the option exercise price. In addition, the Trust's ability to sell the underlying security will be limited while the option is in effect unless the Trust enters into a closing purchase transaction. A closing purchase transaction cancels out the Trust's position as the writer of an option by means of an offsetting purchase of an identical option prior to the expiration of the option it has written. Covered call options also serve as a partial hedge to the extent of the premium received against the price of the underlying security declining.

Put Options. The Trust is authorized to purchase put options to seek to hedge against a decline in the value of its securities or to enhance its return. By buying a put option, the Trust acquires a right to sell the underlying securities or instruments at the exercise price, thus limiting the Trust's risk of loss through a decline in the market value of the securities or instruments until the put option expires. The amount of any appreciation in the value of the underlying securities or instruments will be partially offset by the amount of the premium paid for the put option and any related transaction costs. Prior to its expiration, a put option may be sold in a closing sale transaction and profit or loss from the sale will depend on whether the amount received is more or less than the premium paid for the put option plus the related transaction costs. A closing sale transaction cancels out the Trust's position as the purchaser of an option by means of an offsetting sale of an identical option prior to the expiration of the option it has purchased. The Trust also may purchase uncovered put options.

The Trust also has authority to write (i.e., sell) put options. The Trust will receive a premium for writing a put option, which increases the Trust's return. The Trust has the obligation to buy the securities or instruments at an agreed upon price if the price of the securities or instruments decreases below the exercise price. There are several risks associated with transactions in options on securities and indexes. For example, there are significant differences between the securities and options markets that could result in an imperfect correlation between these markets, causing a given transaction not to achieve its objectives. In addition, a liquid secondary market for particular options, whether traded OTC or on a national securities exchange may be absent for reasons which include the following: there may be insufficient trading interest in certain options; restrictions may be imposed by a national securities exchange on opening transactions or closing transactions or both; trading halts, suspensions or other restrictions may be imposed with respect to particular classes or series of options or underlying securities; unusual or unforeseen circumstances may interrupt normal operations on a national securities exchange; the facilities of a national securities exchange or the Options Clearing Corporation (the OCC) may not at all times be adequate to handle current trading volume; or one or more national securities exchanges could, for economic or other reasons, decide or be compelled at some future date to discontinue the trading of options (or a particular class or series of options), in which event the secondary market on that national securities exchange (or in that class or series of options) would cease to exist, although outstanding options that had been issued by the OCC as a result of trades on that national securities exchange would continue to be exercisable in accordance with their terms.

Futures. The Trust may engage in transactions in futures and options on futures. Futures are standardized, exchange-traded contracts that obligate a purchaser to take delivery, and a seller to make delivery, of a specific amount of an asset at a specified future date at a specified price. No price is paid upon entering into a futures contract. Rather, upon purchasing or selling a futures contract the Trust is required to deposit collateral (margin) equal to a percentage (generally less than 10%) of the contract value. Each day thereafter until the futures position is closed, the Trust will pay additional margin representing any loss experienced as a result of

Eaton Vance Senior Floating-Rate Trust

11

SAI dated February 24, 2014

the futures position the prior day or be entitled to a payment representing any profit experienced as a result of the futures position the prior day. Futures involve substantial leverage risk. The sale of a futures contract limits the Trust's risk of loss from a decline in the market value of portfolio holdings correlated with the futures contract prior to the futures contract's expiration date. In the event the market value of the Trust holdings correlated with the futures contract increases rather than decreases, however, the Trust will realize a loss on the futures position and a lower return on the Trust holdings than would have been realized without the purchase of the futures contract.

The purchase of a futures contract may protect the Trust from having to pay more for securities as a consequence of increases in the market value for such securities during a period when the Trust was attempting to identify specific securities in which to invest in a market the Trust believes to be attractive. In the event that such securities decline in value or the Trust determines not to complete an anticipatory hedge transaction relating to a futures contract, however, the Trust may realize a loss relating to the futures position.

The Trust is also authorized to purchase or sell call and put options on futures contracts including financial futures and stock indices. Generally, these strategies would be used under the same market and market sector conditions (i.e., conditions relating to specific types of investments) in which the Trust entered into futures transactions. The Trust may purchase put options or write call options on futures contracts and stock indices in lieu of selling the underlying futures contract in anticipation of a decrease in the market value of its securities. Similarly, the Trust can purchase call options, or write put options on futures contracts and stock indices, as a substitute for the purchase of such futures to hedge against the increased cost resulting from an increase in the market value of securities which the Trust intends to purchase.

Risks Associated with Futures. The primary risks associated with the use of futures contracts and options are (a) the imperfect correlation between the change in market value of the instruments held by the Trust and the price of the futures contract or option; (b) possible lack of a liquid secondary market for a futures contract and the resulting inability to close a futures contract when desired; (c) losses caused by unanticipated market movements, which are potentially unlimited; (d) the investment adviser's inability to predict correctly the direction of securities prices, interest rates, currency exchange rates and other economic factors; and (e) the possibility that the counterparty will default in the performance of its obligations.

The Trust has claimed an exclusion from the definition of the term Commodity Pool Operator (CPO) under the Commodity Exchange Act and therefore is not subject to registration as a CPO. Foreign Currency Transactions. The Trust may engage in spot transactions and forward foreign currency exchange contracts and currency swaps, purchase and sell options on currencies and purchase and sell currency futures and related options thereon (collectively,

Currency Instruments) for purposes of hedging against the decline in the value of currencies in which its portfolio holdings are denominated against the U.S. dollar or, to seek to enhance returns. Such transactions could be effected with respect to hedges on foreign dollar denominated securities owned by the Trust, sold by the Trust but not yet delivered, or committed or anticipated to be purchased by the Trust.

Forward Foreign Currency Exchange Contracts. Forward foreign currency exchange contracts are OTC contracts to purchase or sell a specified amount of a specified currency or multinational currency unit at a price and future date set at the time of the contract. Spot foreign exchange transactions are similar but require current, rather than future, settlement. The Trust will enter into foreign exchange transactions for purposes of hedging either a specific transaction or the Trust position or, to seek to enhance returns. Proxy hedging is often used when the currency to which the Trust is exposed is difficult to hedge or to hedge against the dollar. Proxy hedging entails entering into a forward contract to sell a currency whose changes in value are generally considered to be linked to a currency or currencies in which some or all of the Trust's securities are, or are expected to be, denominated, and to buy U.S. dollars. Proxy hedging involves some of the same risks and considerations as other transactions with similar instruments. Currency transactions can result in losses to the Trust if the currency being hedged fluctuates in value to a degree or in a direction that is not anticipated. In addition, there is the risk that the perceived linkage between various currencies may not be present or may not be present during the particular time that the Trust is engaged in

proxy hedging. The Trust may also cross-hedge currencies by entering into forward contracts to sell one or more currencies that are expected to decline in value relative to other currencies to which the Trust has or in which the Trust expects to have portfolio exposure. Some of the forward foreign currency contracts entered into by the Trust are classified as non-

Eaton Vance Senior Floating-Rate Trust

12

SAI dated February 24, 2014

deliverable forwards (NDF). NDFs are cash-settled, short-term forward contracts that may be thinly traded or are denominated in non-convertible foreign currency, where the profit or loss at the time at the settlement date is calculated by taking the difference between the agreed upon exchange rate and the spot rate at the time of settlement, for an agreed upon notional amount of funds. NDFs are commonly quoted for time periods of one month up to two years, and are normally quoted and settled in U.S. dollars. They are often used to gain exposure to and/or hedge exposure to foreign currencies that are not internationally traded.

Currency Futures. The Trust may also seek to enhance returns or hedge against the decline in the value of a currency through use of currency futures or options thereon. Currency futures are similar to forward foreign exchange transactions except that futures are standardized, exchange-traded contracts while forward foreign exchange transactions are traded in the OTC market. Currency futures involve substantial currency risk, and also involve leverage risk.

Currency Options. The Trust may also seek to enhance returns or hedge against the decline in the value of a currency through the use of currency options. Currency options are similar to options on securities. For example, in consideration for an option premium the writer of a currency option is obligated to sell (in the case of a call option) or purchase (in the case of a put option) a specified amount of a specified currency on or before the expiration date for a specified amount of another currency. The Trust may engage in transactions in options on currencies either on exchanges or OTC markets. Currency options involve substantial currency risk, and may also involve credit, leverage or liquidity risk.

Risk Factors in Hedging Foreign Currency. Hedging transactions involving Currency Instruments involve substantial risks, including correlation risk. Although Currency Instruments will be used with the intention of hedging against adverse currency movements, transactions in Currency Instruments involve the risk that anticipated currency movements will not be accurately predicted and that the Trust's hedging strategies will be ineffective. To the extent that the Trust hedges against anticipated currency movements that do not occur, the Trust may realize losses and decrease its total return as the result of its hedging transactions. Furthermore, the Trust will only engage in hedging activities from time to time and may not be engaging in hedging activities when movements in currency exchange rates occur.

Swap Agreements. Swap agreements are two-party contracts entered into primarily by institutional investors for periods ranging from a few weeks to more than one year. In a standard swap transaction, two parties agree to exchange the returns (or differentials in rates of return) earned or realized on particular predetermined investments or instruments, which can be adjusted for an interest factor. The gross returns to be exchanged or swapped between the parties are generally calculated with respect to a notional amount, i.e., the return on or increase in value of a particular dollar amount invested at a particular interest rate or in a basket of securities representing a particular index. Whether the Trust's use of swap agreements or swaptions will be successful in furthering its investment objectives will depend on the investment adviser's ability to predict correctly whether certain types of investments are likely to produce greater returns than other investments. Because they are two-party contracts and because they may have terms of greater than seven days, swap agreements may be considered to be illiquid. Moreover, the Trust bears the risk of loss of the amount expected to be received under a swap agreement in the event of the default or bankruptcy of a swap agreement counterparty. The Trust will enter into swap agreements only with counterparties that meet certain standards of creditworthiness. If there is a default by the other party to such a transaction, the Trust will have contractual remedies pursuant to the agreements related to the transaction. Swap agreements are also subject to the risk that the Trust will not be able to meet its obligations to the counterparty. The Trust, however, will segregate liquid assets equal to or greater than the market value of the liabilities under the swap agreement or the amount it would cost the Trust initially to make an equivalent direct investment, plus or minus any amount the Trust is obligated to pay or is to receive under the swap agreement. The swap market has grown substantially in recent years with a large number of banks and investment banking firms acting both as principals and as agents utilizing standardized swap documentation. As a result, the swap market has become relatively liquid. The swaps market is largely unregulated. It is possible that developments in the swaps market, including potential government regulation, could adversely affect

the Trust's ability to terminate existing swap agreements or to realize amounts to be received under such agreements.

Eaton Vance Senior Floating-Rate Trust

13

SAI dated February 24, 2014

Asset Coverage. To the extent required by SEC guidelines, the Trust will only engage in transactions that expose it to an obligation to another party if it owns either: (1) an offsetting (covered) position for the same type of financial asset, or (2) cash or liquid securities, segregated with its custodian, with a value sufficient at all times to cover its potential obligations not covered as provided in (1). Assets used as cover or segregated with the custodian cannot be sold while the position(s) requiring cover is open unless replaced with other appropriate assets. As a result, if a large portion of assets is segregated or committed as cover, it could impede portfolio management or the ability to meet redemption requests or other current obligations.

Securities lending

As described in the Prospectus, the Trust may lend a portion of its portfolio Senior Loans or other securities to broker-dealers or other institutional borrowers. Loans will be made only to organizations whose credit quality or claims paying ability is considered by the Adviser to be at least investment grade. All securities loans will be collateralized on a continuous basis by cash or U.S. government securities having a value, marked to market daily, of at least 100% of the market value of the loaned securities. The Trust may receive loan fees in connection with loans that are collateralized by securities or on loans of securities for which there is special demand. The Trust may also seek to earn income on securities loans by reinvesting cash collateral in mortgage-backed securities (MBS) or other securities consistent with its investment objective and policies, seeking to invest at rates that are higher than the rebate rate that it normally will pay to the borrower with respect to such cash collateral. Any such reinvestment will be subject to the investment policies, restrictions and risk considerations described in the Prospectus and in this SAI.

Senior Loans and other securities may result in delays in recovering, or a failure of the borrower to return, the loaned securities. The defaulting borrower ordinarily would be liable to the Trust for any losses resulting from such delays or failures, and the collateral provided in connection with the loan normally would also be available for that purpose. Securities loans normally may be terminated by either the Trust or the borrower at any time. Upon termination and the return of the loaned securities, the Trust would be required to return the related cash or securities collateral to the borrower and it may be required to liquidate longer term portfolio securities in order to do so. To the extent that such securities have decreased in value, this may result in the Trust realizing a loss at a time when it would not otherwise do so. The Trust also may incur losses if it is unable to reinvest cash collateral at rates higher than applicable rebate rates paid to borrowers and related administrative costs. These risks are substantially the same as those incurred through investment leverage, and will be subject to the investment policies, restrictions and risk considerations described in the Prospectus and in this SAI.

The Trust will receive amounts equivalent to any interest or other distributions paid on securities while they are on loan, and the Trust will not be entitled to exercise voting or other beneficial rights on loaned securities. The Trust will exercise its right to terminate loans and thereby regain these rights whenever the Adviser considers it to be in the Trust's interest to do so, taking into account the related loss of reinvestment income and other factors.

Short-term trading

Securities may be sold in anticipation of market decline (a rise in interest rates) or purchased in anticipation of a market rise (a decline in interest rates) and later sold. In addition, a security may be sold and another purchased at approximately the same time to take advantage of what the Adviser believes to be a temporary disparity in the normal yield relationship between the two securities. Yield disparities may occur for reasons not directly related to the investment quality of particular issues or the general movement of interest rates, such as changes in the overall demand for or supply of various types of fixed income securities or changes in the investment objectives of investors.

Temporary investments

The Trust may invest temporarily in cash or cash equivalents. Cash equivalents are highly liquid, short-term securities such as commercial paper, time deposits, certificates of deposit, short-term notes and short-term U.S. Government

obligations.

Eaton Vance Senior Floating-Rate Trust

14

SAI dated February 24, 2014

Investment restrictions

The following investment restrictions of the Trust are designated as fundamental policies and as such cannot be changed without the approval of the holders of a majority of the Trust's outstanding voting securities, which as used in this SAI means the lesser of (a) 67% of the shares of the Trust present or represented by proxy at a meeting if the holders of more than 50% of the outstanding shares are present or represented at the meeting or (b) more than 50% of outstanding shares of the Trust. As a matter of fundamental policy the Trust may not:

(1)

Borrow money, except as permitted by the Investment Company Act of 1940 (the 1940 Act). The 1940 Act currently requires that any indebtedness incurred by a closed-end investment company have an asset coverage of at least 300%;

(2)

Issue senior securities, as defined in the 1940 Act, other than (i) preferred shares which immediately after issuance will have asset coverage of at least 200%, (ii) indebtedness which immediately after issuance will have asset coverage of at least 300%, or (iii) the borrowings permitted by investment restriction (1) above. The 1940 Act currently defines senior security as any bond, debenture, note or similar obligation or instrument constituting a security and evidencing indebtedness, and any stock of a class having priority over any other class as to distribution of assets or payment of dividends. Debt and equity securities issued by a closed-end investment company meeting the foregoing asset coverage provisions are excluded from the general 1940 Act prohibition on the issuance of senior securities;

(3)

Purchase securities on margin (but the Trust may obtain such short-term credits as may be necessary for the clearance of purchases and sales of securities). The purchase of investment assets with the proceeds of a permitted borrowing or securities offering will not be deemed to be the purchase of securities on margin;

(4)

Underwrite securities issued by other persons, except insofar as it may technically be deemed to be an underwriter under the Securities Act of 1933 in selling or disposing of a portfolio investment;

(5)

Make loans to other persons, except by (a) the acquisition of loan interests, debt securities and other obligations in which the Trust is authorized to invest in accordance with its investment objectives and policies, (b) entering into repurchase agreements, (c) lending its portfolio securities and (d) lending cash consistent with applicable law;

(6)

Purchase or sell real estate, although it may purchase and sell securities that are secured by interests in real estate and securities of issuers that invest or deal in real estate. The Trust reserves the freedom of action to hold and to sell real estate acquired as a result of the ownership of securities;

(7)

Purchase or sell physical commodities or contracts for the purchase or sale of physical commodities. Physical commodities do not include futures contracts with respect to securities, securities indices or other financial instruments; and

(8)

With respect to 75% of its total assets, invest more than 5% of its total assets in the securities of a single issuer or purchase more than 10% of the outstanding voting securities of a single issuer, except obligations issued or guaranteed by the U.S. government, its agencies or instrumentalities and except securities of other investment companies; or invest 25% or more of its total assets in any single industry (other than securities issued or guaranteed by the U.S. government or its agencies or instrumentalities).

The Trust may borrow money as a temporary measure for extraordinary or emergency purposes, including the payment of dividends and the settlement of securities transactions which otherwise might require untimely dispositions of Trust securities. The 1940 Act currently requires that the Trust have 300% asset coverage with respect to all borrowings other than temporary borrowings.

For purposes of construing restriction (8), securities of the U.S. Government, its agencies, or instrumentalities are not considered to represent industries. Municipal obligations backed by the credit of a governmental entity are also not considered to represent industries.

Eaton Vance Senior Floating-Rate Trust

15

SAI dated February 24, 2014

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

The Trust has adopted the following nonfundamental investment policy, which may be changed by the Board of Trustees of the Trust (the Board) without approval of the Trust's shareholders. As a matter of nonfundamental policy, the Trust may not make short sales of securities or maintain a short position, unless at all times when a short position is open it either owns an equal amount of such securities or owns securities convertible into or exchangeable, without payment of any further consideration, for securities of the same issuer as, and equal in amount to, the securities sold short.

The Trust may invest more than 10% of its total assets in one or more other management investment companies (or may invest in affiliated investment companies) to the extent permitted by section 12(d) of the 1940 Act and rules thereunder.

Whenever an investment policy or investment restriction set forth in the Prospectus or this SAI states a maximum percentage of assets that may be invested in any security or other asset or describes a policy regarding quality standards, such percentage limitation or standard shall be determined immediately after and as a result of the Trust's acquisition of such security or asset. Accordingly, any later increase or decrease resulting from a change in values, assets or other circumstances or any subsequent rating change made by a rating service (or as determined by the Adviser if the security is not rated by a rating agency) will not compel the Trust to dispose of such security or other asset. Notwithstanding the foregoing, the Trust must always be in compliance with the borrowing policies set forth above.

