

EATON VANCE SENIOR FLOATING RATE TRUST
Form N-CSRS
June 28, 2011

**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

April 30, 2011

Date of Reporting Period

Item 1. Reports to Stockholders

Eaton Vance
Senior Floating-Rate Trust
Semiannual Report
April 30, 2011

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.

Semiannual Report April 30, 2011

Eaton Vance

Senior Floating-Rate Trust

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Eaton Vance

Senior Floating-Rate Trust

April 30, 2011

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

Performance¹

**New York Stock Exchange (NYSE) Symbol
Inception Date**

**EFR
(11/28/03)**

% Average Annual Total Returns at net asset value (NAV)

Six Months	7.60
One Year	11.13
Five Years	4.67
Since Inception	5.11

% Average Annual Total Returns at market price, NYSE

Six Months	11.54
One Year	7.86
Five Years	7.76
Since Inception	6.24

% Premium/(Discount) to NAV (4/30/11) 8.23

Distributions

Total Distributions per share (10/31/10 - 4/30/11)	\$0.568
Distribution Rate at NAV ²	6.48%
Distribution Rate at market price ²	5.99%

% Total Leverage³

APS	16.28
Borrowings	18.60

Comparative Performance⁴

% Return

S&P/LSTA Leveraged Loan Index

Six Months	4.77
One Year	6.93
Five Years	5.36
Since Inception (11/28/03)	5.41

See Endnotes and Additional Disclosures on page 4.

Past performance is no guarantee of future results. Returns are historical and are calculated by determining the percentage change in NAV or market price (as applicable) with all distributions reinvested. 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 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 www.eatonvance.com.

Eaton Vance
 Senior Floating-Rate Trust
 April 30, 2011
 Fund Profile⁵

Top 10 Holdings (% of total investments)

Intelsat Jackson Holdings SA	1.3
Community Health Systems, Inc.	1.3
Rite Aid Corp.	1.2
SunGard Data Systems, Inc.	1.1
HCA, Inc.	1.1
Aramark Corp.	1.1
Delphi Automotive	1.1
Nielsen Finance, LLC	0.9
UPC Broadband Holding B.V.	0.9
Health Management Associates, Inc.	0.8
Total % of total investments	10.8

Top 10 Sectors (% of total investments)

Healthcare	11.6
Business Equipment and Services	7.7
Cable and Satellite Television	6.8
Leisure Goods/Activities/Movies	5.2
Automotive	4.7
Telecommunications	4.5
Chemicals and Plastics	4.3
Food Service	4.3
Publishing	4.3
Financial Intermediaries	4.2
Total % of total investments	57.6

Credit Quality⁶ (% of loan holdings)

See Endnotes and Additional Disclosures on page 4.

Eaton Vance

Senior Floating-Rate Trust

April 30, 2011

Endnotes and Additional Disclosures

1. Performance results reflect the effects of leverage. Absent an expense waiver by the investment adviser, the returns would be lower.
2. 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 ordinary income, net realized capital gains and return of capital.
3. APS percentage represents the liquidation value of the Fund's APS outstanding as a percentage of the aggregate of the net assets applicable to the Fund's common shares plus the APS and borrowings outstanding. Use of leverage creates an opportunity for income, but creates risks including greater price volatility. The cost of borrowings rises and falls with changes in short-term interest rates. The Fund is required to maintain prescribed asset coverage for its APS and borrowings, which could be reduced if Fund asset values decline.
4. The S&P/LSTA Leveraged Loan Index is an unmanaged index of the institutional leveraged loan market. Indices 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.
5. Fund profile is subject to change due to active management.
6. Ratings are based on Moody, S&P or Fitch, as applicable. Credit ratings are based largely on the rating agency's investment analysis at the time of rating and the rating assigned to any particular security is not necessarily a reflection of the issuer's current financial condition. The rating assigned to a security by a rating agency 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. If securities are rated differently by the rating agencies, the higher rating is applied.

