

EATON VANCE SENIOR FLOATING RATE TRUST
Form N-CSRS
June 26, 2008

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)

The Eaton Vance Building, 255 State Street, Boston, Massachusetts
(Address of principal executive offices)

02109
(Zip code)

Maureen A. Gemma
The Eaton Vance Building, 255 State Street, Boston, Massachusetts 02109
(Name and address of agent for service)

Registrant's telephone number, including area code: (617) 482-8260

Date of fiscal year
end: October 31

Date of reporting period: April 30, 2008

Item 1. Reports to Stockholders

Semiannual Report April 30, 2008

EATON VANCE
SENIOR
FLOATING-RATE
TRUST

**IMPORTANT NOTICES REGARDING PRIVACY,
DELIVERY OF SHAREHOLDER DOCUMENTS,
PORTFOLIO HOLDINGS AND PROXY VOTING**

Privacy. 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, Boston Management and Research, and Eaton Vance Distributors, Inc.

In addition, our Privacy Policy only applies 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.

Delivery of Shareholder Documents. The Securities and Exchange Commission (the "SEC") permits funds to deliver only one copy of shareholder documents, including prospectuses, proxy statements and shareholder reports, to fund investors with multiple accounts at the same residential or post office box address. This practice is often called "householding" and it helps eliminate duplicate mailings to shareholders.

Eaton Vance, or your financial adviser, may household the mailing of your documents indefinitely unless you instruct Eaton Vance, or your financial adviser, otherwise.

If you would prefer that your Eaton Vance documents not be househomed, please contact Eaton Vance at 1-800-262-1122, or contact your financial adviser.

Your instructions that householding not apply to delivery of your Eaton Vance documents will be effective within 30 days of receipt by Eaton Vance or your financial adviser.

Portfolio Holdings. Each Eaton Vance Fund and its underlying Portfolio (if applicable) will file a schedule of its portfolio holdings on Form N-Q with the SEC for the first and third quarters of each fiscal year. The Form N-Q will be available on the Eaton Vance website www.eatonvance.com, by calling Eaton Vance at 1-800-262-1122 or in the EDGAR database on the SEC's website at www.sec.gov. Form N-Q may also be reviewed and copied at the SEC's public reference room in Washington, D.C. (call 1-800-732-0330 for information on the operation of the public reference room).

Proxy Voting. From time to time, funds are required to vote proxies related to the securities held by the funds. The Eaton Vance Funds or their underlying Portfolios (if applicable) vote proxies according to a set of policies and procedures approved by the Funds' and Portfolios' Boards. You may obtain a description of these policies and procedures and information on how the Funds or Portfolios voted proxies relating to portfolio securities during the most recent 12 month period ended June 30, without charge, upon request, by calling 1-800-262-1122. This description is also available on the SEC's website at www.sec.gov.

Eaton Vance Senior Floating-Rate Trust as of April 30, 2008

INVESTMENT UPDATE

Scott H. Page, CFA
Co-Portfolio Manager

Peter M. Campo, CFA
Co-Portfolio Manager

Economic and Market Conditions

- The price dislocation in credit markets that began in the second half of 2007 worsened during the first quarter of 2008. What began as a reaction to the unrelated but growing subprime mortgage problem, grew into a substantial market-wide sell-off that affected not just the loan market but other fixed income and equity asset classes as well. This turmoil led to the collapse of Bear Stearns, and the Federal Reserve's unprecedented action to provide liquidity to the broader market to avert a possible risk of financial market collapse. The impact on the bank loan asset class was significant and unprecedented. Average loan prices, which had fallen about 4-5% by December 2007, declined a further 7-8% by mid-February before recovering somewhat by the end of that month. Along with the tentative return

of market confidence, loan prices have been rising steadily since mid-March 2008 and, as of April 30, 2008, were up approximately 4-5% from their mid-February bottom. Management is cautiously optimistic that the worst is behind us.

- Notwithstanding the market turmoil, management believes that the bank loan asset class fundamentals remain relatively benign. Default rates in the market place have increased to 1%, but remain well below historical averages of 3%. According to S&P's Leveraged Commentary & Data, the market expectations are for default rates to reach 5% in 2008 and 2009. While default risks have certainly increased in the past several months due to the weakening economy, management believes they are contained and are already priced into the asset class. Actual realized credit losses from defaulted loans during the six months ended April 30, 2008 were minimal.