TRUSTEES AND OFFICERS

The Trustees of the Trust are responsible for the overall management and supervision of the affairs of the Trust. The Board members and officers of the Trust are listed below. Except as indicated, each individual has held the office shown or other offices in the same company for the last five years. The noninterested Trustees consist of those Trustees who are not interested persons of the Trust, as that term is defined under the 1940 Act. The business address of each Board member and officer is Two International Place, Boston, Massachusetts 02110. As used in this SAI, EVC refers to Eaton Vance Corp., EV refers to Eaton Vance, Inc., BMR refers to Boston Management and Research, and EVD refers to Eaton Vance Distributors Inc. EVC and EV are the corporate parent and trustee, respectively, of Eaton Vance and BMR. EVD is a wholly-owned subsidiary of EVC. Each officer affiliated with Eaton Vance may hold a position with other Eaton Vance affiliates that is comparable to his or her position with Eaton Vance listed below.

| Name and Year of Birth | Year of Position(s) with the Trust | Term of Office and Length of Service | Principal Occupation(s) and Other Relevant Experience During Past Five Years | Number of Portfolios in Fund Complex Overseen By Trustee ⁽¹⁾ | Other Directorships Held During Last Five Years ⁽²⁾ |
|------------------------|------------------------------------|--------------------------------------|--|---|--|
|------------------------|------------------------------------|--------------------------------------|--|---|--|

INTERESTED TRUSTEE

| | | | | | |
|-----------------------------|------------------|--|--|-----|-----------------------------------|
| THOMAS E. FAUST JR. 1958 | Class II Trustee | Until 2014. 3 years. Since 2007. | Chairman, Chief Executive Officer and President of EVC, Director and President of EV, Chief Executive Officer and President of Eaton Vance and BMR, and Director of EVD. Trustee and/or officer of 182 registered investment | 182 | Director of EVC and Hexavest Inc. |
|-----------------------------|------------------|--|--|-----|-----------------------------------|

companies. Mr. Faust is an interested person because of his positions with BMR, Eaton Vance, EVC, EVD and EV, which are affiliates of the Trust.

Eaton Vance Senior Floating-Rate Trust

16

SAI dated February 24, 2014

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

| Name and Year of Birth | Position(s) with the Trust | Term of Office and Length of Service | Principal Occupation(s) During Past Five Years and Other Relevant Experience | Number of Portfolios in Fund Complex Overseen By Trustee ⁽¹⁾ | Other Directorships Held During Last Five Years ⁽²⁾ |
|--------------------------------|----------------------------|--|--|---|---|
| NON-INTERESTED TRUSTEES | | | | | |
| SCOTT E. ESTON 1956 | Class I Trustee | Until 2016. 3 years. Since 2011. | Private investor. Formerly held various positions at Grantham, Mayo, Van Otterloo and Co., L.L.C. (investment management firm) (1997-2009), including Chief Operating Officer (2002-2009), Chief Financial Officer (1997-2009) and Chairman of the Executive Committee (2002-2008); President and Principal Executive Officer, GMO Trust (open-end registered investment company) (2006-2009). Former Partner, Coopers and Lybrand L.L.P. (now PricewaterhouseCoopers) (public accounting firm) (1987-1997). | 182 | None |
| ALLEN R. FREEDMAN 1940 | Class I Trustee | Until 2016. 3 years. Since 2007. | Private Investor. Former Chairman (2002-2004) and a Director (1983-2004) of Systems & Computer Technology Corp. (provider of software to higher education). Formerly, a Director of Loring Ward International (fund distributor) (2005-2007). Formerly, Chairman and a Director of Indus International, Inc. (provider of enterprise management software to the power generating industry) (2005-2007). Former Chief Executive Officer of Assurant, Inc. (insurance provider) (1979-2000). | 182 | Director of Stonemor Partners L.P. (owner and operator of cemeteries). Formerly, Director of Assurant, Inc. (insurance provider) (1979-2011). |

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

| | | | | | |
|---------------------------|---------------------|--|--|-----|---|
| VALERIE A. MOSLEY 1960 | Class I Trustee | Until 2016. 2 years. Since 2014. | Chairwoman and Chief Executive Officer of Valmo Ventures (a consulting and investment firm). Former Partner and Senior Vice President, Portfolio Manager and Investment Strategist at Wellington Management Company, LLP (investment management firm) (1992-2012). Former Chief Investment Officer, PG Corbin Asset Management (1990-1992). Formerly worked in institutional corporate bond sales at Kidder Peabody (1986-1990). | 182 | Director of Dynex Capital, Inc. (mortgage REIT) (since 2013). |
| WILLIAM H. PARK 1947 | Class II Trustee | Until 2014. 3 years. Since 2003. | Consultant and private investor. Formerly, Chief Financial Officer, Aveon Group, L.P. (investment management firm) (2010-2011). Formerly, Vice Chairman, Commercial Industrial Finance Corp. (specialty finance company) (2006-2010). Formerly, President and Chief Executive Officer, Prizm Capital Management, LLC (investment management firm) (2002-2005). Formerly, Executive Vice President and Chief Financial Officer, United Asset Management Corporation (investment management firm) (1982-2001). Formerly, Senior Manager, Price Waterhouse (now PricewaterhouseCoopers) (an independent registered public accounting firm) (1972-1981). | 182 | None |

Eaton Vance Senior Floating-Rate Trust

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

| Name and Year of Birth | Position(s) with the Trust | Term of Office and Length of Service | Principal Occupation(s) During Past Five Years and Other Relevant Experience | Number of Portfolios in Fund Complex Overseen By Trustee ⁽¹⁾ | Other Directorships Held During Last Five Years ⁽²⁾ |
|---|----------------------------|--|--|---|---|
| RONALD A. PEARLMAN 1940 | Class III Trustee | Until 2015. 3 years. Since 2003. | Professor of Law, Georgetown University Law Center. Formerly, Deputy Assistant Secretary (Tax Policy) and Assistant Secretary (Tax Policy), U.S. Department of the Treasury (1983-1985). Formerly, Chief of Staff, Joint Committee on Taxation, U.S. Congress (1988-1990). | 182 | None |
| HELEN FRAME PETERS ^(A) 1948 | Class III Trustee | Until 2015. 3 years. Since 2008. | Professor of Finance, Carroll School of Management, Boston College. Formerly, Dean, Carroll School of Management, Boston College (2000-2002). Formerly, Chief Investment Officer, Fixed Income, Scudder Kemper Investments (investment management firm) (1998-1999). Formerly, Chief Investment Officer, Equity and Fixed Income, Colonial Management Associates (investment management firm) (1991-1998). | 182 | Formerly, Director of BJ's Wholesale Club, Inc. (wholesale club retailer) (2004-2011). Formerly, Trustee of SPDR Index Shares Funds and SPDR Series Trust (exchange traded funds) (2000-2009). Formerly, Director of Federal Home Loan Bank of Boston (a bank for banks) (2007-2009). |
| LYNN A. STOUT 1957 | Class I Trustee | Until 2016. 3 years. Since 2003. | Distinguished Professor of Corporate and Business Law, Jack G. Clarke Business Law Institute, Cornell University Law School. Formerly, the Paul Hastings Professor of Corporate and Securities Law (2006-2012) and Professor of Law (2001-2006), University of California at Los Angeles School of Law. | 182 | None |
| HARRIETT TEE TAGGART | Class III Trustee | Until 2015 3 years. | Managing Director, Taggart Associates (a professional | 182 | Director of Albemarle Corporation |

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

| | | | | | |
|-------------------------------|--|--|--|-----|--|
| 1948 | | Since 2011. | practice firm); formerly, Partner and Senior Vice President, Wellington Management Company, LLP (investment management firm)(1983-2006). | | (chemicals manufacturer) (since 2007) and The Hanover Group (specialty property and casualty insurance company) (since 2009). Formerly, Director of Lubrizol Corporation (specialty chemicals) (2007-2011) |
| RALPH F. VERNI (A) 1943 | Chairman of the Board and Class II Trustee | Until 2014. 3 years. Trustee since 2005; Chairman of the Board since 2007. | Consultant and private investor. Formerly, Chief Investment Officer (1982-1992), Chief Financial Officer (1988-1990) and Director (1982-1992), New England Life. Formerly, Chairperson, New England Mutual Funds (1982-1992). Formerly, President and Chief Executive Officer, State Street Management & Research (1992-2000). Formerly, Chairperson, State Street Research Mutual Funds (1992-2000). Formerly, Director, W.P. Carey, LLC (1998-2004) and First Pioneer Farm Credit Corp. (2002-2006). | 182 | None |

(1)

Includes both master and feeder funds in a master-feeder structure.

(2)

During their respective tenures, the Trustees (except for, Mr. Eston and Ms. Taggart for all funds except eUnits™ 2 Year U.S. Equity Market Participation Trust: Upside to Cap / Buffered Downside and Ms. Mosley for all funds) also served as Board members of one or more of the following funds (which operated in the years noted): Eaton Vance Credit Opportunities Fund (launched in 2005 and terminated in 2010); Eaton Vance Insured Florida Plus Municipal Bond Fund (launched in 2002 and terminated in 2009); and Eaton Vance National Municipal Income Trust (launched in 1998 and terminated in 2009).

(A)

APS Trustee.

Eaton Vance Senior Floating-Rate Trust

18

SAI dated February 24, 2014

PRINCIPAL OFFICERS WHO ARE NOT TRUSTEES

| <u>Name and Year of Birth</u> | <u>Trust Position(s)</u> | <u>Term of Office and Length of Service</u> | <u>Principal Occupation(s) During Past Five Years</u> |
|-------------------------------|---|--|--|
| Scott H. Page 1959 | President | Since 2008 | Vice President of EVM and BMR. Officer of 6 registered investment companies managed by EVM or BMR. |
| Payson F. Swaffield 1956 | Vice President | Since 2011 | Chief Income Investment Officer of EVC. Vice President of Eaton Vance and BMR. Officer of 137 registered investment companies managed by Eaton Vance or BMR. |
| Maureen A. Gemma 1960 | Vice President, Secretary and Chief Legal Officer | Vice President since 2011, Secretary since 2007 and Chief Legal Officer since 2008 | Vice President of EVM and BMR. Officer of 181 registered investment companies managed by EVM or BMR. |
| James F. Kirchner 1967 | Treasurer | Since 2013* | Vice President of EVM and BMR. Officer of 181 registered investment companies managed by EVM or BMR. |
| Paul M. O Neil 1953 | Chief Compliance Officer | Since 2004 | Vice President of EVM and BMR. Officer of 181 registered investment companies managed by EVM or BMR. |

*

Prior to 2013, Mr. Kirchner served as Assistant Treasurer of the Trust since 2007.

The Board has general oversight responsibility with respect to the business and affairs of the Trust. The Board has engaged an investment adviser and (if applicable) a sub-adviser (collectively the adviser) to manage the Trust and an administrator to administer the Trust and is responsible for overseeing such adviser and administrator and other service providers to the Trust. The Board is currently composed of ten Trustees, including nine Trustees who are not interested persons of the Trust, as that term is defined in the 1940 Act (each an Independent Trustee). In addition to eight regularly scheduled meetings per year, the Board holds special meetings or informal conference calls to discuss specific matters that may require action prior to the next regular meeting. As discussed below, the Board has established five committees to assist the Board in performing its oversight responsibilities.

The Board has appointed an Independent Trustee to serve in the role of Chairman. The Chairman's primary role is to participate in the preparation of the agenda for meetings of the Board and the identification of information to be presented to the Board with respect to matters to be acted upon by the Board. The Chairman also presides at all meetings of the Board and acts as a liaison with service providers, officers, attorneys, and other Board members generally between meetings. The Chairman may perform such other functions as may be requested by the Board from time to time. Except for any duties specified herein or pursuant to the Trust's Declaration of Trust or By-laws, the designation of Chairman does not impose on such Independent Trustee any duties, obligations or liability that is greater than the duties, obligations or liability imposed on such person as a member of the Board, generally.

The Trust is subject to a number of risks, including, among others, investment, compliance, operational, and valuation risks. Risk oversight is part of the Board's general oversight of the Trust and is addressed as part of various activities of the Board and its Committees. As part of its oversight of the Trust, the Board directly, or through a Committee, relies on and reviews reports from, among others, Trust management, the adviser, the administrator, the principal

underwriter, the Chief Compliance Officer (the CCO), and other Trust service providers responsible for day-to-day oversight of Trust investments, operations and compliance to assist the Board in identifying and understanding the nature and extent of risks and determining whether, and to what extent, such risks can be mitigated. The Board also interacts with the CCO and with senior personnel of the adviser, administrator, principal underwriter and other Trust service providers and provides input on risk management issues during meetings of the Board and its Committees. Each of the adviser, administrator, principal underwriter and the other Trust service providers has its own, independent interest and responsibilities in risk management, and its policies and methods for carrying out risk management functions will depend, in

Eaton Vance Senior Floating-Rate Trust

19

SAI dated February 24, 2014

part, on its individual priorities, resources and controls. It is not possible to identify all of the risks that may affect the Trust or to develop processes and controls to eliminate or mitigate their occurrence or effects. Moreover, it is necessary to bear certain risks (such as investment-related risks) to achieve the Trust's goals.

The Board, with the assistance of management and with input from the Board's various committees, reviews investment policies and risks in connection with its review of Trust performance. The Board has appointed a Trust Chief Compliance Officer who oversees the implementation and testing of the Trust compliance program and reports to the Board regarding compliance matters for the Trust and its principal service providers. In addition, as part of the Board's periodic review of the advisory, sub-advisory (if applicable), distribution and other service provider agreements, the Board may consider risk management aspects of their operations and the functions for which they are responsible. With respect to valuation, the Board approves and periodically reviews valuation policies and procedures applicable to valuing the Trust's shares. The administrator, the investment adviser and the sub-adviser (if applicable) are responsible for the implementation and day-to-day administration of these valuation policies and procedures and provides reports periodically to the Board regarding these and related matters. In addition, the Board or the Audit Committee of the Board receives reports periodically from the independent public accounting firm for the Trust regarding tests performed by such firm on the valuation of all securities, as well as with respect to other risks associated with funds. Reports received from service providers, legal counsel and the independent public accounting firm assist the Board in performing its oversight function.

The Trust's Declaration of Trust does not set forth any specific qualifications to serve as a Trustee. The Charter of the Governance Committee also does not set forth any specific qualifications, but does set forth certain factors that the Committee may take into account in considering Independent Trustee candidates. In general, no one factor is decisive in the selection of an individual to join the Board. Among the factors the Board considers when concluding that an individual should serve on the Board are the following: (i) knowledge in matters relating to the mutual fund industry; (ii) experience as a director or senior officer of public companies; (iii) educational background; (iv) reputation for high ethical standards and professional integrity; (v) specific financial, technical or other expertise, and the extent to which such expertise would complement the Board members' existing mix of skills, core competencies and qualifications; (vi) perceived ability to contribute to the ongoing functions of the Board, including the ability and commitment to attend meetings regularly and work collaboratively with other members of the Board; (vii) the ability to qualify as an Independent Trustee for purposes of the 1940 Act and any other actual or potential conflicts of interest involving the individual and the Trust; and (viii) such other factors as the Board determines to be relevant in light of the existing composition of the Board.

Among the attributes or skills common to all Board members are their ability to review critically, evaluate, question and discuss information provided to them, to interact effectively with the other members of the Board, management, sub-advisers, other service providers, counsel and independent registered public accounting firms, and to exercise effective and independent business judgment in the performance of their duties as members of the Board. Each Board member's ability to perform his or her duties effectively has been attained through the Trustee's business, consulting, public service and/or academic positions and through experience from service as a Board member in the Eaton Vance Group of Funds (and/or in other capacities, including for any predecessor funds), public companies, or non-profit entities or other organizations as set forth below. Each Board member's ability to perform his or her duties effectively also has been enhanced by his or her educational background, professional training, and/or other life experiences.

In respect of each current member of the Board, the individual's substantial professional accomplishments and experience, including in fields related to the operations of the Eaton Vance Group of Funds, were a significant factor in the determination that the individual should serve as a member of the Board. The following is a summary of each Board member's particular professional experience and additional considerations that contributed to the Board's conclusion that he or she should serve as a member of the Board:

Eaton Vance Senior Floating-Rate Trust

20

SAI dated February 24, 2014

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Scott E. Eston. Mr. Eston has served as a member of the Eaton Vance Fund Boards since 2011. He currently serves on the investment and advisory board of the BAC Seed Fund, a real estate investment firm, on the board and on the investment committee of Michigan State University Foundation, and on the investment advisory committee of Michigan State University. From 1997 through 2009, Mr. Eston served in several capacities at Grantham, Mayo, Van Otterloo and Co. (GMO), including as Chairman of the Executive Committee and Chief Operating and Chief Financial Officer, and also as the President and Principal Executive officer of GMO Trust, an affiliated open-end registered investment company. From 1978 through 1997, Mr. Eston was employed at Coopers & Lybrand L.L.P. (now PricewaterhouseCoopers) (since 1987 as a Partner).

Thomas E. Faust Jr. Mr. Faust has served as a member of the Eaton Vance Fund Boards since 2007. He is currently Chairman, Chief Executive Officer and President of EVC, Director and President of EV, Chief Executive Officer and President of Eaton Vance and BMR, and Director of EVD. Mr. Faust has served as a Director of Hexavest Inc. since 2012. Mr. Faust previously served as an equity analyst, portfolio manager, Director of Equity Research and Management and Chief Investment Officer of Eaton Vance (1985-2007). He holds B.S. degrees in Mechanical Engineering and Economics from the Massachusetts Institute of Technology and an MBA from Harvard Business School. Mr. Faust has been a Chartered Financial Analyst since 1988.

Allen R. Freedman. Mr. Freedman has served as a member of the Eaton Vance Fund Boards since 2007 and is the Chairperson of the Governance Committee. Mr. Freedman also serves as a Director of Stonemor Partners L.P. where he also serves as the Chair of the Audit Committee and a member of the Trust and Compliance Committee. Mr. Freedman was previously a Director of Assurant, Inc. from 1979-2011, a Director of Systems & Computer Technology Corp. from 1983-2004 and Chairman from 2002-2004, a Director of Loring Ward International from 2005-2007 and Chairman and a Director of Indus International, Inc. from 2005-2007. Mr. Freedman was formerly the Chairman and Chief Executive Officer of Fortis, Inc. (predecessor to Assurant, Inc.), a specialty insurance company from which he retired in 2000. Mr. Freedman also served as a Director of the Fortis Mutual Funds and First Fortis Life Insurance Company. Mr. Freedman is a founding director of the Association of Audit Committee Members, Inc.

Valerie A. Mosley. Ms. Mosley has served as a member of the Eaton Vance Fund Boards since January 1, 2014. She currently owns and manages a consulting and investment firm, Valmo Ventures. From 1992 through 2012, Ms. Mosley served in several capacities at Wellington Management Company, LLP, an investment management firm, including as a Partner, Senior Vice President, Portfolio Manager and Investment Strategist. Ms. Mosley also served as Chief Investment Officer at PG Corbin Asset Management from 1990-1992 and worked in institutional corporate bond sales at Kidder Peabody from 1986-1990. Ms. Mosley is a Director of Dynex Capital, Inc., a mortgage REIT, and also serves as a trustee or board member of several major non-profit organizations and endowments, including Wheelock College's endowment, Mass Ventures, a quasi-public early-stage investment corporation active in Massachusetts, and the Federal Reserve Bank of Boston's Advisory Board for Diversity.