Eaton Vance
Senior Floating-Rate Trust

April 30, 2011

Portfolio of Investments (Unaudited)

Senior Floating-Rate Interests 139.2%

**Principal
Amount***

(000 s omitted)	Borrower/Tranche Description	Value
Aerospace and Defense 2.5%		
Booz Allen Hamilton, Inc.		
475	Term Loan, 4.00%, Maturing August 3, 2017	\$ 481,056
DAE Aviation Holdings, Inc.		
891	Term Loan, 5.28%, Maturing July 31, 2014	901,285
925	Term Loan, 5.28%, Maturing July 31, 2014	935,589
Delos Aircraft, Inc.		
625	Term Loan, 7.00%, Maturing March 17, 2016	629,687
Doncasters (Dundee HoldCo 4 Ltd.)		
394	Term Loan, 4.21%, Maturing July 13, 2015	385,301
394	Term Loan, 4.71%, Maturing July 13, 2015	385,301
GBP 500	Term Loan - Second Lien, 6.63%, Maturing January 13, 2016	795,504
DynCorp International, LLC		
819	Term Loan, 6.25%, Maturing July 5, 2016	827,247
Evergreen International Aviation		
912	Term Loan, 10.50%, Maturing October 31, 2011 ⁽²⁾	904,289
IAP Worldwide Services, Inc.		
785	Term Loan, 8.25%, Maturing December 30, 2012	784,398
International Lease Finance Co.		
850	Term Loan, 6.75%, Maturing March 17, 2015	856,451
Spirit AeroSystems, Inc.		
1,557	Term Loan, 3.53%, Maturing September 30, 2016	1,568,418
TransDigm, Inc.		
2,145	Term Loan, 4.00%, Maturing February 14, 2017	2,170,925
Wesco Aircraft Hardware Corp.		
441	Term Loan, 4.25%, Maturing April 4, 2017	446,053
Wyle Laboratories, Inc.		
856	Term Loan, 7.75%, Maturing March 25, 2016	858,872

\$ 12,930,376

Automotive 6.4%

Adesa, Inc.

1,944 Term Loan, 2.97%, Maturing October 18, 2013 \$ 1,942,611

Allison Transmission, Inc.

3,800 Term Loan, 2.99%, Maturing August 7, 2014 3,800,084

Autotrader.com, Inc.

1,097 Term Loan, 4.75%, Maturing December 15, 2016 1,107,948

Delphi Automotive

8,650 Term Loan, 5.00%, Maturing April 14, 2017 8,643,945

Federal-Mogul Corp.

2,445 Term Loan, 2.17%, Maturing December 29, 2014 2,388,463

3,072 Term Loan, 2.15%, Maturing December 28, 2015 3,001,457

Ford Motor Co.

3,157 Term Loan, 2.97%, Maturing December 16, 2013 3,164,481

Goodyear Tire & Rubber Co.

5,400 Term Loan - Second Lien, 1.94%, Maturing April 30, 2014 5,333,850

HHI Holdings, LLC

525 Term Loan, 7.01%, Maturing March 21, 2017 525,656

Metaldyne, LLC

920 Term Loan, 7.75%, Maturing October 28, 2016 943,385

TriMas Corp.

142 Term Loan, 6.00%, Maturing August 2, 2011 143,119

2,568 Term Loan, 6.00%, Maturing December 15, 2015 2,587,285

\$ 33,582,284

Beverage and Tobacco 0.2%

Green Mountain Coffee Roasters

1,097 Term Loan, 5.50%, Maturing December 16, 2016 \$ 1,113,366

\$ 1,113,366

Building and Development 2.4%

Armstrong World Industries, Inc.		
650	Term Loan, 4.00%, Maturing March 9, 2018	\$ 655,606
Beacon Sales Acquisition, Inc.		
1,075	Term Loan, 2.27%, Maturing September 30, 2013	1,061,981
Brickman Group Holdings, Inc.		
1,172	Term Loan, 7.25%, Maturing October 14, 2016	1,197,945
CB Richard Ellis Services, Inc.		
694	Term Loan, 1.63%, Maturing March 5, 2018 ⁽³⁾	694,575
656	Term Loan, 1.75%, Maturing September 4, 2019 ⁽³⁾	656,261
Forestar USA Real Estate Group, Inc.		
244	Revolving Loan, 0.84%, Maturing August 6, 2013 ⁽³⁾	239,498
2,240	Term Loan, 6.50%, Maturing August 6, 2015	2,228,919
NCI Building Systems, Inc.		
250	Term Loan, 8.00%, Maturing April 18, 2014	248,712
November 2005 Land Investors, LLC		
305	Term Loan, 0.00%, Maturing March 31, 2011 ⁽⁴⁾⁽⁵⁾	68,589
Panolam Industries Holdings, Inc.		
1,619	Term Loan, 8.25%, Maturing December 31, 2013	1,497,622
RE/MAX International, Inc.		
1,754	Term Loan, 5.50%, Maturing April 15, 2016	1,762,007
Realogy Corp.		
139	Term Loan, 3.24%, Maturing October 10, 2013	133,113
665	Term Loan, 3.31%, Maturing October 10, 2013	638,742

See Notes to Financial Statements.

