EATON VANCE CALIFORNIA MUNICIPAL BOND FUND Form N-CSR November 27, 2013

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Form N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED

MANAGEMENT INVESTMENT COMPANIES

Investment Company Act File Number: 811-21147

Eaton Vance California Municipal Bond Fund

(Exact Name of Registrant as Specified in Charter)

Two International Place, Boston, Massachusetts 02110

(Address of Principal Executive Offices)

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(Registrant s Telephone Number)

September 30

Date of Fiscal Year End

September 30, 2013

Date of Reporting Period

Item 1. Reports to Stockholders

Municipal Bond Funds

Annual Report

September 30, 2013

Municipal (EIM) California (EVM) New York (ENX)

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. Each Fund has claimed an exclusion from the definition of the term commodity pool operator under the Commodity Exchange Act and is not subject to the CFTC regulation. Because of its management of other strategies, each Fund s adviser is registered with the CFTC as a commodity pool operator.

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 September 30, 2013

Eaton Vance

Municipal Bond Funds

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Municipal Bond Funds

September 30, 2013

Management s Discussion of Fund Performance

Economic and Market Conditions

During the first seven months of the fiscal year ended September 30, 2013, interest rates declined to historic lows, driven by highly accommodative monetary policies instituted by central banks around the world. In December 2012, the U.S. Federal Reserve (the Fed) replaced Operation Twist, the central bank s swapping of its short-term holdings for long-term Treasury bonds, with outright purchases of \$45 billion of Treasuries each month. This was in addition to the monthly purchase of approximately \$40 billion of agency mortgage-backed securities that it had begun just a few months before. These actions combined to put extraordinary downward pressure on yields, driving investors to look for other sources of income. One beneficiary was the municipal bond market, which rallied during the first seven months of the period in response to strong investor demand.

In late May 2013, however, Fed Chairman Ben Bernanke surprised the markets by indicating that the Fed s \$85 billion in monthly asset purchases, known collectively as quantitative easing (QE), could be tapered sooner than most investors had expected. The negative effect on the bond market was swift and dramatic. Investors rushed to sell fixed-income assets in anticipation of rising interest rates, causing nearly every fixed-income asset class to decline dramatically in value.

Historic outflows had a particularly significant effect on the municipal bond market because, unlike other domestic fixed-income asset classes, the municipal market is primarily retail based and is generally impacted more by the actions of small individual investors than other fixed-income asset classes. Even after the Fed tried to temper its comments and calm the markets, moderating the outflows in other fixed-income classes, heavy selling in municipals continued through August 2013. The selling abated in September 2013, after the Fed surprised the markets again by postponing its tapering of QE that many investors had thought was imminent. The Barclays Municipal Bond Index² an unmanaged index of municipal bonds traded in the United States declined 2.21% for the one-year period, while the Funds benchmark, the Barclays Long (22+) Year Municipal Bond Index (the Index), lost 5.06%.

During the period, additional pressure on the municipal market came from the city of Detroit s bankruptcy filing on July 18, 2013 and heightened attention to Puerto

Rico s fiscal woes throughout September 2013. Although Detroit s bankruptcy was not a surprise, because the city s fiscal problems had been well-documented for many years, the bankruptcy s negative headlines injected additional fear into the municipal bond market. That fear, combined with Puerto Rico s well-publicized fiscal challenges, drove both institutional and retail investors to sell Puerto Rico bonds, exerting additional downward pressure on the market value of the bonds in late August and September 2013 as the Funds fiscal year was ending.

Fund Performance

For the fiscal year ended September 30, 2013, Municipal Bond Fund, California Municipal Bond Fund and New York Municipal Bond Fund shares at net asset value (NAV) all underperformed the -5.06% return of the Index.

The Funds overall strategy is to invest normally in higher-quality bonds (rated Åor higher) with maturities of 10 years or more in order to capture their typically higher yields and a greater income stream.

Management hedges to various degrees against the greater potential risk of volatility at the long end of the yield curve by using Treasury futures and/or interest-rate swaps in seeking to mitigate risk. As a risk management tactic within the Funds—overall strategy, interest-rate hedging is intended to moderate performance on both the upside and the downside of the market. During this period of negative performance by municipal

bonds, the Funds hedging through Treasury futures mitigated some of the downside and, thus, added to the Funds performance relative to the Index.

