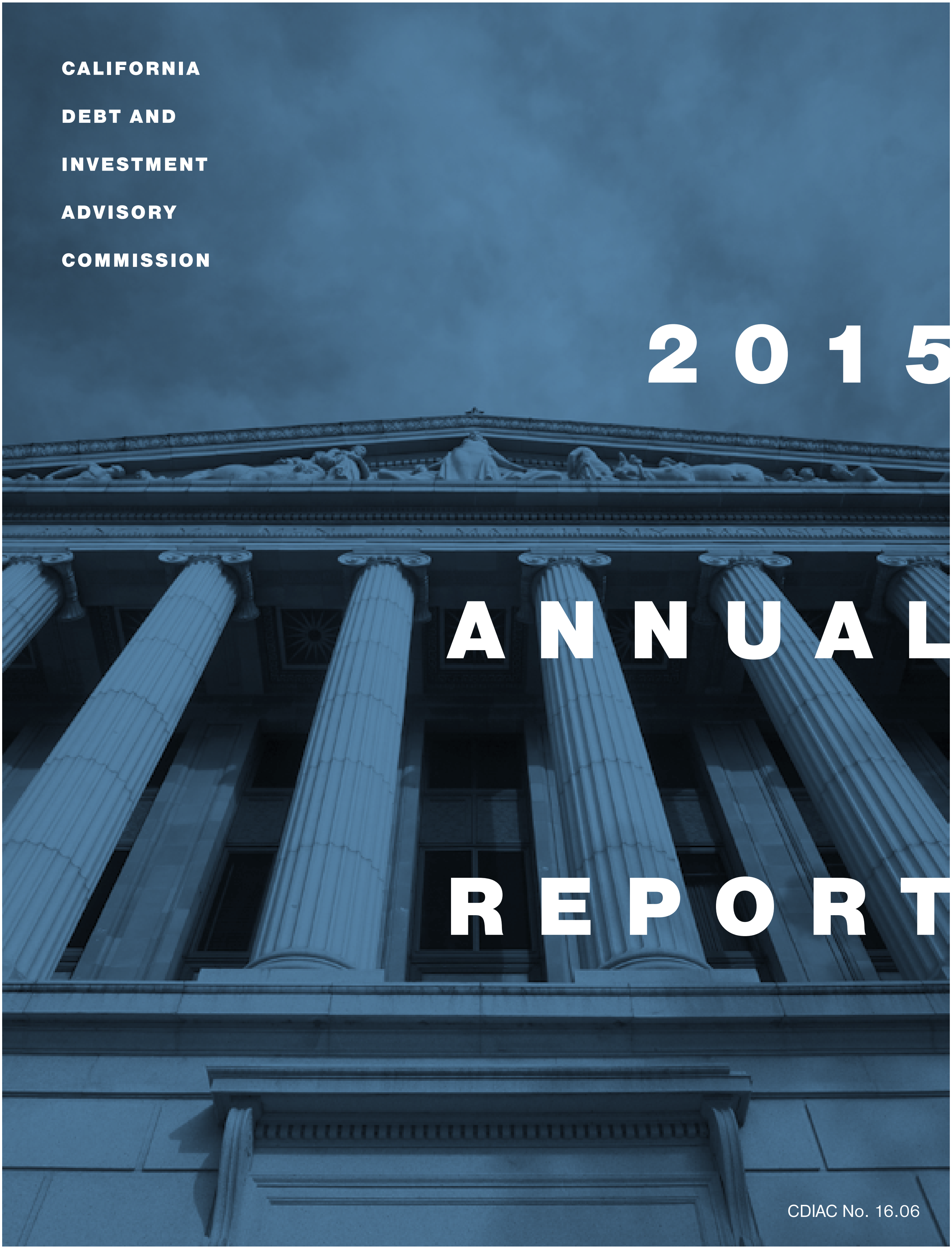

CALIFORNIA
DEBT AND
INVESTMENT
ADVISORY
COMMISSION

2015 ANNUAL REPORT

CDIAC No. 16.06

CDIAC

CALIFORNIA
DEBT AND
INVESTMENT
ADVISORY
COMMISSION

June 09, 2016

To Our Constituents:

I am pleased to present the California Debt and Investment Advisory Commission (CDIAC) 2015 Annual Report.

Under the leadership of Treasurer John Chiang the California Debt and Investment Advisory Commission (CDIAC) has been active on multiple fronts, furthering the practice of debt administration and public investing. Among the highlights of this 2015 Annual Report are CDIAC's contributions to the Treasurer's Task Force on Bond Accountability and the development of DebtWatch.

On February 12, 2015, Treasurer Chiang convened a special task force to develop best practice guidelines on the fiduciary care and use of state and local bond proceeds. Over the course of five meetings, the Task Force considered how state and local agencies administer bond proceeds and then developed recommended practices that could help public agencies improve the tracking of bond proceeds to ensure that the proceeds were being used for legal and intended purposes. In addition, the Task Force made recommendations on how public agencies can encourage adoption of these practices through education and training and further the adoption of these practices through policies and procedures.

