

Eaton Vance Enhanced Equity Income Fund II
Form N-CSR
February 27, 2017

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, 2016

Date of Reporting Period

Item 1. Reports to Stockholders

Eaton Vance

Enhanced Equity Income

Fund II (EOS)

Annual Report

December 31, 2016

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, 2016

Eaton Vance

Enhanced Equity Income Fund II

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Enhanced Equity Income Fund II

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Management's Discussion of Fund Performance

Economic and Market Conditions

U.S. stock markets rose in the 12-month period ended December 31, 2016, as the nation's economy continued to strengthen and the outcome of the U.S. presidential election gave stocks a late-period boost.

U.S. stocks as well as international markets opened the period on the downside amid worries about falling oil prices, declining interest rates and slowing global growth, particularly in China. The pullback began in early January 2016 and continued into mid-February, when stocks turned around and soon overcame the earlier losses. Coinciding with the move was a reversal in crude oil prices, which rose following a prolonged decline.

In June 2016, U.S. stocks plunged along with international markets following Britain's Brexit vote to leave the European Union. However, equity markets, led by the U.S., quickly rallied from the two-day tailspin and recovered the lost ground. Helped by stronger U.S. economic indicators, major U.S. stock indexes reached multiple record highs during July and August 2016.

U.S. equity markets retreated in late August 2016 amid falling oil prices and fears about a possible interest rate increase. The U.S. Federal Reserve's (the Fed's) decision at its September 2016 meeting to leave rates unchanged, along with an agreement by the Organization of the Petroleum Exporting Countries (OPEC) to curb oil production, sent stocks briefly higher. In November 2016, stocks rallied sharply following the victory of Donald Trump in the U.S. presidential election. The broad-based "Trump Bump" was led by financial stocks as well as the aerospace & defense industry. Financial stocks got another boost in mid-December 2016 when the Fed raised its benchmark interest rate amid stronger economic growth reports.

For the 12-month period, the blue-chip Dow Jones Industrial Average² advanced 16.50%, while the broader U.S. equity market, as represented by the S&P 500 Index, returned 11.96%. The technology-laden NASDAQ Composite Index delivered an 8.87% gain. Small-cap U.S. stocks, as measured by the Russell 2000[®] Index outperformed their large-cap counterparts, as measured by the S&P 500 Index during the period. Value stocks as a group outpaced growth stocks in both the large- and small-cap categories, as measured by the Russell value and growth indexes.

Fund Performance

For the 12-month period ended December 31, 2016, Eaton Vance Enhanced Equity Income Fund II (the Fund) had a total return of 2.72% at net asset value (NAV), underperforming the 7.08% 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 7.07% and 5.81%, respectively. The Fund's underlying common stock portfolio underperformed the Index during the period and thus detracted from relative Fund performance. The Fund's options overlay strategy detracted from performance versus the Index as well.

The Fund's options strategy consists of writing (selling) covered call options on individual securities in the portfolio, to seek 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 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 information technology (IT) and financials sectors detracted from performance versus the index. In addition, a lack of exposure to the telecommunication services sector, the strongest-performing sector in the Index, and

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overweighting health care, a sector that underperformed the Index during the period, detracted versus the Index. In IT, the Fund's overweight position, relative to the Index, in data analytics software provider Tableau Software, Inc. hurt performance versus the Index. The stock declined on disappointing revenue and earnings. Elsewhere in the sector, the Fund's overweight holding in network security firm Palo Alto Networks, Inc. declined in price amid an uncertain spending outlook by its enterprise customers. In the financials sector, the Fund's out-of-Index holding in financial services giant Credit Suisse Group AG declined in value. A difficult global environment for Credit Suisse's securities trading business hindered the firm's efforts to restructure itself and led to concerns it might need to raise additional capital. The Fund sold Tableau Software and Credit Suisse Group during the period.

In contrast, stock selection and an overweight in the energy sector, stock selection in the consumer discretionary sector, and underweighting the weak-performing real estate sector aided Fund performance versus the Index. The Fund's overweight holding in Devon Energy Corp. contributed to results versus the Index in the energy sector, as the oil and gas producer's stock rose on an improving outlook for petroleum prices. In consumer discretionary, the Fund's overweight position in media conglomerate Time Warner, Inc. appreciated as a result of the firm's pending acquisition by AT&T.

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 include 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 or equal to 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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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	2.72%	12.09%	6.51%
Fund at Market Price		1.68	13.79	5.20
Russell 1000® Growth Index		7.08%	14.48%	8.33%
CBOE S&P 500 BuyWrite Index		7.07	7.23	4.27
CBOE NASDAQ 100 BuyWrite Index		5.81	7.20	4.06

% Premium/Discount to NAV³	6.30%
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Distributions⁴

Total Distributions per share for the period	\$ 1.050
Distribution Rate at NAV	7.69%
Distribution Rate at Market Price	8.20%

Fund Profile

Sector Allocation (% of total investments)⁵

Top 10 Holdings (% of total investments)⁵

Alphabet, Inc., Class C	7.4%
Amazon.com, Inc.	5.2
Facebook, Inc., Class A	4.8
Visa, Inc., Class A	3.5

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Celgene Corp.	3.4
Apple, Inc.	2.6
Biogen, Inc.	2.4
Norfolk Southern Corp.	2.4
Costco Wholesale Corp.	2.4
Broadcom, Ltd.	2.4
Total	36.5%

See Endnotes and Additional Disclosures in this report.

