EATON VANCE SENIOR INCOME TRUST Form N-CSR August 24, 2012

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: 811-09013

Eaton Vance Senior Income 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)

June 30

Date of Fiscal Year End June 30, 2012

Julie 30, 2012

Date of Reporting Period

Item 1. Reports to Stockholders

Eaton Vance Senior Income Trust (EVF)

Annual Report June 30, 2012

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 June 30, 2012

Eaton Vance

Senior Income 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	35
Federal Tax Information	36
Dividend Reinvestment Plan	37
Board of Trustees Contract Approval	39
Management and Organization	42
Important Notices	44

Eaton Vance
Senior Income Trust
June 30, 2012
Management s Discussion of Fund Performance

Economic and Market Conditions

The 12-month period ended June 30, 2012 was marked by significant market volatility, as investor sentiment seesawed in reaction to financial headlines. Changes in investor sentiment were in fact the primary driver of volatility in floating rate bank loans, as corporate fundamentals underlying the U.S. loan market remained strong throughout the period. The publicly traded firms in the S&P/LSTA Leveraged Loan Index (the Index),² reported average EBITDA (earnings before interest, taxes, depreciation, and amortization) growth in excess of 10% during the fiscal year. An industry default rate of 1.04% for the period, compared with a trailing 10-year average of about 3%, offered further evidence of strong U.S. corporate fundamentals.

The macroeconomic backdrop made investors alternately nervous and confident during the period. At the start of the fiscal year in July 2011, economic indicators were beginning to weaken. By late summer, the U.S. debt downgrade and a deteriorating global outlook helped create a strong risk-averse dynamic in the market, pushing prices down for floating rate loans. The Fed s stated intent to keep interest rates low into 2014 was another factor putting downward pressure on the asset class.

Beginning in October 2011, the market rebounded as improving U.S. economic indicators nudged investors to increase risk tolerance. Bank loans and high yield bonds, each rated below investment grade, were among the asset classes that benefited. This inclination toward assuming greater risk continued through the first quarter of 2012 and into April. But in the closing months of the period, evidence of slowing GDP and job growth combined with a deteriorating European outlook seemed to push investors back to a more fearful stance, and the bank loan market retreated again. For the one-year period as a whole, floating-rate bank loans, as measured by the Index, were in positive territory, up 3.42%.

Fund Performance

For the fiscal year ending June 30, 2012, Eaton Vance Senior Income Trust (the Fund) shares at net asset value (NAV) had a total return of 5.58%, outperforming the 3.42% return of the Index.

Under normal market conditions, the Fund invests at least 80% of its total assets in senior, secured floating-rate loans (senior loans). In keeping with the Fund s secondary goal of preservation of capital, management tends to overweight higher-rated loans relative to the Index a strategy that may help results in a more cautious environment but detract from performance in a less cautious environment, when lower-rated investments generally outperform. Fundamental research drives the credit selection process, with the goal of producing a fundamentally stronger portfolio than the Index with fewer loan defaults.

The Fund may also invest in second-lien loans and high-yield bonds, and may employ leverage,⁵ which may increase risk and volatility. As of June 30, 2012, the Fund s investments included senior loans to 362 borrowers spanning 36 industries, with an average loan representing 0.25% of total investments, and no industry constituting more than 11.2% of total investments. Health care, business equipment and services, and electronics/electrical were the top three industry weightings.

The Fund s outperformance relative to the Index was due largely to the higher credit quality of its portfolio, which held up better when the market declined during the period, and to the use of leverage, which magnifies income and price volatility but during this period benefited performance. The Fund also benefited from investing in high yield bonds, which outperformed the bank loan market during the fiscal year; as of period end, high yield bonds constituted 5.2% of total investments. Another positive factor was the Fund s low default rate: less than 0.36% of the Fund s bank loan assets defaulted over the one-year period, compared with 1.04% of assets for the Index.

Within the Fund s bank loan investments, results relative to the Index were also aided by overweights in food/drug retailers sectors that outperformed during the period and by underweights in the utilities and publishing sectors, which underperformed.

In contrast, underweights in several strong-performing sectors dragged on results relative to the Index; these included financial intermediaries, building and development, and retailers other than food and drug firms. 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. 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.