William H. Park. Mr. Park has served as a member of the Eaton Vance Fund Boards since 2003 and is the Chairperson of the Audit Committee. Mr. Park was formerly the Chief Financial Officer of Aveon Group, L.P. from 2010-2011. Mr. Park also served as Vice Chairman of Commercial Industrial Finance Corp. from 2006-2010, as President and Chief Executive Officer of Prizm Capital Management, LLC from 2002-2005, as Executive Vice President and Chief Financial Officer of United Asset Management Corporation from 1982-2001 and as Senior Manager of Price Waterhouse (now PricewaterhouseCoopers) from 1972-1981.

Eaton Vance Senior Floating-Rate Trust

Ronald A. Pearlman. Mr. Pearlman has served as a member of the Eaton Vance Fund Boards since 2003 and is the Chairperson of the Compliance Reports and Regulatory Matters Committee. He is a Professor of Law at Georgetown University Law Center. Previously, Mr. Pearlman was Deputy Assistant Secretary (Tax Policy) and Assistant Secretary (Tax Policy), U.S. Department of the Treasury from 1983-1985 and served as Chief of Staff, Joint Committee on Taxation, U.S. Congress from 1988-1990. Mr. Pearlman was engaged in the private practice of law from 1969-2000, with the exception of the periods of government service. He represented large domestic and multinational businesses in connection with the tax aspects of complex transactions and high net worth individuals in connection with tax and business planning.

Helen Frame Peters. Ms. Peters has served as a member of the Eaton Vance Fund Boards since 2008. She is currently a Professor of Finance at Carroll School of Management, Boston College and was formerly Dean of Carroll School of Management from 2000-2002. Ms. Peters was previously a Director of BJ's Wholesale Club, Inc. from 2004-2011. In addition, Ms. Peters was the Chief Investment Officer, Fixed Income at Scudder Kemper Investments from 1998-1999 and Chief Investment Officer, Equity and Fixed Income at Colonial Management Associates from 1991-1998. Ms. Peters also served as a Trustee of SPDR Index Shares Funds and SPDR Series Trust from 2000-2009 and as a Director of the Federal Home Loan Bank of Boston from 2007-2009.

Lynn A. Stout. Ms. Stout has served as a member of the Eaton Vance Fund Boards since 1998. She has been a Distinguished Professor of Corporate and Business Law at the Cornell University Law School since 2012. Previously, Ms. Stout was the Paul Hastings Professor of Corporate and Securities Law from 2006-2012 and Professor of Law from 2001-2006 at the University of California at Los Angeles School of Law.

Harriett Tee Taggart. Ms. Taggart has served as a member of the Eaton Vance Fund Boards since 2011. She currently manages a professional practice, Taggart Associates. Since 2007, Ms. Taggart has been a Director of Albermarle Corporation, a specialty chemical company where she serves as a member of the Audit Committee and of the Nomination and Governance Committee. Since 2009 she has served as a Director of the Hanover Insurance Group, Inc. where she also serves as member of the Audit Committee. Ms. Taggart is also a trustee or member of several major non-profit boards, advisory committees and endowment investment companies. From 1983 through 2006, Ms. Taggart served in several capacities at Wellington Management Company, LLP, an investment management firm, including as a Partner, Senior Vice President and chemical industry sector portfolio manager. Ms. Taggart also served as a Director of the Lubrizol Corporation, a specialty chemicals manufacturer from 2007-2011.

Ralph F. Verni. Mr. Verni has served as a member of the Eaton Vance Fund Boards since 2005 and is the Independent Chairperson of the Board and the Chairperson of the Contract Review Committee. Mr. Verni was formerly the Chief Investment Officer (from 1982-1992), Chief Financial Officer (from 1988-1990) and Director (from 1982-1992) of New England Life. Mr. Verni was also the Chairperson of the New England Mutual Funds from 1982-1992; President and Chief Executive Officer of State Street Management & Research from 1992-2000; Chairperson of the State Street Research Mutual Funds from 1992-2000; Director of W.P. Carey, LLC from 1998-2004; and Director of First Pioneer Farm Credit Corp. from 2002-2006. Mr. Verni has been a Chartered Financial Analyst since 1977.

The Board of the Trust have several standing Committees, including the Governance Committee, the Audit Committee, the Portfolio Management Committee, the Compliance Reports and Regulatory Matters Committee and the Contract Review Committee. Each of the Committees are comprised of only noninterested Trustees.

Messrs. Freedman (Chair), Eston, Park, Pearlman and Verni, and Mmes. Mosley, Peters, Stout and Taggart are members of the Governance Committee. The purpose of the Governance Committee is to consider, evaluate and make recommendations to the Board with respect to the structure, membership and operation of the Board and the Committees thereof, including the nomination and selection of noninterested Trustees and a Chairperson of the Board and the compensation of such persons. During the fiscal year ended October 31, 2013, the Governance Committee convened eight times.

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

The Governance Committee will, when a vacancy exists or is anticipated, consider any nominee for noninterested Trustee recommended by a shareholder if such recommendation is submitted in writing to the Governance Committee, contains sufficient background information concerning the candidate, including

Eaton Vance Senior Floating-Rate Trust

22

SAI dated February 24, 2014

evidence the candidate is willing to serve as a noninterested Trustee if selected for the position, and is received in a sufficiently timely manner.

Messrs. Park (Chair), Eston, Pearlman and Verni, and Ms. Peters are members of the Audit Committee. The Board has designated Mr. Park, a noninterested Trustee, as audit committee financial expert. The Audit Committee's purposes are to (i) oversee the Trust's accounting and financial reporting processes, its internal control over financial reporting, and, as appropriate, the internal control over financial reporting of certain service providers; (ii) oversee or, as appropriate, assist Board oversight of the quality and integrity of the Trust's financial statements and the independent audit thereof; (iii) oversee, or, as appropriate, assist Board oversight of, the Trust's compliance with legal and regulatory requirements that relate to the Trust's accounting and financial reporting, internal control over financial reporting and independent audits; (iv) approve prior to appointment the engagement and, when appropriate, replacement of the independent registered public accounting firm, and, if applicable, nominate the independent registered public accounting firm to be proposed for shareholder ratification in any proxy statement of the Trust; (v) evaluate the qualifications, independence and performance of the independent registered public accounting firm and the audit partner in charge of leading the audit; and (vi) prepare, as necessary, audit committee reports consistent with the requirements of applicable SEC and stock exchange rules for inclusion in the proxy statement of the Trust. During the fiscal year ended October 31, 2013, the Audit Committee convened twenty-two times.

Messrs. Verni (Chair), Eston, Freedman and Park, and Mmes. Mosley, Peters and Taggart are members of the Contract Review Committee. The purposes of the Contract Review Committee are to consider, evaluate and make recommendations to the Board concerning the following matters: (i) contractual arrangements with each service provider to the Trust, including advisory, sub-advisory, transfer agency, custodial and fund accounting, distribution services and administrative services; (ii) any and all other matters in which any service provider (including Eaton Vance or any affiliated entity thereof) has an actual or potential conflict of interest with the interests of the Trust; and (iii) any other matter appropriate for review by the noninterested Trustees, unless the matter is within the responsibilities of the other Committees of the Board. During the fiscal year ended October 31, 2013, the Contract Review Committee convened seven times.

Mmes. Peters and Taggart (Co-Chairs) and Mosley and Mr. Freedman are members of the Portfolio Management Committee. The purposes of the Portfolio Management Committee are to: (i) assist the Board in its oversight of the portfolio management process employed by the Trust and its investment adviser and sub-adviser(s), if applicable, relative to the Trust's stated objective(s), strategies and restrictions; (ii) assist the Board in its oversight of the trading policies and procedures and risk management techniques applicable to the Trust; and (iii) assist the Board in its monitoring of the performance results of all funds and portfolios, giving special attention to the performance of certain funds and portfolios that it or the Board identifies from time to time. During the fiscal year ended October 31, 2013, the Portfolio Management Committee convened six times.

Messrs. Pearlman (Chair) and Eston, and Ms. Stout are members of the Compliance Reports and Regulatory Matters Committee. The purposes of the Compliance Reports and Regulatory Matters Committee are to: (i) assist the Board in its oversight role with respect to compliance issues and certain other regulatory matters affecting the Trust; (ii) serve as a liaison between the Board and the Trust's CCO; and (iii) serve as a qualified legal compliance committee within the rules promulgated by the SEC. During the fiscal year ended October 31, 2013, the Compliance Reports and Regulatory Matters Committee convened eleven times.

Eaton Vance Senior Floating-Rate Trust

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Share Ownership. The following table shows the dollar range of equity securities beneficially owned by each Trustee in the Trust and in all Eaton Vance Funds overseen by the Trustee as of December 31, 2013.

| <u>Name of Trustee</u> | <u>Dollar Range of Equity Securities Owned in the Trust</u> | <u>Aggregate Dollar Range of Equity Securities Owned in Funds Overseen by Trustee in the Eaton Vance Family of Funds</u> |
|------------------------|---|--|
| Interested Trustee | | |
| Thomas E. Faust Jr. | None | Over \$100,000 |
| Noninterested Trustees | | |
| Scott E. Eston | None | Over \$100,000* |
| Allen R. Freedman | None | Over \$100,000 |
| Valerie A. Mosley** | None | None |
| William H. Park | None | Over \$100,000 |
| Ronald R. Pearlman | None | Over \$100,000 |
| Helen Frame Peters | None | Over \$100,000 |
| Lynn A. Stout | None | Over \$100,000* |
| Harriett Tee Taggart | None | Over \$100,000 |
| Ralph F. Verni | None | Over \$100,000 |

* Includes shares which may be deemed to be beneficially owned through the Trustee Deferred Compensation Plan

** Ms. Mosley became a Trustee effective January 1, 2014.

As of December 31, 2013, no noninterested Trustee or any of their immediate family members owned beneficially or of record any class of securities of EVC, EVD or any person controlling, controlled by or under common control with EVC or EVD.

During the calendar years ended December 31, 2012 and December 31, 2013, no noninterested Trustee (or their immediate family members) had:

1.

Any direct or indirect interest in Eaton Vance, EVC, EVD, or any person controlling, controlled by or under common control with EVC or EVD;

2.

Any direct or indirect material interest in any transaction or series of similar transactions with (i) the Trust; (ii) another fund managed by EVC, distributed by EVD or a person controlling, controlled by or under common control with EVC or EVD; (iii) EVC or EVD; (iv) a person controlling, controlled by or under common control with EVC or EVD; or (v) an officer of any of the above; or

3.

Any direct or indirect relationship with (i) the Trust; (ii) another fund managed by EVC, distributed by EVD or a person controlling, controlled by or under common control with EVC or EVD; (iii) EVC or EVD; or (iv) a person controlling, controlled by or under common control with EVC or EVD; or (v) an officer of any of the above.

During the calendar years ended December 31, 2012 and December 31, 2013, no officer of EVC, EVD or any person controlling, controlled by or under common control with EVC or EVD served on the board of directors of a company

where a noninterested Trustee of the Trust or any of their immediate family members served as an officer.

Noninterested Trustees may elect to defer receipt of all or a percentage of their annual fees in accordance with the terms of a Trustees Deferred Compensation Plan (the Deferred Compensation Plan). Under the Deferred Compensation Plan, an eligible Board member may elect to have his or her deferred fees invested in the Eaton Vance family of funds, and the amount paid to the Board members under the Deferred Compensation Plan will be determined based upon the performance of such investments. Deferral of Board members fees in accordance with the Deferred Compensation Plan will have a negligible effect on the assets, liabilities, and net

Eaton Vance Senior Floating-Rate Trust

24

SAI dated February 24, 2014

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

income of a participating fund or portfolio, and do not require that a participating Board member be retained. There is no retirement plan for Board members.

The fees and expenses of the Board members of the Trust are paid by the Trust. (A Board member of the Trust who is a member of the Eaton Vance organization receives no compensation from the Trust.) During the fiscal year ended October 31, 2013, the Board members of the Trust earned the following compensation in their capacities as Board members from the Trust. For the year ended December 31, 2013, the Board members earned the following compensation in their capacities as Board members of the funds in the Eaton Vance fund complex⁽¹⁾:

| Source of Compensation | Scott E. Eston | Allen R. Freedman | Valerie A. Mosley | William H. Park | Ronald A. Pearlman | Helen Frame Peters | Lynn A. Stout | Harriett Tee Taggart | Ralph F. Verni |
|---------------------------------------|--------------------------|-------------------|-------------------|-----------------|--------------------|--------------------|--------------------------|----------------------|--------------------------|
| Trust | \$3,881 ⁽²⁾ | \$3,730 | \$3,504 | \$3,796 | \$3,796 | \$3,504 | \$3,569 ⁽³⁾ | \$3,806 | \$5,256 ⁽⁴⁾ |
| Trust and Fund Complex ⁽¹⁾ | \$245,000 ⁽⁵⁾ | \$255,000 | \$240,000 | \$260,000 | \$260,000 | \$240,000 | \$245,000 ⁽⁶⁾ | \$240,000 | \$360,000 ⁽⁷⁾ |

(1)

As of February 1, 2014, the Eaton Vance fund complex consists of 182 registered investment companies or series thereof. Ms. Mosley was appointed a Trustee effective January 1, 2014, and thus the compensation figures listed for the Trust and the Trust and Fund Complex are estimated based on amounts she would have received if she had been a Trustee for the 2013 calendar year and for the fiscal year ended October 31, 2013. Benjamin C. Esty resigned as a Trustee effective December 31, 2013. For the fiscal year ended October 31, 2013, Mr. Esty received Trustees fees of \$3,796 from the Trust. For the calendar year ended December 31, 2013, he received \$260,000 from the Trust and Fund Complex.

(2)

Includes \$3,881 of deferred compensation.

(3)

Includes \$682 of deferred compensation.

(4)

Includes \$2,596 of deferred compensation.

(5)

Includes \$236,017 of deferred compensation.

(6)

Includes \$45,000 of deferred compensation.

(7)

Includes \$171,250 of deferred compensation.

Proxy voting policy

The Trust is subject to the Eaton Vance Funds Proxy Voting Policy and Procedures, pursuant to which the Board members have delegated proxy voting responsibility to the Adviser and adopted the Adviser's proxy voting policies and procedures (the Policies). The members of the Board will review the Trust's proxy voting records from time to time and will annually consider approving the Policies for the upcoming year. An independent proxy voting service has been retained to assist in the voting of the Trust proxies through the provision of vote analysis, implementation and recordkeeping and disclosure services. In the event that a conflict of interest arises between the Trust's shareholders and the Adviser or any of its affiliates or any affiliate of the Trust, the Adviser will generally refrain from voting the proxies related to the companies giving rise to such conflict until it consults with the Board of the Trust, except as contemplated under the Trust Policy. The Board's Special Committee will instruct the Adviser on the appropriate course of action. The Trust's and the Adviser's Proxy Voting Policies and Procedures are attached as Appendix B to this SAI. Pursuant to certain provisions of the 1940 Act and certain exemptive orders relating to funds investing in other funds, a Trust may be required or may elect to vote its interest in another fund in the same portion as the holders of all other shares of that fund. Information on how the Trust voted proxies relating to portfolio securities during the most recent 12-month period ended June 30 is available (1) without charge, upon request, by calling 1-800-262-1122, and (2) on the SEC's website at <http://www.sec.gov>.

INVESTMENT ADVISORY AND OTHER SERVICES

Eaton Vance, its affiliates and its predecessor companies have been managing assets of individuals and institutions since 1924 and of investment companies since 1931. They maintain a large staff of experienced fixed-income, senior loan and equity investment professionals to service the needs of their clients. The fixed-income group focuses on all kinds of taxable investment-grade and high-yield securities, tax-exempt investment-grade and high-yield securities, and U.S. Government securities. The senior loan group focuses on senior floating rate loans, unsecured loans and other floating rate debt securities such as notes, bonds and asset

Eaton Vance Senior Floating-Rate Trust

25

SAI dated February 24, 2014

backed securities. The equity group covers stocks ranging from blue chip to emerging growth companies. Eaton Vance and its affiliates act as adviser to a family of mutual funds, and individual and various institutional accounts, including corporations, hospitals, retirement plans, universities, foundations and trusts.

The Trust will be responsible for all of its costs and expenses not expressly stated to be payable by Eaton Vance under the Investment Advisory Agreement (the Advisory Agreement) or the Amended and Restated Administrative Services Agreement (the Administration Agreement). Such costs and expenses to be borne by the Trust include, without limitation: (i) expenses of maintaining the Trust and continuing its existence; (ii) registration of the Trust under the 1940 Act; (iii) commissions, spreads, fees and other expenses connected with the acquisition, holding and disposition of securities and other investments; (iv) auditing, accounting and legal expenses; (v) taxes and interest; (vi) governmental fees; (vii) expenses of listing shares of the Trust with a stock exchange, and expenses of issue, sale, repurchase and redemption (if any) of interests in the Trust, including expenses of conducting tender offers for the purpose of repurchasing Trust interests; (viii) expenses of registering and qualifying the Trust and its shares under federal and state securities laws and of preparing and filing registration statements and amendments for such purposes; (ix) expenses of reports and notices to shareholders and of meetings of shareholders and proxy solicitations therefore; (x) expenses of reports to governmental officers and commissions; (xi) insurance expenses; (xii) association membership dues; (xiii) fees, expenses and disbursements of custodians and subcustodians for all services to the Trust (including, without limitation, safekeeping of funds, securities and other investments, keeping of books, accounts and records, and determination of net asset values); (xiv) fees, expenses and disbursements of transfer agents, dividend disbursing agents, shareholder servicing agents and registrars for all services to the Trust; (xv) expenses for servicing shareholder accounts; (xvi) any direct charges to shareholders approved by the Trustees of the Trust; (xvii) compensation and expenses of Trustees of the Trust who are not members of the Adviser's organization; (xviii) pricing and valuation services employed by the Trust; (xix) all expenses incurred in connection with leveraging of Trust's assets through a line of credit, or issuing and maintaining preferred shares; and (xx) such non-recurring items as may arise, including expenses incurred in connection with litigation, proceedings and claims and the obligation of the Trust to indemnify its Trustees, officers and shareholders with respect thereto.

The Advisory Agreement with the Adviser continues in effect indefinitely so long as such continuance is approved at least annually (i) by the vote of a majority of those Trustees of the Trust who are not interested persons of the Adviser or the Trust cast in person at a meeting specifically called for the purpose of voting on such approval and (ii) by the Trust's Board or by vote of a majority of the outstanding voting securities of the Trust. The Trust's Administration Agreement continues in effect to August 6, 2014 and indefinitely thereafter so long as such continuance is approved at least annually by (i) the Trust's Board and (ii) the vote of a majority of those Trustees of the Trust who are not interested persons of the Eaton Vance or the Trust. Each agreement may be terminated at any time without penalty on sixty (60) days' written notice by the Trustees of the Trust or Eaton Vance, as applicable, or by vote of the majority of the outstanding shares of the Trust. Each agreement will terminate automatically in the event of its assignment. The Advisory Agreement provides that, in the absence of willful misfeasance, bad faith, gross negligence or reckless disregard of its obligations or duties to the Trust under the Advisory Agreement on the part of Eaton Vance, Eaton Vance shall not be subject to liability to the Trust or to any shareholder of the Trust for any act or omission in the course of, or connected with, rendering services hereunder or for any losses that may be sustained in the acquisition, holding or disposition of any interest in a loan or of any security, investment or other asset. The Administration Agreement provides that in the absence of willful misfeasance, bad faith, gross negligence or reckless disregard of its obligations or duties to the Trust under the Administration Agreement on the part of the Eaton Vance, Eaton Vance shall not be subject to liability to the Trust or to any shareholder of the Trust for any act or omission in the course of, or connected with, rendering services under the Administration Agreement or for any losses which may be sustained in the acquisition, holding or disposition of any security or other investment.

