

Eaton Vance Enhanced Equity Income Fund II
Form N-CSR
February 26, 2016

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: 811-21670

Eaton Vance Enhanced Equity Income Fund II
(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)

December 31

Date of Fiscal Year End

December 31, 2015

Date of Reporting Period

Item 1. Reports to Stockholders

Eaton Vance

Enhanced Equity Income

Fund II (EOS)

Annual Report

December 31, 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.

Managed Distribution Plan. Pursuant to an exemptive order issued by the Securities and Exchange Commission (Order), the Fund is authorized to distribute long-term capital gains to shareholders more frequently than once per year. Pursuant to the Order, the Fund's Board of Trustees approved a Managed Distribution Plan (MDP) pursuant to which the Fund makes monthly cash distributions to common shareholders, stated in terms of a fixed amount per common share.

The Fund currently distributes monthly cash distributions equal to \$0.0875 per share in accordance with the MDP. You should not draw any conclusions about the Fund's investment performance from the amount of these distributions or from the terms of the MDP. The MDP will be subject to regular periodic review by the Fund's Board of Trustees and the Board may amend or terminate the MDP at any time without prior notice to Fund shareholders. However, at this time there are no reasonably foreseeable circumstances that might cause the termination of the MDP.

The Fund may distribute more than its net investment income and net realized capital gains and, therefore, a distribution may include a return of capital. A return of capital distribution does not necessarily reflect the Fund's investment performance and should not be confused with yield or income. With each distribution, the Fund will issue a notice to shareholders and a press release containing information about the amount and sources of the distribution and other related information. The amounts and sources of distributions contained in the notice and press release are only estimates and are not provided for tax purposes. The amounts and sources of the Fund's distributions for tax purposes will be reported to shareholders on Form 1099-DIV for each calendar year.

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 December 31, 2015

Eaton Vance

Enhanced Equity Income Fund II

Table of Contents

Management's Discussion of Fund Performance	2
Performance	3
Fund Profile	3
Fund Snapshot	4
Endnotes and Additional Disclosures	5
Financial Statements	6
Report of Independent Registered Public Accounting Firm	19
Federal Tax Information	20
Dividend Reinvestment Plan	21
Management and Organization	23
Important Notices	26

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2015

Management's Discussion of Fund Performance

Economic and Market Conditions

After a roller-coaster ride, the broad U.S. equity market (as represented by the S&P 500 Index²) finished the year almost where it began, returning 1.38% for the 12 months ended December 31, 2015. The Dow Jones Industrial Average was even flatter, rising just 0.21% in 2015. However, the technology-laden NASDAQ Composite Index rose 6.96%, as a number of Internet-related companies posted strong returns.

U.S. equities were buoyed by a continued modest economic recovery during the period: Nearly every month was marked by meaningful jobs growth, while the unemployment rate dropped to 5.0% for the first time since 2008. Consumers, the chief engine of the U.S. economy, increased their spending, and the consumer discretionary sector was the strongest-performing sector in the S&P 500 Index for the 12-month period.

Yet the period was characterized by significant market volatility, as several factors buffeted U.S. stocks. China replaced Greece as many investors' biggest overseas concern, with slowing growth in the world's second-largest economy weighing heavily on U.S. firms doing business in emerging markets. In addition, ongoing uncertainty about when the U.S. Federal Reserve (the Fed) would raise interest rates contributed to market volatility during the period. The Fed finally announced a rate hike in December.

A strengthening U.S. dollar during the period posed another headwind for U.S. companies competing in global markets, making their exports more expensive and decreasing the dollar value of overseas revenues. Falling commodity prices, especially for oil, were more of a double-edged sword. While consumers and many firms saw their fuel and energy bills decline, profits were slashed for numerous energy producers and commodity-related companies.

For the 12-month period, large-cap U.S. stocks (as measured by the Russell 1000[®] Index) delivered positive returns, but their small-cap counterparts (as measured by the Russell 2000[®] Index) were in negative territory. Growth stocks as a group outpaced value stocks across the large-, mid- and small-cap categories.

