EATON VANCE SENIOR FLOATING RATE TRUST
Form N-CSR
December 28, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED

MANAGEMENT INVESTMENT COMPANIES

Investment Company Act File Number: 811-21411

Eaton Vance Senior Floating-Rate Trust

(Exact Name of Registrant as Specified in Charter)

Two International Place, Boston, Massachusetts 02110

(Address of Principal Executive Offices)

Maureen A. Gemma

Two International Place, Boston, Massachusetts 02110

(Name and Address of Agent for Services)

(617) 482-8260

(Registrant s Telephone Number)

October 31

Date of Fiscal Year End

October 31, 2017

Date of Reporting Period

Item 1. Reports to Stockholders

Eaton Vance

Senior Floating-Rate Trust (EFR)

Annual Report

October 31, 2017

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 swap agreements) or markets itself as providing investment exposure to such instruments. The Fund has claimed an exclusion from the definition of the term commodity pool operator under the Commodity Exchange Act. Accordingly, neither the Fund nor the adviser with respect to the operation of the Fund is subject to CFTC regulation. Because of its management of other strategies, the Fund s adviser is registered with the CFTC as a commodity pool operator and a commodity trading advisor.

Fund shares are not insured by the FDIC and are not deposits or other obligations of, or guaranteed by, any depository institution. Shares are subject to investment risks, including possible loss of principal invested.

Annual Report October 31, 2017

Eaton Vance

Senior Floating-Rate Trust

Table of Contents

Management s Discussion of Fund Performance	2
Performance	3
Fund Profile	4
Endnotes and Additional Disclosures	5
Financial Statements	6
Report of Independent Registered Public Accounting Firm	47
Federal Tax Information	48
Annual Meeting of Shareholders	49
Dividend Reinvestment Plan	50
Management and Organization	52
Important Notices	55

Eaton Vance

Senior Floating-Rate Trust

October 31, 2017

Management s Discussion of Fund Performance[1]

Economic and Market Conditions

The U.S. floating-rate loan market experienced a positive return and limited price volatility for the 12-month period ended October 31, 2017, with the S&P/LSTA Leveraged Loan Index (the Index),[2] a broad barometer of the U.S. loan market, returning 5.06%. For the period as a whole, performance was composed almost entirely of income payments, with only a small contribution from loan price appreciation.

As the period opened, capital markets in general experienced volatility following the outcome of the U.S. presidential election. In particular, many fixed-income markets experienced falling prices alongside rising interest rates, as market participants focused on the potential for a Trump Administration to spur higher economic growth and inflation by lowering taxes and reducing regulation. By contrast, the loan market was helped by increasing investor demand for floating-rate securities amid growing expectations for rising short-term interest rates. As the period carried on, the U.S. Federal Reserve Board (the Fed) followed through with its pledge to tighten financial conditions, with short-term rate hikes in December 2016, and March and June 2017. As a result, loans benefited from investor demand throughout the period.

Amid strong demand, issuance of new loans was robust throughout the period. Growth in overall loan supply, however, was limited by repayments and refinancing of existing loans. Refinancing in general delivered a recycling of existing loans at lower overall spreads to U.S. Treasurys. While tightening loan spreads throughout the period hurt some of the asset class income generating power, rising interest rates on new loan issuance provided a significant offset. Loan price changes, on the other hand, were relatively stable, with the majority of loans beginning and ending the fiscal year near their par value (issuance price). Approximately 85% of performing loans ended the period bid at 98% of their par value or higher.

With the U.S. economy continuing its low-growth recovery throughout the period, health in corporate fundamentals continued to reflect relatively benign conditions. As a result, the loan market s default rate remained low from a historical perspective, finishing the period near a 20-month low and running at approximately half its long-term average.