Pursuant to the Advisory Agreement, the Trust has agreed to pay the Adviser as compensation for its investment advisory and administrative services an annual fee of 0.75% of the Trust's average daily gross assets. Pursuant to the Administration Agreement, based on the current level of compensation payable to Eaton Vance by the Trust under the Advisory Agreement, Eaton Vance receives no compensation from the Trust in respect of the services rendered and

the facilities provided as administrator under the Administration Agreement.

Eaton Vance Senior Floating-Rate Trust

26

SAI dated February 24, 2014

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

Eaton Vance is a business trust organized under the laws of The Commonwealth of Massachusetts. EV serves as trustee of Eaton Vance. EV and Eaton Vance are wholly-owned subsidiaries of EVC, a Maryland corporation and publicly-held holding company. EVC through its subsidiaries and affiliates engages primarily in investment management, administration and marketing activities. The Directors of EVC are Thomas E. Faust Jr., Ann E. Berman, Leo I. Higdon, Jr., Dorothy E. Puhly, Winthrop H. Smith, Jr. and Richard A. Spillane, Jr. All shares of the outstanding Voting Common Stock of EVC are deposited in a Voting Trust, the Voting Trustees of which are Mr. Faust, Jeffrey P. Beale, Daniel C. Cataldo, Cynthia J. Clemson, Maureen A. Gemma, Laurie G. Hylton, Brian D. Langstraat, Michael R. Mach, Frederick S. Marius, David C. McCabe, Thomas M. Metzold, Scott H. Page, Walter A. Row, III, David M. Stein, Payson F. Swaffield, Michael W. Weilheimer, and Matthew J. Witkos (all of whom are officers of Eaton Vance or its affiliates). The Voting Trustees have unrestricted voting rights for the election of Directors of EVC. All of the outstanding voting trust receipts issued under said Voting Trust are owned by certain of the officers of BMR and Eaton Vance who may also be officers, or officers and Directors of EVC and EV. As indicated under Management and Organization, all of the officers of the Trust (as well as Mr. Faust who is also a Trustee) hold positions in the Eaton Vance organization.

Portfolio Managers

The portfolio managers of the Trust are listed below. Each portfolio manager manages other investment companies and/or investment accounts in addition to the Trust. The following table shows, as of the Trust's most recent fiscal year end, the number of accounts each portfolio manager managed in each of the listed categories and the total assets (in millions of dollars) in the accounts managed within each category. The table also shows the number of accounts with respect to which the advisory fee is based on the performance of the account, if any, and the total assets (in millions of dollars) in those accounts.

| | Number of All Accounts | Total Assets of All Accounts | Number of Accounts Paying a Performance Fee | Total Assets of Accounts Paying a Performance Fee |
|-------------------------------------|---------------------------|---------------------------------|---|--|
| Peter M. Campo | | | | |
| Registered Investment Companies | 1 | \$923.7 | 0 | \$0 |
| Other Pooled Investment Vehicles | 0 | \$0 | 0 | \$0 |
| Other Accounts | 0 | \$0 | 0 | \$0 |
| Scott H. Page | | | | |
| Registered Investment Companies | 16 | \$35,225.0 | 0 | \$0 |
| Other Pooled Investment Vehicles | 8 | \$9,079.2 | 1 | \$253.3 |
| Other Accounts | 2 | \$1,510.1 | 0 | \$0 |
| Craig P. Russ | | | | |
| Registered Investment Companies | 12 | \$30,200.1 | 0 | \$0 |
| Other Pooled Investment Vehicles | 1 | \$5,885.2 | 0 | \$0 |
| Other Accounts | 2 | \$1,510.1 | 0 | \$0 |

Eaton Vance Senior Floating-Rate Trust

27

SAI dated February 24, 2014

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

The following table shows the dollar range of shares of the Fund beneficially owned by each portfolio manager as of the Fund's most recent fiscal year ended October 31, 2013 and in the Eaton Vance family of funds as of December 31, 2013.

| Portfolio Manager | Dollar Range of Equity Securities Owned in the Fund | Aggregate Dollar Range of Equity Securities Owned in all Registered Funds in The Eaton Vance Family of Funds |
|-------------------|---|--|
| Peter M. Campo | None | \$500,001 - \$1,000,000 |
| Scott H. Page | \$100,001 - \$500,000 | Over \$1,000,000 |
| Craig P. Russ | None | Over \$1,000,000 |

It is possible that conflicts of interest may arise in connection with the portfolio managers' management of the Trust's investments on the one hand and the investments of other accounts for which the Trust manager is responsible for on the other. For example, a portfolio manager may have conflicts of interest in allocating management time, resources and investment opportunities among the Trust and other accounts he advises. In addition, due to differences in the investment strategies or restrictions between the Trust and the other accounts, a portfolio manager may take action with respect to another account that differs from the action taken with respect to the Trust. In some cases, another account managed by a portfolio manager may compensate the investment adviser based on the performance of the securities held by that account. The existence of such a performance based fee may create additional conflicts of interest for the portfolio manager in the allocation of management time, resources and investment opportunities.

Whenever conflicts of interest arise, the portfolio manager will endeavor to exercise his discretion in a manner that he believes is equitable to all interested persons.

Compensation Structure of Eaton Vance

Compensation of the Adviser's portfolio managers and other investment professionals has three primary components: (1) a base salary, (2) an annual cash bonus, and (3) annual stock-based compensation consisting of options to purchase shares of EVC's nonvoting common stock and/or restricted shares of EVC's nonvoting common stock. The Adviser's investment professionals also receive certain retirement, insurance and other benefits that are broadly available to all the Adviser's employees. Compensation of the Adviser's investment professionals is reviewed primarily on an annual basis. Cash bonuses, stock-based compensation awards, and adjustments in base salary are typically paid or put into effect at or shortly after the October 31st fiscal year-end of EVC.

Eaton Vance's Method to Determine Compensation

The Adviser compensates its portfolio managers based primarily on the scale and complexity of their portfolio responsibilities and the total return performance of managed funds and accounts versus appropriate peer groups or benchmarks. In addition to rankings within peer groups of funds on the basis of absolute performance, consideration may also be given to relative risk-adjusted performance. Risk-adjusted performance measures include, but are not limited to, the Sharpe ratio. Performance is normally based on periods ending on the September 30th preceding fiscal year end. Fund performance is normally evaluated primarily versus peer groups of funds as determined by Lipper Inc. and/or Morningstar, Inc. When a fund's peer group as determined by Lipper or Morningstar is deemed by the Adviser's management not to provide a fair comparison, performance may instead be evaluated primarily against a custom peer group or market index. In evaluating the performance of a fund and its manager, primary emphasis is normally placed on three-year performance, with secondary consideration of performance over longer and shorter periods. For funds that are tax-managed or otherwise have an objective of after-tax returns, performance is measured net of taxes. For other funds, performance is evaluated on a pre-tax basis. For funds with an investment objective other than total return (such as current income), consideration will also be given to the fund's success in achieving its objective. For managers responsible for multiple funds and accounts, investment performance is evaluated on an aggregate basis, based on averages or weighted averages among managed funds and accounts. Funds and accounts that have performance-based advisory fees are not accorded disproportionate weightings in measuring aggregate portfolio manager performance.

Eaton Vance Senior Floating-Rate Trust

28

SAI dated February 24, 2014

The compensation of portfolio managers with other job responsibilities (such as heading an investment group or providing analytical support to other portfolios) will include consideration of the scope of such responsibilities and the managers' performance in meeting them.

The Adviser seeks to compensate portfolio managers commensurate with their responsibilities and performance, and competitive with other firms within the investment management industry. The Adviser participates in investment-industry compensation surveys and utilizes survey data as a factor in determining salary, bonus and stock-based compensation levels for portfolio managers and other investment professionals. Salaries, bonuses and stock-based compensation are also influenced by the operating performance of the Adviser and its parent company. The overall annual cash bonus pool is generally based on a substantially fixed percentage of pre-bonus adjusted operating income. While the salaries of the Adviser's portfolio managers are comparatively fixed, cash bonuses and stock-based compensation may fluctuate significantly from year to year, based on changes in manager performance and other factors as described herein. For a high performing portfolio manager, cash bonuses and stock-based compensation may represent a substantial portion of total compensation.

Investment Advisory Services

Under the general supervision of the Trust's Board, Eaton Vance will carry out the investment and reinvestment of the assets of the Trust, will furnish continuously an investment program with respect to the Trust, will determine which securities should be purchased, sold or exchanged, and will implement such determinations. Eaton Vance will furnish to the Trust investment advice and provide related office facilities and personnel for servicing the investments of the Trust. Eaton Vance will compensate all Trustees and officers of the Trust who are members of the Eaton Vance organization and who render investment services to the Trust, and will also compensate all other Eaton Vance personnel who provide research and investment services to the Trust.

Commodity Futures Trading Commission Registration

Effective December 31, 2012, the Commodity Futures Trading Commission (CFTC) adopted certain regulatory changes that subject registered investment companies and advisers to regulation by the CFTC if a fund invests more than a prescribed level of its assets in certain CFTC-regulated instruments (including futures, certain options and swaps agreements) or markets itself as providing investment exposure to such instruments. The Trust has claimed an exclusion from the definition of the term "commodity pool operator" under the Commodity Exchange Act.

Accordingly, neither the Trust nor the adviser with respect to the operation of the Trust is subject to CFTC regulation. Because of its management of other strategies, Eaton Vance is registered with the CFTC as a commodity pool operator. Eaton Vance is also registered as a commodity trading advisor. The CFTC has neither reviewed nor approved the Trust's investment strategies or this Statement of Additional Information.

Administrative Services

Under the Administration Agreement, Eaton Vance is responsible for managing the business affairs of the Trust, subject to the supervision of the Trust's Board. Eaton Vance will furnish to the Trust all office facilities, equipment and personnel for administering the affairs of the Trust. Eaton Vance will compensate all Trustees and officers of the Trust who are members of the Eaton Vance organization and who render executive and administrative services to the Trust, and will also compensate all other Eaton Vance personnel who perform management and administrative services for the Trust. Eaton Vance's administrative services include recordkeeping, preparation and filing of documents required to comply with federal and state securities laws, supervising the activities of the Trust's custodian and transfer agent, providing assistance in connection with the Trustees and shareholders' meetings, providing services in connection with quarterly repurchase offers and other administrative services necessary to conduct the Trust's business.

Eaton Vance Senior Floating-Rate Trust

29

SAI dated February 24, 2014

Code of Ethics

The Adviser and the Trust have adopted a Code of Ethics governing personal securities transactions. Under the Code, Eaton Vance employees may purchase and sell securities (including securities held or eligible for purchase by the Trust) subject to certain pre-clearance and reporting requirements and other procedures.

The Code can be reviewed and copied at the Securities and Exchange Commission's public reference room in Washington, DC (call 1-202-942-8090 for information on the operation of the public reference room); on the EDGAR Database on the SEC's Internet site (<http://www.sec.gov>); or, upon payment of copying fees, by writing the SEC's public reference section, Washington, DC 20549-0102, or by electronic mail at publicinfo@sec.gov.

DETERMINATION OF NET ASSET VALUE

The net asset value of the Trust is determined by State Street Bank and Trust Company (as agent and custodian) by subtracting the liabilities of the Trust from the value of its total assets. The Trust is closed for business and will not issue a net asset value on the following business holidays and any other business day that the New York Stock Exchange (the Exchange) is closed: New Year's Day, Martin Luther King, Jr. Day, Presidents' Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

The Board has approved procedures pursuant to which investments are valued for purposes of determining the Trust's net asset value. Listed below is a summary of the methods generally used to value investments (some or all of which may be held by the Trust) under the procedures.

Interests in senior floating-rate loans (Senior Loans) for which reliable market quotations are readily available are valued generally at the average mean of bid and ask quotations obtained from a third party pricing service. Other Senior Loans are valued at fair value by the investment adviser under procedures approved by the Trustees. In fair valuing a Senior Loan, the investment adviser utilizes one or more of the valuation techniques described in (i) through (iii) below to assess the likelihood that the borrower will make a full repayment of the loan underlying such Senior Loan relative to yields on other Senior Loans issued by companies of comparable credit quality. If the investment adviser believes that there is a reasonable likelihood of full repayment, the investment adviser will determine fair value using a matrix pricing approach that considers the yield on the Senior Loan. If the investment adviser believes there is not a reasonable likelihood of full repayment, the investment adviser will determine fair value using analyses that include, but are not limited to: (i) a comparison of the value of the borrower's outstanding equity and debt to that of comparable public companies; (ii) a discounted cash flow analysis; or (iii) when the investment adviser believes it is likely that a borrower will be liquidated or sold, an analysis of the terms of such liquidation or sale. In certain cases, the investment adviser will use a combination of analytical methods to determine fair value, such as when only a portion of a borrower's assets are likely to be sold. In conducting its assessment and analyses for purposes of determining fair value of a Senior Loan, the investment adviser will use its discretion and judgment in considering and appraising relevant factors. Fair value determinations are made by the portfolio managers of the Trust based on information available to such managers. The portfolio managers of other funds managed by the investment adviser that invest in Senior Loans may not possess the same information about a Senior Loan borrower as the portfolio managers of the Trust. At times, the fair value of a Senior Loan determined by the portfolio managers of other funds managed by the investment adviser that invest in Senior Loans may vary from the fair value of the same Senior Loan determined by the portfolio managers of the Trust. The fair value of each Senior Loan is periodically reviewed and approved by the investment adviser's Valuation Committee and by the Trustees based upon procedures approved by the Trustees. Junior Loans (i.e., subordinated loans and second lien loans) are valued in the same manner as Senior Loans.

Debt obligations (including short-term obligations with a remaining maturity of more than sixty days) are generally valued on the basis of valuations provided by third party pricing services, as derived from such services' pricing models. Inputs to the models may include, but are not limited to, reported trades, executable bid and asked prices,

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

broker/dealer quotations, prices or yields of securities with similar characteristics, benchmark curves or information pertaining to the issuer, as well as industry and economic events. The pricing services may use a matrix approach, which considers information regarding securities with similar characteristics to determine the valuation for a security. Short-term obligations purchased with a remaining maturity of sixty days or less are generally valued at amortized cost, which approximates market value.

Eaton Vance Senior Floating-Rate Trust

30

SAI dated February 24, 2014

Equity securities (including common shares of closed-end investment companies) listed on a U.S. securities exchange generally are valued at the last sale or closing price on the day of valuation or, if no sales took place on such date, at the mean between the closing bid and asked prices therefore on the exchange where such securities are principally traded. Equity securities listed on the NASDAQ Global or Global Select Market generally are valued at the NASDAQ official closing price. Unlisted or listed securities for which closing sales prices or closing quotations are not available are valued at the mean between the latest available bid and asked prices or, in the case of preferred equity securities that are not listed or traded in the over-the-counter market, by a third party pricing service that will use various techniques that consider factors including, but not limited to, prices or yields of securities with similar characteristics, benchmark yields, broker/dealer quotes, quotes of underlying common stock, issuer spreads, as well as industry and economic events. Forward foreign currency exchange contracts are generally valued at the mean of the average bid and average asked prices that are reported by currency dealers to a third party pricing service at the valuation time. Such third party pricing service valuations are supplied for specific settlement periods and the Trust's forward foreign currency exchange contracts are valued at an interpolated rate between the closest preceding and subsequent settlement period reported by the third party pricing service. Foreign securities and currencies are valued in U.S. dollars, based on foreign currency exchange rate quotations supplied by a third party pricing service. The pricing service uses a proprietary model to determine the exchange rate. Inputs to the model include reported trades and implied bid/ask spreads. Investments for which valuations or market quotations are not readily available or are deemed unreliable are valued at fair value using methods determined in good faith by or at the direction of the Trustees of the Trust in a manner that fairly reflects the security's value, or the amount that the Trust might reasonably expect to receive for the security upon its current sale in the ordinary course. Each such determination is based on a consideration of relevant factors, which are likely to vary from one pricing context to another. These factors may include, but are not limited to, the type of security, the existence of any contractual restrictions on the security's disposition, the price and extent of public trading in similar securities of the issuer or of comparable companies or entities, quotations or relevant information obtained from broker/dealers or other market participants, information obtained from the issuer, analysts, and/or the appropriate stock exchange (for exchange-traded securities), an analysis of the company's or entity's financial condition, and an evaluation of the forces that influence the issuer and the market(s) in which the security is purchased and sold.

The Trust may invest in Eaton Vance Cash Reserves Fund, LLC (Cash Reserves Fund), an affiliated investment company managed by Eaton Vance Management (EVM). Cash Reserves Fund generally values its investment securities utilizing the amortized cost valuation technique in accordance with Rule 2a-7 under the 1940 Act. This technique involves initially valuing a portfolio security at its cost and thereafter assuming a constant amortization to maturity of any discount or premium. If amortized cost is determined not to approximate fair value, Cash Reserves Fund may value its investment securities in the same manner as debt obligations described above.

PORTFOLIO TRADING

The Trust will acquire Senior Loans from major international banks, selected domestic regional banks, insurance companies, finance companies and other financial institutions. In selecting financial institutions from which Senior Loans may be acquired, the investment adviser will consider, among other factors, the financial strength, professional ability, level of service and research capability of the institution. While these financial institutions are generally not required to repurchase Senior Loans which they have sold, they may act as principal or on an agency basis in connection with their sale by the Trust.

Decisions concerning the execution of portfolio security transactions, including the selection of the market and the broker-dealer firm, are made by the Trust's investment adviser. The Trust is responsible for the expenses associated with its portfolio transactions. The investment adviser is also responsible for the execution of transactions for all other accounts managed by it. The investment adviser places the portfolio security transactions for execution with one or more broker-dealer firms. The investment adviser uses its best efforts to obtain execution of portfolio security transactions at prices which in the investment adviser's judgment are advantageous to the client and at a reasonably competitive spread or (when a disclosed commission is being charged) at reasonably competitive commission rates. In

seeking such execution, the investment adviser will use its best judgment in evaluating the terms of a transaction, and will give consideration to various relevant factors, including without limitation the full range and quality of the broker-dealer firm's services including the responsiveness of the firm to the investment adviser, the size and type of the transaction, the nature and character of the market for the security, the confidentiality, speed and certainty of effective execution required

Eaton Vance Senior Floating-Rate Trust

31

SAI dated February 24, 2014

for the transaction, the general execution and operational capabilities of the broker-dealer firm, the reputation, reliability, experience and financial condition of the firm, the value and quality of the services rendered by the firm in other transactions, and the amount of the spread or commission, if any. In addition, the investment adviser may consider the receipt of Research Services (as defined below), provided it does not compromise the investment adviser's obligation to seek best overall execution for the Trust. The investment adviser may engage in portfolio brokerage transactions with a broker-dealer firm that sells shares of Eaton Vance funds, provided such transactions are not directed to that firm as compensation for the promotion or sale of such shares.