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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 Common Stock Portfolio	Monthly
Positions Held	61
% US / Non-US	96.8/3.2
Average Market Cap Call Options Written	\$152.5 Billion
% of Stock Portfolio	46%
Average Days to Expiration	23 days
% Out of the Money The following terms as used in the Fund snapshot:	6.8%

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

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(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.

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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 Dow Jones Industrial Average is a price-weighted average of 30 blue-chip stocks that are generally the leaders in their industry. S&P 500 Index is an unmanaged index of large-cap stocks commonly used as a measure of U.S. stock market performance. NASDAQ Composite Index is a market capitalization-weighted index of all domestic and international securities listed on NASDAQ. 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 a 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. Fund distributions may be affected by numerous factors including changes in Fund performance, the cost of financing for leverage, portfolio holdings, realized and projected returns, and other factors. 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.

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Portfolio of Investments

Common Stocks 97.6%

Security	Shares	Value
Aerospace & Defense 2.2%		
Raytheon Co.	98,723	\$ 14,018,666
		\$ 14,018,666
Banks 2.1%		
JPMorgan Chase & Co.	81,511	\$ 7,033,584
Wells Fargo & Co.	121,495	6,695,590
		\$ 13,729,174
Beverages 2.1%		
Constellation Brands, Inc., Class A	53,392	\$ 8,185,528
PepsiCo, Inc.	50,891	5,324,725
		\$ 13,510,253
Biotechnology 8.6%		
Alexion Pharmaceuticals, Inc. ⁽²⁾	79,300	\$ 9,702,355
Biogen, Inc. ⁽²⁾	55,787	15,820,077
Celgene Corp. ⁽²⁾	191,465	22,162,074
Incyte Corp. ⁽²⁾	79,647	7,986,205
		\$ 55,670,711
Building Products 1.6%		
Johnson Controls International PLC	251,568	\$ 10,362,086
		\$ 10,362,086
Capital Markets 2.6%		
CBOE Holdings, Inc.	63,150	\$ 4,666,154
Charles Schwab Corp. (The)	222,369	8,776,904
S&P Global, Inc.	32,384	3,482,575

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\$ 16,925,633

Chemicals 3.5%

Ecolab, Inc.	113,855	\$ 13,346,083
Monsanto Co.	25,020	2,632,354
RPM International, Inc.	131,277	7,066,641

\$ 23,045,078

Communications Equipment 1.5%

Palo Alto Networks, Inc. ⁽²⁾	78,193	\$ 9,778,035
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\$ 9,778,035

Security

Shares Value

Distributors 2.1%

LKQ Corp. ⁽²⁾	451,255	\$ 13,830,966
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\$ 13,830,966

Energy Equipment & Services 0.8%

Halliburton Co.	99,099	\$ 5,360,265
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\$ 5,360,265

Food & Staples Retailing 3.4%

Costco Wholesale Corp.	96,998	\$ 15,530,350
Sprouts Farmers Market, Inc. ⁽²⁾	336,288	6,362,569

\$ 21,892,919

Food Products 3.7%

Blue Buffalo Pet Products, Inc. ⁽²⁾	422,141	\$ 10,148,269
Pinnacle Foods, Inc.	261,633	13,984,284

\$ 24,132,553

Health Care Equipment & Supplies 1.2%

Hologic, Inc. ⁽²⁾	122,195	\$ 4,902,463
Medtronic PLC	45,333	3,229,070

\$ 8,131,533

Hotels, Restaurants & Leisure 1.4%

Starbucks Corp.	159,813	\$ 8,872,818
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\$ 8,872,818

Household Durables 2.1%

Newell Brands, Inc.	300,633	\$ 13,423,263
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\$ 13,423,263

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Internet & Direct Marketing Retail 6.0%

Amazon.com, Inc.(2)	45,443	\$ 34,076,342
Priceline Group, Inc. (The)(2)	3,551	5,205,979
		\$ 39,282,321

Internet Software & Services 13.8%

Alphabet, Inc., Class C(2)	62,670	\$ 48,369,959
Facebook, Inc., Class A(2)	273,201	31,431,775
GoDaddy, Inc., Class A(2)	292,437	10,220,673
		\$ 90,022,407

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Portfolio of Investments continued

Security	Shares	Value
IT Services 3.5%		
Visa, Inc., Class A	296,228	\$ 23,111,708
		\$ 23,111,708
Machinery 1.5%		
Dover Corp.	131,790	\$ 9,875,025
		\$ 9,875,025
Media 2.7%		
Time Warner, Inc.	75,099	\$ 7,249,306
Walt Disney Co. (The)	99,784	10,399,489
		\$ 17,648,795
Multiline Retail 0.8%		
Macy's, Inc.	142,770	\$ 5,112,594
		\$ 5,112,594
Oil, Gas & Consumable Fuels 1.3%		
Anadarko Petroleum Corp.	77,053	\$ 5,372,906
EOG Resources, Inc.	31,594	3,194,153
		\$ 8,567,059
Personal Products 0.6%		
Estee Lauder Cos., Inc. (The), Class A	54,110	\$ 4,138,874
		\$ 4,138,874
Pharmaceuticals 6.3%		
Allergan PLC ⁽²⁾	51,812	\$ 10,881,038
Bristol-Myers Squibb Co.	91,953	5,373,733
Eli Lilly & Co.	57,603	4,236,701
Johnson & Johnson	57,794	6,658,447