Fund Performance

For the fiscal year ended October 31, 2017, Eaton Vance Senior Floating-Rate Trust (the Fund) had a total return

of 8.54% at net asset value (NAV). By comparison, the Fund s benchmark, the Index, returned 5.06% for the period. The Index is unmanaged and returns do not reflect the effect of any applicable sales charges, commissions, expenses or leverage. Outperformance of the Fund versus the Index for the period was a function of the Fund s credit rating[8] positioning, diversification and loan selection, the inclusion of an allocation to high-yield bonds and the application of investment leverage.[6]

The Fund has historically tended to maintain underweight exposures, relative to the Index, to lower rated credit segments of the market, namely the CCC- and D- (defaulted) ratings tiers within the Index. This strategy may help the Fund experience limited credit losses over the long run, but it may detract from relative performance versus the Index in times when lower-quality loans perform well. For the period, the Fund held overweight positions in the BB- and B-rated segments of the Index, which returned 3.97% and 5.13%, respectively. The Fund maintained underweights to CCC- and D-rated segments of the Index, which returned 15.22% and 9.94%, respectively. As a result, the Fund s positioning in higher-quality loans detracted from performance versus the Index during the period.

Security selection overall aided Fund performance versus the Index, with loan picks in the Fund outpacing those within the Index at large. On the sector level, the period was notable for weakness in the retailers (excluding food and drugs) sector of the loan market, which suffered a negative return on challenging business results and investors seemingly increasing aversion to the space. The Fund s underweight exposure to retailers (excluding food and drugs) was therefore a contributor to relative results versus the Index. Elsewhere, the Fund s overweight exposure to food/drug retailers versus the Index was a detractor, as this area also experienced weakness.

The Fund s out-of-Index holdings in high-yield bonds also contributed to Fund performance versus the Index, as the high-yield asset class outperformed loans during the period. In a similar vein, the Fund s employment of leverage contributed to performance versus the Index as well. Utilization of leverage was helpful in that it enhanced the positive return of the Fund s underlying portfolio. The Index is unlevered.

See Endnotes and Additional Disclosures in this report.

Past performance is no guarantee of future results. Returns are historical and are calculated by determining the percentage change in net asset value (NAV) or market price (as applicable) with all distributions reinvested and include management fees and other expenses. Fund performance at market price will differ from its results at NAV due to factors such as changing perceptions about the Fund, market conditions, fluctuations in supply and demand for Fund shares, or changes in Fund distributions. Investment return and principal value will fluctuate so that shares, when sold, may be worth more or less than their original cost. Performance less than or equal to one year is cumulative. Performance is for the stated time period only; due to market volatility, current Fund performance may be lower or higher than the quoted return. For performance as of the most recent month-end, please refer to eatonvance.com.

Eaton Vance

Senior Floating-Rate Trust

October 31, 2017

Performance[2,3]

Portfolio Managers Scott H. Page, CFA, Craig P. Russ and Peter M. Campo, CFA

% Average Annual Total Returns	**Inception Date**	**One Year**	**Five Years**	**Ten Years**
Fund at NAV	11/28/2003	8.54%	6.24%	5.82%
Fund at Market Price		9.04	4.48	6.35
S&P/LSTA Leveraged Loan Index		5.06%	4.15%	4.68%

% Premium/Discount to NAV[4]	
	4.34%

Distributions[5]	
Total Distributions per share for the period	$ 0.873
Distribution Rate at NAV	5.44%
Distribution Rate at Market Price	5.69%

% Total Leverage[6]	
Auction Preferred Shares (APS)	11.21%
Borrowings	23.27

See Endnotes and Additional Disclosures in this report.

Past performance is no guarantee of future results. Returns are historical and are calculated by determining the percentage change in net asset value (NAV) or market price (as applicable) with all distributions reinvested and include management fees and other expenses. Fund performance at market price will differ from its results at NAV due to factors such as changing perceptions about the Fund, market conditions, fluctuations in supply and demand for Fund shares, or changes in Fund distributions. Investment return and principal value will fluctuate so that shares, when sold, may be worth more or less than their original cost. Performance less than or equal to one year is cumulative. Performance is for the stated time period only; due to market volatility, current Fund performance may be lower or higher than the quoted return. For performance as of the most recent month-end, please refer to eatonvance.com.

