

EATON VANCE SENIOR FLOATING RATE TRUST
Form N-CSRS
June 28, 2007

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)

Alan R. Dynner

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, 2007

Item 1. Reports to Stockholders

Semiannual Report April 30, 2007

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 househanded, 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, 2007

INVESTMENT UPDATE

The Trust

Performance for the Past Six Months

- Based on share price, Eaton Vance Senior Floating-Rate Trust (the Trust), a closed-end fund traded on the New York Stock Exchange, had a total return of 9.77% for the six months ended April 30, 2007. That return was the result of an increase in share price to \$19.18 on April 30, 2007, from \$18.24 on October 31, 2006, and the reinvestment of \$0.808 in dividends.(1)
- Based on net asset value (NAV), the Trust had a total return of 5.06% for the six months ended April 30, 2007. That return was the result of an increase in NAV to \$18.81 on April 30, 2007, from \$18.69 on October 31, 2006, and the reinvestment of all distributions. (1)
- Based on its April 2007 monthly dividend payment of \$0.13 and a closing share price of \$19.18, the Trust had a market yield of 8.13%.(2)
- For performance comparison, the S&P/LSTA Leveraged Loan Index – an unmanaged index of U.S. dollar-denominated leveraged loans – had a total return of 3.86% for the six months ended April 30, 2007.(3)

The Trust's Investments

- The Trust's loan investments represented 454 borrowers and 39 industries as of April 30, 2007. The Trust's average loan size was 0.19% of total investments, and no industry constituted more than 8.0% of the Trust's total assets. Health care, business equipment/services, leisure goods/activities/movies, publishing and chemicals/plastics were the Trust's largest industry weightings. (4)
- In the six months ended April 30, 2007, despite record new loan issuance, demand exceeded loan supply. The technical imbalance resulted in loans repricing at slightly lower credit spreads. In addition, certain large new issues came to market with fewer financial covenants. However, despite this fact, management notes that the chief determinants of the loan asset class's long-term performance – seniority and security – remain in place. Reflecting increasing investor demand for loans, the Trust's share price traded at a premium at April 30, 2007, reversing the discount that prevailed throughout most of 2006.
- The Trust had a 7.0% exposure in European loans at April 30, 2007. European issuance continued to grow and represented further opportunities for diversification. For example, while there may be concerns about a slowing U.S. economy, the Trust benefited from loans to companies operating in the relatively robust U.K. and German economies. All of the Trust's non-dollar-denominated investments were hedged to help protect against foreign currency risk.
- The Trust's 8% investment in high-yield bonds contributed to performance during the six months ended April 30, 2007. With high-yield spreads at historically low levels, the Trust's bond investments remained focused on shorter-maturity securities, while avoiding deeply subordinated and overleveraged new issues.
- At April 30, 2007, the Trust had leverage in the amount of approximately 38.5% of the Trust's total assets. The Trust employs leverage through the issuance of Auction Preferred Shares (APS).(5) Use of financial leverage creates an opportunity for increased income but, at the same time, creates special risks (including the likelihood of

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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 the cost of the Trust's APS may be offset by increased/decreased income from the Trust's senior loan investments.

The views expressed in 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.

- (1) Performance results reflect the effect of leverage resulting from the Trust's issuance of Auction Preferred Shares. Absent an expense waiver by the investment adviser, returns would be lower.*
- (2) The Trust's market yield is calculated by dividing the most recent dividend per share by the share market price at the end of the period and annualizing the result.*
- (3) 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, such as the issuance of Auction Preferred Shares.*
- (4) Holdings and industry weightings are subject to change due to active management.*
- (5) 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.*

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. 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. For performance as of the most recent month end, please refer to www.eatonvance.com.

Shares of the Trust 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.

Eaton Vance Senior Floating-Rate Trust as of April 30, 2007

PERFORMANCE

Performance(1)

Average Annual Total Return (by share price, NYSE)	
Six Months	9.77 %
One Year	18.49
Life of Trust (11/28/03)	7.40
Average Annual Total Return (at net asset value)	
Six Months	5.06 %
One Year	8.74
Life of Trust (11/28/03)	6.79

(1) Performance results reflect the effect of leverage resulting from the Trust's issuance of Auction Preferred Shares. Absent an expense waiver by the investment adviser, the returns would be lower. 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.

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. 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. For performance as of the most recent month end, please refer to www.eatonvance.com.

Diversification by Industries(2)

By total investments

Health Care	7.5 %
Business Equip. & Services	7.2
Leisure Goods/Activities/Movies	6.1
Chemicals & Plastics	5.9
Publishing	5.4
Building & Development	5.2
Cable & Satellite Television	4.7
Radio & Television	4.5
Automotive	4.3
Telecommunications	4.2
Containers & Glass Products	3.2
Retailers (Except Food & Drug)	3.2
Lodging & Casinos	3.1
Electronics/Electrical	2.8
Utilities	2.6
Oil & Gas	2.4
Financial Intermediaries	2.4
Food Products	2.4
Forest Products	1.8
Industrial Equipment	1.8
Conglomerates	1.8 %
Nonferrous Metals/Minerals	1.7
Aerospace & Defense	1.7
Ecological Services & Equip.	1.6

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Food Service	1.4
Food/Drug Retailers	1.3
Home Furnishings	1.2
Insurance	0.9
Drugs	0.9
Equipment Leasing	0.7
Surface Transport	0.7
Beverage & Tobacco	0.7
Clothing/Textiles	0.5
Farming/Agriculture	0.3
Air Transport	0.3
Broker/Dealer/Investment	0.3
Rail Industries	0.3
Cosmetics/Toiletries	0.3
Steel	0.1

(2) Reflects the Trust's investments as of April 30, 2007. Industries are shown as a percentage of the Trust's total investments. Portfolio information may not be representative of the Trust's current or future investments and are subject to change due to active management.