Fund Performance

For the 12-month period ended December 31, 2015, Eaton Vance Enhanced Equity Income Fund II (the Fund) had a total return of 6.87% at net asset value (NAV), outperforming the 5.67% return of the Fund's equity benchmark, the Russell 1000[®] Growth Index (the Index), and both of the Fund's options benchmarks, the CBOE S&P 500 BuyWrite Index and the CBOE NASDAQ-100 BuyWrite Index,

which returned 5.24% and 6.78%, respectively. The Fund's underlying common stock portfolio outperformed the Index for the period and thus contributed to relative Fund performance, while the Fund's options overlay strategy detracted from Fund performance versus the Index.

The Fund's options strategy, which consists of writing (selling) covered call options on individual securities in the portfolio, seeks to generate current income from the option premiums and is designed to help limit the Fund's exposure to market volatility. The options strategy detracted from the Fund's relative performance versus the Index due to the single-stock nature of the call writing, whereby some of the largest contributors to relative performance in the Fund's common stock portfolio had their contributions reduced by the options written against them, which ended in losses.

Within the Fund's common stock portfolio, stock selection in the consumer discretionary and information technology sectors lifted Fund performance relative to the Index. Stock selection and an underweight versus the Index in the energy sector also contributed to relative Fund performance. In consumer discretionary, the Fund's overweight in Internet retailer Amazon.com, Inc. boosted relative Fund performance versus

Edgar Filing: Eaton Vance Enhanced Equity Income Fund II - Form N-CSR

the Index. The stock was driven higher by Amazon's accelerating growth and profitability, along with greater disclosure of the financial and operating details of the firm's cloud computing business. Elsewhere in the sector, the Fund's overweight in athletic wear maker NIKE, Inc. also aided relative Fund performance versus the Index, as the company benefited from strong growth in revenue and future orders. In the information technology sector, the Fund's overweight in Class C shares of Alphabet, Inc., parent company of Google, helped Fund performance versus the Index. The stock rose in response to the new CFO's efforts to better manage expenses and provide more clarity on the profitability of the various businesses in the firm's portfolio.

In contrast, stock selection in the health care, financials and industrials sectors detracted from the Fund's performance relative to the Index. In health care, the Fund's overweight in Perrigo Co. PLC, a manufacturer of private-label over-the-counter pharmaceuticals, hurt relative Fund performance versus the Index. The stock rose early in the 12-month period on a takeover offer at a premium to the firm's share price, but retreated when the takeover bid failed later in the period. In the industrials sector, the Fund's overweights in railroad companies Union Pacific Corp. and Genesee & Wyoming, Inc. dragged on Fund performance versus the Index, as both firms were negatively impacted by declines in shipments of coal, crude oil and agricultural products during the period.

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.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2015

Performance²

Portfolio Managers Michael A. Allison, CFA, Lewis R. Piantedosi and Yana S. Barton, CFA

% Average Annual Total Returns	Inception Date	One Year	Five Years	Ten Years
Fund at NAV	01/31/2005	6.87%	11.73%	7.28%
Fund at Market Price		6.43	11.61	7.53
Russell 1000 [®] Growth Index		5.67%	13.53%	8.53%
CBOE S&P 500 BuyWrite Index		5.24	6.96	4.87
CBOE NASDAQ 100 BuyWrite Index		6.78	6.33	3.69

% Premium/Discount to NAV³	5.34%
--	-------

Distributions⁴

Total Distributions per share for the period	\$ 1.050
Distribution Rate at NAV	7.29%
Distribution Rate at Market Price	7.70%

Fund Profile

Sector Allocation (% of total investments)⁵

Top 10 Holdings (% of total investments)⁵

Alphabet, Inc., Class C	7.3%
Amazon.com, Inc.	4.9
Apple, Inc.	4.1
Facebook, Inc., Class A	4.0
Visa, Inc., Class A	3.3

Edgar Filing: Eaton Vance Enhanced Equity Income Fund II - Form N-CSR

Medtronic PLC	2.5
Perrigo Co. PLC	2.5
Gilead Sciences, Inc.	2.5
Dollar General Corp.	2.4
Sprouts Farmers Market, Inc.	2.3
Total	35.8%

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.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2015

Fund Snapshot

Objective The primary investment objective is to provide current income, with a secondary objective of capital appreciation.