Using CDIAC's debt issuance database as the source of data, the Treasurer created and launched a web portal that provides a more user-friendly way for the public to interact with the data. DebtWatch, as the website is named, provides information on debt issues from more than 6,000 state and local public agencies, allowing viewers to identify over $1.5 trillion dollars in debt issued over the past 30 years. DebtWatch provides greater transparency and accountability by helping policy makers, researchers, and the public to search for projects within their communities.

CDIAC continues to seek ways to address the core training needs of public officials as well as foster discussion and awareness of emerging practices and tools. To this end, CDIAC has expanded its partnership with allied organizations, including the California Municipal Treasurer's Association and the California Society of Municipal Analysts. It has benefited from these alliances by tapping into the expertise that distinguishes these organizations to offer more skill-based training.

As we move into 2016, CDIAC is committed to providing the highest level of service with planned improvements to its data collection and reporting processes, an expansive agenda of research projects, and training that avails public officials of the tools needed to properly manage and safeguard the public's resources.

Respectfully,

Mark B. Campbell
Executive Director

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ABOUT CDIAC

The California Debt and Investment Advisory Commission (CDIAC) provides information, education, and technical assistance on debt issuance and public funds investing to state and local public agencies and other public finance professionals. CDIAC was created in 1981 with the passage of Chapter 1088, Statutes of 1981 (AB 1192, Costa). This legislation established the California Debt Advisory Commission as the State's clearinghouse for public debt issuance information and required it to assist state and local agencies with the monitoring, issuance, and management of public financings. CDIAC's name was changed to the California Debt and Investment Advisory Commission with the passage of Chapter 833, Statutes of 1996 (AB 1197, Takasugi) and its mission was expanded to cover the investment of public funds. CDIAC is specifically required to:

- Serve as the State's clearinghouse for public debt issuance information.
- Publish a monthly newsletter.
- Maintain contact with participants in the municipal finance industry to improve the market for public debt issuance.
- Provide technical assistance to state and local governments to reduce issuance costs and protect issuers' credit.
- Undertake or commission studies on methods to reduce issuance costs and improve credit ratings.
- Recommend legislative changes to improve the sale and servicing of debt issuances.
- Assist state financing authorities and commissions in carrying out their responsibilities.
- Collect specific financing information on public issuance through Mello-Roos Community Facilities Districts after January 1, 1993 or as a member of a Marks-Roos Bond Pool beginning January 1, 1996; collect reports of draws on reserves and defaults from Mello-Roos Community Facilities Districts and Marks-Roos Bond Pools filed by public financing agencies within 10 days of each occurrence.
- In conjunction with statewide associations representing local agency financial managers and elected officials, develop a continuing education program aimed at state and local officials who have direct or supervisory responsibility for the issuance of public debt or the investment of public funds.
- Receive notice of public hearings and copies of resolutions adopted by a joint powers authority for certain bonds authorized pursuant to Marks-Roos Local Bond Pooling Act of 1985.

Figure 1 summarizes the CDIAC's statutory provisions.

Figure 1

CDIAC STATUTORY PROVISIONS

FUNCTION	CALIFORNIA CODE SECTION	DESCRIPTION OF PROVISIONS
CDIAC Authorizing Statute	Government Code Section 8855 - 8859	Establishes CDIAC's duties
Report of Proposed Sale of Public Debt	Government Code Section 8855(i)	Requires the issuer of any proposed debt issue of state or local government to, no later than 30 days prior to the sale, give written notice of the proposed sale to CDIAC.
Report of Final Sale of Public Debt	Government Code Section 8855(j)	Requires the issuer of any debt issue of state or local government to submit, not later than 21 days after sale, a report of final sale to CDIAC including specific information about the transaction.
Mello-Roos Reporting Requirements	Government Code Section 53359.5(a) thru (c) and 53356.05	Reporting requirements: debt issuance, annual debt service, default, reserve draw, specific events affecting the value of outstanding bonds, and annual status.
Marks-Roos Reporting Requirements	Government Code Section 6586.5, 6586.7, 6599.1(a), 6588.7 (e)(2), 6599.1(c)	Reporting requirements: notice of hearing authorizing bond sale, copy of resolution authorizing bonds, written notice of proposed sale, debt issuance, annual debt service, default, reserve draw, rate reduction bond savings, and annual status.
General Obligation Bond Cost of Issuance	Government Code Section 53509.5(b)	Reporting requirements: cost of issuance of bonds issued by city, county, city and county, school district, community college district or special district.
Refunding Bonds Sold at Private Sale or on a Negotiated Basis	Government Code Section 53583(c)(2) (B)	Reporting requirement: written statement from public district, public corporation, authority, agency, board, commission, county, city and county, city, school district, or other public entity or any improvement district or zone explaining the reasons why the local agency made the decision to sell the bonds at a private sale or on a negotiated basis instead of at public sale.
School and Community College Districts	Education Code Section 15146(c), (d)(2), and (e)	Reporting requirements: cost of issuance of bonds issued by a school district and report of sale or planned sale by a school district.
School and Community College Districts	Education Code Section 15303(b)	Reporting requirements: copy of the resolution adopted by the board of supervisors approving the use of Education Code allowing for the creation of school improvement districts within a school and community college district in the county.
Joint Powers Authority	Government Code Section 6548.5	Reporting requirements: level of fees or charges imposed by a Joint Powers Authority for the issuance of bonds pursuant to the Joint Exercise of Powers Act.
Joint Powers Authority	Government Code Section 6586.7	Reporting requirements: a copy of the resolution adopted by an authority authorizing bonds or the issuance of bonds or accepting the proceeds of bonds issued pursuant to Joint Exercise of Powers Act with exemptions given to certain types of issuers and projects.
Joint Powers Authority	Government Code 6586.5(a)(3)	Reporting requirements: public notice at least 5 days prior to hearing where the authority makes certain findings and takes actions with respecting to financing certain improvements.
Joint Powers Authority	Government Code Section 6588.7(e)(2)	Reporting requirements: a statement from the authority that it is issuing rate reduction bonds, the source of repayment, and the saving realized from the sale of the bonds.
City, County and Other Agencies	Government Code Section 5418	Reporting requirements: written notice from the agency explaining the reasons the legislative body has decided to sell the bonds at a private sale rather than public.
Harbor Agency—Joint Powers Authority	Harbor and Navigation Code Section 1706(b)	Reporting requirements: annual report regarding receipts and expenditures from the infrastructure fund established pursuant to a harbor agency Joint Powers Agency.
Redevelopment Agency	Health and Safety Code Section 33664(d)	Reporting requirements: copy of the agency's resolution specifying the financial advantage of the agency purchasing its own bonds and a covering letter with other information specific to the bonds.