Eaton Vance

Senior Floating-Rate Trust

October 31, 2017

Fund Profile

Top 10 Issuers (% of total investments)[7]

Valeant Pharmaceuticals International, Inc.	1.2%
Reynolds Group Holdings, Inc.	1.2
Univision Communications, Inc.	1.0
TransDigm, Inc.	1.0
Asurion, LLC	1.0
Virgin Media Investment Holdings Limited	0.9
Envision Healthcare Corporation	0.8
Infor (US), Inc.	0.8
MEG Energy Corp.	0.8
Jaguar Holding Company II	0.8
Total	9.5%

Top 10 Sectors (% of total investments)[7]

Health Care	9.8%
Electronics/Electrical	9.4
Business Equipment and Services	8.3
Chemicals and Plastics	5.1
Telecommunications	4.5
Drugs	4.2
Retailers (Except Food and Drug)	4.1
Industrial Equipment	3.7

Cable and Satellite Television	3.6
Leisure Goods/Activities/Movies	3.6
Total	56.3%

See Endnotes and Additional Disclosures in this report.

Eaton Vance

Senior Floating-Rate Trust

October 31, 2017

Endnotes and Additional Disclosures

[1] The views expressed in this report are those of the portfolio manager(s) and are current only through the date stated at the top of this page. These views are subject to change at any time based upon market or other conditions, and Eaton Vance and the Fund(s) disclaim any responsibility to update such views. These views may not be relied upon as investment advice and, because investment decisions are based on many factors, may not be relied upon as an indication of trading intent on behalf of any Eaton Vance fund. This commentary may contain statements that are not historical facts, referred to as forward looking statements . The Fund s actual future results may differ significantly from those stated in any forward looking statement, depending on factors such as changes in securities or financial markets or general economic conditions, the volume of sales and purchases of Fund shares, the continuation of investment advisory, administrative and service contracts, and other risks discussed from time to time in the Fund s filings with the Securities and Exchange Commission.

[2] S&P/LSTA Leveraged Loan Index is an unmanaged index of the institutional leveraged loan market. Unless otherwise stated, index returns do not reflect the effect of any applicable sales charges, commissions, expenses, taxes or leverage, as applicable. It is not possible to invest directly in an index.

[3] Performance results reflect the effects of leverage. The Fund s performance for certain periods reflects the effects of expense reductions. Absent these reductions, performance would have been lower. Performance since inception for an index, if presented, is the performance since the Fund s or oldest share class inception, as applicable. Included in the average annual total return at NAV for the five and ten year periods is the impact of the tender and repurchase of a portion of the Fund s APS at 95% of the Fund s APS per share liquidation preference. Had this transaction not occurred, the total return at NAV would be lower for the Fund.

[4] The shares of the Fund often trade at a discount or premium from their net asset value. The discount or premium of the Fund may vary over time and may be higher or lower than what is quoted in this report. For up-to-date premium/discount information, please refer to http://eatonvance.com/closedend.

[5] The Distribution Rate is based on the Fund s last regular distribution per share in the period (annualized) divided by the Fund s NAV or market price at the end of the period. The Fund s distributions may be comprised of amounts characterized for federal income tax purposes as qualified and non-qualified ordinary dividends, capital gains and nondividend distributions, also known as return of capital. For additional information about nondividend distributions, please refer to Eaton Vance Closed-End Fund Distribution Notices (19a) posted on our website, eatonvance.com. The Fund will determine the federal income tax character of distributions paid to a shareholder after the end of the calendar year. This is reported on the IRS form 1099-DIV and provided to the shareholder shortly after each year-end. For information about the tax character of distributions made in prior calendar years,

please refer to Performance-Tax Character of Distributions on the Fund s webpage available at eatonvance.com. The Fund s distributions are determined by the investment adviser based on its current assessment of the Fund s long-term return potential. Fund distributions may be affected by numerous factors including changes in Fund performance, the cost of financing for leverage, portfolio holdings, realized and projected returns, and other factors. As portfolio and market conditions change, the rate of distributions paid by the Fund could change.