Transactions on stock exchanges and other agency transactions involve the payment of negotiated brokerage commissions. Such commissions vary among different broker-dealer firms, and a particular broker-dealer may charge different commissions according to such factors as the difficulty and size of the transaction and the volume of business done with such broker-dealer. Transactions in foreign securities often involve the payment of brokerage commissions, which may be higher than those in the United States.

There is generally no stated commission in the case of securities traded in the over-the-counter markets including transactions in fixed-income securities which are generally purchased and sold on a net basis (i.e., without commission) through broker-dealers and banks acting for their own account rather than as brokers. Such firms attempt to profit from such transactions by buying at the bid price and selling at the higher asked price of the market for such obligations, and the difference between the bid and asked price is customarily referred to as the spread. Fixed-income transactions may also be transactions directly with the issuer of the obligations. In an underwritten offering the price paid often includes a disclosed fixed commission or discount retained by the underwriter or dealer. Although spreads or commissions paid on portfolio security transactions will, in the judgment of the investment adviser, be reasonable in relation to the value of the services provided, commissions exceeding those which another firm might charge may be paid to broker-dealers who were selected to execute transactions on behalf of the investment adviser's clients in part for providing brokerage and research services to the investment adviser.

Pursuant to the safeharbor provided in Section 28(e) of the Securities Exchange Act of 1934, as amended, a broker or dealer who executes a portfolio transaction on behalf of the investment adviser client may receive a commission which is in excess of the amount of commission another broker or dealer would have charged for effecting that transaction if the investment adviser determines in good faith that such compensation was reasonable in relation to the value of the brokerage and research services provided. This determination may be made on the basis of either that particular transaction or on the basis of the overall responsibility which the investment adviser and its affiliates have for accounts over which they exercise investment discretion. Research Services as used herein includes any and all brokerage and research services to the extent permitted by Section 28(e) of the Securities and Exchange Act of 1934, as amended. Generally, Research Services may include, but are not limited to, such matters as research, analytical and quotation services, data, information and other services products and materials which assist the investment adviser in the performance of its investment responsibilities. More specifically, Research Services may include general economic, political, business and market information, industry and company reviews, evaluations of securities and portfolio strategies and transactions, technical analysis of various aspects of the securities markets, recommendations as to the purchase and sale of securities and other portfolio transactions, certain financial, industry and trade publications, certain news and information services, and certain research oriented computer software, data bases and services. Any particular Research Service obtained through a broker-dealer may be used by the investment adviser in connection with client accounts other than those accounts which pay commissions to such broker-dealer. Any such Research Service may be broadly useful and of value to the investment adviser in rendering investment advisory services to all or a significant portion of its clients, or may be relevant and useful for the management of only one client's account or of a few clients' accounts, or may be useful for the management of merely a segment of certain clients' accounts, regardless of whether any such account or accounts paid commissions to the brokerdealer through which such Research Service was obtained. The investment adviser evaluates the nature and quality of the various Research Services obtained through broker-dealer firms and may attempt to allocate sufficient portfolio security transactions to such firms to ensure the continued receipt of Research Services which the investment adviser believes are useful or of value to it in rendering investment advisory services to its clients. The investment adviser may also

receive brokerage and Research Services from underwriters and dealers in fixed-price offerings.

Eaton Vance Senior Floating-Rate Trust

32

SAI dated February 24, 2014

Research Services provided by (and produced by) broker-dealers that execute portfolio transactions or from affiliates of executing broker-dealers are referred to as Proprietary Research. The investment adviser may and does consider the receipt of Proprietary Research Services as a factor in selecting broker dealers to execute client portfolio transactions, provided it does not compromise the investment adviser's obligation to seek best overall execution. The investment adviser also may consider the receipt of Research Services under so called client commission arrangements or commission sharing arrangements (both referred to as CCAs) as a factor in selecting broker dealers to execute transactions, provided it does not compromise the investment adviser's obligation to seek best overall execution. Under a CCA arrangement, the investment adviser may cause client accounts to effect transactions through a broker-dealer and request that the broker-dealer allocate a portion of the commissions paid on those transactions to a pool of commission credits that are paid to other firms that provide Research Services to the investment adviser. Under a CCA, the broker-dealer that provides the Research Services need not execute the trade. Participating in CCAs may enable the investment adviser to consolidate payments for research using accumulated client commission credits from transactions executed through a particular broker-dealer to periodically pay for Research Services obtained from and provided by other firms, including other broker-dealers that supply Research Services. The investment adviser believes that CCAs offer the potential to optimize the execution of trades and the acquisition of a variety of high quality Research Services that the investment adviser might not be provided access to absent CCAs. The investment adviser will only enter into and utilize CCAs to the extent permitted by Section 28(e) of the Securities Exchange Act of 1934, as amended.

The investment companies sponsored by the investment adviser or its affiliates may also allocate brokerage commissions to acquire information relating to the performance, fees and expenses of such companies and other investment companies, which information is used by the Trustees of such companies to fulfill their responsibility to oversee the quality of the services provided to various entities, including the investment adviser, to such companies. Such companies may also pay cash for such information.

Securities considered as investments for the Trust may also be appropriate for other investment accounts managed by the investment adviser or its affiliates. Whenever decisions are made to buy or sell securities by the Trust and one or more of such other accounts simultaneously, the investment adviser will allocate the security transactions (including new issues) in a manner which it believes to be equitable under the circumstances. As a result of such allocations, there may be instances where the Trust will not participate in a transaction that is allocated among other accounts. If an aggregated order cannot be filled completely, allocations will generally be made on a pro rata basis. An order may not be allocated on a pro rata basis where, for example: (i) consideration is given to portfolio managers who have been instrumental in developing or negotiating a particular investment; (ii) consideration is given to an account with specialized investment policies that coincide with the particulars of a specific investment; (iii) pro rata allocation would result in odd-lot or de minimis amounts being allocated to a portfolio or other client; or (iv) where the investment adviser reasonably determines that departure from a pro rata allocation is advisable. While these aggregation and allocation policies could have a detrimental effect on the price or amount of the securities available to a portfolio from time to time, it is the opinion of the members of the Board that the benefits from the investment adviser organization outweigh any disadvantage that may arise from exposure to simultaneous transactions.

The following table shows brokerage commissions paid during the fiscal years ended October 31, 2013, 2012 and 2011 as well as the amount of portfolio security transactions for the most recent fiscal year (if any) that were directed to firms that provided some Research Services to the investment adviser or its affiliates (see above), and the commissions paid in connection therewith.

| <u>Fiscal Year End</u> | <u>Brokerage Commission Paid</u> | <u>Amount of Transactions Directed to Firms Providing Research</u> | <u>Commissions Paid on Transactions Directed to Firms Providing Research</u> |
|------------------------|--------------------------------------|--|--|
| October 31, 2013 | \$154 | \$162,886 | \$81 |
| October 31, 2012 | \$421 | \$153,071 | \$421 |

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

October 31, 2011

\$14

\$0

\$0

During the fiscal year ended October 31, 2013, the Trust held no securities of its regular brokers or dealers, as that term is defined in Rule 10b-1 of the 1940 Act.

Eaton Vance Senior Floating-Rate Trust

33

SAI dated February 24, 2014

TAXES

The Trust intends to qualify each year as a regulated investment company (RIC) under the Internal Revenue Code of 1986, as amended (the Code). Accordingly, the Trust intends to satisfy certain requirements relating to sources of its income and diversification of its assets and to distribute substantially all of its net income and net short-term and long-term capital gains (after reduction by any available capital loss carryforwards) in accordance with the timing requirements imposed by the Code, so as to maintain its RIC status and to avoid paying any federal income or excise tax. To the extent it qualifies for treatment as a RIC and satisfies the above-mentioned distribution requirements, the Trust will not be subject to federal income tax on income paid to its shareholders in the form of dividends or capital gain distributions.

To qualify as a RIC for federal income tax purposes, the Trust must derive at least 90% of its annual gross income from dividends, interest, payments with respect to securities loans, gains from the sale or other disposition of stock, securities or foreign currencies, or other income (including, but not limited to, gains from options, futures or forward contracts) derived with respect to its business of investing in stock, securities and currencies, and net income derived from an interest in a qualified publicly traded partnership. The Trust must also distribute to its shareholders at least the sum of 90% of its investment company taxable income and 90% of its net tax-exempt interest income for each taxable year.

The Trust must also satisfy certain requirements with respect to the diversification of its assets. The Trust must have, at the close of each quarter of its taxable year, at least 50% of the value of its total assets represented by cash and cash items, U.S. government securities, securities of other RICs, and other securities that, in respect of any one issuer, do not represent more than 5% of the value of the assets of the Trust or more than 10% of the voting securities of that issuer. In addition, at those times, not more than 25% of the value of the Trust's assets may be invested in securities (other than U.S. Government securities or the securities of other RICs) of any one issuer, or of two or more issuers that the Trust controls and which are engaged in the same or similar trades or businesses or related trades or businesses, or of one or more qualified publicly traded partnerships. For purposes of asset diversification testing, obligations issued or guaranteed by certain agencies or instrumentalities of the U.S. government, such as the Federal Agricultural Mortgage Corporation, the Federal Farm Credit System Financial Assistance Corporation, Federal Home Loan Banks, Federal Home Loan Mortgage Corporation, Federal National Mortgage Association, Government National Mortgage Association, and Student Loan Marketing Corporation are treated as U.S. government securities.

The Trust also seeks to avoid payment of federal excise tax. However, if the Trust fails to distribute in a calendar year substantially all of its ordinary income for such year and substantially all of its capital gain net income for the one-year period ending October 31 (or later if the Trust is permitted so to elect and so elects), plus any retained amount from the prior year, the Trust will be subject to a 4% excise tax on the undistributed amounts. In order to avoid incurring a federal excise tax obligation, the Code requires that a RIC distribute (or be deemed to have distributed) by December 31 of each calendar year (i) at least 98% of its ordinary income (not including tax-exempt income) for such year, (ii) at least 98.2% of its capital gain net income (which is the excess of its realized capital gains over its realized capital losses), generally computed on the basis of the one-year period ending on October 31 of such year, after reduction by any available capital loss carryforwards and (iii) 100% of any income and capital gains from the prior year (as previously computed) that was not paid out during such year and on which the Trust paid no federal income tax. If the Trust fails to meet these requirements it will be subject to a nondeductible 4% excise tax on the undistributed amounts. For the foregoing purposes, a RIC is treated as having distributed any amount on which it is subject to income tax for any tax year ending in such calendar year and, if it so elects, the amounts on which qualified estimated tax payments are made by it during such calendar year (in which case the amount it is treated as having distributed in the following calendar year will be reduced.)

If the Trust does not qualify as a RIC for any taxable year, the Trust's taxable income will be subject to corporate income taxes, and all distributions from earnings and profits, including distributions of net capital gain (if any), will be taxable to the shareholder as ordinary income. Such distributions will be treated as qualified dividend income with

respect to shareholders who are individuals and will be eligible for the dividends received deduction in the case of shareholders taxed as corporations, provided certain holding period requirements are met. In order to requalify for taxation as a RIC, the Trust may be required to recognize unrealized gains, pay substantial taxes and interest, and make substantial distributions.

Eaton Vance Senior Floating-Rate Trust

34

SAI dated February 24, 2014

The Trust intends to make monthly distributions of net investment income after payment of dividends on any outstanding preferred shares or interest on any outstanding borrowings. The Trust will distribute annually any net short-term capital gain (which is taxable as ordinary income) and any net capital gain. Distributions of the Trust's net capital gains (capital gain dividends), if any, are taxable to shareholders as long-term capital gains, regardless of the length of time shares have been held by shareholders. Dividends paid to shareholders out of the Trust's current and accumulated earnings and profits, except in the case of capital gain dividends and certain dividends received by individuals, will be taxable as ordinary income. Dividends with respect to the shares generally will not constitute qualified dividends for federal income tax purposes and thus will not be eligible for the favorable long-term capital gains tax rates. If, for any calendar year, the Trust's total distributions exceed the Trust's current and accumulated earnings and profits, the excess will be treated as a tax-free return of capital to each Common Shareholder (up to the amount of the Common Shareholder's basis in his or her Common Shares) and thereafter as gain from the sale of Common Shares (assuming the Common Shares are held as a capital asset). The amount treated as a tax-free return of capital will reduce the Common Shareholder's adjusted basis in his or her Common Shares, thereby increasing his or her potential gain or reducing his or her potential loss on the subsequent sale or other disposition of his or her Common Shares. See below for a summary of the maximum tax rates applicable to capital gains (including capital gain dividends). Dividends will not qualify for a dividends received deduction generally available to corporate shareholders.

If the Trust fails to meet the annual gross income test described above, the Trust would nevertheless be considered to have satisfied the test if (i) (a) such failure was due to reasonable cause and not due to willful neglect and (b) the Trust reported the failure pursuant to a schedule for such tax year filed in the manner provided by the Internal Revenue Service (the IRS), and (ii) the Trust pays an excise tax equal to the excess non-qualifying income. If the Trust failed to meet the asset diversification test described above with respect to any quarter, the Trust would nevertheless be considered to have satisfied the requirements for such quarter if the Trust cured such failure within 6 months and either (i) such failure was de minimis or (ii) (a) such failure was due to reasonable cause and not due to willful neglect and (b) the Trust reports the failure pursuant to a schedule for the quarter filed as provided by the IRS and pays an excise tax.

Gains or losses attributable to fluctuations in exchange rates between the time the Trust accrues income or receivables or expenses or other liabilities denominated in a foreign currency and the time the Trust actually collects such income or receivables or pays such liabilities are generally treated as ordinary income or loss. Transactions in foreign currencies, foreign currency-denominated debt securities and certain foreign currency options, futures contracts, forward contracts and similar instruments (to the extent permitted) may give rise to ordinary income or loss to the extent such income or loss results from fluctuations in the value of the foreign currency concerned.

The Trust may be subject to foreign withholding or other foreign taxes with respect to income (possibly including, in some cases, capital gains) on certain foreign securities. These taxes may be reduced or eliminated under the terms of an applicable U.S. income tax treaty. If more than 50% of the value of the total assets of the Trust consists of securities issued by foreign issuers, the Trust may be eligible to pass through to shareholders its proportionate share of any foreign taxes paid by the Trust, in which event shareholders will include in income, and will be entitled to take any foreign tax credits or deductions for, such foreign taxes.

The Trust's investment in zero coupon and certain other securities will cause it to realize income prior to the receipt of cash payments with respect to these securities. Such income will be accrued daily by the Trust and, in order to avoid a tax payable by the Trust, the Trust may be required to liquidate securities that it might otherwise have continued to hold in order to generate cash so that the Trust may make required distributions to its shareholders.

Any recognized gain or income attributable to market discount on long-term debt obligations (*i.e.*, on obligations with a term of more than one year except to the extent of a portion of the discount attributable to original issue discount) purchased by the Trust is taxable as ordinary income. A long-term debt obligation is generally treated as acquired at a market discount if purchased after its original issue at a price less than (i) the stated principal amount payable at

maturity, in the case of an obligation that does not have original issue discount or (ii) in the case of an obligation that does have original issue discount, the sum of the issue price and any original issue discount that accrued before the obligation was purchased, subject to a *de minimis* exclusion.

Eaton Vance Senior Floating-Rate Trust

35

SAI dated February 24, 2014

The Trust may invest a portion of its total assets in high yield securities, commonly known as junk bonds. Investments in these types of securities may present special tax issues for the Trust. Federal income tax rules are not entirely clear about issues such as when the Trust may cease to accrue interest, original issue discount or market discount, when and to what extent deductions may be taken for bad debts or worthless securities, how payments received on obligations in default should be allocated between principal and income and whether exchanges of debt obligations in a bankruptcy or workout context are taxable. These and other issues will be addressed by the Trust, in the event it invests in such debt securities, in order to seek to preserve its status as a RIC and to not become subject to U.S. federal income or excise tax.

The Trust's investments in options, futures contracts, hedging transactions, forward contracts (to the extent permitted) and certain other transactions will be subject to special tax rules (including mark-to-market, constructive sale, straddle, wash sale, short sale and other rules), the effect of which may be to accelerate income to the Trust, defer Trust losses, cause adjustments in the holding periods of securities held by the Trust, convert capital gain into ordinary income and convert short-term capital losses into long-term capital losses. These rules could therefore affect the amount, timing and character of distributions to shareholders. The Trust may be required to limit its activities in options and futures contracts in order to enable it to maintain its RIC status.

Selling shareholders will generally recognize gain or loss in an amount equal to the difference between the shareholder's adjusted tax basis in the shares sold and the amount received. If the shares are held as a capital asset, the gain or loss will be a capital gain or loss.

The maximum tax rate applicable to net capital gains recognized by individuals and other non-corporate taxpayers is (i) the same as the maximum ordinary income tax rate for gains recognized on the sale of capital assets held for one year or less (39.6%), or (ii) 20% (for individuals in the 39.6% tax bracket) for gains recognized on the sale of capital assets held for more than one year (as well as certain capital gain dividends) (0% for individuals in the 10% and 15% tax brackets and 15% for individuals in the tax brackets from 25% through 35%). Any loss on a disposition of shares held for six months or less will be treated as a long-term capital loss to the extent of any capital gain dividends received with respect to those shares. For purposes of determining whether shares have been held for six months or less, the holding period is suspended for any periods during which the shareholder's risk of loss is diminished as a result of holding one or more other positions in substantially similar or related property, or through certain options or short sales. Any loss realized on a sale or exchange of shares will be disallowed to the extent those shares are replaced by other shares within a period of 61 days beginning 30 days before and ending 30 days after the date of disposition of the shares (whether through the reinvestment of distributions, which could occur, for example, if the shareholder is a participant in the dividend reinvestment plan or otherwise). In that event, the basis of the replacement shares will be adjusted to reflect the disallowed loss.

Sales charges paid upon a purchase of shares cannot be taken into account for purposes of determining gain or loss on a sale of the shares before the 91st day after their purchase to the extent a sales charge is reduced or eliminated in a subsequent acquisition of shares of the Trust (or of another fund) during the period beginning on the date of such sale and ending on January 31 of the calendar year following the calendar year that includes the date of such sale pursuant to the reinvestment or exchange privilege. Any disregarded amounts will result in an adjustment to the shareholder's tax basis in some or all of any other shares acquired.

Certain net investment income received by an individual having adjusted gross income in excess of \$200,000 (or \$250,000 for married individuals filing jointly or \$125,000 for married individuals filing separately) will be subject to a tax of 3.8 percent. Undistributed net investment income of trusts and estates in excess of a specified amount also will be subject to this tax. Dividends and capital gains distributed by the Trust, and gain realized on the sale of shares, will constitute investment income of the type subject to this tax.

