EATON VANCE SENIOR INCOME TRUST Form N-CSR August 24, 2015

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, 2015

Date of Reporting Period

Item 1. Reports to Stockholders

Senior Income Trust (EVF)

Annual Report

June 30, 2015

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 June 30, 2015

Eaton Vance

Senior Income Trust

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Senior Income Trust

June 30, 2015

Management s Discussion of Fund Performance

Economic and Market Conditions

The U.S. floating-rate loan market was mixed over the fiscal year ended June 30, 2015, with the S&P/LSTA Leveraged Loan Index,² a broad barometer of the loan market, returning 1.82% during the 12-month period. Positive returns for the asset class were driven by income, with price declines in the latter part of 2014 detracting from returns.

Technical conditions i.e., the balance of supply and demand put downward pressure on loan prices from the beginning of the period through the end of 2014. The supply of new loans outpaced institutional inflows, while the retail side of the loan market experienced net outflows. It appeared that a key driver of outflows in 2014 was decreased urgency regarding rising interest rates, as a rate hike by the Federal Reserve Board no longer appeared to be imminent.

Falling energy prices also appeared to have impacted the loan market. The heaviest outflows and price declines in the asset class occurred in late 2014, after the Organization of the Petroleum Exporting Countries announced it would not cut oil production. This exacerbated an ongoing decline in crude prices. While the loan market has relatively small energy exposure, investors appeared to view falling energy prices as a negative event for loans.

From January through May 2015, however, conditions improved. Oil prices stabilized and corporate fundamentals, which had generally strengthened throughout the period, began to prevail. Flows into the loan market moved from negative to flat and prices began to rise. In June, commodity prices declined, negatively impacting loan prices in commodity sectors, notably nonferrous metals/materials.

With the U.S. economy continuing its lumpy but gradual recovery during the period, improving corporate fundamentals kept the default rate fairly benign. The loan default rate, a measure of corporate health and credit risk in the market, was 1.24%, well below the market s 10-year average of 3.2%, according to Standard & Poor s Leveraged Commentary & Data.

Fund Performance

For the fiscal year ended June 30, 2015, Eaton Vance Senior Income Trust (the Fund) shares at net asset value (NAV) had a total return of 1.71%, underperforming the 1.82% return of the S&P/LSTA Leveraged Loan Index (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 its secondary objective of preservation of capital, the Fund has historically tended to overweight higher-rated loans relative to the Index. This strategy may help the Fund experience limited credit losses over time, but may detract from relative results versus the Index in times when lower-rated loans perform well.

For the 12-month period, BBB-rated⁸ loans in the Index returned 2.10%, BB-rated loans in the Index returned 3.27%, B-rated loans in the Index returned 2.18%, CCC-rated loans in the Index returned 1.50%, and D-rated (defaulted) loans in the Index returned -25.29%. The negative performance of the D-rated category was due in large part to the continued decline of loans issued by Energy Future Holdings, also known as TXU, a major Index component that defaulted during the Fund s previous fiscal year but was not held by the Fund. Across the ratings tiers, the Fund s overweight to higher-quality BBB-, BB- and B-rated loans, which outperformed the Index during the period, contributed positively to Fund performance versus the Index.

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The Fund s employment of investment leveragedetracted from relative performance versus the Index, which does not employ leverage. The use of leverage has the effect of achieving additional exposure to the loan market, and thus magnifying a fund s exposure to its underlying investments in both up and down market environments. Thus in the period when loan prices declined in the latter half of 2014, investment leverage hurt results for the period overall. The Fund s exposure to high-yield bonds, however, which outperformed the loan market during the period, helped relative results versus the Index, which does not include high-yield bonds.

On a sector-level basis, the Fund s overweights to steel, nonferrous metals/minerals, and oil and gas detracted from Fund results versus the Index, as those sectors underperformed the Index during the period. In contrast, the Fund s underweight to utilities contributed to the Fund s relative results versus the Index, as that sector trailed the Index during the period. Similarly, the Fund s overweights to financial intermediaries and to food/drug retailers, sectors that outperformed the overall loan market during the period, contributed to Fund performance versus the Index.

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 includes 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 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.

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Senior Income Trust

June 30, 2015

Performance^{2,3}

Portfolio Managers Scott H. Page, CFA and John Redding

% Average Annual Total Returns	Inception Date	One Year	Five Years	Ten Yea	ars
Fund at NAV	10/30/1998	1.71%	7.49%		.95%
Fund at Market Price		3.02	5.14	4.	.57
S&P/LSTA Leveraged Loan Index		1.82%	5.47%	4.	.98%
% Premium/Discount to NAV ⁴					
				1	1.54%
Distributions ⁵					
Total Distributions per share for the period				\$ 0.4	402
Distribution Rate at NAV				5.	.81%
Distribution Rate at Market Price				6.	.57%
% Total Leverage ⁶					
Auction Preferred Shares (APS)				25.	.23%
Borrowings				13.	.76

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 includes 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 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.