Strategy The Fund invests in a portfolio of primarily large- and mid-cap securities that the investment adviser believes have above-average growth and financial strength and writes call options on individual securities to generate current earnings from the option premium.

Options Strategy	Write Single Stock Covered Calls
Equity Benchmark²	Russell 1000 [®] Growth Index
Morningstar Category	Large Growth
Distribution Frequency	Monthly
Common Stock Portfolio	
Positions Held	60
% US / Non-US	95.6/4.4
Average Market Cap	\$156.3 Billion
Call Options Written	
% of Stock Portfolio	48%
Average Days to Expiration	18 days
% Out of the Money	8.0%

The following terms as used in the Fund snapshot:

Average Market Cap: An indicator of the size of the companies in which the Fund invests and is the sum of each security's weight in the portfolio multiplied by its market cap. Market Cap is determined by multiplying the price of a share of a company's common stock by the number of shares outstanding.

Call Option: For a call option on a security, the option buyer has the right to purchase, and the option seller (or writer) has the obligation to sell, a specified security at a specified price (exercise price or strike price) on or before a specified date (option expiration date). The buyer of a call option makes a cash payment (premium) to the seller (writer) of the option upon entering into the option contract.

Covered Call Strategy: A strategy of owning a portfolio of common stocks and writing call options on all or a portion of such stocks to generate current earnings from option premium.

Out of the Money: For a call option on a common stock, the extent to which the exercise price of the option exceeds the current price of the stock.

See Endnotes and Additional Disclosures in this report.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 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 500 Index is an unmanaged index of large-cap stocks commonly used as a measure of U.S. stock market performance. Dow Jones Industrial Average is a price-weighted average of 30 blue-chip stocks that are generally the leaders in their industry. NASDAQ Composite Index is a market capitalization-weighted index of all domestic and international securities listed on NASDAQ. Russell 1000[®] Index is an unmanaged index of 1,000 U.S. large-cap stocks. Russell 2000[®] Index is an unmanaged index of 2,000 U.S. small-cap stocks. Russell 1000[®] Growth Index is an unmanaged index of U.S. large-cap growth stocks. CBOE S&P 500 BuyWrite Index measures the performance of a hypothetical buy-write strategy on the S&P 500 Index. CBOE NASDAQ-100 BuyWrite Index measures the performance of a theoretical portfolio that owns stocks included in the NASDAQ-100 Index and writes (sells) NASDAQ-100 Index covered call options. 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. Performance since inception for an index, if presented, is the performance since the Fund's or oldest share class' inception, as applicable.
- ³ 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>.
- 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 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. In recent years, a significant portion of the Fund's distributions has been characterized as return of capital. 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.
- ⁵ Depictions do not reflect the Fund's option positions. Excludes cash and cash equivalents.

Fund snapshot and profile subject to change due to active management.

[Important Notice to Shareholders](#)

Effective June 30, 2015, the Fund is managed by Michael A. Allison, CFA, Lewis R. Piantedosi and Yana S. Barton, CFA.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2015