To meet its statutory responsibilities, CDIAC's divides its functions into four units: Data Collection and Analysis, Policy Research, Education and Outreach, and Administration.

Pursuant to statute, all state and local government issuers must submit information to CDIAC at two points during the debt issuance process: thirty days prior to the proposed sale date and no later than 21 days after the actual sale date.[1] Included in these reports to CDIAC are the sale date, name of the issuer, type of sale, principal amount issued, type of financing instrument, source(s) of repayment, purpose of the financing, rating of the issue, and members of the financing team. In addition, Mello-Roos and Marks-Roos bond issuers, for as long as their bonds are outstanding, must submit a yearly fiscal status report on or before October 30th. Data compiled from these reports are the basis for public issuance statistics and analyses released by CDIAC. Since 1984, CDIAC has maintained this information in the California Debt Issuance Database – a portion of which is available on CDIAC's website.[2]

Since 1984, CDIAC has organized educational seminars focusing on public finance matters. Offered at locations throughout the state, CDIAC seminars are designed to: (1) introduce new public finance staff to the bond issuance and investment processes; (2) strengthen the expertise of public officials familiar with the issuance and the investment processes; and (3) inform public officials about current topics that may affect public issuance and the investment of public funds.

CDIAC COMMISSION MEMBERS

Pursuant to statute, the Commission may consist of between three and nine members, depending on the number of appointments made by the Treasurer or the Legislature. Three statewide elected officials — the State Treasurer, State Controller, and Governor or Director of Finance – serve *ex officio*. Statute names the Treasurer to be chair. Local government associations, such as the League of California Cities, may nominate two local finance officers for appointment by the Treasurer. The Senate Rules Committee and the Speaker of the Assembly may each appoint two members. Appointed members serve at the pleasure of their appointing power and otherwise hold four-year terms.

The 2015 Commission members serving as of June 30, 2015 included:

JOHN CHIANG

California State Treasurer
Residence: Torrance, California

Background: Mr. Chiang graduated with honors from the University of South Florida with a degree in Finance, and received his law degree from the Georgetown University Law Center. As State Treasurer, he oversees a bank that processes trillions of dollars in transactions every year. He sells California's bonds, invests the State's money and manages its cash. Prior to being elected Treasurer, he served from 2007 through 2014 as State Controller. In that office, he took steps during the Great Recession to preserve cash to meet obligations to education and bond holders, worked to ensure the fiscal solvency of the State's pension plans, and ensured that $3.1 billion in unclaimed property was returned to the rightful owners. Prior to serving as Controller, he was elected to the Board of Equalization in 1998, where he led with innovative taxpayer-friendly services such as the State's free income tax return preparation service, ReadyReturn.

Mr. Chiang holds a degree from the University of South Florida and a Juris Doctor from the Georgetown University Law Center.

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[1] AB 2274, Gordon (Chapter 181, Statutes of 2014) reduced the time period for submission of final reports of debt issuance from 45 days to 21 days.

[2] While CDIAC has collected information since January 1, 1982, the Debt Issuance Database contains information from 1984 to present day.

EDMUND G. BROWN
Governor of California
Residence: Sacramento, California

Background: Edmund G. Brown Jr., known as Jerry, was elected Governor of California in November 2010. Governor Brown has held other elected positions including member of the Los Angeles Community College Board of Trustees, Secretary of State, Governor (1975 to 1983), Mayor of Oakland, and California Attorney General.

Governor Brown received his Bachelor of Arts degree in classics from the University of California at Berkeley and his law degree from Yale Law School.