Dividends and distributions on the Trust's shares are generally subject to federal income tax as described herein to the extent they do not exceed the Trust's realized income and gains, even though such dividends and distributions may

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

economically represent a return of a particular shareholder's investment. Such distributions are likely to occur in respect of shares purchased at a time when the Trust's net asset value reflects gains that are either unrealized, or realized but not distributed. Such realized gains may be required to be distributed even when the Trust's net asset value also reflects unrealized losses. Certain distributions declared in October,

Eaton Vance Senior Floating-Rate Trust

36

SAI dated February 24, 2014

November or December and paid in the following January will be taxed to shareholders as if received on December 31 of the year in which they were declared. In addition, certain other distributions made after the close of a taxable year of the Trust may be spilled back and treated as paid by the Trust (except for purposes of the 4% excise tax) during such taxable year. In such case, shareholders will be treated as having received such dividends in the taxable year in which the distributions were actually made. Dividends paid out of the Trust's investment company taxable income are generally taxable to a shareholder as ordinary income to the extent of the Trust's earnings and profits. Dividends with respect to the shares generally will not constitute qualified dividends for federal income tax purposes and thus will not be eligible for the favorable long-term capital gains tax rates.

Amounts paid by the Trust to individuals and certain other shareholders who have not provided the Trust with their correct taxpayer identification number (TIN) and certain certifications required by the IRS as well as shareholders with respect to whom the Trust has received certain information from the IRS or a broker may be subject to backup withholding of federal income tax arising from the Trust's taxable dividends and other distributions as well as the gross proceeds of sales of shares, at a rate of 28%. An individual's TIN is generally his or her social security number. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from payments made to a shareholder may be refunded or credited against such shareholder's U.S. federal income tax liability, if any, provided that the required information is furnished to the IRS and such shareholder makes a timely filing of an appropriate tax return or refund claim.

The Trust will inform shareholders of the source and tax status of all distributions promptly after the close of each calendar year. The IRS has taken the position that if a RIC has more than one class of shares, it may designate distributions made to each class in any year as consisting of no more than that class's proportionate share of particular types of income for that year, including ordinary income and net capital gain. A class's proportionate share of a particular type of income for a year is determined according to the percentage of total dividends paid by the RIC during that year to the class. Accordingly, the Trust intends to designate a portion of its distributions in capital gain dividends in accordance with the IRS position.

The Trust (or its administrative agent) is required to report to the IRS and furnish to shareholders the cost basis information and holding period for shares purchased on or after January 1, 2012, and redeemed by the Trust on or after that date. The Trust will permit shareholders to elect from among several permitted cost basis methods. In the absence of an election, the Trust will use a default cost basis method. The cost basis method a shareholder elects may not be changed with respect to a redemption of shares after the settlement date of the redemption. Shareholders should consult with their tax advisors to determine the best permitted cost basis method for their tax situation and to obtain more information about how the cost basis reporting rules apply to them.

The foregoing discussion does not address the special tax rules applicable to certain classes of investors, such as tax-exempt entities, foreign investors, insurance companies and financial institutions. Shareholders should consult their own tax advisors with respect to special tax rules that may apply in their particular situations, as well as the state, local, and, where applicable, foreign tax consequences of investing in the Trust.

Although the matter is not free from doubt, due to the absence of direct regulatory or judicial authority, under current law the manner in which the Trust intends to allocate items of ordinary income and net capital gain among the Trust's Common Shares and Auction Preferred Shares will be respected for federal income tax purposes. It is possible that the IRS could disagree with counsel's opinion and attempt to reallocate the Trust's net capital gain or other taxable income.

Under Treasury regulations, if a shareholder realizes a loss on disposition of the Trust's shares of \$2 million or more for an individual shareholder or \$10 million or more for a corporate shareholder, the shareholder must file with the IRS a disclosure statement on Form 8886. Direct shareholders of portfolio securities are in many cases excepted from this reporting requirement, but under current guidance, shareholders of a RIC are not excepted. The fact that a loss is reportable under these regulations does not affect the legal determination of whether the taxpayer's treatment of the

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

loss is proper. Shareholders should consult their tax advisors to determine the applicability of these regulations in light of their individual circumstances. Certain tax-exempt entities and their managers may be subject to excise tax if they are parties to certain reportable transactions.

Eaton Vance Senior Floating-Rate Trust

37

SAI dated February 24, 2014

The foregoing briefly summarizes some of the important federal income tax consequences to Shareholders of investing in shares, reflects the federal tax law as of the date of this Statement of Additional Information, and does not address special tax rules applicable to certain types of investors, such as corporate and foreign investors. This discussion is based upon current provisions of the Code, the regulations promulgated thereunder, and judicial and administrative ruling authorities, all of which are subject to change or differing interpretations by the courts or the IRS retroactively or prospectively. No attempt has been made to present a complete explanation of the federal tax treatment of the Trust or the implications to Shareholders, and the discussions here and in the Prospectus are not intended as a substitute for careful tax planning. Investors should consult their tax advisors regarding other federal, state or local tax considerations that may be applicable in their particular circumstances, as well as any proposed tax law changes.

State and local taxes

Shareholders should consult their own tax advisers as to the state or local tax consequences of investing in the Trust.

OTHER INFORMATION

The Trust is an organization of the type commonly known as a Massachusetts business trust. Under Massachusetts law, shareholders of such a trust may, in certain circumstances, be held personally liable as partners for the obligations of the trust. The Declaration of Trust contains an express disclaimer of shareholder liability in connection with the Trust property or the acts, obligations or affairs of the Trust. The Declaration of Trust also provides for indemnification out of the Trust property of any shareholder held personally liable for the claims and liabilities to which a shareholder may become subject by reason of being or having been a shareholder. Thus, the risk of a shareholder incurring financial loss on account of shareholder liability is limited to circumstances in which the Trust itself is unable to meet its obligations. The Trust has been advised by its counsel that the risk of any shareholder incurring any liability for the obligations of the Trust is remote.

The Declaration of Trust provides that the Trustees will not be liable for errors of judgment or mistakes of fact or law; but nothing in the Declaration of Trust protects a Trustee against any liability to the Trust or its shareholders to which he or she would otherwise be subject by reason of willful misfeasance, bad faith, gross negligence, or reckless disregard of the duties involved in the conduct of his or her office. Voting rights are not cumulative, which means that the holders of more than 50% of the shares voting for the election of Trustees can elect 100% of the Trustees and, in such event, the holders of the remaining less than 50% of the shares voting on the matter will not be able to elect any Trustees.

The Declaration of Trust provides that no person shall serve as a Trustee if shareholders holding two-thirds of the outstanding shares have removed him from that office either by a written declaration filed with the Trust's custodian or by votes cast at a meeting called for that purpose. The Declaration of Trust further provides that the Trustees of the Trust shall promptly call a meeting of the shareholders for the purpose of voting upon a question of removal of any such Trustee or Trustees when requested in writing so to do by the record holders of not less than 10 per centum of the outstanding shares.

The Trust's Prospectus, any related Prospectus Supplement, and this SAI do not contain all of the information set forth in the Registration Statement that the Trust has filed with the SEC. The complete Registration Statement may be obtained from the SEC upon payment of the fee prescribed by its Rules and Regulations.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Deloitte & Touche LLP, Boston, Massachusetts are the independent auditors for the Trust, providing audit services, tax return preparation, and assistance and consultation with respect to the preparation of filings with the SEC.

FINANCIAL STATEMENTS

The audited financial statements of the Trust, and the independent registered public accounting firm's report thereon, for the fiscal year ended October 31, 2013 are incorporated herein by reference from the Trust's most recent Annual Report to Common Shareholders filed with the SEC on Form N-CSR pursuant to Rule 30b2-1 under the 1940 Act.

Eaton Vance Senior Floating-Rate Trust

39

SAI dated February 24, 2014

RATINGS

The ratings indicated herein are believed to be the most recent ratings available at the date of this SAI for the securities listed. Ratings are generally given to securities at the time of issuance. While the rating agencies may from time to time revise such ratings, they undertake no obligation to do so, and the ratings indicated do not necessarily represent ratings which would be given to these securities on a particular date.

MOODY S INVESTORS SERVICE, INC. (Moody s)

LONG-TERM CORPORATE OBLIGATIONS RATINGS

Moody s long-term obligation ratings are opinions of the relative credit risk of fixed-income obligations with an original maturity of one year or more. They address the possibility that a financial obligation will not be honored as promised. Such ratings use Moody s Global Scale and reflect both the likelihood of default and any financial loss suffered in the event of default.

Aaa: Obligations rated Aaa are judged to be of the highest quality, with minimal credit risk.

Aa: Obligations rated Aa are judged to be of high quality and are subject to very low risk.

A: Obligations rated A are considered upper-medium grade and are subject to low credit risk.

Baa: Obligations rated Baa are subject to moderate credit risk. They are considered medium grade and as such may possess certain speculative characteristics.

Ba: Obligations rated Ba are judged to have speculative elements and are subject to substantial credit risk.

B: Obligations rated B are considered speculative and are subject to high credit risk.

Caa: Obligations rated Caa are judged to be of poor standing and are subject to very high credit risk.

Ca: Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.

C: Obligations rated C are the lowest rated class of bonds and are typically in default, with little prospect for recovery of principal or interest.

Note: Moody s appends numerical modifiers, 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

SHORT-TERM CORPORATE OBLIGATION RATINGS

Moody s short term ratings are opinions of the ability of issuers to honor short-term financial obligations. Ratings may be assigned to issuers, short-term programs or to individual short-term debt instruments. Such obligations generally have an original maturity not exceeding thirteen months, unless explicitly noted.

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

P-1: Issuers (or supporting institutions) rated Prime-1 have a superior ability to repay short-term debt obligations.

P-2: Issuers (or supporting institutions) rated Prime-2 have a strong ability to repay short-term debt obligations.

P-3: Issuers (or supporting institutions) rated Prime-3 have an acceptable ability to repay short-term obligations.

NP: Issuers (or supporting institutions) rated Not Prime do not fall within any of the Prime ratings categories.

Eaton Vance Senior Floating-Rate Trust

40

SAI dated February 24, 2014

ISSUER RATINGS

Issuer Ratings are opinions of the ability of entities to honor senior unsecured financial obligations and contracts. Moody's expresses Issuer Ratings on its general long-term and short-term scales.

US MUNICIPAL RATINGS

Moody's municipal ratings are opinions of the investment quality of issuers and issues in the U.S. municipal market. As such, these ratings incorporate assessment of the default probability and loss severity of these issuers and issues. The default and loss content for Moody's municipal long-term rating scale differs from Moody's general long-term scale. Historical default and loss rates for obligations rated on the US Municipal Scale are significantly lower than for similarly rated corporate obligations. It is important that users of Moody's ratings understand these differences when making rating comparisons between the Municipal and Global scales.

US MUNICIPAL LONG-TERM DEBT RATINGS

Municipal Ratings are based upon the analysis of five primary factors related to municipal finance: market position, financial position, debt levels, governance, and covenants. Each of the factors is evaluated individually and for its effect on the other factors in the context of the municipality's ability to repay its debt.

Aaa: Issuers or issues rated Aaa demonstrate the strongest creditworthiness relative to other US municipal or tax-exempt issuers or issues.

Aa: Issuers or issues rated Aa demonstrate very strong creditworthiness relative to other US municipal and tax-exempt issuers.

A: Issuers or issues rated A present above-average creditworthiness relative to other US municipal or tax-exempt issuers or issues.

Baa: Issuers or issues rated Baa represent average creditworthiness relative to other US municipal or tax-exempt issuers or issues.

Ba: Issuers or issues rated Ba demonstrate below-average creditworthiness relative to other US municipal or tax-exempt issuers or issues.

B: Issuers or issues rated B demonstrate weak creditworthiness relative to other US municipal or tax-exempt issuers or issues.

Caa: Issuers or issues rated Caa demonstrate very weak creditworthiness relative to other US municipal or tax-exempt issuers or issues.

Ca: Issuers or issues rated Ca demonstrate extremely weak creditworthiness relative to other US municipal or tax-exempt issuers or issues.

C: Issuers or issues rated C demonstrate the weakest creditworthiness relative to other US municipal or tax-exempt issuers or issues.

Note: Moody's appends numerical modifiers, 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

US MUNICIPAL SHORT-TERM OBLIGATION RATINGS AND DEMAND OBLIGATION RATINGS

Short-Term Obligation Ratings

There are three rating categories for short-term municipal obligations that are considered investment grade. These ratings are designated as Municipal Investment Grade (MIG) and are divided into three levels--MIG 1 through MIG 3. In addition, those short-term obligations that are of speculative quality are designated SG, or speculative grade. MIG ratings expires at the maturity of the obligation.

MIG 1: This designation denotes superior credit quality. Excellent protection is afforded by established cash flows, highly reliable liquidity support, or demonstrated broad-band access to the market for refinancing.

MIG 2: This designation denotes strong credit quality. Margins of protection are ample, although not as large as in the preceding group.

Eaton Vance Senior Floating-Rate Trust

41

SAI dated February 24, 2014

MIG 3: This designation denotes acceptable credit quality. Liquidity and cash-flow protection may be narrow, and market access for refinancing is likely to be less well-established.

SG: This designation denotes speculative-grade credit quality. Debt instruments in this category may lack sufficient margins or protection.

Demand Obligation Ratings

In the case of variable rate demand obligations (VRDOs), a two-component rating is assigned; a long or short-term rating and demand obligation rating. The first element represents Moody's evaluation of the degree of risk associated with scheduled principal and interest payments. The second element represents Moody's evaluation of the degree of risk associated with the ability to receive purchase price upon demand (demand feature), using a variation of the MIG rating scale, the Variable Municipal Investment Grade or VMIG rating.

When either the long- or short-term aspect of a VRDO is not rated, that piece is designated NR., e.g., Aaa/NR or NR/VMIG.

VMIG rating expirations are a function of each issue's specific structural or credit features.

VMIG 1: This designation denotes superior credit quality. Excellent protection is afforded by the superior short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand.

VMIG 2: This designation denotes strong credit quality. Good protection is afforded by the strong short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand.

VMIG 3: This designation denotes acceptable credit quality. Adequate protection is afforded by the satisfactory short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand.

SG: This designation denotes speculative-grade credit quality. Demand features rated in this category may be supported by a liquidity provider that does not have an investment grade short-term rating or may lack the structural and/or legal protections necessary to ensure the timely payment of purchase price upon demand.

STANDARD & POOR'S RATINGS GROUP (S&P)

ISSUE CREDIT RATINGS DEFINITIONS

Issue credit ratings can be either long or short term. Short-term ratings are generally assigned to those obligations considered short-term in the relevant market. In the U.S., for example, that means obligations with an original maturity of no more than 365 days--including commercial paper. Short-term ratings are also used to indicate the creditworthiness of an obligor with respect to put-features on long-term obligations. The result is a dual rating, in which the short-term rating addresses the put feature, in addition to the usual long-term rating. Medium-term notes are assigned long-term ratings.

Issue credit ratings are based in varying degrees on the following considerations:

Likelihood of payment, capacity and willingness of the obligor to meet its financial commitment on an obligation in accordance with the terms of the obligation.

Nature of and provisions of the obligations;

Protection afforded by, and relative position of, the obligation in the event of bankruptcy, reorganization, or other arrangement under the laws of bankruptcy and other laws affecting creditors' rights.

Issue ratings are an assessment of default risk, but may incorporate an assessment of relative seniority or ultimate recovery in the event of default. Junior obligations are typically rated lower than senior obligations, to reflect the lower priority in bankruptcy, as noted above. (Such differentiation may apply when an entity has both senior and subordinated obligations, secured and unsecured obligations, or operating company and holding company obligations.)

Eaton Vance Senior Floating-Rate Trust

42

SAI dated February 24, 2014

LONG-TERM ISSUE CREDIT RATINGS:

AAA: An obligation rated AAA has the highest rating assigned by S&P. The obligor's capacity to meet its financial commitment on the obligation is extremely strong.

AA: An obligation rated AA differs from the highest-rated obligors only to a small degree. The obligor's capacity to meet its financial commitments on the obligation is very strong.

A: An obligation rated A is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial commitments on the obligation is still strong.

BBB: An obligation rated BBB exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

BB, B, CCC, CC and C

Obligations rated BB, B, CCC, CC, and C are regarded as having significant speculative characteristics. BB the least degree of speculation and C the highest. While such obligations will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposures to adverse conditions.

BB: An obligation rated BB is less vulnerable to non-payment than other speculative issues. However, it faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitment on the obligation.

B: An obligation rated B is more vulnerable than obligations rated BB, but the obligor currently has the capacity to meet its financial commitment on the obligation. Adverse business, financial or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitment on the obligation.

CCC: An obligation rated CCC is currently vulnerable to nonpayment, and is dependent upon favorable business, financial, and economic conditions for the obligor to meet its financial commitment on the obligation. In the event of adverse business, financial or, economic conditions, the obligor is not likely to have the capacity to meet its financial commitment on the obligation.

CC: An obligation rated CC is currently highly vulnerable to nonpayment.

C: A subordinated debt or preferred stock obligation rated C is currently highly vulnerable to nonpayment. The C rating may be used to cover a situation where a bankruptcy petition has been filed or similar action taken, but payments on this obligation are being continued. A C also will be assigned to a preferred stock issue in arrears on dividends or sinking fund payments, but that is currently paying.

D: A obligation rated D is in payment default. The D rating category is used when payments on an obligation are not made on the date due even if the applicable grace period has not expired, unless S&P believes that such payments will be made during such grace period. The D rating also will be used upon the filing of a bankruptcy petition or the taking of a similar action if payments on an obligation are jeopardized.

Plus (+) or Minus (-): The ratings from AA to CCC may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories.

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

NR: This indicates that no rating has been requested, that there is insufficient information on which to base a rating, or that S&P does not rate a particular obligation as a matter of policy.

Eaton Vance Senior Floating-Rate Trust

43

SAI dated February 24, 2014

SHORT-TERM ISSUE CREDIT RATINGS

A-1: A short-term obligation rated A-1 is rated in the highest category by S&P. The obligor's capacity to meet its financial commitment on the obligation is strong. Within this category, certain obligations are designated with a plus sign (+). This indicates that the obligor's capacity to meet its financial commitments on these obligation is extremely strong.

A-2: A short-term obligation rated A-2 is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher rating categories. However, the obligor's capacity to meet its financial commitment on the obligation is satisfactory.

A-3: A short-term obligation rated A-3 exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

B: A short-term obligation rated B is regarded as having significant speculative characteristics. Ratings of B-1, B-2, and B-3 may be assigned to indicate finer distinctions within the B category. The obligor currently has the capacity to meet its financial commitment on the obligation; however, it faces major ongoing uncertainties which could lead to the obligor's inadequate capacity to meet its financial commitment on the obligation.

B-1: A short-term obligation rated B-1 is regarded as having significant speculative characteristics, but the obligor has a relatively stronger capacity to meet their financial commitments over the short-term compared to other speculative-grade obligors.