Portfolio of Investments

Common Stocks 99.7%

Security	Shares	Value
Aerospace & Defense 2.7%		
Boeing Co. (The)	29,967	\$ 4,332,929
Raytheon Co.	61,257	7,628,334
Spirit AeroSystems Holdings, Inc., Class A ⁽²⁾	135,158	6,767,361
		\$ 18,728,624
Banks 2.3%		
Citigroup, Inc.	134,103	\$ 6,939,830
PNC Financial Services Group, Inc. (The)	36,483	3,477,195
Wells Fargo & Co.	103,355	5,618,378
		\$ 16,035,403
Beverages 3.5%		
Constellation Brands, Inc., Class A	72,555	\$ 10,334,734
PepsiCo, Inc.	136,497	13,638,780
		\$ 23,973,514
Biotechnology 6.7%		
Celgene Corp. ⁽²⁾	126,004	\$ 15,090,239
Gilead Sciences, Inc.	168,047	17,004,676
Incyte Corp. ⁽²⁾	53,615	5,814,547
Vertex Pharmaceuticals, Inc. ⁽²⁾	64,856	8,160,830
		\$ 46,070,292
Building Products 1.1%		
Fortune Brands Home & Security, Inc.	138,882	\$ 7,707,951
		\$ 7,707,951
Capital Markets 3.0%		
Charles Schwab Corp. (The)	243,622	\$ 8,022,472

Edgar Filing: Eaton Vance Enhanced Equity Income Fund II - Form N-CSR

Credit Suisse Group AG	255,328	5,500,267
Invesco, Ltd.	206,491	6,913,319
		\$ 20,436,058
Chemicals 0.9%		
Monsanto Co.	60,978	\$ 6,007,553
		\$ 6,007,553
Communications Equipment 1.7%		
Palo Alto Networks, Inc. ⁽²⁾	65,005	\$ 11,449,981
		\$ 11,449,981
Security	Shares	Value
Diversified Financial Services 1.2%		
McGraw Hill Financial, Inc.	83,571	\$ 8,238,429
		\$ 8,238,429
Food & Staples Retailing 2.3%		
Sprouts Farmers Market, Inc. ⁽²⁾	607,255	\$ 16,146,910
		\$ 16,146,910
Food Products 3.1%		
Blue Buffalo Pet Products, Inc. ⁽²⁾	290,222	\$ 5,430,053
Mondelez International, Inc., Class A	269,576	12,087,788
WhiteWave Foods Co. (The), Class A ⁽²⁾	103,745	4,036,718
		\$ 21,554,559
Health Care Equipment & Supplies 3.7%		
Medtronic PLC	222,479	\$ 17,113,084
Zimmer Biomet Holdings, Inc.	78,186	8,021,102
		\$ 25,134,186
Health Care Providers & Services 0.7%		
AmSurg Corp. ⁽²⁾	63,425	\$ 4,820,300
		\$ 4,820,300
Hotels, Restaurants & Leisure 1.7%		
Starbucks Corp.	194,995	\$ 11,705,550
		\$ 11,705,550
Household Durables 0.8%		
Newell Rubbermaid, Inc.	123,279	\$ 5,434,138
		\$ 5,434,138

Edgar Filing: Eaton Vance Enhanced Equity Income Fund II - Form N-CSR

Internet & Catalog Retail 6.7%

Amazon.com, Inc. ⁽²⁾	50,445	\$ 34,095,271
Priceline Group, Inc. (The) ⁽²⁾	9,231	11,769,063
		\$ 45,864,334

Internet Software & Services 12.4%

Alphabet, Inc., Class C ⁽²⁾	66,046	\$ 50,120,989
Facebook, Inc., Class A ⁽²⁾	264,505	27,683,093
Twitter, Inc. ⁽²⁾	324,901	7,518,209
		\$ 85,322,291

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2015

Portfolio of Investments continued

Security	Shares	Value
IT Services 4.3%		
Fiserv, Inc. ⁽²⁾	71,994	\$ 6,584,571
Visa, Inc., Class A	296,228	22,972,482
		\$ 29,557,053
 Leisure Products 1.8%		
Brunswick Corp.	239,745	\$ 12,109,520
		\$ 12,109,520
 Machinery 0.5%		
Toro Co. (The)	47,699	\$ 3,485,366
		\$ 3,485,366
 Media 2.0%		
Walt Disney Co. (The)	132,545	\$ 13,927,829
		\$ 13,927,829
 Multiline Retail 2.4%		
Dollar General Corp.	225,419	\$ 16,200,863
		\$ 16,200,863
 Oil, Gas & Consumable Fuels 0.4%		
EOG Resources, Inc.	34,741	\$ 2,459,315
		\$ 2,459,315
 Personal Products 1.2%		
Estee Lauder Cos., Inc. (The), Class A	91,359	\$ 8,045,074
		\$ 8,045,074