Eaton Vance
Senior Floating-Rate Trust

April 30, 2011

Portfolio of Investments (Unaudited) continued

Principal Amount* (000 s omitted)	Borrower/Tranche Description	Value
Building and Development (continued)		
South Edge, LLC		
1,588	Term Loan, 0.00%, Maturing October 31, 2009 ⁽⁶⁾	\$ 1,345,406
		\$ 12,428,976
Business Equipment and Services 11.5%		
Activant Solutions, Inc.		
153	Term Loan, 2.31%, Maturing May 2, 2013	\$ 152,646
916	Term Loan, 4.81%, Maturing February 2, 2016	917,533
Advantage Sales & Marketing, Inc.		
1,845	Term Loan, 5.25%, Maturing December 18, 2017	1,857,285
Affinion Group, Inc.		
4,635	Term Loan, 5.00%, Maturing October 10, 2016	4,652,036
Allied Security Holdings, LLC		
575	Term Loan, 5.00%, Maturing February 4, 2017	579,552
Dealer Computer Services, Inc.		
2,400	Term Loan, 3.75%, Maturing April 20, 2018	2,423,479
Education Management, LLC		
4,009	Term Loan, 2.06%, Maturing June 3, 2013	3,950,048
Fifth Third Processing Solution		
923	Term Loan, 5.50%, Maturing November 3, 2016	932,260
First American Corp.		
918	Term Loan, 4.75%, Maturing April 12, 2016	923,227
Infogroup, Inc.		
720	Term Loan, 6.25%, Maturing July 1, 2016	726,159
iPayment, Inc.		

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	2,176	Term Loan, 4.25%, Maturing May 10, 2013	2,168,789
Kronos, Inc.			
	1,007	Term Loan, 2.06%, Maturing June 11, 2014	995,236
Language Line, LLC			
	2,170	Term Loan, 6.25%, Maturing June 20, 2016	2,191,258
Mitchell International, Inc.			
	1,000	Term Loan - Second Lien, 5.56%, Maturing March 30, 2015	925,000
NE Customer Service			
	1,661	Term Loan, 6.00%, Maturing March 23, 2016	1,661,308
Protection One Alarm Monitor, Inc.			
	1,629	Term Loan, 6.00%, Maturing May 16, 2016	1,636,649
Quantum Corp.			
	111	Term Loan, 3.81%, Maturing July 14, 2014	110,439
Quintiles Transnational Corp.			
	979	Term Loan, 2.31%, Maturing March 29, 2013	978,412
	1,700	Term Loan - Second Lien, 4.31%, Maturing March 31, 2014	1,704,250
Sabre, Inc.			
	5,937	Term Loan, 2.23%, Maturing September 30, 2014	5,497,250
Safenet, Inc.			
	1,936	Term Loan, 2.71%, Maturing April 12, 2014	1,923,490
Serena Software, Inc.			
	474	Term Loan, 4.31%, Maturing March 10, 2016	472,519
Sitel (Client Logic)			
	1,567	Term Loan, 5.79%, Maturing January 30, 2014	1,562,785
Softlayer Tech, Inc.			
	648	Term Loan, 7.25%, Maturing November 5, 2016	654,016
Solera Holdings, LLC			
EUR	725	Term Loan, 2.94%, Maturing May 16, 2014	1,063,255
SunGard Data Systems, Inc.			
	2,166	Term Loan, 1.98%, Maturing February 28, 2014	2,149,101
	6,642	Term Loan, 3.93%, Maturing February 26, 2016	6,683,261
TransUnion, LLC			
	1,900	Term Loan, 4.75%, Maturing February 12, 2018	1,917,338
Travelport, LLC			
	4,062	Term Loan, 4.74%, Maturing August 21, 2015	3,987,047
	553	Term Loan, 4.81%, Maturing August 21, 2015	542,505
EUR	1,054	Term Loan, 5.66%, Maturing August 21, 2015	1,520,481
West Corp.			
	281	Term Loan, 2.73%, Maturing October 24, 2013	280,386
	1,943	Term Loan, 4.59%, Maturing July 15, 2016	1,962,753
	683	Term Loan, 4.61%, Maturing July 15, 2016	690,318
			\$ 60,392,071