[6] Leverage represents the liquidation value of the Fund s APS and borrowings outstanding as a percentage of Fund net assets applicable to common shares plus APS and borrowings outstanding. Use of leverage creates an opportunity for income, but creates risks including greater price volatility. The cost of leverage rises and falls with changes in short-term interest rates. The Fund may be required to maintain prescribed asset coverage for its leverage and may be required to reduce its leverage at an inopportune time.

[7] Excludes cash and cash equivalents.

[8] Credit ratings are categorized using S&P Ratings, which are subject to change, apply to the creditworthiness of the issuers of the underlying securities and not to the Fund or its shares. Credit ratings measure the quality of a bond based on the issuer s creditworthiness, with ratings ranging from AAA, being the highest, to D, being the lowest based on S&P s measures. Ratings of BBB or higher by S&P are considered to be investment- grade quality. Credit ratings are based largely on the ratings agency s analysis at the time of rating. The rating assigned to any particular security is not necessarily a reflection of the issuer s current financial condition and does not necessarily reflect its assessment of the volatility of a security s market value or of the liquidity of an investment in the security. Holdings designated as Not Rated are not rated by S&P.

Fund profile subject to change due to active management.

Eaton Vance

Senior Floating-Rate Trust

October 31, 2017

Portfolio of Investments

Senior Floating-Rate Loans — 138.3%[1]

Borrower/Tranche Description	Principal Amount* (000's omitted)	Value
Aerospace and Defense — 2.0%		
Accudyne Industries, LLC		
Term Loan, 5.08%, (3 mo. USD LIBOR + 3.75%), Maturing August 2, 2024	700	$ 705,851
IAP Worldwide Services, Inc.		
Revolving Loan, 1.38%, (3 mo. USD LIBOR + 5.50%), Maturing July 18, 2018[2]	311	310,143
Term Loan - Second Lien, 8.00%, (3 mo. USD LIBOR + 6.50%), Maturing July 18, 2019[3]	417	336,239
TransDigm, Inc.		
Term Loan, 4.33%, (USD LIBOR + 3.00%), Maturing June 4, 2021[4]	1,766	1,775,620
Term Loan, 4.27%, (USD LIBOR + 3.00%), Maturing June 9, 2023[4]	4,289	4,312,789
Term Loan, 4.26%, (USD LIBOR + 3.00%), Maturing August 22, 2024[4]	2,584	2,600,118
Wesco Aircraft Hardware Corp.		
Term Loan, 4.25%, (1 mo. USD LIBOR + 3.00%), Maturing October 4, 2021	926	911,777
		$ 10,952,537
Automotive — 2.5%		
Allison Transmission, Inc.		
Term Loan, 3.25%, (1 mo. USD LIBOR + 2.00%), Maturing September 23, 2022	1	$ 1,442
American Axle and Manufacturing, Inc.		
Term Loan, 3.56%, (USD LIBOR + 2.25%), Maturing April 6, 2024[4]	3,037	3,041,940
Apro, LLC		
Term Loan, 5.24%, (1 mo. USD LIBOR + 4.00%), Maturing August 8, 2024	275	279,125
CS Intermediate Holdco 2, LLC		
Term Loan, 3.58%, (3 mo. USD LIBOR + 2.25%), Maturing November 2, 2023	595	599,645
Dayco Products, LLC		
Term Loan, 6.32%, (3 mo. USD LIBOR + 5.00%), Maturing May 19, 2023	1,022	1,032,662