B-2: A short-term obligation rated B-2 is regarded as having significant speculative characteristics, and the obligor has an average speculative-grade capacity to meet its financial commitments over the short-term compared to other speculative-grade obligors.

B-3: A short-term obligation rated B-3 is regarded as having significant speculative characteristics, and the obligor has a relatively weaker capacity to meet its financial commitments over the short-term compared to other speculative-grade obligors.

C: A short-term obligation rated C is currently vulnerable to nonpayment and is dependent upon favorable business, financial and economic conditions for the obligor to meet its financial commitment on the obligation.

D: A short-term obligation rated D is in payment default. The D rating category is used when payments on an obligation are not made on the date due even if the applicable grace period has not expired, unless S&P believes that such payments will be made during such grace period. The D rating also will be used upon the filing of a bankruptcy petition or the taking of a similar action if payments on an obligation are jeopardized.

ISSUER CREDIT RATINGS DEFINITIONS

Issuer credit ratings are based on current information furnished by obligors or obtained by S&P from other sources it considers reliable. S&P does not perform an audit in connection with any issuer credit rating and may, on occasion, rely on unaudited financial information. Issuer credit ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of, such information, or based on other circumstances. Issuer credit ratings can either be long or short term. Short-term issuer credit ratings reflect the obligor's creditworthiness over a short-term horizon.

LONG-TERM ISSUER CREDIT RATINGS

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

AAA: An obligor rated AAA has extremely strong capacity to meet its financial commitments. AAA is the highest issuer credit rating assigned by S&P.

AA: An obligor rated AA has very strong capacity to meet its financial commitments. It differs from the highest-rated obligors only to a small degree.

A: An obligor rated A has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.

BBB: An obligor rated BBB has adequate capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.

Eaton Vance Senior Floating-Rate Trust

44

SAI dated February 24, 2014

BB, B, CCC and CC

Obligors rated BB, B, CCC, and CC are regarded as having significant speculative characteristics. BB indicates least degree of speculation and CC the highest. While such obligors will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposures to adverse conditions.

BB: An obligor BB is less vulnerable in the near term than other lower-rated obligors. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitments.

B: An obligor rated B is more vulnerable than the obligors rated BB, but the obligor currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.

CCC: An obligor rated CCC is currently vulnerable, and is dependent upon favorable business, financial, and economic conditions to meet its financial commitments.

CC: An obligor rated CC is currently highly vulnerable.

Plus (+) or Minus (-): The ratings from AA to CCC may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories.

R: An obligor rated R is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision the regulators may have the power to favor one class of obligations over others or pay some obligations and not others. Please see S&P's issue credit ratings for a more detailed description of the effects of regulatory supervision on specific issues or classes of obligations.

SD and D: An obligor rated SD (selective default) or D has failed to pay one or more of its obligations (rated or unrated) when it came due. A D rating is assigned when S&P believes that the default will be a general default and that the obligor will fail to pay all or substantially all of its obligations as they come due. An SD rating is assigned when S&P believes that the obligor has selectively defaulted on a specific issue or class of obligations but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner. Please see S&P's issue credit ratings for a more detailed description of the effects of a default on specific issues or classes of obligations.

NR: An issuer designated NR is not rated.

SHORT-TERM ISSUER CREDIT RATINGS

A-1: An obligor rated A-1 has strong capacity to meet its financial commitments. It is rated in the highest category by S&P. Within this category, certain obligors are designated with a plus sign (+). This indicates that the obligor's capacity to meet its financial commitments is extremely strong.

A-2: An obligor rated A-2 has satisfactory capacity to meet its financial commitments. However, it is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in the highest rating category.

A-3: An obligor rated A-3 has adequate capacity to meet its financial obligations. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.

B: An obligor rated B is regarded as vulnerable and has significant speculative characteristics. Ratings B-1, B-2, and B-3 may be assigned to indicate finer distinctions within the B category. The obligor currently has the capacity to meet its financial commitments; however, it faces major ongoing uncertainties which could lead to the obligor's inadequate capacity to meet its financial commitments.

B-1: Obligor with a B-1 short-term rating have a relatively stronger capacity to meet their financial commitments over the short-term compared to other speculative-grade obligors.

B-2: Obligor with a B-2 short-term rating have an average speculative-grade capacity to meet their financial commitments over the short-term compared to other speculative-grade obligors.

B-3: Obligor with a B-3 short-term rating have a relatively weaker capacity to meet their financial commitments over the short-term compared to other speculative-grade obligors.

Eaton Vance Senior Floating-Rate Trust

45

SAI dated February 24, 2014

C: An obligor rated C is currently vulnerable to nonpayment and is dependent upon favorable business, financial, and economic conditions for it to meet its financial commitments.

R: An obligor rated R is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision the regulators may have the power to favor one class of obligations over others or pay some obligations and not others. Please see S&P's issue credit ratings for a more detailed description of the effects of regulatory supervision on specific issues or classes of obligations.

SD and D: An obligor rated SD (selective default) or D has failed to pay one or more of its obligations (rated or unrated) when it came due. A D rating is assigned when S&P believes that the default will be a general default and that the obligor will fail to pay all or substantially all of its obligations as they come due. An SD rating is assigned when S&P believes that the obligor has selectively defaulted on a specific issue or class of obligations but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner. Please see S&P's issue credit ratings for a more detailed description of the effects of a default on specific issues or classes of obligations.

NR: An issuer designated as NR is not rated.

MUNICIPAL RATINGS

SHORT-TERM NOTES: An S&P U.S. municipal note ratings reflects the liquidity factors and market access risks unique to notes. Notes due in three years or less will likely receive a note rating. Notes maturing beyond three years will most likely receive a long-term debt rating. The following criteria will be used in making that assessment:

Amortization schedule--the larger the final maturity relative to other maturities, the more likely it will be treated as a note; and

Source of payment--the more dependent the issue is on the market for its refinancing, the more likely it will be treated as a note.

Note rating symbols are as follows:

SP-1: Strong capacity to pay principal and interest. An issue determined to possess a very strong capacity to pay debt will be given a plus(+) designation.

SP-2: Satisfactory capacity to pay principal and interest, with some vulnerability to adverse financial and economic changes over the term of the notes.

SP-3: Speculative capacity to pay principal and interest.

FITCH RATINGS

LONG-TERM CREDIT RATINGS

Investment Grade

AAA: Highest credit quality AAA ratings denote the lowest expectation of credit risk. They are assigned only in case of exceptionally strong capacity for payment of financial commitments. The capacity is highly unlikely to be adversely affected by foreseeable events.

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

AA: Very high credit quality. AA ratings denote expectations of very low credit risk. They indicate very strong capacity for payment of financial commitments. This capacity is not significantly vulnerable to foreseeable events.

A: High credit quality. A ratings denote expectations of low credit risk. The capacity for payment of financial commitments is considered strong. The capacity may, nevertheless, be more vulnerable to changes in circumstances or in economic conditions that is the case for higher ratings.

BBB: Good credit quality. BBB ratings indicate that they are currently expectations of low credit risk. The capacity for payment of financial commitments is considered adequate but adverse changes in circumstances and economic conditions are more likely to impair this capacity. This is the lowest investment grade category.

Eaton Vance Senior Floating-Rate Trust

46

SAI dated February 24, 2014

Speculative Grade

BB: Speculative. **BB** ratings indicate that there is a possibility of credit risk developing, particularly as the result of adverse economic change over time; however, business or financial alternatives may be available to allow financial commitments to be met. Securities rated in this category are not investment grade. The obligor's ability to pay interest and repay principal may be affected over time by adverse economic changes. However, business and financial alternatives can be identified that could assist the obligor in satisfying its debt service requirements.

B: Highly speculative. For issuers and performing obligations, **B** ratings indicate that significant credit risk is present, but a limited margin of safety remains. Financial commitments are currently being met; however, capacity for continued payment is contingent upon a sustained, favorable business and economic environment.

For individual obligations, may indicate distressed or defaulted obligations with potential for extremely high recoveries. Such obligations would possess a Recovery of Rating **RR1** (outstanding).

CCC: For issuers and performing obligations, default is a real possibility. Capacity for meeting financial commitments is solely reliant upon sustained, favorable business or economic conditions.

For individual obligations, may indicate distressed or defaulted obligations with potential for average to superior levels of recovery. Differences in credit quality may be denoted by plus/minus distinctions. Such obligations typically would possess a Recovery Rating of **RR2** (superior), **RR3** (good) or **RR4** (average).

CC: For issuers and performing obligations, default of some kind appears probable.

For individual obligations, may indicate distressed or defaulted obligations with a Recovery Rating of **RR4** (average) or **RR5** (below average).

C: For issuers performing obligations, default is imminent.

For individual obligations, may indicate distressed or defaulted obligations with potential for below-average to poor recoveries. Such obligations would possess a Recovery Rating of **RR6** (poor).

RD: Indicates an entity that has failed to make due payments (within the applicable grace period) on some but not all material financial obligations, but continues to honor other classes of obligations.

D: Indicates an entity or sovereign that has defaulted on all of its financial obligations. Default generally is defined as one of the following:

Failure of an obligor to make timely payment of principal and/or interest under the contractual terms of any financial obligation; The bankruptcy filings, administration, receivership, liquidation or other winding-up or cessation of business of an obligor; The distressed or other coercive exchange of an obligation, where creditors were offered securities with diminished structural or economic terms compared with the existing obligation.

Default ratings are not assigned prospectively; within this context, non-payment on an instrument that contains a deferral feature or grace period will not be considered a default until after the expiration of the deferral or grace period.

Issuers will be rated **D** upon a default. Defaulted and distressed obligations typically are rated along the continuum of **C** to **B** ratings categories, depending upon their recovery prospects and other relevant characteristics. Additionally, in structured finance transactions, where analysis indicates that an instrument is irrevocably impaired such that it is not expected to meet pay interest and/or principal in full in accordance with the terms of the obligation's documentation

during the life of the transaction, but where no payment default in accordance with the terms of the documentation is imminent, the obligation may be rated in the B or CCC-C categories.

Default is determined by reference to the terms of the obligations' documentation. Fitch will assign default ratings where it has reasonably determined that payment has not been made on a material obligation in accordance with the requirements of the obligations' documentation, or where it believes that default ratings consistent with Fitch's published definition of default are the most appropriate ratings to assign.

Eaton Vance Senior Floating-Rate Trust

47

SAI dated February 24, 2014

Notes to Long-Term ratings:

The modifiers + or - may be appended to a rating to denote relative status within major rating categories. Such suffixes are not added to the AAA Long-term rating category, to categories below CCC, or to Short-term ratings other than F1. (The +/- modifiers are only used to denote issues within the CCC category, whereas issuers are only rated CCC without the use of modifiers.)

Short-Term Credit Ratings

The following ratings scale applies to foreign currency and local currency ratings. A Short-term rating has a time horizon of less than 13 months for most obligations, or up to three years for US public finance, in line with industry standards, to reflect unique risk characteristics of bond, tax and revenue anticipation notes that are commonly issued with terms up to three years. Short-term ratings thus place greater emphasis on the liquidity necessary to meet financial commitments in a timely manner.

F1: Highest credit quality. Indicates the strongest capacity for timely payment of financial commitments; may have an added + to denote any exceptionally strong credit feature.

F2: Good credit quality. A satisfactory capacity for timely payment of financial commitments, but the margin of safety is not as great as in the case of the higher ratings.

F3: Fair credit quality. The capacity for timely payment of financial commitments is adequate; however, near term adverse changes could result in a reduction to non investment grade.

B: Speculative. Minimal capacity for timely payment of financial commitments, plus vulnerability to near term adverse changes in financial and economic conditions.

C: High default risk. Default is a real possibility. Capacity for meeting financial commitments is solely reliant upon a sustained, favorable business and economic environment.

D: Indicates an entity or sovereign that has defaulted on all of its financial obligations.

Notes to Short-Term ratings:

The modifiers + or - may be appended to a rating to denote relative status within major rating categories. Such suffixes are not added to the AAA Long-term rating category, to categories below CCC, or to Short-term ratings other than F1. (The +/- modifiers are only used to denote issues within the CCC category, whereas issuers are only rated CCC without the use of modifiers.)

DESCRIPTION OF INSURANCE FINANCIAL STRENGTH RATINGS

Moody's Investors Service, Inc. Insurance Financial Strength Ratings

Moody's Insurance Financial Strength Ratings are opinions of the ability of insurance companies to repay punctually senior policyholder claims and obligations. Specific obligations are considered unrated unless they are individually rated because the standing of a particular insurance obligation would depend on an assessment of its relative standing under those laws governing both the obligation and the insurance company. Insurance Companies rated Aaa offer exceptional financial security. While the credit profile of these companies is likely to change, such changes as can be visualized are most unlikely to impair their fundamentally strong position.

Standard & Poor's Insurance Financial Strength Ratings

A S&P insurer financial strength rating is a current opinion of the financial security characteristics of an insurance organization with respect to its ability to pay under its insurance policies and contracts in accordance with their terms. Insurer financial strength ratings are also assigned to health maintenance organizations and similar health plans with respect to their ability to pay under their policies and contracts in accordance with their terms. This opinion is not specific to any particular policy or contract, nor does it address the suitability of a particular policy or contract for a specific purpose or purchaser. Furthermore, the opinion does not take into account deductibles, surrender or cancellation penalties, timeliness of payment, nor the likelihood of the use of a defense such as fraud to deny claims. For organizations with cross-border or multinational operations, including those conducted by subsidiaries or branch offices, the ratings do not take into account potential that may exist for foreign exchange restrictions to prevent financial obligations from being met. Insurer financial strength ratings are based on information furnished by rated organizations or obtained by S&P from other sources it considers reliable. S&P does not perform an audit in connection with any rating and may on occasion rely on unaudited financial information. Ratings may be changed, suspended, or withdrawn as a result of

Eaton Vance Senior Floating-Rate Trust

48

SAI dated February 24, 2014

changes in, or unavailability of such information or based on other circumstances. Insurer financial strength ratings do not refer to an organization's ability to meet nonpolicy (i.e. debt) obligations. Assignment of ratings to debt issued by insurers or to debt issues that are fully or partially supported by insurance policies, contracts, or guarantees is a separate process from the determination of insurer financial strength ratings, and follows procedures consistent with issue credit rating definitions and practices. Insurer financial strength ratings are not a recommendation to purchase or discontinue any policy or contract issued by an insurer or to buy, hold, or sell any security issued by an insurer. A rating is not a guaranty of an insurer's financial strength or security. An insurer rated AAA has extremely strong financial security characteristics. AAA is the highest insurer financial strength rating assigned by S&P.

Fitch Insurer Financial Strength Ratings

The Fitch Insurer Financial Strength (IFS) Rating provides an assessment of the financial strength of an insurance organization. The IFS Rating is assigned to the insurance company's policyholder obligations, including assumed reinsurance obligations and contract holder obligations, such as guaranteed investment contracts. The IFS Rating reflects both the ability of the insurer to meet these obligations on a timely basis, and expected recoveries received by claimants in the event the insurer stops making payments or payments are interrupted, due to either the failure of the insurer or some form of regulatory intervention. In the context of the IFS Rating, the timeliness of payments is considered relative to both contract and/or policy terms but also recognizes the possibility of reasonable delays caused by circumstances common to the insurance industry, including claims reviews, fraud investigations and coverage disputes. The IFS Rating does not encompass policyholder obligations residing in separate accounts, unit-linked products or segregated funds, for which the policyholder bears investment or other risks. However, any guarantees provided to the policyholder with respect such obligations are included in the IFS Rating. Expected recoveries are based on Fitch's assessments of the sufficiency of an insurance company's assets to fund policyholder obligations, in a scenario in which payments have been ceased or interrupted. Accordingly, expected recoveries exclude the impact of recoveries obtained from any government sponsored guaranty or policyholder protection funds. Expected recoveries also exclude the impact of collateralizing or security, such as letters of credit or trusteed assets, supporting select reinsurance obligations. IFS Ratings can be assigned to insurance and reinsurance companies in any insurance sector, including the life & annuity, non-life, property/casualty, health, mortgage, financial guaranty, residual value and title insurance sectors, as well as to managed care companies such as health maintenance organizations. The IFS Rating does not address the quality of an insurer's claims handling services or the relative value of products sold. AAA IFS Rating is exceptional strong. AAA IFS Rating denotes the lowest exception of ceased or interrupted payments. They are assigned only in the case of exceptionally strong capacity to meet policyholder and contract obligations on a timely basis. This capacity is highly unlikely to be adversely affected by foreseeable events.

Eaton Vance Senior Floating-Rate Trust

Eaton Vance Funds

Proxy Voting Policy and Procedures

I. Overview

The Boards of Trustees (the “Board”) of the Eaton Vance Funds have determined that it is in the interests of the Funds’ shareholders to adopt these written proxy voting policy and procedures (the “Policy”). For purposes of this Policy:

.

“Fund” means each registered investment company sponsored by the Eaton Vance organization; and

.

“Adviser” means the adviser or sub-adviser responsible for the day-to-day management of all or a portion of the Fund’s assets.

II. Delegation of Proxy Voting Responsibilities

The Board hereby delegates to the Adviser responsibility for voting the Fund’s proxies as described in this Policy. In this connection, the Adviser is required to provide the Board with a copy of its proxy voting policies and procedures (Adviser Procedures) and all Fund proxies will be voted in accordance with the Adviser Procedures, provided that in the event a material conflict of interest arises with respect to a proxy to be voted for the Fund (as described in Section IV below) the Adviser shall follow the process for voting such proxy as described in Section IV below.

The Adviser is required to report any material change to the Adviser Procedures to the Board in the manner set forth in Section V below. In addition, the Board will review the Adviser Procedures annually.

III. Delegation of Proxy Voting Disclosure Responsibilities

Pursuant to Rule 30b1-4 promulgated under the Investment Company Act of 1940, as amended (the “1940 Act”), the Fund is required to file Form N-PX no later than August 31st of each year. On Form N-PX, the Fund is required to disclose, among other things, information concerning proxies relating to the Fund’s portfolio investments, whether or not the Fund (or its Adviser) voted the proxies relating to securities held by the Fund and how it voted on the matter and whether it voted for or against management.

To facilitate the filing of Form N-PX for the Fund:

.

The Adviser is required to record, compile and transmit in a timely manner all data required to be filed on Form N-PX for the Fund that it manages. Such data shall be transmitted to Eaton Vance Management, which acts as administrator to the Fund (the Administrator) or the third party service provider designated by the Administrator; and

.

the Administrator is required to file Form N-PX on behalf of the Fund with the Securities and Exchange Commission (Commission) as required by the 1940 Act. The Administrator may delegate the filing to a third party service party

provided each such filing is reviewed and approved by the Administrator.

IV. Conflicts of Interest

The Board expects the Adviser, as a fiduciary to the Fund it manages, to put the interests of the Fund and its shareholders above those of the Adviser. When required to vote a proxy for the Fund, the Adviser may have material business relationships with the issuer soliciting the proxy that could give rise to a potential material conflict of interest for the Adviser.¹ In the event such a material conflict of interest arises, the Adviser, to the extent it is aware or reasonably should have been aware of the material conflict, will refrain from voting any proxies related to companies giving rise to such material conflict until it notifies and consults with the appropriate Board, or any committee, sub-committee or group of Independent Trustees identified by the Board (as long as such committee, sub-committee or group contains at least two or more Independent Trustees) (the Board Members), concerning the material conflict. For ease of communicating with the Board Members, the Adviser is required to provide the foregoing notice to the Fund's Chief Legal Officer who will then notify and facilitate a consultation with the Board Members.