Craig P. Russ
Co-Portfolio Manager

Management Discussion

- The Trust's investment objective is to seek to provide a high level of current income. As a secondary objective, it may also seek preservation of capital to the extent consistent with its primary goal of high current income. Under normal market conditions, the Trust invests at least 80% of its total assets in senior, secured floating-rate loans (senior loans). In managing the Trust, the investment adviser seeks to invest in a portfolio of senior loans that will be less volatile over time than the general loan market. The Trust may also invest in second lien loans and high yield bonds, and, as discussed on the next page, may employ leverage, which may increase risk.
- The Trust's investments included senior loans to 450 borrowers spanning 39 industries on April 30, 2008, with an average loan size of 0.20% of total investments, and no industry constituting more than 9% of total investments. Health care, business equipment and services, cable and satellite television, publishing, and chemicals and plastics were the top industry weightings.
- The Trust continues to have less than 1% exposure to home builders. The Trust did not have any exposure to subprime or prime mortgage lenders during the six-month period ended April 30, 2008.

- The Trust's net asset value declined in November 2007 through February 2008, as the dimensions of the credit crises widened, before rebounding in March and April 2008 reflecting conditions in the broader market. The Trust underperformed its benchmark during the period primarily due to the use of

Eaton Vance Senior Floating-Rate Trust

Total Return Performance 10/31/07 4/30/08

NYSE Symbol	EFR
At Market(1)	-3.35%
At Net Asset Value(1)	-6.74%
S&P/LSTA Leveraged Loan Index(2)	-3.31%
Total Distributions per share	\$ 0.686
Distribution Rate(3)	At Market 7.54% At NAV 7.11%

Please refer to page 3 for additional performance information.

(1) Performance results reflect the effect of leverage resulting from the Trust's issuance of Auction Preferred Shares.

(2) It is not possible to invest directly in an Index. The Index's total return reflects changes in value of the loans constituting the Index and accrual of interest and does not reflect the commissions or expenses that would have been incurred if an investor individually purchased or sold the loans represented in the Index. Unlike the Trust, the Index's return does not reflect the effect of leverage.

(3) The Distribution Rate is based on the Trust's most recent monthly distribution per share (annualized) divided by the Trust's NAV or market price at the end of the period. The Trust's monthly distributions may be comprised of ordinary income, net realized capital gains and return of capital.

Past performance is no guarantee of future results. Returns are historical and are calculated by determining the percentage change in net asset value or share price (as applicable) with all distributions reinvested. The Trust's performance at market share price will differ from its results at NAV. Although share price performance generally reflects investment results over time, during shorter periods, returns at share price can also be affected by factors such as changing perceptions about the Trust, market conditions, fluctuations in supply and demand for the Trust's shares, or changes in Trust distributions. Investment return and principal value will fluctuate so that shares, when sold, may be worth more or less than their original cost. Performance is for the stated time period only; due to market volatility, the Trust's current

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performance may be lower or higher than the quoted return. Absent an expense waiver by the investment adviser, returns would be lower. For performance as of the most recent month end, please refer to www.eatonvance.com.

Trust 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.

leverage. Unlike the Trust, the Index's return does not reflect the effect of leverage.

- As of April 30, 2008, the Trust had leverage in the amount of approximately 42.5% of the Trust's total assets. The Trust employs leverage through the issuance of Auction Preferred Shares ("APS"). (1) Use of financial leverage creates an opportunity for increased income but, at the same time, creates special risks (including the likelihood of greater volatility of net asset value and market price of common shares). The cost of the Trust's APS rises and falls with changes in short-term interest rates. Such increases/ decreases in cost of the Trust's APS may be offset by increased/decreased income from the Trust's senior loan investments.

- As has been widely reported since mid-February 2008, the normal functioning of the auction market in the U.S. for certain types of auction rate securities has been disrupted by an imbalance between buy and sell orders. Consistent with patterns in the broader market for auction rate securities, the Trust has, since mid-February, experienced unsuccessful APS auctions. In the event of an unsuccessful auction, the affected APS shares remain outstanding, and the dividend rate reverts to the specified maximum payable rate.