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Zoetis, Inc.	261,438	13,994,776	
			\$ 41,144,695
Road & Rail 3.6%			
Norfolk Southern Corp.	146,278	\$ 15,808,263	
Union Pacific Corp.	73,754	7,646,815	
			\$ 23,455,078
Semiconductors & Semiconductor Equipment 4.7%			
Broadcom, Ltd.	87,085	\$ 15,394,016	
NXP Semiconductors NV ⁽²⁾	52,830	5,177,868	
Texas Instruments, Inc.	135,586	9,893,710	
			\$ 30,465,594
Security	Shares	Value	
Software 7.6%			
Adobe Systems, Inc. ⁽²⁾	65,181	\$ 6,710,384	
FireEye, Inc. ⁽²⁾	646,150	7,689,185	
Intuit, Inc.	57,394	6,577,926	
Microsoft Corp.	222,060	13,798,809	
salesforce.com, inc. ⁽²⁾	213,800	14,636,748	
			\$ 49,413,052
Specialty Retail 2.3%			
Advance Auto Parts, Inc.	32,019	\$ 5,415,053	
Home Depot, Inc. (The)	37,666	5,050,257	
Lowe's Cos., Inc.	63,241	4,497,700	
			\$ 14,963,010
Technology Hardware, Storage & Peripherals 2.6%			
Apple, Inc.	144,235	\$ 16,705,298	
			\$ 16,705,298
Textiles, Apparel & Luxury Goods 0.9%			
NIKE, Inc., Class B	115,596	\$ 5,875,745	
			\$ 5,875,745
Trading Companies & Distributors 0.5%			
NOW, Inc. ⁽²⁾	143,893	\$ 2,945,490	
			\$ 2,945,490
Total Common Stocks (identified cost \$498,004,908)			\$ 635,410,698
Short-Term Investments 2.7%			

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Description	Units	Value
Eaton Vance Cash Reserves Fund, LLC, 0.81% ⁽³⁾	17,680,031	\$ 17,681,799
Total Short-Term Investments (identified cost \$17,683,552)		\$ 17,681,799
Total Investments 100.3% (identified cost \$515,688,460)		\$ 653,092,497

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See Notes to Financial Statements.

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Portfolio of Investments continued

Covered Call Options Written (0.3)%

Exchange-Traded Options (0.3)%

Security	Number of Contracts	Strike Price	Expiration		Value
			Date		
Adobe Systems, Inc.	225	\$ 110.00	1/20/17	\$	(3,712)
Advance Auto Parts, Inc.	160	180.00	1/20/17		(7,600)
Alexion Pharmaceuticals, Inc.	395	124.00	1/27/17		(296,250)
Allergan PLC	255	212.50	2/3/17		(196,350)
Alphabet, Inc., Class C	310	830.00	1/27/17		(167,400)
Amazon.com, Inc.	225	797.50	1/13/17		(31,613)
Anadarko Petroleum Corp.	385	74.50	1/13/17		(8,277)
Apple, Inc.	720	120.00	1/20/17		(31,680)
Biogen, Inc.	275	310.00	2/3/17		(153,771)
Blue Buffalo Pet Products, Inc.	2,110	25.00	1/20/17		(58,025)
Bristol-Myers Squibb Co.	455	62.00	1/20/17		(11,375)
Broadcom, Ltd.	435	190.00	1/20/17		(29,363)
CBOE Holdings, Inc.	315	75.00	1/20/17		(23,625)
Celgene Corp.	955	125.00	1/20/17		(48,705)
Charles Schwab Corp. (The)	1,110	41.50	2/3/17		(57,719)
Constellation Brands, Inc., Class A	265	165.00	1/20/17		(21,863)
Costco Wholesale Corp.	480	165.00	1/13/17		(25,200)
Dover Corp.	470	80.00	1/20/17		(16,450)
Ecolab, Inc.	360	120.00	1/20/17		(20,700)
Eli Lilly & Co.	285	77.00	1/20/17		(9,405)
EOG Resources, Inc.	170	113.00	1/6/17		(340)
Estee Lauder Cos., Inc. (The), Class A	270	80.00	1/20/17		(9,450)
Facebook, Inc., Class A	1,365	124.00	2/3/17		(190,418)
FireEye, Inc.	2,087	15.00	1/13/17		(8,348)
GoDaddy, Inc., Class A	1,460	39.00	1/20/17		(18,250)
Halliburton Co.	495	56.00	1/6/17		(4,950)
Hologic, Inc.	610	42.00	1/20/17		(9,150)
Home Depot, Inc. (The)	185	136.00	1/13/17		(21,645)
Incyte Corp.	305	120.00	1/20/17		(12,962)
Intuit Corp.	200	120.00	1/20/17		(5,500)
Johnson & Johnson	285	119.00	2/3/17		(23,085)
Johnson Controls International PLC	1,255	44.00	1/20/17		(20,707)
JPMorgan Chase & Co.	405	88.50	1/13/17		(22,883)
LKQ Corp.	1,260	35.00	1/20/17		(6,300)
Lowe's Cos., Inc.	560	77.50	1/13/17		(8,680)
Macy's, Inc.	710	39.50	2/3/17		(28,400)
Medtronic PLC	225	74.50	2/3/17		(10,125)
Microsoft Corp.	1,110	66.50	1/27/17		(41,625)
Newell Brands, Inc.	1,500	48.00	1/20/17		(26,250)
NIKE, Inc., Class B	575	53.50	1/13/17		(5,462)
Norfolk Southern Corp.	730	113.00	1/13/17		(31,025)