One

Five

Eaton Vance

Senior Income Trust

June 30, 2012

Portfolio Managers Scott H. Page, CFA and John Redding

Performance^{2,3}

% Average Annual Total Returns	Inception Date	Year	Years	Ten Years
Fund at NAV Fund at Market Price	10/30/1998	5.58% 4.09	3.32% 3.46	5.39% 6.04
S&P/LSTA Leveraged Loan Index		3.42%	4.38%	5.24%
% Premium/Discount to NAV				
				-1.96%
Distributions ⁴				
Total Distributions per share for the period Distribution Rate at NAV Distribution Rate at Market Price				\$0.441 6.37% 6.50%
% Total Leverage ⁵				
Auction Preferred Shares (APS) Borrowings				26.24% 10.97

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. 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 Income Trust June 30, 2012 Fund Profile

Top 10 Holdings (% of total investments)⁶

See Endnotes and Additional Disclosures in this report.

Intelsat Jackson Holdings S.A. Rite Aid Corporation Asurion LLC Calpine Corp. (corporate bond) Aramark Corporation Alliance Boots Holdings Limited Chrysler Group LLC Community Health Systems, Inc. SunGard Data Systems, Inc. Telesat LLC	1.2% 1.2 1.1 1.0 1.0 1.0 1.0 0.8 0.8
Total	10.1%
Top 10 Sectors (% of total investments) ⁶	
Health Care	11.2%
Business Equipment and Services	8.2
Electronics/Electrical	6.5
Leisure Goods/Activities/Movies	4.9
Automotive	4.6
Financial Intermediaries	4.5
Telecommunications	4.3
Food Products Food Service	4.2 4.0
Publishing	3.9
r ublishing	3.9
Total	56.3%
Credit Quality (% of loan holdings) ⁷	

4

9

Eaton Vance
Senior Income Trust
June 30, 2012
Endnotes and Additional Disclosures

- 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.
- ⁴ 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 composed of ordinary income, tax- exempt income, net realized capital gains and return of capital.
- ⁵ 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 is required to maintain prescribed asset coverage for its APS and borrowings, which could be reduced if Fund asset values decline.
- ⁶ Excludes cash and cash equivalents.
- ⁷ Ratings are based on Moody s, 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. Ratings of BBB or higher by Standard and Poor s or Fitch (Baa or higher by Moody s) are considered to be investment grade quality.

Fund profile subject to change due to active management.

Eaton Vance Senior Income Trust

June 30, 2012

Portfolio of Investments

Senior Floating-Rate Interests 146.7%)

		Principal Amount*	
Borrower/Tranche Description		(000 s omitted)	Value
Aerospace and Defense 2.4%			
AVIO S.p.A.			
Term Loan, Maturing December 13, 2014 ⁽²⁾		300	\$ 292,800
Term Loan, Maturing December 13, 2015 ⁽²⁾		325	317,200
Term Loan, 4.13%, Maturing December 14, 2017	EUR	275	347,142
DAE Aviation Holdings, Inc.			
Term Loan, 5.47%, Maturing July 31, 2014		695	687,798
Term Loan, 5.47%, Maturing July 31, 2014		731	723,346
Ducommun Incorporated			
Term Loan, 5.50%, Maturing June 28, 2017		272	270,889
IAP Worldwide Services, Inc.			
Term Loan, 9.25%, Maturing December 28, 2012		910	787,011
Sequa Corporation			
Term Loan, 3.72%, Maturing December 3, 2014		397	389,280
TASC, Inc.			
Term Loan, 4.50%, Maturing December 18, 2015		741	729,140
Transdigm, Inc.			
Term Loan, 4.00%, Maturing February 14, 2017		398	397,005
Term Loan, 4.00%, Maturing February 14, 2017		1,081	1,081,888
Wyle Services Corporation			
Term Loan, 5.00%, Maturing March 27, 2017		394	389,939