The Funds use of leverage hurt performance versus the Index during the period. In managing the Funds, management holds leverage to seek to enhance the Funds tax-exempt income. The use of leverage has the effect of achieving additional exposure to the municipal market. Leverage magnifies a fund s exposure to its underlying investments in both up and down markets. During this period of negative performance by municipal bonds, leverage was a key detractor from the Funds performance versus the Index.

Fund-specific Results

Eaton Vance Municipal Bond Fund shares at NAV returned -7.59%, underperforming the -5.06% return of the Index. The chief detractors from performance versus the Index were leverage, security selection in the education sector and

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 www.eatonvance.com.

Municipal Bond Funds

September 30, 2013

Management s Discussion of Fund Performance continued

security selection in bonds with maturities of 10-20 years. The main contributors to performance relative to the Index were an underweighting and security selection in Puerto Rico bonds, security selection in zero-coupon bonds and BBB-rated bonds, and the Fund s hedging strategy.

Eaton Vance California Municipal Bond Fund shares at NAV returned -6.18%, underperforming the -5.06% return of the Index. In addition to leverage, detractors from results versus the Index included security selection in AAA-rated bonds and an underweighting in the housing sector. Contributors to relative performance versus the Index included an under-weighting and security selection in both Puerto Rico bonds and BBB-rated bonds. Security selection in zero-coupon bonds and the Fund shedging strategy aided results versus the Index as well.

Eaton Vance New York Municipal Bond Fund shares at NAV returned -7.16%, underperforming the -5.06% return of the Index. Key detractors from performance versus the Index included leverage, security selection in AAA-rated bonds and security selection in electric utility bonds. Significant contributors to performance versus the Index included the Fund shedging strategy and underweights in Puerto Rico bonds, BBB-rated bonds and bonds with maturities of 30 years or more.

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Municipal Bond Fund

September 30, 2013

Performance^{2,3}

Portfolio Manager William H. Ahern, Jr., CFA

% Average Annual Total Returns	Inception Date	One Year	Five Years	Ten Years
Fund at NAV	08/30/2002	-7.59%	9.40%	5.14%
Fund at Market Price		-15.17	7.97	5.32
Barclays Long (22+) Year Municipal Bond Index		-5.06%	7.24%	4.82%

% Premium/Discount to NAV*	
	-5.86%

Distributions ⁵	
Total Distributions per share for the period	\$ 0.766
Distribution Rate at NAV	6.24%
Taxable-Equivalent Distribution Rate at NAV	11.02%
Distribution Rate at Market Price	6.63%
Taxable-Equivalent Distribution Rate at Market Price	11 71%

% Total Leverage ⁶	
Residual Interest Bond (RIB)	Δ2 17%

Fund Profile

The above chart includes the ratings of securities held by special purpose vehicles established in connection with the RIB financing.⁶ Absent such securities, credit quality (% of total investments) is as follows:⁷

AAA	10.6%	BBB	4.9%
AA	59.4	BB	0.6
A	23.9	Not Rated	0.6

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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 www.eatonvance.com.

California Municipal Bond Fund

September 30, 2013

Performance^{2,3}

Portfolio Manager Cynthia J. Clemson

% Average Annual Total Returns	Inception Date	One Year	Five Years	Ten Years
Fund at NAV	08/30/2002	-6.18%	7.29%	4.37%
Fund at Market Price		-13.60	5.41	3.82
Barclays Long (22+) Year Municipal Bond Index		-5.06%	7.24%	4 82%

% Premium/Discount to NAV*	
	-10.25%

Distributions ⁵	
Total Distributions per share for the period	\$ 0.654
Distribution Rate at NAV	5.68%
Taxable-Equivalent Distribution Rate at NAV	11.58%
Distribution Rate at Market Price	6.33%
Taxable-Equivalent Distribution Rate at Market Price	12 90%

% Total Leverage ⁶	
RIB	42.46%

Fund Profile

The above chart includes the ratings of securities held by special purpose vehicles established in connection with the RIB financing.⁶ Absent such securities, credit quality (% of total investments) is as follows:⁷

AAA	11.8%	BBB	3.8%
AA	55.5	Not Rated	2.8
A	26.1		

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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 www.eatonvance.com.