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Palo Alto Networks, Inc.	390	136.00	1/27/17	(48,750)
	Number of	Expiration		
Security	Contracts	Strike Price	Date	Value
PepsiCo, Inc.	320	\$ 109.00	1/27/17	\$ (7,200)
Pinnacle Foods, Inc.	1,305	57.50	2/17/17	(68,513)
Priceline Group, Inc. (The)	15	1,610.00	1/13/17	(375)
Raytheon Co.	490	150.00	1/20/17	(12,740)
S&P Global, Inc.	160	120.00	1/20/17	(4,000)
salesforce.com, inc.	985	72.00	1/6/17	(10,342)
Starbucks Corp.	795	62.50	1/27/17	(8,347)
Texas Instruments, Inc.	675	77.50	2/3/17	(39,488)
Union Pacific Corp.	365	110.00	1/27/17	(29,748)
Visa, Inc., Class A	1,480	81.50	2/3/17	(129,500)
Walt Disney Co. (The)	495	109.00	1/20/17	(9,157)
Wells Fargo & Co.	515	59.00	1/13/17	(5,922)
Zoetis, Inc.	864	55.00	1/20/17	(36,720)

Total Covered Call Options Written
(premiums received \$3,691,383) **\$ (2,135,440)**

Other Assets, Less Liabilities 0.0%⁽⁴⁾ **\$ 123,190**

Net Assets 100.0% **\$ 651,080,247**

The percentage shown for each investment category in the Portfolio of Investments is based on net assets.

(1) A portion of each applicable common stock for which a written call option is outstanding at December 31, 2016 has been pledged as collateral for such written option.

(2) Non-income producing security.

(3) Affiliated investment company, available to Eaton Vance portfolios and funds, which invests in high quality, U.S. dollar denominated money market instruments. The rate shown is the annualized seven-day yield as of December 31, 2016.

(4) Amount is less than 0.05%.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Statement of Assets and Liabilities

	December 31, 2016
Assets	
Unaffiliated investments, at value (identified cost, \$498,004,908)	\$ 635,410,698
Affiliated investment, at value (identified cost, \$17,683,552)	17,681,799
Dividends receivable	512,312
Dividends receivable from affiliated investment	12,166
Receivable for premiums on written options	211,490
Tax reclaims receivable	177,907
Total assets	\$ 654,006,372
Liabilities	
Written options outstanding, at value (premiums received, \$3,691,383)	\$ 2,135,440
Payable to affiliates:	
Investment adviser fee	557,812
Trustees fees	8,544
Accrued expenses	224,329
Total liabilities	\$ 2,926,125
Net Assets	\$ 651,080,247
Sources of Net Assets	
Common shares, \$0.01 par value, unlimited number of shares authorized, 47,655,123 shares issued and outstanding	\$ 476,551
Additional paid-in capital	512,327,940
Accumulated net realized loss	(680,348)
Net unrealized appreciation	138,956,104
Net Assets	\$ 651,080,247
Net Asset Value (\$651,080,247 ÷ 47,655,123 common shares issued and outstanding)	\$ 13.66

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Statement of Operations

	Year Ended
	December 31, 2016
Investment Income	
Dividends	\$ 8,365,961
Interest allocated from/dividends from affiliated investment	50,613
Expenses allocated from affiliated investment	(840)
Total investment income	\$ 8,415,734
Expenses	
Investment adviser fee	\$ 6,545,446
Trustees' fees and expenses	34,460
Custodian fee	234,258
Transfer and dividend disbursing agent fees	18,461
Legal and accounting services	84,978
Printing and postage	266,235
Miscellaneous	62,953
Total expenses	\$ 7,246,791
Net investment income	\$ 1,168,943
Realized and Unrealized Gain (Loss)	
Net realized gain (loss)	
Investment transactions	\$ 8,471,056
Investment transactions in/allocated from affiliated investment	1,406
Written options	(1,761,509)
Foreign currency transactions	(4,650)
Net realized gain	\$ 6,706,303
Change in unrealized appreciation (depreciation)	
Investments	\$ 6,111,184
Investments - affiliated investment	(1,753)
Written options	509,377
Foreign currency	(2,966)
Net change in unrealized appreciation (depreciation)	\$ 6,615,842
Net realized and unrealized gain	\$ 13,322,145
Net increase in net assets from operations	\$ 14,491,088

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Statements of Changes in Net Assets

	Year Ended December 31,	
	2016	2015
Increase (Decrease) in Net Assets		
From operations		
Net investment income	\$ 1,168,943	\$ 6,154,425
Net realized gain from investment transactions, written options and foreign currency transactions	6,706,303	25,136,908
Net change in unrealized appreciation (depreciation) from investments, written options and foreign currency	6,615,842	12,263,753
Net increase in net assets from operations	\$ 14,491,088	\$ 43,555,086
Distributions to shareholders		
From net investment income	\$ (2,552,807)	\$ (6,133,616)
From net realized gain	(6,005,117)	(26,238,679)
Tax return of capital	(41,479,956)	(17,665,585)
Total distributions	\$ (50,037,880)	\$ (50,037,880)
Net decrease in net assets	\$ (35,546,792)	\$ (6,482,794)
Net Assets		
At beginning of year	\$ 686,627,039	\$ 693,109,833
At end of year	\$ 651,080,247	\$ 686,627,039