- As of May 7, 2008, the Trust redeemed two-thirds of its outstanding APS, representing 10,508 shares and \$262,700,000 in liquidation preferences, through debt financing. The Trust was not required to sell portfolio holdings, and the cost to the Trust of the new debt leverage is expected, over time, to be lower than the total cost of the APS based on the maximum applicable dividend rates that apply when auctions do not clear.

- Effective January 30, 2008, Peter M. Campo assumed co-portfolio management responsibilities for Eaton Vance Senior Floating-Rate Trust. Mr. Campo joined Eaton Vance in 2003 as an analyst in the bank loan group, and has been a Vice President since 2005. Previously, Mr. Campo worked as a bank loan analyst at CypressTree Investment Management.

(1) *In the event of a rise in long-term interest rates, the value of the Trust's investment portfolio could decline, which would reduce the asset coverage for its Auction Preferred Shares.*

Portfolio Composition

Top Ten Holdings(2)

By total investments

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Sungard Data Systems, Inc.	1.3%
Charter Communications Operating, Inc.	1.2
Univision Communications, Inc.	1.1
WGM Acquisition Corp.	1.1
Idearc, Inc.	0.9
UPC Broadband Holding B.V.	0.9
Georgia-Pacific Corp.	0.9
HCA, Inc.	0.8
Community Health Systems, Inc.	0.8
Nielson Finance, LLC	0.8

(2) Reflects the Trust's investments as of 4/30/08. Holdings are shown as a percentage of the Trust's total investments.

Top Five Industries(3)

By total investments

Health Care	9.0%
Business Equipment and Services	6.8
Cable and Satellite Television	6.7
Publishing	6.6
Chemicals and Plastics	6.2

(3) Reflects the Trust's investments as of 4/30/08. Industries are shown as a percentage of the Trust's total investments.

Credit Quality Ratings for Total Loan Investments(4)

By total loan investments

Baa	0.8%
Ba	51.3
B	31.0
Caa	3.0
Non-Rated(5)	13.9

(4) Credit Quality ratings are those provided by Moody's Investor Services, Inc., a nationally recognized bond rating service. Reflects the Trust's total loan investments as of 4/30/08.

(5) Certain loans in which the Trust invests are not rated by a rating agency. In management's opinion, such securities are comparable to securities rated by a rating agency in the categories listed above.

The views expressed throughout this report are those of the portfolio managers and are current only through the end of the period of the report as stated on the cover. These views are subject to change at any time based upon market or other conditions, and Eaton Vance disclaims any responsibility to update such views. These views may not be relied on as investment advice and, because investment decisions for an Eaton Vance fund are based on many factors, may not be relied on as an indication of trading intent on behalf of any Eaton Vance fund. Portfolio information provided in the report may not be representative of current or future investments and may change due to active management.

Eaton Vance Senior Floating-Rate Trust as of April 30, 2008

FUND PERFORMANCE**Trust Performance⁽¹⁾**

New York Stock Exchange Symbol	EFR
Average Annual Total Return (by share price, NYSE)	
Six Months	-3.35%
One Year	-14.72
Life of Trust (11/28/03)	1.96
Average Annual Total Return (at net asset value)	
Six Months	-6.74%
One Year	-7.75
Life of Trust (11/28/03)	3.33

(1) Performance results reflect the effect of leverage resulting from the Trust's issuance of Auction Preferred Shares.

Past performance is no guarantee of future results. Returns are historical and are calculated by determining the percentage change in net asset value or share price (as applicable) with all distributions reinvested. The Trust's performance at market share price will differ from its results at NAV. Although share price performance generally reflects investment results over time, during shorter periods, returns at share price can also be affected by factors such as changing perceptions about the Trust, market conditions, fluctuations in supply and demand for the Trust's shares, or changes in Trust distributions. Investment return and principal value will fluctuate so that shares, when redeemed, may be worth more or less than their original cost. Performance is for the stated time period only; due to market volatility, the Trust's current performance may be lower or higher than the quoted return. Absent an expense waiver by the investment adviser, the returns would be lower. For performance as of the most recent month end, please refer to www.eatonvance.com.