New York Municipal Bond Fund

September 30, 2013

Performance^{2,3}

Portfolio Manager Craig R. Brandon, CFA

% Average Annual Total Returns	Inception Date	One Year	Five Years	Ten Years
Fund at NAV	08/30/2002	-7.16%	8.05%	4.60%
Fund at Market Price		-17.05	7.20	4.33
Barclays Long (22+) Year Municipal Bond Index		-5.06%	7 24%	4 82%

% Premium/Discount to NAV*	
	-9 42%

Distributions ⁵	
Total Distributions per share for the period	\$ 0.688
Distribution Rate at NAV	5.40%
Taxable-Equivalent Distribution Rate at NAV	10.46%
Distribution Rate at Market Price	5.96%
Taxable-Equivalent Distribution Rate at Market Price	11.55%

% Total Leverage ⁶	
RIB	41.34%
Fund Profile	

The above chart includes the ratings of securities held by special purpose vehicles established in connection with the RIB financing.⁶ Absent such securities, credit quality (% of total investments) is as follows:⁷

AAA	13.8%	BBB	7.1%
AA	49.4	Not Rated	1.5
A	28.2		

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performance at market price will differ from its results at NAV due to factors such as changing perceptions about the Fund, market conditions, fluctuations in supply and demand for Fund shares, or changes in Fund distributions. Investment return and principal value will fluctuate so that shares, when sold, may be worth more or less than their original cost. Performance less than one year is cumulative. Performance is for the stated time period only; due to market volatility, current Fund performance may be lower or higher than the quoted return. For performance as of the most recent month end, please refer to www.eatonvance.com.

Municipal Bond Funds

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Endnotes and Additional Disclosures

- The views expressed in this report are those of the portfolio manager(s) and are current only through the date stated at the top of this page. These views are subject to change at any time based upon market or other conditions, and Eaton Vance and the Fund(s) disclaim any responsibility to update such views. These views may not be relied upon as investment advice and, because investment decisions are based on many factors, may not be relied upon as an indication of trading intent on behalf of any Eaton Vance fund. This commentary may contain statements that are not historical facts, referred to as forward looking statements. The Fund s actual future results may differ significantly from those stated in any forward looking statement, depending on factors such as changes in securities or financial markets or general economic conditions, the volume of sales and purchases of Fund shares, the continuation of investment advisory, administrative and service contracts, and other risks discussed from time to time in the Fund s filings with the Securities and Exchange Commission.
- ² Barclays Municipal Bond Index is an unmanaged index of municipal bonds traded in the U.S. Barclays Long (22+) Year Municipal Bond Index is an unmanaged index of municipal bonds traded in the U.S. with maturities of 22 years or more. 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 tax-exempt income, ordinary income, net realized 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. 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. Taxable-equivalent performance is based on the highest combined federal and state income tax rates, where applicable. Lower tax rates would result in lower tax-equivalent performance. Actual tax rates will vary depending on your income, exemptions and deductions. Rates do not include local taxes.
- ⁶ Fund employs RIB financing. The leverage created by RIB investments provides an opportunity for increased income but, at the same time, creates special risks (including the likelihood of greater price volatility). The cost of leverage rises and falls with changes in short-term interest rates. See Floating Rate Notes Issued in Conjunction with Securities Held in the notes to the financial statements for more information about RIB financing. RIB leverage represents the amount of Floating Rate Notes outstanding at period end as a percentage of Fund net assets plus Floating Rate Notes.
- ⁷ Ratings are based on Moody s, S&P or Fitch, as applicable. 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 Standard and Poor s or Fitch (Baa or higher by Moody s) are considered to be investment grade quality. Credit ratings are based largely on the rating 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. If securities are rated differently by the rating agencies, the higher rating is applied. Holdings designated as Not Rated are not rated by the national rating agencies stated above.

Fund profile subject to change due to active management.

Municipal Bond Fund

September 30, 2013

Portfolio of Investments

Tax-Exempt Municipal Securities 171.0%

Security Amount Value Value

Education 16.6%

California Educational Facilities Authority, (University of Southern California), 5.25%, 10/1/38⁽¹⁾ \$ 9,750 \$ 10,443,127

Principal