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Financial Highlights

	Year Ended December 31,				
	2016	2015	2014	2013	2012
Net asset value Beginning of year	\$ 14.410	\$ 14.540	\$ 14.170	\$ 11.950	\$ 11.750
Income (Loss) From Operations					
Net investment income ⁽¹⁾	\$ 0.025	\$ 0.129	\$ 0.024	\$ 0.053	\$ 0.045
Net realized and unrealized gain	0.275	0.791	1.396	3.211	1.195
Total income from operations	\$ 0.300	\$ 0.920	\$ 1.420	\$ 3.264	\$ 1.240
Less Distributions					
From net investment income	\$ (0.054)	\$ (0.128)	\$ (0.205)	\$ (0.126)	\$ (0.117)
From net realized gain	(0.126)	(0.551)	(0.845)	(0.924)	
Tax return of capital	(0.870)	(0.371)			(0.942)
Total distributions	\$ (1.050)	\$ (1.050)	\$ (1.050)	\$ (1.050)	\$ (1.059)
Anti-dilutive effect of share repurchase program (see Note 5)⁽¹⁾	\$	\$	\$	\$ 0.006	\$ 0.019
Net asset value End of year	\$ 13.660	\$ 14.410	\$ 14.540	\$ 14.170	\$ 11.950
Market value End of year	\$ 12.800	\$ 13.640	\$ 13.830	\$ 12.990	\$ 10.440
Total Investment Return on Net Asset Value⁽²⁾	2.72%	6.87%	10.98%	29.60%	12.13%
Total Investment Return on Market Value⁽²⁾	1.68%	6.43%	15.07%	35.99%	12.74%
Ratios/Supplemental Data					
Net assets, end of year (000 s omitted)	\$ 651,080	\$ 686,627	\$ 693,110	\$ 675,297	\$ 572,036
Ratios (as a percentage of average daily net assets):					
Expenses ⁽³⁾	1.11%	1.10%	1.11%	1.13%	1.12%
Net investment income	0.18%	0.88%	0.17%	0.41%	0.37%
Portfolio Turnover	58%	52%	77%	121%	45%

⁽¹⁾ Computed using average shares outstanding.

⁽²⁾ Returns are historical and are calculated by determining the percentage change in net asset value or market value with all distributions reinvested. Distributions are assumed to be reinvested at prices obtained under the Fund's dividend reinvestment plan.

⁽³⁾ Excludes the effect of custody fee credits, if any, of less than 0.005%. Effective September 1, 2015, custody fee credits, which were earned on cash deposit balances, were discontinued by the custodian.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Notes to Financial Statements

1 Significant Accounting Policies

Eaton Vance Enhanced Equity Income Fund II (the Fund) is a Massachusetts business trust registered under the Investment Company Act of 1940, as amended (the 1940 Act), as a diversified, closed-end management investment company. The Fund's primary investment objective is to provide current income, with a secondary objective of capital appreciation.

The following is a summary of significant accounting policies of the Fund. The policies are in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP). The Fund is an investment company and follows accounting and reporting guidance in the Financial Accounting Standards Board (FASB) Accounting Standards Codification Topic 946.

A Investment Valuation The following methodologies are used to determine the market value or fair value of investments.

Equity Securities. Equity securities listed on a U.S. securities exchange generally are valued at the last sale or closing price on the day of valuation or, if no sales took place on such date, at the mean between the closing bid and asked prices therefore on the exchange where such securities are principally traded. Equity securities listed on the NASDAQ Global or Global Select Market generally are valued at the NASDAQ official closing price. Unlisted or listed securities for which closing sales prices or closing quotations are not available are valued at the mean between the latest available bid and asked prices.

Derivatives. Exchange-traded options are valued at the mean between the bid and asked prices at valuation time as reported by the Options Price Reporting Authority for U.S. listed options or by the relevant exchange or board of trade for non-U.S. listed options. Over-the-counter options are valued by a third party pricing service using techniques that consider factors including the value of the underlying instrument, the volatility of the underlying instrument and the period of time until option expiration.

Foreign Securities and Currencies. Foreign securities and currencies are valued in U.S. dollars, based on foreign currency exchange rate quotations supplied by a third party pricing service. The pricing service uses a proprietary model to determine the exchange rate. Inputs to the model include reported trades and implied bid/ask spreads. The daily valuation of exchange-traded foreign securities generally is determined as of the close of trading on the principal exchange on which such securities trade. Events occurring after the close of trading on foreign exchanges may result in adjustments to the valuation of foreign securities to more accurately reflect their fair value as of the close of regular trading on the New York Stock Exchange. When valuing foreign equity securities that meet certain criteria, the Fund's Trustees have approved the use of a fair value service that values such securities to reflect market trading that occurs after the close of the applicable foreign markets of comparable securities or other instruments that have a strong correlation to the fair-valued securities.

Affiliated Fund. The Fund may invest in Eaton Vance Cash Reserves Fund, LLC (Cash Reserves Fund), an affiliated investment company managed by Eaton Vance Management (EVM). While Cash Reserves Fund is not a registered money market mutual fund, it conducts all of its investment activities in accordance with the requirements of Rule 2a-7 under the 1940 Act. Investments in Cash Reserves Fund are valued at the closing net asset value per unit on the valuation day. Cash Reserves Fund generally values its investment securities based on available market quotations provided by a third party pricing service. Prior to Cash Reserves Fund's issuance of units in October 2016, the value of the Fund's investment in Cash Reserves Fund reflected the Fund's proportionate interest in its net assets and the Fund recorded its pro-rata share of Cash Reserves Fund's income, expenses and realized gain or loss.