Trust allocations(3)

By total investments

(3) Trust Allocations are shown as a percentage of the Trust's total investments, which represents 159.1% of the Trust's net assets as of April 30, 2007. Trust statistics may not be representative of the Trust's current or future investments and are subject to change due to active management.

Eaton Vance Senior Floating-Rate Trust as of April 30, 2007

PORTFOLIO OF INVESTMENTS (Unaudited)

Senior, Floating Rate Interests 139.2%			
Principal Amount		Borrower/Tranche Description	Value
Aerospace and Defense 2.6%			
DRS Technologies, Inc.			
\$	828,386	Term Loan, 6.86%, Maturing January 31, 2013	\$ 830,561
Evergreen International Aviation			
	1,472,461	Term Loan, 8.83%, Maturing October 31, 2011	1,481,664
Hawker Beechcraft Acquisition			
	176,702	Term Loan, 5.25%, Maturing March 26, 2014	177,538
	2,088,298	Term Loan, 7.32%, Maturing March 26, 2014	2,098,180
Hexcel Corp.			
	1,386,641	Term Loan, 7.11%, Maturing March 1, 2012	1,391,840
IAP Worldwide Services, Inc.			
	962,813	Term Loan, 9.69%, Maturing December 30, 2012	965,069
K&F Industries, Inc.			
	1,385,545	Term Loan, 7.32%, Maturing November 18, 2012	1,387,927
Spirit AeroSystems, Inc.			
	1,622,010	Term Loan, 7.11%, Maturing December 31, 2011	1,631,134
Standard Aero Holdings, Inc.			
	1,220,448	Term Loan, 7.59%, Maturing August 24, 2012	1,222,737
TransDigm, Inc.			
	1,625,000	Term Loan, 7.35%, Maturing June 23, 2013	1,636,578
Vought Aircraft Industries, Inc.			
	2,138,729	Term Loan, 7.83%, Maturing December 17, 2011	2,157,443
Wesco Aircraft Hardware Corp.			
	1,164,229	Term Loan, 7.60%, Maturing September 29, 2013	1,173,689
Wyle Laboratories, Inc.			
	250,335	Term Loan, 8.11%, Maturing January 28, 2011	251,665
			\$ 16,406,025
Air Transport 0.3%			
Northwest Airlines, Inc.			
\$	2,100,000	DIP Loan, 7.32%, Maturing August 21, 2008	\$ 2,109,845
			\$ 2,109,845
Automotive 6.4%			
AA Acquisitions Co., Ltd.			
GBP	1,000,000	Term Loan, 7.90%, Maturing June 25, 2012	\$ 2,029,564
Accuride Corp.			

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	2,024,423	Term Loan, 7.38%, Maturing January 31, 2012	2,038,762
Affina Group, Inc.			
	1,370,985	Term Loan, 8.36%, Maturing November 30, 2011	1,381,910
AxleTech International Holding, Inc.			
	1,750,000	Term Loan, 11.85%, Maturing April 21, 2013	1,767,500
Principal Amount		Borrower/Tranche Description	Value
Automotive (continued)			
CSA Acquisition Corp.			
\$	361,032	Term Loan, 7.88%, Maturing December 23, 2011	\$ 363,232
	929,390	Term Loan, 7.88%, Maturing December 23, 2011	935,054
	493,750	Term Loan, 7.88%, Maturing December 23, 2012	497,453
Dana Corp.			
	2,350,000	Term Loan, 7.88%, Maturing March 30, 2008	2,357,894
Dayco Products, LLC			
	2,009,813	Term Loan, 7.85%, Maturing June 21, 2011	2,031,585
Exide Technologies, Inc.			
	600,067	Term Loan, 11.63%, Maturing May 5, 2010	630,821
	606,424	Term Loan, 11.63%, Maturing May 5, 2010	637,503
Federal-Mogul Corp.			
	2,915,607	Revolving Loan, 6.83%, Maturing July 1, 2007 ⁽²⁾	2,904,977
Ford Motor Co.			
	1,770,563	Term Loan, 8.36%, Maturing December 15, 2013	1,784,784
General Motors Corp.			
	1,446,375	Term Loan, 7.73%, Maturing November 29, 2013	1,459,483
Goodyear Tire & Rubber Co.			
	2,400,000	Term Loan, 7.10%, Maturing April 30, 2010	2,412,127
	1,000,000	Term Loan, 8.82%, Maturing March 1, 2011	1,006,000
HLI Operating Co., Inc.			
	1,788,705	Term Loan, 8.84%, Maturing June 3, 2009	1,798,394