EATON VANCE SENIOR FLOATING RATE TRUST Form 497 February 26, 2015

Prospectus Supplement

(To Prospectus dated February 25, 2015)

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 25, 2015. 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 23, 2015, the last reported sale price for our Common Shares on the NYSE was \$14.27 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 20 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 25, 2015

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 25, 2015 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 49 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.

ii

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	19
Use of proceeds	19
Portfolio composition	20
Investment objectives, policies and risks	20
Management of the Trust	38
Plan of distribution	39
Distributions	41
Federal income tax matters	41
Dividend reinvestment plan	43
Description of capital structure	44
Custodian and Transfer Agent	48
Legal Opinions	48
Reports to Shareholders	48
Independent registered public accounting firm	48
Additional information	48
Table of contents for the Statement of	49

Additional Information The Trust's privacy policy

50

Until March 23, 2015 (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.

iii

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.

iv

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, 2015, Eaton Vance and its affiliates managed approximately \$295.7 billion of fund and separate account assets on behalf of clients, including approximately \$38.6 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 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 25, 2015 (Offering). The Distributor 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 Supplement and 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 23, 2015 was \$15.19 per share. As of February 23, 2015, the last reported sale price for the Common Shares was \$14.27.

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 \$14.27 per share (the last reported sale price per share of our Common Shares on the NYSE on February 23, 2015). Actual sales, if any, of our Common Shares under this Prospectus Supplement and the accompanying Prospectus may be greater or less than \$14.27 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, 2014 (audited); and

on a pro forma as adjusted basis to reflect the assumed sale of 1,690,275 Common Shares at \$14.27 per share (the last reported sale price for our Common Shares on the NYSE on February 23, 2015), in an offering under this Prospectus Supplement and the accompanying Prospectus, after deducting the assumed commission of \$241,202 (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, 2014	Pro Forma (unaudited)
	(audited) <u>Actual</u>	As adjusted
Net Assets	\$564,827,174	\$588,706,196
Common shares outstanding, \$0.01 par value per share		
r i r i r i r		

38,531,810

Paid-in capital Undistributed net investment income Accumulated net realized loss on investments, futures contracts and foreign currency transactions	\$687,562,596 \$53,512	\$711,441,618 \$53,512
Net unrealized appreciation (depreciation) on investments, futures contracts and swap contracts	(\$112,899,208)	(\$112,899,208)
Net Assets Net asset value per share	(\$9,889,726) \$564,827,174 \$15.33	(\$9,889,726) \$588,706,196 \$15.28

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 14.3% of the Trust s total assets and borrowings in an amount equal to 22.8% 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⁾ for the year ended October 31, 2014.

Common Shareholder transaction expenses Sales load paid by you (as a percentage of offering price) Offering expenses (as a percentage of offering price) Dividend reinvestment plan fees

 $1\%^{(2)}$ None⁽¹⁾ 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	$1.19\%^{(5)}$
Interest payments on borrowed funds	$0.40\%^{(6)}$
Other expenses	0.17%
Total annual expenses	1.76%
Dividends on preferred shares	$0.03\%^{(6)}$
Total annual Trust operating expenses and dividends on preferred shares	1.79%

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 1.79% of net assets attributable to Common Shares in years 1 through 10 and (ii) a 5% annual return:

1 Year	3 Years	5 Years	10 Years
\$28	\$66	\$106	\$218

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 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 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 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, 2014.
- (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, 2014 the outstanding borrowings and APS represented approximately 37.67% 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.

			NAV per Sha	re on Date of	NAV Premium Date of Market	· · · ·
	Maulta	4 Duile a			_	e
	Marke	t Price	Market Price I	high and Low	Lo)W
Quarter Ended	High	Low	High	Low	High	Low
1/31/2015	14.14	13.37	15.30	14.83	7.58%	9.84%
The last reported sale price, NAV per Common Share and percentage discount to NAV per Common Share on						
February 23, 2015, were \$14.27, \$15.19 and 6.06%, respectively. As of February 23, 2015, we had 36,841,535						
Common Shares outstanding and net assets of approximately \$559,637,015.						