Fair Valuation. Investments for which valuations or market quotations are not readily available or are deemed unreliable are valued at fair value using methods determined in good faith by or at the direction of the Trustees of the Fund in a manner that fairly reflects the security's value, or the amount that the Fund might reasonably expect to receive for the security upon its current sale in the ordinary course. Each such determination is based on a consideration of relevant factors, which are likely to vary from one pricing context to another. These factors may include, but are not limited to, the type of security, the existence of any contractual restrictions on the security's disposition, the price and extent of public trading in similar securities of the issuer or of comparable companies or entities, quotations or relevant information obtained from broker/dealers or other market participants, information obtained from the issuer, analysts, and/or the appropriate stock exchange (for exchange-traded securities), an analysis of the company's or entity's financial condition, and an evaluation of the forces that influence the issuer and the market(s) in which the security is purchased and sold.

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B Investment Transactions Investment transactions for financial statement purposes are accounted for on a trade date basis. Realized gains and losses on investments sold are determined on the basis of identified cost.

C Income Dividend income is recorded on the ex-dividend date for dividends received in cash and/or securities. However, if the ex-dividend date has passed, certain dividends from foreign securities are recorded as the Fund is informed of the ex-dividend date. Withholding taxes on foreign dividends and capital gains have been provided for in accordance with the Fund's understanding of the applicable countries' tax rules and rates. Interest income is recorded on the basis of interest accrued, adjusted for amortization of premium or accretion of discount.

D Federal Taxes The Fund's policy is to comply with the provisions of the Internal Revenue Code applicable to regulated investment companies and to distribute to shareholders each year substantially all of its net investment income, and all or substantially all of its net realized capital gains. Accordingly, no provision for federal income or excise tax is necessary.

As of December 31, 2016, the Fund had no uncertain tax positions that would require financial statement recognition, de-recognition, or disclosure. The Fund files a U.S. federal income tax return annually after its fiscal year-end, which is subject to examination by the Internal Revenue Service for a period of three years from the date of filing.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Notes to Financial Statements continued

E Foreign Currency Translation Investment valuations, other assets, and liabilities initially expressed in foreign currencies are translated each business day into U.S. dollars based upon current exchange rates. Purchases and sales of foreign investment securities and income and expenses denominated in foreign currencies are translated into U.S. dollars based upon currency exchange rates in effect on the respective dates of such transactions. Recognized gains or losses on investment transactions attributable to changes in foreign currency exchange rates are recorded for financial statement purposes as net realized gains and losses on investments. That portion of unrealized gains and losses on investments that results from fluctuations in foreign currency exchange rates is not separately disclosed.

F Use of Estimates The preparation of the financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of income and expense during the reporting period. Actual results could differ from those estimates.

G Indemnifications Under the Fund's organizational documents, its officers and Trustees may be indemnified against certain liabilities and expenses arising out of the performance of their duties to the Fund. Under Massachusetts law, if certain conditions prevail, shareholders of a Massachusetts business trust (such as the Fund) could be deemed to have personal liability for the obligations of the Fund. However, the Fund's Declaration of Trust contains an express disclaimer of liability on the part of Fund shareholders and the By-laws provide that the Fund shall assume the defense on behalf of any Fund shareholders. Moreover, the By-laws also provide for indemnification out of Fund property of any shareholder held personally liable solely by reason of being or having been a shareholder for all loss or expense arising from such liability. Additionally, in the normal course of business, the Fund enters into agreements with service providers that may contain indemnification clauses. The Fund's maximum exposure under these arrangements is unknown as this would involve future claims that may be made against the Fund that have not yet occurred.

H Written Options Upon the writing of a call or a put option, the premium received by the Fund is included in the Statement of Assets and Liabilities as a liability. The amount of the liability is subsequently marked-to-market to reflect the current market value of the option written, in accordance with the Fund's policies on investment valuations discussed above. Premiums received from writing options which expire are treated as realized gains. Premiums received from writing options which are exercised or are closed are added to or offset against the proceeds or amount paid on the transaction to determine the realized gain or loss. When an index option is exercised, the Fund is required to deliver an amount of cash determined by the excess of the strike price of the option over the value of the index (in the case of a put) or the excess of the value of the index over the strike price of the option (in the case of a call) at contract termination. If a put option on a security is exercised, the premium reduces the cost basis of the securities purchased by the Fund. The Fund, as a writer of an option, may have no control over whether the underlying securities or other assets may be sold (call) or purchased (put) and, as a result, bears the market risk of an unfavorable change in the price of the securities or other assets underlying the written option. The Fund may also bear the risk of not being able to enter into a closing transaction if a liquid secondary market does not exist.