Eaton Vance Senior Floating-Rate Trust

50

SAI dated February 24, 2014

Once the Board Members have been notified of the material conflict:

They shall convene a meeting to review and consider all relevant materials related to the proxies involved. This meeting shall be convened within 3 business days, provided that it an effort will be made to convene the meeting sooner if the proxy must be voted in less than 3 business days;

In considering such proxies, the Adviser shall make available all materials requested by the Board Members and make reasonably available appropriate personnel to discuss the matter upon request.

The Board Members will then instruct the Adviser on the appropriate course of action with respect to the proxy at issue.

If the Board Members are unable to meet and the failure to vote a proxy would have a material adverse impact on the Fund(s) involved, the Adviser will have the right to vote such proxy, provided that it discloses the existence of the material conflict to the Chairman of the Board as soon as practicable and to the Board at its next meeting. Any determination regarding the voting of proxies of the Fund that is made by the Board Members shall be deemed to be a good faith determination regarding the voting of proxies by the full Board.

V. Reports and Review

The Administrator shall make copies of each Form N-PX filed on behalf of the Fund available for the Boards' review upon the Board's request. The Administrator (with input from the Adviser for the Fund) shall also provide any reports reasonably requested by the Board regarding the proxy voting records of the Fund.

The Adviser shall report any material changes to the Adviser Procedures to the Board as soon as practicable and the Boards will review the Adviser Procedures annually.

The Adviser also shall report any changes to the Adviser Procedures to the Fund Chief Legal Officer prior to implementing such changes in order to enable the Administrator to effectively coordinate the Fund's disclosure relating to the Adviser Procedures.

To the extent requested by the Commission, the Policy and the Adviser Procedures shall be appended to the Fund's statement of additional information included in its registration statement.

1

An Adviser is expected to maintain a process for identifying a potential material conflict of interest. As an example only, such potential conflicts may arise when the issuer is a client of the Adviser and generates a significant amount of fees to the Adviser or the issuer is a distributor of the Adviser's products.

2

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

If a material conflict of interest exists with respect to a particular proxy and the proxy voting procedures of the relevant Adviser require that proxies are to be voted in accordance with the recommendation of a third party proxy voting vendor, the requirements of this Section IV shall only apply if the Adviser intends to vote such proxy in a manner inconsistent with such third party recommendation.

Eaton Vance Senior Floating-Rate Trust

51

SAI dated February 24, 2014

EATON VANCE MANAGEMENT

BOSTON MANAGEMENT AND RESEARCH

PROXY VOTING POLICIES AND PROCEDURES

I. Introduction

Eaton Vance Management, Boston Management and Research and Eaton Vance Investment Counsel (each an Adviser and collectively the Advisers) have each adopted and implemented policies and procedures that each Adviser believes are reasonably designed to ensure that proxies are voted in the best interest of clients, in accordance with its fiduciary duties and Rule 206(4)-6 under the Investment Advisers Act of 1940, as amended. The Advisers' authority to vote the proxies of their clients is established by their advisory contracts or similar documentation, such as the Eaton Vance Funds Proxy Voting Policy and Procedures. These proxy policies and procedures reflect the U.S. Securities and Exchange Commission (SEC) requirements governing advisers and the long-standing fiduciary standards and responsibilities for ERISA accounts set out in the Department of Labor Bulletin 94-2 C.F.R. 2509.94-2 (July 29, 1994).

II. Overview

Each Adviser manages its clients' assets with the overriding goal of seeking to provide the greatest possible return to such clients consistent with governing laws and the investment policies of each client. In pursuing that goal, each Adviser seeks to exercise its clients' rights as shareholders of voting securities to support sound corporate governance of the companies issuing those securities with the principle aim of maintaining or enhancing the companies' economic value.

The exercise of shareholder rights is generally done by casting votes by proxy at shareholder meetings on matters submitted to shareholders for approval (for example, the election of directors or the approval of a company's stock option plans for directors, officers or employees). Each Adviser is adopting the formal written Guidelines described in detail below and will utilize such Guidelines in voting proxies on behalf of its clients. These Guidelines are designed to promote accountability of a company's management and board of directors to its shareholders and to align the interests of management with those of shareholders.

Each Adviser will vote any proxies received by a client for which it has sole investment discretion through a third-party proxy voting service (Agent) in accordance with customized policies, as approved by the Boards of Trustees of the Eaton Vance Funds and, with respect to proxies referred back to the Adviser by the Agent pursuant to the Guidelines, in a manner that is reasonably designed to eliminate any potential conflicts of interest, as described more fully below. The Agent is currently Institutional Shareholder Services Inc. Proxies will be voted in accordance with client-specific guidelines and an Eaton Vance Fund's sub-adviser's proxy voting policies and procedures, if applicable.

No set of guidelines can anticipate all situations that may arise. In special cases, the Proxy Administrator (the person specifically charged with the responsibility to oversee the Agent and coordinate the voting of proxies referred back to the Adviser by the Agent) may seek insight from the Proxy Group established by the Advisers. The Proxy Group will assist in the review of the Agent's recommendation when a proxy voting issue is referred to the Proxy Group through the Proxy Administrator. The members of the Proxy Group, which may include employees of the Advisers' affiliates, may change at the Advisers' discretion.

III. Roles and Responsibilities

A. Proxy Administrator

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

The Proxy Administrator will assist in the coordination of the voting of each client's proxy in accordance with the Guidelines below and the Funds' Proxy Voting Policy and Procedures. The Proxy Administrator is authorized to direct the Agent to vote a proxy in accordance with the Guidelines. Responsibilities assigned herein to the Proxy Administrator, or activities in support thereof, may be performed by such members of the Proxy Group or employees of the Advisers' affiliates as are deemed appropriate by the Proxy Group.

Eaton Vance Senior Floating-Rate Trust

52

SAI dated February 24, 2014

B. Agent

An independent proxy voting service (the Agent), as approved by the Board of each Fund, shall be engaged to assist in the voting of proxies. The Agent is currently Institutional Shareholder Services Inc. The Agent is responsible for coordinating with the clients' custodians and the Advisers to ensure that all proxy materials received by the custodians relating to the portfolio securities are processed in a timely fashion. The Agent is required to vote and/or refer all proxies in accordance with the Guidelines below. The Agent shall retain a record of all proxy votes handled by the Agent. Such record must reflect all of the information required to be disclosed in a Fund's Form N-PX pursuant to Rule 30b1-4 under the Investment Company Act of 1940. In addition, the Agent is responsible for maintaining copies of all proxy statements received by issuers and to promptly provide such materials to an Adviser upon request.

Subject to the oversight of the Advisers, the Agent shall establish and maintain adequate internal controls and policies in connection with the provision of proxy voting services to the Advisers, including methods to reasonably ensure that its analysis and recommendations are not influenced by a conflict of interest, and shall disclose such controls and policies to the Advisers when and as provided for herein. Unless otherwise specified, references herein to recommendations of the Agent shall refer to those in which no conflict of interest has been identified.

C. Proxy Group

The Adviser shall establish a Proxy Group which shall assist in the review of the Agent's recommendations when a proxy voting issue has been referred to the Proxy Administrator by the Agent. The members of the Proxy Group, which may include employees of the Advisers' affiliates, may be amended from time to time at the Advisers' discretion.

For each proposal referred to the Proxy Group, the Proxy Group will review the (i) Guidelines, (ii) recommendations of the Agent, and (iii) any other resources that any member of the Proxy Group deems appropriate to aid in a determination of the recommendation.

If the Proxy Group recommends a vote in accordance with the Guidelines, or the recommendation of the Agent, where applicable, it shall instruct the Proxy Administrator to so advise the Agent.

If the Proxy Group recommends a vote contrary to the Guidelines, or the recommendation of the Agent, where applicable, or if the proxy statement relates to a conflicted company of the Agent, as determined by the Advisers, it shall follow the procedures for such voting outlined below.

The Proxy Administrator shall use best efforts to convene the Proxy Group with respect to all matters requiring its consideration. In the event the Proxy Group cannot meet in a timely manner in connection with a voting deadline, the Proxy Administrator shall follow the procedures for such voting outlined below.

IV. Proxy Voting Guidelines (Guidelines)

A. General Policies

It shall generally be the policy of the Advisers to take no action on a proxy for which no client holds a position or otherwise maintains an economic interest in the relevant security at the time the vote is to be cast.

In all cases except those highlighted below, it shall generally be the policy of the Advisers to vote in accordance with the recommendation by the Agent, Institutional Shareholder Services Inc.

When a fund client participates in the lending of its securities and the securities are on loan at the record date, proxies related to such securities generally will not be forwarded to the relevant Adviser by the fund's custodian and therefore will not be voted. In the event that the Adviser determines that the matters involved would have a material effect on

the applicable fund's investment in the loaned securities, the fund will exercise its best efforts to terminate the loan in time to be able to cast such vote or exercise such consent.

Interpretation and application of these Guidelines is not intended to supersede any law, regulation, binding agreement or other legal requirement to which an issuer may be or become subject. The Guidelines relate to the types of proposals that are most frequently presented in proxy statements to shareholders. Absent unusual circumstances, each Adviser will utilize these Guidelines when voting proxies on behalf of its

Eaton Vance Senior Floating-Rate Trust

53

SAI dated February 24, 2014

clients. The Guidelines may be revised at any time, provided such revisions are reported to the Boards of Trustees of the Eaton Vance Funds.

B. Proposals Regarding Mergers and Corporate Restructurings

The Agent shall be directed to refer proxy proposals accompanied by its written analysis and voting recommendation to the Proxy Administrator for all proposals relating to Mergers and Corporate Restructurings.

C. Proposals Regarding Mutual Fund Proxies Disposition of Assets/Termination/Liquidation and Mergers

The Agent shall be directed to refer proxy proposals accompanied by its written analysis and voting recommendation to the Proxy Administrator for all proposals relating to the Disposition of Assets/Termination/Liquidation and Mergers contained in mutual fund proxies.

D. Corporate Structure Matters/Anti-Takeover Defenses

As a general matter, the Advisers will normally vote against anti-takeover measures and other proposals designed to limit the ability of shareholders to act on possible transactions (except in the case of closed-end management investment companies).

E. Social and Environmental Issues

The Advisers generally support management on social and environmental proposals.

F. Voting Procedures

Upon receipt of a referral from the Agent or upon advice from an Eaton Vance investment professional, the Proxy Administrator may solicit additional research from the Agent, as well as from any other source or service.

1

WITHIN-GUIDELINES VOTES: Votes in Accordance with the Guidelines and/or, where applicable, Agent Recommendation

In the event the Proxy Administrator recommends a vote within Guidelines and/or, where applicable, in accordance with the Agent's recommendation, the Proxy Administrator will instruct the Agent to vote in this manner.

2

NON-VOTES: Votes in Which No Action is Taken

The Proxy Administrator may recommend that a client refrain from voting under the following circumstances: (i) if the economic effect on shareholders' interests or the value of the portfolio holding is indeterminable or insignificant, e.g., proxies in connection with securities no longer held in the portfolio of a client or proxies being considered on behalf of a client that is no longer in existence; or (ii) if the cost of voting a proxy outweighs the benefits, e.g., certain international proxies, particularly in cases in which share blocking practices may impose trading restrictions on the relevant portfolio security. In such instances, the Proxy Administrator may instruct the Agent not to vote such proxy.

Reasonable efforts shall be made to secure and vote all other proxies for the clients, but, particularly in markets in which shareholders' rights are limited, Non-Votes may also occur in connection with a client's related inability to timely access ballots or other proxy information in connection with its portfolio securities.

Non-Votes may also result in certain cases in which the Agent's recommendation has been deemed to be conflicted, as provided for herein.

3

OUT-OF-GUIDELINES VOTES: Votes Contrary to Guidelines, or Agent Recommendation, where applicable, Where No Recommendation is Provided by Agent, or Where Agent's Recommendation is Conflicted

If the Proxy Administrator recommends that a client vote contrary to the Guidelines, or the recommendation of the Agent, where applicable, if the Agent has made no recommendation on a matter requiring case-by-case consideration and the Guidelines are silent, or the Agent's recommendation on a matter requiring case-by-case consideration is deemed to be conflicted, the Proxy Administrator will forward the Agent's analysis and recommendation and any research obtained from the Agent or any other source to the Proxy Group. The Proxy Group may consult with the Agent as it deems necessary. The Proxy Administrator will instruct the Agent to vote the proxy as recommended by the Proxy Group. The Adviser will provide a report

Eaton Vance Senior Floating-Rate Trust

54

SAI dated February 24, 2014

to the Boards of Trustees of the Eaton Vance Funds reflecting any votes cast contrary to the Guidelines or Agent Recommendation, as applicable, and shall do so no less than annually.

The Proxy Administrator will maintain a record of all proxy questions that have been referred by the Agent, all applicable recommendations, analysis and research received and any resolution of the matter.

V. Recordkeeping

The Advisers will maintain records relating to the proxies they vote on behalf of their clients in accordance with Section 204-2 of the Investment Advisers Act of 1940, as amended. Those records will include:

.

A copy of the Advisers' proxy voting policies and procedures;

.

Proxy statements received regarding client securities. Such proxy statements received from issuers are either in the SEC's EDGAR database or are kept by the Agent and are available upon request;

.

A record of each vote cast;

.

A copy of any document created by the Advisers that was material to making a decision on how to vote a proxy for a client or that memorializes the basis for such a decision; and

.

Each written client request for proxy voting records and the Advisers' written response to any client request (whether written or oral) for such records.

All records described above will be maintained in an easily accessible place for five years and will be maintained in the offices of the Advisers or their Agent for two years after they are created.

VI. Assessment of Agent and Identification and Resolution of Conflicts with Clients

A. Assessment of Agent

The Advisers shall establish that the Agent (i) is independent from the Advisers, (ii) has resources that indicate it can competently provide analysis of proxy issues, and (iii) can make recommendations in an impartial manner and in the best interests of the clients and, where applicable, their beneficial owners. The Advisers shall utilize, and the Agent shall comply with, such methods for establishing the foregoing as the Advisers may deem reasonably appropriate and shall do so not less than annually as well as prior to engaging the services of any new proxy voting service. The Agent shall also notify the Advisers in writing within fifteen (15) calendar days of any material change to information previously provided to an Adviser in connection with establishing the Agent's independence, competence or impartiality.

B. Conflicts of Interest

Edgar Filing: EATON VANCE SENIOR FLOATING RATE TRUST - Form 497

As fiduciaries to their clients, each Adviser puts the interests of its clients ahead of its own. In order to ensure that relevant personnel of the Advisers are able to identify potential material conflicts of interest, each Adviser will take the following steps:

Quarterly, the Eaton Vance Legal and Compliance Department will seek information from the department heads of each department of the Advisers and of Eaton Vance Distributors, Inc. (EVD) (an affiliate of the Advisers and principal underwriter of certain Eaton Vance Funds). Each department head will be asked to provide a list of significant clients or prospective clients of the Advisers or EVD.

A representative of the Legal and Compliance Department will compile a list of the companies identified (the Conflicted Companies) and provide that list to the Proxy Administrator.

The Proxy Administrator will compare the list of Conflicted Companies with the names of companies for which he or she has been referred a proxy statement (the Proxy Companies). If a Conflicted Company is also a Proxy Company, the Proxy Administrator will report that fact to the Proxy Group.

If the Proxy Administrator expects to instruct the Agent to vote the proxy of the Conflicted Company strictly according to the Guidelines contained in these Proxy Voting Policies and Procedures (the Policies) or the recommendation of the Agent, as applicable, he or she will (i) inform the Proxy Group of that fact, (ii) instruct the Agent to vote the proxies and (iii) record the existence of the material conflict and the resolution of the matter.

Eaton Vance Senior Floating-Rate Trust

If the Proxy Administrator intends to instruct the Agent to vote in a manner inconsistent with the Guidelines contained herein or the recommendation of the Agent, as applicable, the Proxy Group, in consultation with Eaton Vance senior management, will then determine if a material conflict of interest exists between the relevant Adviser and its clients.

If the Proxy Group, in consultation with Eaton Vance senior management, determines that a material conflict exists, prior to instructing the Agent to vote any proxies relating to these Conflicted Companies the Adviser will seek instruction on how the proxy should be voted from:

The client, in the case of an individual or corporate client;

In the case of a Fund, its board of directors, any committee or sub-committee or group of Independent Trustees (as long as such committee, sub-committee or group contains at least two or more Independent Trustees); or

The adviser, in situations where the Adviser acts as a sub-adviser to such adviser.

The Adviser will provide all reasonable assistance to each party to enable such party to make an informed decision.

If the client, Fund board or adviser, as the case may be, fails to instruct the Adviser on how to vote the proxy, the Adviser will generally instruct the Agent, through the Proxy Administrator, to abstain from voting in order to avoid the appearance of impropriety. If however, the failure of the Adviser to vote its clients' proxies would have a material adverse economic impact on the Advisers' clients' securities holdings in the Conflicted Company, the Adviser may instruct the Agent, through the Proxy Administrator, to vote such proxies in order to protect its clients' interests. In either case, the Proxy Administrator will record the existence of the material conflict and the resolution of the matter.

The Advisers shall also identify and address conflicts that may arise from time to time concerning the Agent. Upon the Advisers' request, which shall be not less than annually, and within fifteen (15) calendar days of any material change to such information previously provided to an Adviser, the Agent shall provide the Advisers with such information as the Advisers deem reasonable and appropriate for use in determining material relationships of the Agent that may pose a conflict of interest with respect to the Agent's proxy analysis or recommendations. Such information shall include, but is not limited to, a monthly report from the Agent detailing the Agent's Corporate Securities Division clients and related revenue data. The Advisers shall review such information on a monthly basis.

The Proxy Administrator shall instruct the Agent to refer any proxies for which a material conflict of the Agent is deemed to be present to the Proxy Administrator. Any such proxy referred by the Agent shall be referred to the Proxy Group for consideration accompanied by the Agent's written analysis and voting recommendation. The Proxy Administrator will instruct the Agent to vote the proxy as recommended by the Proxy Group.

Eaton Vance Senior Floating-Rate Trust

Eaton Vance Senior Floating-Rate Trust

Statement of Additional Information

February 24, 2014

Investment Adviser and Administrator of

Eaton Vance Senior Floating-Rate Trust

Eaton Vance Management

Two International Place

Boston, MA 02110

Custodian

State Street Bank and Trust Company

200 Clarendon Street

Boston, MA 02116

Transfer Agent

American Stock Transfer & Trust Company, LLC

6201 15th Avenue

Brooklyn, NY 11219

Independent Registered Public Accounting Firm

Deloitte & Touche LLP

200 Berkeley Street

Boston, MA 02116