\$ 6,413,438

Evergreen International Aviation, Inc. Term Loan, 11.50%, Maturing June 30, 2015 Orbitz Worldwide Inc.	424	\$ 367,486
Term Loan, 3.25%, Maturing July 25, 2014	1,372	1,295,216
		\$ 1,662,702
Automotive 7.3%		
Allison Transmission, Inc.		
Term Loan, 2.75%, Maturing August 7, 2014	2,347	\$ 2,323,894
Autoparts Holdings Limited		
Term Loan, 6.50%, Maturing July 28, 2017	696	673,420
Chrysler Group LLC		
Term Loan, 6.00%, Maturing May 24, 2017	4,087	4,122,984
Delphi Corporation		
Term Loan, 3.50%, Maturing March 31, 2017	936	935,737
Federal-Mogul Corporation		
Term Loan, 2.18%, Maturing December 29, 2014	2,198	2,096,349
Term Loan, 2.18%, Maturing December 28, 2015	574	547,989
Goodyear Tire & Rubber Company (The)		
Term Loan - Second Lien, 4.75%, Maturing April 30, 2019	3,375	3,303,281
HHI Holdings LLC		
Term Loan, 7.00%, Maturing March 21, 2017	371	373,103
Metaldyne Company LLC		
Term Loan, 5.25%, Maturing May 18, 2017	1,262	1,252,082
SRAM, LLC		
Term Loan, 4.78%, Maturing June 7, 2018	625	622,588
Tomkins LLC		
Term Loan, 4.25%, Maturing September 29, 2016	962	962,348
TriMas Corporation		
Term Loan, 4.25%, Maturing June 21, 2017	508	508,083
Veyance Technologies, Inc.		
Term Loan, 2.50%, Maturing July 31, 2014	100	97,552
Term Loan, 2.50%, Maturing July 31, 2014	700	681,076
Term Loan, 5.50%, Maturing July 31, 2014	175	172,817
Term Loan - Second Lien, 6.00%, Maturing July 31, 2015	425	396,490

\$ 19,069,793

Maine Beverage Company Term Loan, 2.22%, Maturing March 31, 2013		51	\$	50,374
			\$	50,374
Building and Development 1.2%				
Armstrong World Industries, Inc.				
Term Loan, 4.00%, Maturing March 9, 2018		446	\$	442,541
Goodman Global Inc. Term Loan, 5.75%, Maturing October 28, 2016		838		839,007
Panolam Industries International, Inc.		030		000,007
Term Loan, 8.25%, Maturing December 31, 2013		429		425,090
Preferred Sands Holding Company, LLC Term Loan, 7.50%, Maturing December 15, 2016		373		359,133
RE/MAX International, Inc.		373		337,133
Term Loan, 5.50%, Maturing April 15, 2016		838		836,138
Summit Materials Companies I, LLC Term Loan, 6.00%, Maturing January 30, 2019		249		250,206
Term Loan, 0.00%, Waturing January 30, 2017		27)		230,200
			\$	3,152,115
			Ф	3,132,113
Business Equipment and Services 13.1%				
ACCO Brands Corporation				
Term Loan, 4.25%, Maturing April 30, 2019		249	\$	248,750
		See Notes to Fi	nanc	rial Statements.
	6			