BETTY YEE
California State Controller
Residence: Alameda, California

Background: Betty T. Yee was elected Controller in November 2014, following two terms of service on the Board of Equalization (BOE). As Controller, she continues to serve the BOE as its fifth voting member. As the State's chief financial officer, Yee also chairs the Franchise Tax Board and serves as a member of the California Public Employees Retirement System (CalPERS) and the California State Teacher's Retirement System (CalSTRS) boards. The two boards have a combined portfolio of nearly $500 billion. She has more than 30 years of experience in public service, specializing in state and local finance and tax policy. Yee previously served as Chief Deputy Director for Budget with the California Department of Finance, where she led the development of the Governor's Budget, negotiations with the Legislature and key budget stakeholders, and fiscal analyses of legislation on behalf of the Administration. Prior to this, she served in senior staff positions for several fiscal and policy committees in both house of the California State Legislature. Yee currently serves on the board of directors for the Cal Alumni Association at the University of California Berkeley; California Women Lead; and the Equality California Institute. She was a co-founder of the Asian Pacific Youth Leadership Project, which exposes California high school youth to the public service, public policy, and political arenas.

A native of San Francisco, Yee received her bachelor's degree in sociology from the University of California, Berkeley, and her master's degree in Public Administration from Golden Gate University in San Francisco.

CAROL LIU
State Senator, 21st District
Residence: La Cañada Flintridge, California

Background: Carol Liu was elected to the California State Senate in 2008. Senator Liu serves as the Chair of the Senate Human Services Committee and the Budget Subcommittee on Education. She also serves on the following committees: Banking and Financing Institutions, Budget and Fiscal Review, Education, Governance and Finance, and Public Safety. She represented the 44th Assembly District from 2000-2006. Prior to her election to the State Assembly, she served eight years as a City Councilmember, including two terms as Mayor of the City of La Cañada Flintridge.

Senator Liu graduated from San Jose State College, earned a teaching and administrative credential from University of California, Berkeley, and spent 17 years working in public schools.

HENRY T. PEREA
Assembly Member, 31st District
Residence: Fresno, California

Background: Assemblymember Perea represents the 31st Assembly District that includes the Central Valley communities of Cutler-Orosi, Dinuba, Firebaugh, Fowler, Kerman, Mendota, Parlier, Reedley, Sanger, San Joaquin, Selma and Fresno. He currently serves on the Agriculture, Banking and Finance, Governmental Organization, and Revenue and Taxation Committees, and the Select Committees on Job Creation for the New Economy, and Renewable Energy Economy in Rural California. He began his career in public service with an internship with Congressman Cal Dooley and was later elected to serve on the Fresno City Council.

Assemblymember Perea completed the *Senior Executives in State and Local Government* program at Harvard's John F. Kennedy School of Government.

MATTHEW DABABNEH
Assembly Member, 45th District
Residence: Encino, California

Background: Assemblymember Dababneh was elected to the California State Assembly in November of 2013 to represent the 45th Assembly District which includes the communities of Bell Canyon, Calabasas, Canoga Park, Chatsworth, Encino, Hidden Hills, Northridge, Reseda, Sherman Oaks, Tarzana, West Hills, Winnetka, and Woodland Hills. Dababneh currently serves as the Chairman of the Banking and Finance Committee and is also a member of the Insurance, Revenue and Taxation, and Privacy and Consumer Protection Committees. Prior to his election to the Assembly, Dababneh worked as the District Chief of Staff for Congressman Brad Sherman and served on the boards of several local non-profit organizations, including Hope of the Valley Rescue Mission, the Valley Cultural Center, Phoenix House Juvenile Drug Rehabilitation Academy, and the House of Hope. Dababneh graduated with a B.A. from the University of California, Los Angeles.

JOSÉ CISNEROS
Treasurer of the City and County of San Francisco
Residence: San Francisco, California

Background: As Treasurer, Mr. Cisneros serves as the City's banker and Chief Investment Officer, and manages tax and revenue collection for San Francisco. In 2006, Mr. Cisneros launched the Bank on San Francisco program, the first program in the nation to address the needs of unbanked residents by actively partnering with financial institutions to offer products and services to lower-income consumers. In addition, he worked to establish the Office of Financial Empowerment, only the third municipal office nationwide dedicated to stabilizing the financial lives of low-income families.

Mr. Cisneros received his Bachelor of Science from the Massachusetts Institute of Technology, Sloan School of Management and studied for his Master of Business Administration at Boston University. He is also a graduate of the International Business Program at Stichting Nijenrode University in the Netherlands.

DAVID BAUM
City of San Leandro
Residence: San Francisco Bay Area, California

Background: David Baum is the Director of Finance for the City of San Leandro. In this capacity, he is responsible for budget, treasury, debt administration, revenue management, general accounting, payroll, and purchasing. He has more than 20 years of local government experience including serving as the Chief Financial Officer of the San Jose Redevelopment Agency and manager of the financial rehabilitation of the City of Hercules. In addition, he served over 10 years as a board member of an elementary and middle school in Saratoga.

Mr. Baum holds a Bachelor of Arts Degree in Economics from Stanford University.