2 Distributions to Shareholders and Income Tax Information

Subject to its Managed Distribution Plan, the Fund makes monthly distributions from its cash available for distribution, which consists of the Fund's dividends and interest income after payment of Fund expenses, net option premiums and net realized and unrealized gains on stock investments. The Fund intends to distribute all or substantially all of its net realized capital gains. Distributions are recorded on the ex-dividend date. Distributions to shareholders are determined in accordance with income tax regulations, which may differ from U.S. GAAP. As required by U.S. GAAP, only distributions in excess of tax basis earnings and profits are reported in the financial statements as a return of capital. Permanent differences between book and tax accounting relating to distributions are reclassified to paid-in capital. For tax purposes, distributions from short-term capital gains are considered to be from ordinary income. Distributions in any year may include a substantial return of capital component.

The tax character of distributions declared for the years ended December 31, 2016 and December 31, 2015 was as follows:

Year Ended December 31,

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	2016	2015
Distributions declared from:		
Ordinary income	\$ 2,552,807	\$ 6,133,616
Long-term capital gains	\$ 6,005,117	\$ 26,238,679
Tax return of capital	\$ 41,479,956	\$ 17,665,585

During the year ended December 31, 2016, accumulated net realized gain was decreased by \$1,383,864 and accumulated distributions in excess of net investment income was decreased by \$1,383,864 due to differences between book and tax accounting, primarily for foreign currency gain (loss), return of capital distributions from securities and dividend redesignations. These reclassifications had no effect on the net assets or net asset value per share of the Fund.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Notes to Financial Statements continued

As of December 31, 2016, the components of distributable earnings (accumulated losses) on a tax basis were as follows:

Net unrealized appreciation	\$ 138,275,756
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The differences between components of distributable earnings (accumulated losses) on a tax basis and the amounts reflected in the Statement of Assets and Liabilities are primarily due to wash sales and investments in partnerships.

The cost and unrealized appreciation (depreciation) of investments of the Fund at December 31, 2016, as determined on a federal income tax basis, were as follows:

Aggregate cost	\$ 516,368,809
Gross unrealized appreciation	\$ 145,883,186
Gross unrealized depreciation	(9,159,498)
Net unrealized appreciation	\$ 136,723,688

3 Investment Adviser Fee and Other Transactions with Affiliates

The investment adviser fee is earned by EVM as compensation for management and investment advisory services rendered to the Fund. The fee is computed at an annual rate of 1.00% of the Fund's average daily gross assets and is payable monthly. Gross assets as referred to herein represent net assets plus obligations attributable to investment leverage, if any. For the year ended December 31, 2016, the Fund's investment adviser fee amounted to \$6,545,446. The Fund invests its cash in Cash Reserves Fund. EVM does not currently receive a fee for advisory services provided to Cash Reserves Fund. EVM also serves as administrator of the Fund, but receives no compensation.

Trustees and officers of the Fund who are members of EVM's organization receive remuneration for their services to the Fund out of the investment adviser fee. Trustees of the Fund who are not affiliated with EVM may elect to defer receipt of all or a percentage of their annual fees in accordance with the terms of the Trustees Deferred Compensation Plan. For the year ended December 31, 2016, no significant amounts have been deferred. Certain officers and Trustees of the Fund are officers of EVM.

4 Purchases and Sales of Investments

Purchases and sales of investments, other than short-term obligations, aggregated \$376,848,202 and \$440,333,382, respectively, for the year ended December 31, 2016.

5 Common Shares of Beneficial Interest

The Fund may issue common shares pursuant to its dividend reinvestment plan. There were no common shares issued by the Fund for the years ended December 31, 2016 and December 31, 2015.

The Board of Trustees of the Fund approved the continuation of the Fund's share repurchase program that has been in effect since August 6, 2012. Pursuant to the terms of the reauthorization of the program, the Fund may repurchase up to 10% of its common shares outstanding as of September 30, 2013 in open market transactions at a discount to net asset value (NAV). The terms of the reauthorization increased the number of shares available for repurchase. The repurchase

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program does not obligate the Fund to purchase a specific amount of shares. There were no repurchases of common shares by the Fund for the years ended December 31, 2016 and December 31, 2015.

6 Financial Instruments

The Fund may trade in financial instruments with off-balance sheet risk in the normal course of its investing activities. These financial instruments may include written options and may involve, to a varying degree, elements of risk in excess of the amounts recognized for financial statement purposes. The notional or contractual amounts of these instruments represent the investment the Fund has in particular classes of financial instruments and do not necessarily represent the amounts potentially subject to risk. The measurement of the risks associated with these instruments is meaningful only when all related and offsetting transactions are considered. A summary of obligations under these financial instruments at December 31, 2016 is included in the Portfolio of Investments. At December 31, 2016, the Fund had sufficient cash and/or securities to cover commitments under these contracts.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Notes to Financial Statements continued

Written options activity for the year ended December 31, 2016 was as follows:

	Number of Contracts	Premiums Received
Outstanding, beginning of year	33,125	\$ 3,543,344
Options written	400,908	42,657,151
Options terminated in closing purchase transactions	(158,265)	(16,594,656)
Options expired	(240,962)	(25,914,456)
Outstanding, end of year	34,806	\$ 3,691,383

The Fund is subject to equity price risk in the normal course of pursuing its investment objectives. The Fund writes covered call options on individual stocks above the current value of the stock to generate premium income. In writing call options on individual stocks, the Fund in effect, sells potential appreciation in the value of the applicable stock above the exercise price in exchange for the option premium received. The Fund retains the risk of loss, minus the premium received, should the price of the underlying stock decline.