FCA US, LLC				
Term Loan, 3.24%, (1 mo. USD LIBOR + 2.00%), Maturing December 31, 2018		1,209		1,215,398
Federal-Mogul Holdings Corporation				
Term Loan, 4.99%, (1 mo. USD LIBOR + 3.75%), Maturing April 15, 2021		3,005		3,028,687
Horizon Global Corporation				
Term Loan, 5.74%, (1 mo. USD LIBOR + 4.50%), Maturing June 30, 2021		355		358,150

Borrower/Tranche Description		**Principal Amount* (000 s omitted)**		**Value**
Automotive (continued)				
Sage Automotive Interiors, Inc.				
Term Loan, 6.24%, (1 mo. USD LIBOR + 5.00%), Maturing October 27, 2022		720	$	722,261
TI Group Automotive Systems, LLC				
Term Loan, 3.75%, (3 mo. EURIBOR + 3.00%, Floor 0.75%), Maturing June 30, 2022	EUR	784		921,994
Term Loan, 3.99%, (1 mo. USD LIBOR + 2.75%), Maturing June 30, 2022		957		961,897
Tower Automotive Holdings USA, LLC				
Term Loan, 4.00%, (1 mo. USD LIBOR + 2.75%), Maturing March 7, 2024		1,333		1,341,721
Visteon Corporation				
Term Loan, 3.58%, (3 mo. USD LIBOR + 2.25%), Maturing March 24, 2024		627		631,133
			$	**14,136,055**
Beverage and Tobacco 0.8%				
Arterra Wines Canada, Inc.				
Term Loan, 4.04%, (2 mo. USD LIBOR + 2.75%), Maturing December 15, 2023		2,134	$	2,151,213
Flavors Holdings, Inc.				
Term Loan, 7.08%, (3 mo. USD LIBOR + 5.75%), Maturing April 3, 2020		1,116		1,048,943
Term Loan - Second Lien, 11.33%, (3 mo. USD LIBOR + 10.00%), Maturing October 3, 2021		1,000		745,000
Refresco Group B.V.				
Term Loan, Maturing September 26, 2024(5)		350		352,625
			$	**4,297,781**
Brokerage / Securities Dealers / Investment Houses 0.9%				
Aretec Group, Inc.				
Term Loan, 5.49%, (1 mo. USD LIBOR + 4.25%), Maturing November 23, 2020		1,433	$	1,435,015
Term Loan - Second Lien, 6.74%, (1 mo. USD LIBOR + 5.50% (2.00% Cash, 4.74% PIK)), Maturing May 23, 2021		2,465		2,453,971
Resolute Investment Managers, Inc.				
Term Loan - Second Lien, 10.13%, (3 mo. USD LIBOR + 8.75%), Maturing March 3, 2023		275		277,062

Term Loan - Second Lien, Maturing April 30, 2023[(5)]	275	275,000
Salient Partners L.P.		
Term Loan, 9.85%, (3 mo. USD LIBOR + 8.50%), Maturing May 19, 2021	709	687,730
		$ 5,128,778

See Notes to Financial Statements.

Eaton Vance

Senior Floating-Rate Trust

October 31, 2017

Portfolio of Investments — continued

Borrower/Tranche Description	Principal Amount* (000's omitted)	Value
Building and Development — 3.4%		
American Builders & Contractors Supply Co., Inc.		
Term Loan, 3.74%, (1 mo. USD LIBOR + 2.50%), Maturing October 31, 2023	2,662	$ 2,680,477
Beacon Roofing Supply, Inc.		
Term Loan, Maturing August 23, 2024[5]	575	579,073
Core & Main L.P.		
Term Loan, 4.46%, (6 mo. USD LIBOR + 3.00%), Maturing August 1, 2024	750	757,344
CPG International, Inc.		
Term Loan, 5.08%, (3 mo. USD LIBOR + 3.75%), Maturing May 3, 2024	1,884	1,901,836
DTZ U.S. Borrower, LLC		