The following table provides information about our outstanding Common Shares as of February 23, 2015:

Title of Class	Amount Authorized	Amount Held by the Trust o	<u>r Amount Outstanding</u>
		for its Account	
Common Shares	Unlimited	0	36,841,535

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 prospectus Supplement and the accompanying the sale of all of the Common Shares offered under this Prospectus Supplement and the accompanying the sale of all of the Common Shares offered under this Prospectus Supplement and the accompanying the sale of all of the Common Shares offered under this Prospectus Supplement and the accompanying the sale of all of the Common Shares offered under this Prospectus Supplement and the accompanying the sale of all of the Common Shares offered under this Prospectus Supplement and the accompanying Prospectus, at the last reported sale price of \$14.27 per share for our Common Shares on the NYSE as of February 23, 2015, we estimate that the net proceeds of this offering will be approximately \$23,879,022 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.

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, 2015, Eaton Vance and its affiliates managed approximately \$295.7 billion of fund and separate account assets on behalf of clients, including approximately \$38.6 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.

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 Investment Company Act of 1940, as amended (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 20.

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)

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.

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 \$220 million (\$210 million prior to March 25, 2014) 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, 2014, the Trust had \$210 million in outstanding borrowings, at an interest rate of 0.92%, 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 30, Investment objectives, policies and risks Additional risk considerations at page 33 and Description of capital structure at page 44.

Exchange listing. As of February 23, 2015, the Trust had 36,841,535 Common Shares outstanding as well as 5,252APS outstanding. The Trust s Common Shares are traded on the New York Stock Exchange (NYSE) under the symbol EFR. As of February 23, 2015, the last reported sales price of a Common Share of the Trust on the NYSE was \$14.27. Common Shares offered and sold pursuant to this Registration Statement will also be listed on the NYSE and trade under this symbol.

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 25, 2015, 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 49 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.

Eaton Vance Senior Floating-Rate Trust

2

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 25, 2015

Eaton Vance Senior Floating-Rate Trust

3

Table of Contents

Prospectus summary	5
Summary of Trust expenses	16
Financial highlights and investment performance	17
The Trust	19
Use of proceeds	19
Portfolio composition	20
Investment objectives, policies and risks	20
Management of the Trust	38
Plan of distribution	39
Distributions	41
Federal income tax matters	41
Dividend reinvestment plan	43
Description of capital structure	44
Custodian and Transfer Agent	48
Legal Opinions	48
Reports to Shareholders	48
Independent registered public accounting firm	48
Additional information	48
Table of contents for the Statement of Additional Information	49
The Trust's privacy policy	50

Eaton Vance Senior Floating-Rate Trust

4

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's 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.

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.

Eaton Vance Senior Floating-Rate Trust

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 portfolio managers of the Trust. Mr. Page has been an Eaton Vance portfolio manager since 1996, is a Vice President of Eaton Vance and is Co-Director of Eaton Vance s Bank Loan Investment Group. Mr. Russ has been an Eaton Vance portfolio manager since 2001, is a Vice President of Eaton Vance and is Co-Director of Eaton Vance s Bank Loan Investment Group. Mr. Campo has been an Eaton Vance portfolio manager since 2008 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 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 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

Eaton Vance Senior Floating-Rate Trust

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 23, 2015, 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 23, 2015, the last reported sales price of a Common Share of the Trust on the NYSE was \$14.27. 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 \$220 million (\$210 million prior to March 25, 2014) 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, 2014, the Trust had \$210 million in outstanding borrowings, at an interest rate of 0.92%, 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.

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.

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, 2015, Eaton Vance and its affiliates managed approximately \$295.7 billion of fund and separate account assets on behalf of clients, including approximately \$38.6 billion in floating-rate income assets. See

Management of the Trust.

Eaton Vance Senior Floating-Rate Trust

7

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 indemnifica