Cable and Satellite Television 10.2%

Atlantic Broadband Finance, LLC		
1,362	Term Loan, 4.00%, Maturing March 8, 2016	\$ 1,372,889
Bragg Communications, Inc.		
2,075	Term Loan, 2.81%, Maturing August 31, 2014	2,051,409
Bresnan Communications, LLC		
1,247	Term Loan, 4.50%, Maturing December 14, 2017	1,258,876
Casema NV		
EUR 1,000	Term Loan - Second Lien, 5.95%, Maturing March 14, 2016	1,485,779
Cequel Communications, LLC		
2,146	Term Loan, 2.24%, Maturing November 5, 2013	2,139,011
Charter Communications Operating, LLC		
3,933	Term Loan, 2.22%, Maturing March 6, 2014	3,936,523
995	Term Loan, 3.56%, Maturing September 6, 2016	999,623
CSC Holdings, Inc.		
2,878	Term Loan, 2.06%, Maturing March 29, 2016	2,888,758
Foxco Acquisition Sub, LLC		
560	Term Loan, 4.77%, Maturing July 14, 2015	562,622

See Notes to Financial Statements.

Eaton Vance
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Portfolio of Investments (Unaudited) continued

Principal Amount* (000 \$ omitted)	Borrower/Tranche Description	Value
Cable and Satellite Television (continued)		
Insight Midwest Holdings, LLC		
3,304	Term Loan, 2.02%, Maturing April 7, 2014	\$ 3,282,963
Kabel Deutschland GmbH		
EUR 2,000	Term Loan, 5.21%, Maturing December 13, 2016	2,988,220
MCC Iowa, LLC		
5,645	Term Loan, 1.94%, Maturing January 31, 2015	5,627,253
Mediacom, LLC		
819	Term Loan, 4.50%, Maturing October 23, 2017	812,416
Mediacom Broadband, LLC		
1,464	Term Loan, 4.50%, Maturing October 23, 2017	1,465,767
Mediacom Illinois, LLC		
3,636	Term Loan, 1.94%, Maturing January 31, 2015	3,490,578
985	Term Loan, 5.50%, Maturing March 31, 2017	989,309
NDS Finance, Ltd.		
1,350	Term Loan, 4.00%, Maturing March 12, 2018	1,355,906
ProSiebenSat.1 Media AG		
EUR 93	Term Loan, 2.58%, Maturing July 2, 2014	131,494
EUR 904	Term Loan, 2.58%, Maturing July 2, 2014	1,284,486
EUR 369	Term Loan, 3.68%, Maturing March 6, 2015	506,678
EUR 2,187	Term Loan, 2.92%, Maturing June 26, 2015	3,144,258
EUR 97	Term Loan, 2.96%, Maturing July 3, 2015	139,738
EUR 369	Term Loan, 3.93%, Maturing March 4, 2016	506,677
EUR 384	Term Loan, 8.30%, Maturing March 6, 2017 ⁽²⁾	514,871
EUR 520	Term Loan - Second Lien, 5.05%, Maturing September 2, 2016	691,573
UPC Broadband Holding B.V.		
409	Term Loan, 3.74%, Maturing December 30, 2016	411,035
EUR 2,353	Term Loan, 4.71%, Maturing December 31, 2016	3,463,539
1,264	Term Loan, 3.74%, Maturing December 29, 2017	1,268,902
EUR 1,619	Term Loan, 4.96%, Maturing December 31, 2017	2,387,142
Virgin Media Investment Holding		

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	GBP	456	Term Loan, 4.57%, Maturing December 31, 2015	764,600	
YPSO Holding SA					
	EUR	550	Term Loan, 4.95%, Maturing June 16, 2014 ⁽²⁾	739,880	
	EUR	212	Term Loan, 5.11%, Maturing June 16, 2014 ⁽²⁾	285,533	
	EUR	253	Term Loan, 5.11%, Maturing June 16, 2014 ⁽²⁾	340,635	&n