CDIAC'S ROLE IN THE CALIFORNIA MUNICIPAL MARKET

CDIAC was created to serve as a clearinghouse for information related to the use of debt by public agencies in California. To this was added the responsibility for providing information in the form of debt data, education, and research. In 1996 following the Orange County bankruptcy the scope of CDIAC role was expanded to include public investing. Over time CDIAC has become not only a standard for training and data on debt issuance but it has taken on national significance in delivering timely and insightful programs on emerging topics in public finance. It continues to seek ways to offer services that make conditions better for market participants. Here are just a few of the ways CDIAC has made a difference in 2015.

DEBT WATCH

To promote transparency in government, Treasurer John Chiang created a website to make it easier for taxpayers to track the $1.5 trillion in bonds, notes, and other public debt issued over the past 30 years by more than 6,000 state and local governmental entities. The site, powered by the data provided by issuers of public debt to CDIAC since 1983, is unique in that it uses an "open data" platform to increase the ease with which individuals can interact with the data.

Data is available from the site's homepage for the following categories:

- State of California
- Counties
- Cities
- K-14 Schools
- UC & CSU
- Joint Powers Authorities
- Mello-Roos Districts
- Special Districts

The website provides access to the data through two different approaches: a *Data Lens* page that features notable findings and trends in an interactive graphical form and a *Compare Issuers* page that allows users to compare issuers.

Data Lens pages offer debt data sorted in a variety of ways, which may include:

- Sale Date
- Sold Status
- Issuer County
- Issuer Group
- Issuer Type

- Issuer
- Debt Type
- Purpose
- Source of Repayment
- Underwriter
- Financial Advisor
- Bond Counsel
- Trustee

Compare Issuers pages allow users to compare up to five issuers at a time and to make their own charts comparing data for proposed and issued debt in these categories:

- Principal
- New Money
- Refinancings

TASK FORCE ON BOND ACCOUNTABILITY

On February 12, 2015, California State Treasurer John Chiang convened a special task force to develop best practice guidelines on the fiduciary care and use of state and local bond proceeds. The Task Force on Bond Accountability (Task Force), composed of current and former securities regulators, local treasurers, and public agency fiduciaries, along with academicians and finance industry experts, was charged with developing best practice guidelines for how bond proceeds should be managed in order to reduce the risk of fraud, waste, and abuse. Additionally, the Task Force was asked to consider strategies to increase transparency and oversight of the use of bond funds.

The Treasurer's decision to form the Task Force resulted, in part, from the revelation that approximately $1.3 million was discovered missing during a routine audit of bond funds held by the Association of Bay Area Governments (ABAG), an issuer of bonds for local governments, nonprofit organizations, and private entities in the San Francisco region. The funds were being held in trust by ABAG for the City and County of San Francisco. The *San Francisco Chronicle* reported that the bond money, which was earmarked for public parks and street improvements in downtown San Francisco, was allegedly embezzled by ABAG's director of financial services.

The Task Force gathered information on the internal controls and practices employed by public agencies to manage bond proceeds through different means, including:

- Speaker presentations;
- Staff research and reports;
- Task Force member expertise; and
- Case studies of California issuers.

The Task Force published its final report on December 14, 2015, which included recommended practices that could help public agencies improve the tracking of bond proceeds to ensure that the proceeds were being used for legal and intended purposes. The report also included the Task Force's recommendations on how public agencies can encourage adoption of these practices through education and training and further the adoption of these practices through policies and procedures. Finally, the report recommended further analysis that may lead to more specific accounting and administrative procedures to be used by State and local agencies to administer bond funds.

The best practices developed by the Task Force embrace the internal control principles recognized by the U.S. Government Accountability Office (GAO) as a measure of the adequacy of any internal control system. These include:

1. The oversight body and management should demonstrate a commitment to integrity and ethical values.

2. The oversight body should oversee the entity's internal control system.
3. Management should establish an organizational structure, assign responsibility, and delegate authority to achieve the entity's objectives.
4. Management should demonstrate a commitment to recruit, develop, and retain competent individuals.
5. Management should evaluate performance and hold individuals accountable for their internal control responsibilities.
6. Management should define objectives clearly to enable the identification of risks and define risk tolerances.
7. Management should identify, analyze, and respond to risks related to achieving the defined objectives.
8. Management should consider the potential for fraud when identifying, analyzing, and responding to risks.
9. Management should identify, analyze, and respond to significant changes that could impact the internal control system.
10. Management should design control activities to achieve objectives and respond to risks.
11. Management should design the entity's information system and related control activities to achieve objectives and respond to risks.
12. Management should implement control activities through policies.
13. Management should use quality information to achieve the entity's objectives.
14. Management should internally communicate the necessary quality information to achieve the entity's objectives.
15. Management should externally communicate the necessary quality information to achieve the entity's objectives.
16. Management should establish and operate monitoring activities to monitor the internal control system and evaluate the results.
17. Management should remediate identified internal control deficiencies on a timely basis.