Eaton Vance Senior Income Trust

June 30, 2012

Portfolio of Investments continued

Borrower/Tranche Description	Principal Amount* (000 s omitted)	Value
Business Equipment and Services (continued)		
Acosta, Inc.		
Term Loan, 4.75%, Maturing March 1, 2018	636	\$ 632,855
Term Loan, Maturing March 1, 2018 ⁽²⁾	350	351,313
Acxiom Corporation		
Term Loan, 3.44%, Maturing March 15, 2015	356	353,824
Advantage Sales & Marketing, Inc.		
Term Loan, 5.25%, Maturing December 18, 2017	1,409	1,396,274
Affinion Group, Inc.		
Term Loan, 5.00%, Maturing July 16, 2015	2,276	2,078,505
Allied Security Holdings, LLC		
Term Loan, 5.25%, Maturing February 3, 2017	494	493,133
Altegrity, Inc.		
Term Loan, 7.75%, Maturing February 20, 2015	336	333,942
Term Loan, 2.99%, Maturing February 21, 2015	709	671,927
BAR/BRI Review Courses, Inc.		
Term Loan, 6.00%, Maturing June 16, 2017	327	325,085
Brand Energy & Infrastructure Services, Inc.		
Term Loan, 2.50%, Maturing February 7, 2014	455	427,981
Term Loan, 3.73%, Maturing February 7, 2014	389	367,683
Brickman Group Holdings Inc.		
Term Loan, 5.50%, Maturing October 14, 2016	701	702,355
Brock Holdings III, Inc.		
Term Loan, 6.01%, Maturing March 16, 2017	575	575,557
ClientLogic Corporation		
Term Loan, 7.13%, Maturing January 30, 2017	EUR 586	659,515
Term Loan, 7.22%, Maturing January 30, 2017	303	293,256
DynCorp International LLC	200	220 562
Term Loan, 6.29%, Maturing July 7, 2016	329	329,563
Education Management LLC	1 047	1 001 207
Term Loan, 8.25%, Maturing March 29, 2018	1,047	1,021,306

EIG Investors Corp.			
Term Loan, 7.75%, Maturing April 20, 2018		550	547,250
Expert Global Solutions, Inc.			,
Term Loan, 8.00%, Maturing April 3, 2018		998	993,759
Genesys Telecom Holdings, U.S., Inc.			,
Term Loan, 6.75%, Maturing January 31, 2019		324	326,078
Go Daddy Operating Company, LLC			,
Term Loan, 5.50%, Maturing December 17, 2018		720	710,928
IMS Health Incorporated			
Term Loan, 4.50%, Maturing August 25, 2017		857	854,065
KAR Auction Services, Inc.			,
Term Loan, 5.00%, Maturing May 19, 2017		1,436	1,439,807
Kronos, Inc.		•	
Term Loan, 5.22%, Maturing June 9, 2017		543	542,623
Term Loan, 6.25%, Maturing December 28, 2017		423	424,191
Term Loan - Second Lien, 10.46%, Maturing June 11, 2018		500	505,938
Language Line, LLC			,
Term Loan, 6.25%, Maturing June 20, 2016		1,030	1,022,415
Meritas LLC		,	, ,
Term Loan, 7.50%, Maturing July 28, 2017		383	381,544
Mitchell International, Inc.			,
Term Loan - Second Lien, 5.75%, Maturing March 30, 2015		500	488,750
Monitronics International Inc.			,
Term Loan, 5.50%, Maturing March 16, 2018		424	423,673
Quintiles Transnational Corp.			-,
Term Loan, 5.00%, Maturing June 8, 2018		2,153	2,131,717
Sabre, Inc.		,	, ,
Term Loan, 2.25%, Maturing September 30, 2014		2,576	2,467,551
Sensus USA Inc.		,	, ,
Term Loan, 4.75%, Maturing May 9, 2017		346	344,473
Softlayer Technologies, Inc.			,
Term Loan, 7.25%, Maturing November 5, 2016		320	318,925
SunGard Data Systems, Inc.			,-
Term Loan, 3.93%, Maturing February 26, 2016		1,328	1,318,496
Term Loan, 3.99%, Maturing February 28, 2017		2,163	2,146,887
SymphonyIRI Group, Inc.		_,	_,,
Term Loan, 5.00%, Maturing December 1, 2017		421	418,909
Trans Union, LLC			,
Term Loan, 5.50%, Maturing February 12, 2018		1,933	1,937,920
Travelport LLC		-,,	-,,,,,-,
Term Loan, 4.96%, Maturing August 21, 2015		299	274,343
Term Loan, 4.97%, Maturing August 21, 2015		1,103	1,013,228
Term Loan, 5.18%, Maturing August 21, 2015	EUR	371	418,809
U.S. Security Holdings, Inc.			,
Term Loan, 6.00%, Maturing July 28, 2017		61	61,048
Term Loan, 6.00%, Maturing July 28, 2017		312	311,911
West Corporation		2.2	211,711
Term Loan, 4.50%, Maturing July 15, 2016		358	356,197
Term Loan, 4.59%, Maturing July 15, 2016		1,018	1,013,402
		-,0-0	1,010,102

\$ 34,457,661