The fair value of open derivative instruments (not considered to be hedging instruments for accounting disclosure purposes) and whose primary underlying risk exposure is equity price risk at December 31, 2016 was as follows:

Derivative	Fair Value	
	Asset Derivative	Liability Derivative ⁽¹⁾
Written options	\$	\$ (2,135,440)

⁽¹⁾ Statement of Assets and Liabilities location: Written options outstanding, at value.

The effect of derivative instruments (not considered to be hedging instruments for accounting disclosure purposes) on the Statement of Operations and whose primary underlying risk exposure is equity price risk for the year ended December 31, 2016 was as follows:

Derivative	Realized Gain (Loss) on Derivatives Recognized in Income ⁽¹⁾	Change in Unrealized Appreciation (Depreciation) on Derivatives Recognized in Income ⁽²⁾
Written options	\$ (1,761,509)	\$ 509,377

⁽¹⁾ Statement of Operations location: Net realized gain (loss) Written options.

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(2) Statement of Operations location: Change in unrealized appreciation (depreciation) Written options.

[7 Fair Value Measurements](#)

Under generally accepted accounting principles for fair value measurements, a three-tier hierarchy to prioritize the assumptions, referred to as inputs, is used in valuation techniques to measure fair value. The three-tier hierarchy of inputs is summarized in the three broad levels listed below.

Level 1 quoted prices in active markets for identical investments

Level 2 other significant observable inputs (including quoted prices for similar investments, interest rates, prepayment speeds, credit risk, etc.)

Level 3 significant unobservable inputs (including a fund's own assumptions in determining the fair value of investments)

In cases where the inputs used to measure fair value fall in different levels of the fair value hierarchy, the level disclosed is determined based on the lowest level input that is significant to the fair value measurement in its entirety. The inputs or methodology used for valuing securities are not necessarily an indication of the risk associated with investing in those securities.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Notes to Financial Statements continued

At December 31, 2016, the hierarchy of inputs used in valuing the Fund's investments and open derivative instruments, which are carried at value, were as follows:

Asset Description	Level 1	Level 2	Level 3	Total
Common Stocks	\$ 635,410,698*	\$	\$	\$ 635,410,698
Short-Term Investments		17,681,799		17,681,799
Total Investments	\$ 635,410,698	\$ 17,681,799	\$	\$ 653,092,497
Liability Description				
Covered Call Options Written	\$ (2,135,440)	\$	\$	\$ (2,135,440)
Total	\$ (2,135,440)	\$	\$	\$ (2,135,440)

* The level classification by major category of investments is the same as the category presentation in the Portfolio of Investments. The Fund held no investments or other financial instruments as of December 31, 2015 whose fair value was determined using Level 3 inputs. At December 31, 2016, there were no investments transferred between Level 1 and Level 2 during the year then ended.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Report of Independent Registered Public Accounting Firm

To the Trustees and Shareholders of Eaton Vance Enhanced Equity Income Fund II:

We have audited the accompanying statement of assets and liabilities of Eaton Vance Enhanced Equity Income Fund II (the Fund), including the portfolio of investments, as of December 31, 2016, and the related statement of operations for the year then ended, the statements of changes in net assets for each of the two years in the period then ended, and the financial highlights for each of the five years in the period then ended. These financial statements and financial highlights are the responsibility of the Fund's management. Our responsibility is to express an opinion on these financial statements and financial highlights based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and financial highlights are free of material misstatement. The Fund is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Fund's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. Our procedures included confirmation of securities owned as of December 31, 2016, by correspondence with the custodian and brokers; where replies were not received from brokers, we performed other auditing procedures. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such financial statements and financial highlights referred to above present fairly, in all material respects, the financial position of Eaton Vance Enhanced Equity Income Fund II as of December 31, 2016, the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period then ended, and the financial highlights for each of the five years in the period then ended, in conformity with accounting principles generally accepted in the United States of America.

DELOITTE & TOUCHE LLP

Boston, Massachusetts

February 17, 2017

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Federal Tax Information (Unaudited)

The Form 1099-DIV you received in February 2017 showed the tax status of all distributions paid to your account in calendar year 2016. Shareholders are advised to consult their own tax adviser with respect to the tax consequences of their investment in the Fund. As required by the Internal Revenue Code and/or regulations, shareholders must be notified regarding the status of qualified dividend income for individuals, the dividends received deduction for corporations and capital gains dividends.

Qualified Dividend Income. For the fiscal year ended December 31, 2016, the Fund designates approximately \$8,050,798, or up to the maximum amount of such dividends allowable pursuant to the Internal Revenue Code, as qualified dividend income eligible for the reduced tax rate of 15%.

Dividends Received Deduction. Corporate shareholders are generally entitled to take the dividends received deduction on the portion of the Fund's dividend distribution that qualifies under tax law. For the Fund's fiscal 2016 ordinary income dividends, 100.00% qualifies for the corporate dividends received deduction.

Capital Gains Dividends. The Fund hereby designates as a capital gain dividend with respect to the taxable year ended December 31, 2016, \$6,005,117 or, if subsequently determined to be different, the net capital gain of such year.

Eaton Vance

Enhanced Equity Income Fund II

December 31, 2016

Dividend Reinvestment Plan

The Fund offers a dividend reinvestment plan (Plan) pursuant to which shareholders may elect to have distributions automatically reinvested in common shares (Shares) of the Fund. You may elect to participate in the Plan by completing the Dividend Reinvestment Plan Application Form. If you do not participate, you will receive all distributions in cash paid by check mailed directly to you by American Stock Tran