Senior Income Trust

June 30, 2015

Fund Profile

Top 10 Issuers (% of total investments)⁷

Valeant Pharmaceuticals International, Inc.	1.1%
First Data Corporation	1.1
Community Health Systems, Inc.	1.1
Asurion, LLC	1.1
SunGard Data Systems, Inc.	1.0
NBTY, Inc.	1.0
Calpine Corporation	0.9
FMG Resources (August 2006) Pty Ltd.	0.9
Virgin Media Investment Holdings Limited	0.9
Intelsat Jackson Holdings S.A.	0.9
Total	10.0%
Top 10 Sectors (% of total investments) ⁷	

Electronics/Electrical8.1Business Equipment and Services7.5	5
Retailers (Except Food and Drug) 5.5	
Chemicals and Plastics 5.0	
Food Products 4.7	
Oil and Gas 4.0	
Financial Intermediaries 3.7	
Lodging and Casinos 3.7	
Leisure Goods/Activities/Movies 3.6	
Total 55.6%	;

Credit Quality (% of bonds, loans and asset-backed securities)⁸

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See Endnotes and Additional Disclosures in this report.

Senior Income Trust

June 30, 2015

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. Performance since inception for an index, if presented, is the performance since the Fund s or oldest share class inception, as applicable.
- 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. 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 Ratings are based on Moody s, S&P or Fitch, as applicable. If securities are rated differently by the ratings agencies, the higher rating is applied. 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 or Fitch (Baa or higher by Moody s) 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 the national ratings agencies stated above.

Fund profile subject to change due to active management.

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Senior Income Trust

June 30, 2015

Portfolio of Investments

Senior Floating-Rate Interests 142.8%)

	Principal	
	Amount*	
Borrower/Tranche Description	(000 s omitted)	Value
Aerospace and Defense1.9%BE Aerospace, Inc.Term Loan, 4.00%, MaturingDecember 16, 2021DAE Aviation Holdings, Inc.Term Loan, 6.25%, MaturingNovember 2, 2018IAP Worldwide Services, Inc.Revolving Loan, MaturingJuly 18, 2018(2)Term Loan - Second Lien, 8.00%, Maturing July 18, 2019(3)Silver II US Holdings, LLCTerm Loan, 4.00%, MaturingDecember 13, 2019Standard Aero LimitedTerm Loan, 6.25%, MaturingNovember 2, 2018Transdigm, Inc.Term Loan, 3.75%, Maturing February 28, 2020Term Loan, 3.75%, Maturing June 4, 2021	498 302 161 220 915 136 2,002 891	\$ 501,387 302,947 156,383 176,296 887,530 136,909 1,990,599 885,223
Air Transport 0.4% Virgin America, Inc. Term Loan, 4.50%, Maturing April 4, 2019	1,150	\$ 5,037,274 \$ 1,048,915 \$ 1,048,915
Automotive5.6%Affinia Group Intermediate Holdings, Inc.Term Loan, 4.75%, Maturing April 27, 2020Allison Transmission, Inc.Term Loan, 3.50%, Maturing August 23, 2019Chrysler Group, LLCTerm Loan, 3.50%, Maturing May 24, 2017	743 1,675 2,416	\$ 744,799 1,680,466 2,416,167

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Taum Loop 2 250/ Metuning		
Term Loan, 3.25%, Maturing December 31, 2018	1,037	1,035,968
CS Intermediate Holdco 2, LLC Term Loan, 4.00%, Maturing April 4, 2021	322	321,683
Dayco Products, LLC		021,000
Term Loan, 5.25%, Maturing December 12, 2019	469	471,408
Federal-Mogul Holdings Corporation		
Term Loan, 4.75%, Maturing April 15, 2021 Goodyear Tire & Rubber Company (The)	1,935	1,916,505
Term Loan - Second Lien, 3.75%, Maturing April 30, 2019	2,813	2,821,289
Horizon Global Corporation Term Loan, Maturing May 11, 2022 ⁽²⁾	250	247,656
INA Beteiligungsgesellschaft GmbH		247,050
Term Loan, 4.25%, Maturing May 15, 2020	442 Principal	445,395
	Tincipai	
	Amount*	
Borrower/Tranche Description	(000 s omitted)	Value
-	(,	
Automotive (continued) MPG Holdco I, Inc.		
Term Loan, 3.75%, Maturing		
October 20, 2021 TI Group Automotive Systems, LLC	1,052	\$ 1,052,299
Term Loan, Maturing		
June 24, 2022 ⁽²⁾ Term Loan, Maturing	EUR 375	415,978
June 24, 2022 ⁽²⁾	575	576,078
Tower Automotive Holdings USA, LLC Term Loan, 4.00%, Maturing April 23, 2020	370	370,141
Visteon Corporation	570	570,141
Term Loan, 3.50%, Maturing April 9, 2021	306	306,394
		\$ 14,822,226
		. , ,
Beverage and Tobacco 0.3% Flavors Holdings, Inc.		
Term Loan, 6.75%, Maturing April 3, 2020		\$ 347,854
Term Loan - Second Lien, 11.00%, Maturing October 3, 2021	500	482,500
		\$ 830,354
		,
Prokorace / Socurities Declars / Investment Houses 0.2%		
Brokerage / Securities Dealers / Investment Houses 0.2% Astro AB Borrower, Inc.		
Term Loan, 5.50%, Maturing April 30, 2022	150	\$ 151,691
Term Loan - Second Lien, 9.75%, Maturing March 3, 2023		