EDUCATION AND RESEARCH

CDIAC continued to serve as a conduit for new ideas that improve market conditions and bring about lower costs and higher credit ratings for state and local government issues. CDIAC's Education and Outreach Program convened a symposium of experts, academics, and market participants to examine the opportunities for the municipal market to benefit from advances in technology and market structure. The program examined the benefits derived from greater access to information on pricing and transaction costs offered by electronic trading and the use of these systems to provide transparency, efficiency, and fairness to the entire municipal market. The symposium was inspired by the fact that the municipal securities market is far less regulated and transparent than other segments of the nation's capital markets. Trades occur in a decentralized, over-the-counter fashion to a much higher extent than in corporate securities markets. Industry regulators, including the Securities Exchange Commission, have expressed concern that structural deficiencies render the market inefficient and unfair to issuers as well as to investors. Furthermore, illiquid markets present unique challenges for establishing accurate bond pricing, in both the primary and secondary markets.

CDIAC's Research Unit has produced seminal analyses that help to describe market practices, including identifying meaningful variations in the information provided to investors considering conduit bonds. The research encourages opportunities for the market to work towards standardization and transparency. CDIAC also considered the difficulties public agencies now have in the wake of several unfavorable court rulings to the use of assessments to finance facilities and services. In a report on the topic, CDIAC recognizes several practices that if adopted may reduce the risk present in the current legal environment.

ALTERNATIVE TRADING SYSTEMS:
SOLVING THE LIQUIDITY AND PRICING TRANSPARENCY PROBLEMS IN THE MUNICIPAL MARKET

INTRODUCTION

The municipal market is inefficient and illiquid, leading, in theory, to a higher cost of funds for public agencies. Electronic trading through alternative trading systems (ATS) presents opportunities for municipal market participants to improve liquidity, trade efficiently, and increase market transparency. These opportunities are likely to translate to improved pricing for both issuers and investors. Despite these opportunities most municipal bonds continue to trade without taking full advantage of the benefit of technology, in a marketplace controlled by a limited number of participants who often lack the requisite information to transact efficiently. There are a number of potential ways to increase the efficiency in this market; and regulatory and technological advances are improving the likelihood that these will take hold in the future. But there are still many obstacles to overcome. Ultimately, issuers play an important role in promoting efficiency and helping to advance the adoption of technologies that drive better pricing, efficiency, and liquidity.

INEFFICIENCIES IN BOND TRADING

In simple terms, the less a borrower has to commit to interest costs and fees, the more it can commit to financing improvements and services. Since greater liquidity is believed to lower the cost of funds, a liquid market enables public issuers to finance more public goods. In early 2015, the Commissioner of the Securities and Exchange Commission (SEC) recognized that the municipal market is illiquid, opaque, costly, and unfair.[3] Most recognize it as a highly fragmented market comprised of competing interests, with participants trying to acquire securities that trade infrequently. This is particularly true of secondary market trades between investors after the initial sale of the securities.

The greatest share of secondary market trading of municipal securities occurs over-the-counter (OTC) through dealers in a decentralized market. Three factors contribute to this market's opaqueness and drive transaction costs.[4] First, the framework of existing regulations requires less disclosure of financial and risk information

[3] Aguilar, Luis A., U.S. Securities and Exchange Commission (SEC), *Statement on Making the Municipal Securities Market More Transparent, Liquid, and Fair*, Feb. 13, 2015.

[4] *Overview of Market Structure, Pricing, and Regulation*, U.S. Government Accountability Office, Municipal Securities, Jan. 17, 2012; *see* Green, Richard C., Burton Hollifield, and Norman Schürhoff, *Dealer Intermediation and Price Behavior in the Aftermarket for New Bond Issues*, Journal of Financial Economics, Oct. 2006.

from municipal issuers than corporate issuers. Investors value information that allows for a quick and easy discovery of an issue's risks. Securities lacking comprehensive, frequent, and easily accessible disclosure documents are considered by investors to carry more risk and higher costs. Second, there is essentially no pre-trade price transparency. Investors can only determine the trade prices by contacting dealers. Unlike other securities markets, there is no centralized display of the range of prices dealers are willing to pay for securities. Finally, there are difficulties in accessing and understanding post-trade prices. The Municipal Securities Rulemaking Board (MSRB) provides the post-trade prices on its Electronic Municipal Market Access (EMMA) website. However, this tool is underutilized by retail traders and when used, it can be difficult to analyze.[5]

Electronic trading platforms offer significant value and currently account for more than a quarter of all trades. Although bond trading costs in electronic markets are substantially lower than OTC markets, the availability of electronic resources varies widely depending on the market.[6] The platforms now operating are dealer-centric but they may increasingly provide a means for clients to access the market without the participation of a dealer. Bond exchange-traded funds (ETFs) offer a practical model for electronic trading platforms.[7] ETFs are more transparent than OTC as evidenced by the availability of quotes, and large bond ETFs typically trade intraday within a centralized market, providing deep liquidity with tight bid-ask spreads. Finally, there is considerable evidence that bond ETFs can assist in price discovery.