Edgar Filing: Eaton Vance Enhanced Equity Income Fund II - Form N-CSR

Pharmaceuticals 8.3%		
Allergan PLC ⁽²⁾	34,547	\$ 10,795,938
Bristol-Myers Squibb Co.	223,655	15,385,227
Johnson & Johnson	137,586	14,132,834
Perrigo Co. PLC	117,767	17,040,885
		\$ 57,354,884
Road & Rail 2.3%		
Genesee & Wyoming, Inc., Class A ⁽²⁾	82,999	\$ 4,456,216
Union Pacific Corp.	144,627	11,309,832
		\$ 15,766,048
Semiconductors & Semiconductor Equipment 4.7%		
Avago Technologies, Ltd.	95,527	\$ 13,865,744
Security	Shares	Value
Semiconductors & Semiconductor Equipment (continued)		
NXP Semiconductors NV ⁽²⁾	128,437	\$ 10,820,817
Texas Instruments, Inc.	135,586	7,431,469
		\$ 32,118,030
Software 5.7%		
Microsoft Corp.	222,060	\$ 12,319,889
salesforce.com, inc. ⁽²⁾	185,366	14,532,694
Tableau Software, Inc., Class A ⁽²⁾	133,848	12,611,159
		\$ 39,463,742
Specialty Retail 4.3%		
Advance Auto Parts, Inc.	33,514	\$ 5,044,192
Home Depot, Inc. (The)	104,881	13,870,512
Lowe's Cos., Inc.	137,803	10,478,540
		\$ 29,393,244
Technology Hardware, Storage & Peripherals 5.0%		
Apple, Inc.	271,685	\$ 28,597,563
EMC Corp.	217,801	5,593,130
		\$ 34,190,693
Textiles, Apparel & Luxury Goods 1.7%		
NIKE, Inc., Class B	182,120	\$ 11,382,500
		\$ 11,382,500
Tobacco 0.6%		
Philip Morris International, Inc.	48,249	\$ 4,241,570
		\$ 4,241,570

Edgar Filing: Eaton Vance Enhanced Equity Income Fund II - Form N-CSR

Total Common Stocks
(identified cost \$553,031,198) **\$ 684,325,804**

Short-Term Investments 0.7%

Description	Interest (000 s omitted)	Value
Eaton Vance Cash Reserves Fund, LLC, 0.37% ⁽³⁾	\$ 4,849	\$ 4,848,804

Total Short-Term Investments
(identified cost \$4,848,804) **\$ 4,848,804**

Total Investments 100.4%
(identified cost \$557,880,002) **\$ 689,174,608**

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2015

Portfolio of Investments continued

Covered Call Options Written (0.4)%

Security	Number of Contracts	Strike Price	Expiration Date	Value
Advance Auto Parts, Inc.	165	\$ 175.00	1/15/16	\$ (3,300)
Allergan PLC	170	322.50	1/29/16	(59,500)
Alphabet, Inc., Class C	330	800.00	1/29/16	(427,350)
Amazon.com, Inc.	250	692.50	1/22/16	(247,500)
AmSurg Corp.	315	95.00	1/15/16	(16,538)
Apple, Inc.	1,355	123.00	1/8/16	(2,032)
Avago Technologies, Ltd.	475	160.00	1/8/16	(3,562)
Blue Buffalo Pet Products, Inc.	1,450	20.00	1/15/16	(32,625)
Bristol-Myers Squibb Co.	1,115	71.50	1/8/16	(9,477)
Celgene Corp.	630	118.00	1/29/16	(349,650)
Charles Schwab Corp. (Th				