Eaton Vance Senior Floating-Rate Trust as of April 30, 2008

PORTFOLIO OF INVESTMENTS (Unaudited)

Senior Floating-Rate Interests	157.5%		
Principal Amount*		Borrower/Tranche Description	Value
Aerospace and Defense 3.0%			
ACTS Aero Technical Support & Service, Inc.			
709,366		Term Loan, 5.96%, Maturing October 5, 2014	\$ 595,868
AWAS Capital, Inc.			
1,000,000		Term Loan, 4.38%, Maturing March 22, 2013	861,250
Colt Defense, LLC			
986,389		Term Loan, 6.11%, Maturing July 9, 2014	912,410
DAE Aviation Holdings, Inc.			
416,490		Term Loan, 6.52%, Maturing July 31, 2014	409,852
413,692		Term Loan, 6.65%, Maturing July 31, 2014	407,099
Evergreen International Aviation			
1,391,630		Term Loan, 7.75%, Maturing October 31, 2011	1,238,551
Hawker Beechcraft Acquisition			
200,822		Term Loan, 4.70%, Maturing March 26, 2014	191,973
3,446,097		Term Loan, 4.70%, Maturing March 26, 2014	3,294,255
Hexcel Corp.			
820,506		Term Loan, 4.54%, Maturing March 1, 2012	795,891
IAP Worldwide Services, Inc.			
953,063		Term Loan, 9.00%, Maturing December 30, 2012	795,807
Spirit AeroSystems, Inc.			
1,605,708		Term Loan, 4.57%, Maturing December 31, 2011	1,586,641
TransDigm, Inc.			
1,625,000		Term Loan, 4.66%, Maturing June 23, 2013	1,553,906
Vought Aircraft Industries, Inc.			
2,118,165		Term Loan, 5.12%, Maturing December 17, 2011	2,000,782
Wesco Aircraft Hardware Corp.			
1,142,688		Term Loan, 4.95%, Maturing September 29, 2013	1,117,454
			\$ 15,761,739
Air Transport 0.9%			
Airport Development and Investment, Ltd.			
GBP 982,900		Term Loan, 9.94%, Maturing April 7, 2011	\$ 1,698,177
Delta Air Lines, Inc.			
1,191,000		Term Loan, 6.15%, Maturing April 30, 2014	952,800
Northwest Airlines, Inc.			

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500,000	DIP Loan, Maturing August 21, 2008 ⁽²⁾	415,000
2,079,000	DIP Loan, 4.72%, Maturing August 21, 2008	1,832,598
		\$ 4,898,575

Principal Amount*	Borrower/Tranche Description	Value
Automotive 6.0%		
Accuride Corp.		
1,957,967	Term Loan, 6.24%, Maturing January 31, 2012	\$ 1,899,228
Adesa, Inc.		
4,193,313	Term Loan, 4.95%, Maturing October 18, 2013	3,986,268
Affina Group, Inc.		
1,370,985	Term Loan, 5.90%, Maturing November 30, 2011	1,220,177
Allison Transmission, Inc.		
2,985,000	Term Loan, 5.57%, Maturing September 30, 2014	2,805,634
AxleTech International Holding, Inc.		
1,750,000	Term Loan, 9.19%, Maturing April 21, 2013	1,618,750
Chrysler Financial		
1,496,241	Term Loan, 6.80%, Maturing August 1, 2014	1,365,528
CSA Acquisition Corp.		
357,460	Term Loan, 5.25%, Maturing December 23, 2011	344,949
893,298	Term Loan, 5.25%, Maturing December 23, 2011	862,032
488,750	Term Loan, 5.25%, Maturing December 23, 2012	471,644
Dayco Products, LLC		
1,748,610	Term Loan, 7.35%, Maturing June 21, 2011	1,383,588
Delphi Corp.		
1,000,000	DIP Loan, 6.88%, Maturing July 1, 2008	1,006,429
Ford Motor Co.		
1,752,813	Term Loan, 5.80%, Maturing December 15, 2013	1,615,052
General Motors Corp.		
3,414,312	Term Loan, 5.06%, Maturing November 29, 2013	3,216,388
Goodyear Tire & Rubber Co.		
2,400,000	Term Loan, 4.54%, Maturing April 30, 2010	2,280,000
HLI Operating Co., Inc.		