POTENTIAL APPROACHES TO ADDRESS INEFFICIENCIES

The inefficiencies in trading may be addressed by a number of potential approaches, leading to greater liquidity, better prices for issuers, and lower funding costs. The first approach is to improve pre-trade price transparency. This could be achieved by aggregating and disseminating a National Best Bid or Offer (NBBO) for municipal securities.[8] Several electronic markets are now aggregating electronic actionable quotes for many municipal securities, but most customers do not see these prices. When investors see an aggregate of prices, they derive a higher value from opting for the best price. One objection to this proposal is that the large volume of municipal securities would make computing and disseminating an NBBO challenging. However, the system would still be easier to maintain than the NBBOs that equity options markets currently disseminate. Another objection is that dealers would be harmed if forced to quote continuously. It may be that the system would not force dealers to quote, but allow market forces to reward those that did quote with more order flow than those that did not.

Pre-trade price transparency could also be achieved if regulators chose to mandate that brokers post all customer limit orders in an electronically accessible order display facility (ODF) in order to improve pre-trade price transparency.[9] Access to customer orders through ODFs would allow any dealer or buy-side trader to fill an order. Many dealers object to using ODFs and claim that using them will cut into their

[5] The MSRB launched its EMMA Price Discovery Tool in mid-2014 which enables users to access and understand post-trade prices. However, the Price Discovery Tool does not eliminate all difficulties. For instance, users must know a security's CUSIP number in order to access price trade information.

[6] Hendershott, Terrence, and Ananth Madhavan, *Click or Call? Auction versus Search in the Over-the-Counter Market*, Journal of Finance, Feb. 2015.

[7] Bond ETFs contain a portfolio of bonds, trade like stocks, and are typically traded daily, offering high liquidity.

[8] Harris, Larry, *Transaction Costs, Trade Throughs, and Riskless Principal Trading in Corporate Bond Markets,* Sept. 15, 2015.

[9] Harris, Larry, Albert Kyle, and Erik Sirri, *Statement on the Structure of Trading in Bond Markets*, Financial Economics Roundtable, May 11, 2015. *See generally* Hendershott, Terrence, *Electronic Trading in Financial Markets*, IT Pro, July/August 2003.

profits causing many dealers to withdraw from the business, an outcome that would likely produce less liquidity and higher municipal funding costs. Indeed, ODFs whose prices constrain trades would decrease dealer profits causing some to withdraw from the market. This is due in part to ODFs enabling buy-side traders and efficient dealers to effectively offer liquidity to each other. Yet balance may be restored by electronic dealers who provide better service at a lower cost and replace traditional dealers.

A second approach to improving trade efficiency is to limit the diversity of available bonds. Complexity is counterproductive to creating greater liquidity, yet many municipal bonds have unique features that make pricing them difficult. These characteristics favor well-informed traders but hurt retail and some buy-side traders. Issuing simpler bonds drives down transaction costs and makes researching and trading those issues easier for many market participants.

Third, efficiency and liquidity may be enhanced if there are simply fewer bonds in the market. Liquidity improves when there are more buyers and sellers interested in the same bond issue. An abundance of small issues divides markets, making it difficult for buyers and sellers in different issues to trade with each other even when their issues are excellent substitutes for each other. Some states have formed state bond banks to consolidate small bond issues from multiple local agencies into one pooled issue. The pooled bond often receives a higher rating, produces less spread risk and better interest rates, and lower issuing costs. Absent a state bond bank, issuers can issue a few standard bonds differentiated primarily by length of term.

A fourth approach, establishment of a central municipal bond exchange platform, combines aspects of the first three potential solutions. The current market structure skews pricing and transaction costs. An exchange might lessen fragmentation and pricing discrepancies in the municipal market and provide the inventory and data to support secondary market trading. Because today's electronic trading is transacted on a number of different platforms, the market would benefit from a central exchange. It can help to illuminate the similarities among bonds and increase liquidity for similar issues. A central exchange could organize and group comparable bonds, based on a number of factors, including sector of issuance, date of maturity, and credit rating, and produce a daily potential price range for all active municipal bonds.[10]

A central exchange offers the considerable benefit of eliminating the inefficiencies of OTC trading that requires traders to place multiple calls in an effort to comply with fair pricing regulations. It would allow dealers to quickly access and analyze an aggregate of bids. Although not every issue has depth of market, for those that do, the full extent of that market should be accessible to market participants in order to ensure competitive and fair pricing.

Finally, issuers may create greater liquidity if they improve their disclosure. Investors need to be able to identify which securities are risky and the extent of those risks. Lacking this information they are encouraged to buy the bonds at a lower cost, forcing issuers to pay a premium. If applied across the municipal market, these potential approaches could greatly change the landscape of trading and increase efficiency and liquidity.

REGULATORY AND TECHNOLOGICAL ADVANCES IN THE MARKET

While these five approaches have yet to transform the market, recent regulatory and technological advances have begun to incrementally move

[10] *See, e.g.*, Bergstrom, Evan, Justin Marlowe, and Ron Valinoti, A Groupings Methodology for Municipal Securities: Theory, Application, and Evidence, July 21, 2014.

the market forward. First, the development and widespread use of EMMA has improved investor access to offering information and disclosure relating to securities. EMMA's Price Discovery Tool also facilitates greater transparency in allowing market participants to access post-trade prices. Additionally, fair pricing rules and best execution rules as well as the Financial Industry Regulatory Authority's (FINRA) active regulation of markups has led to narrower spreads.

In the future, regulators can continue to offer value to the municipal market in a few ways – first, by requiring dealers to disclose markups on trades. Even if prices do not change, markup disclosure gives investors more confidence that dealers are conducting business fairly. Second, regulators may clarify best execution rules by identifying a reasonable range of prices at which dealers may trade based on the market for and features of the bond. Finally, regulators may continue to push for improved disclosure within the limits of the Tower Amendment.

New technology complements the existing regulatory developments and has enabled issuers and other market participants to more quickly and efficiently analyze market conditions as well as issue and trade municipal securities. ATSs are platforms used by purchasers and sellers of securities. Existing platforms, including Bloomberg Municipal Bond Platform, Ipreo, TMC Bonds, and Clarity BidRate Alternative Trading System (Clarity Bid), have offered market participants improved transparency, market efficiency, and fairness. Each system is registered with the SEC and regulated as a broker-dealer or securities exchange.

Bloomberg Municipal Bond Platform is a non-trading platform that provides market monitoring, news, analytics, and a database of securities. This platform can be used by any market participant with a subscription service, including issuers, dealers, and municipal advisors. The platform contains new issuance information including comprehensive bond features. For secondary market trading, Bloomberg offers access to all information needed to evaluate a trade, including the bonds' trade histories with prices, bids wanted listings, and electronic trade confirmations.

Electronic platforms also serve the primary market. Ipreo is the preeminent platform tailored to facilitate new municipal bond issuance. The platform allows issuers to manage new issuance through a competitive bid calculation system, document delivery system, and provision of a complete audit trail. Ipreo also enables the financing team to share documents, market the securities to investors, and receive retail and institutional orders. The platform also delivers deal information to investors. Finally, Ipreo shares data with and connects to other platforms.

There are also ATSs that operate primarily in the secondary market.[11] TMC Bonds is an ATS selling fixed income securities. TMC is involved in both the primary and secondary markets but the majority of its business is conduct in the secondary. The platform is used by a wide array of participants including broker-dealers, registered investment advisors, mutual funds, ETFs, insurance companies, credit unions, and municipalities. TMC comprises between a quarter and a third of interdealer trades in the secondary market on a daily basis. Dealers can post new issuance offerings on the platform and receive, manage, and respond to bids.

Specialized ATSs also exist for security subsets. Clarity Bid is an ATS platform that focuses solely on variable rate demand obligation (VRDO) and variable rate demand note (VRDN) trading.[12] The platform attempts to respond to problems

[11] In 2006 The Muni Center changed its name to TMC Bonds to reflect its expansion in offering non-municipal fixed income securities. Similar bond trading platforms include Tradeweb Direct and KCG BondPoint (formerly Knight BondPoint).

[12] VRDOs are securities with interest rates that reset periodically and which may be liquidated at par through puts or tenders. VRDNs are debt instruments payable on demand that accrue interest based on a prevailing money market rate.

in the variable rate market raised by the financial crisis in part by replacing the pricing role of traditional remarketing agents. Like other ATSs, Clarity Bid hosts a competitive bid process which aims to improve execution and lower volatility. Because of the broader buying base using this platform innovative products are better able to reach and gain traction in the market.

These platforms offer transparency in displaying municipal securities, their features, and pricing information. Additionally, the ATS platforms improve liquidity in the secondary market by more efficiently matching buyers and sellers. These platforms can also assist dealers in meeting their best execution obligations by listing bid prices and they promote efficiency by offering a faster approach to conducting market research and trading.

IMPEDIMENTS TO ADOPTION

Municipal securities do not trade as efficiently as securities in other financial markets. The characteristics of the market may present obstacles to efficiency that cannot be overcome through regulatory and technological advances. Additionally, the sweeping changes anticipated by a fully operational ATS might be constrained by market realities.

Fair pricing and best execution regulations may have a minimal effect on retail investors. The assumption that retail investors want to trade more frequently and would do so if the cost of trading were cheaper may be false. The retail community is composed of many buy and hold investors that do not want to trade away stable, long-term investment income. The original purpose in buying a bond may be to hold it to maturity as a regular source of income rather than to attempt to trade it at a profit. Lower trading costs do little for these retail investors.

Additionally, trading in the municipal market is more costly by its nature than in other markets. One reason is that dealers cannot hedge positions in the municipal market. Taxable fixed income and equities markets have futures, options, and derivative products which allow dealers to sell in the short-term. The municipal market lacks, to a large extent, that variety of short-term products and as a result dealers are exposed to risk by holding only long-term securities. That risk is carried as an expense that is passed on to a dealers' customers.

These realities also make it difficult to improve liquidity through technological advances. Although regulations are evolving to enable a more robust trading environment in the secondary market, this may be difficult to achieve because of the mismatch between buyers and sellers. A bid wanted process, such as in an NBBO, may not provide better prices. In the current market, an issue may receive multiple bid wanted offers without resulting in a trade because bids are not fairly priced. The presence of a consolidated bidding platform might result only in more transparency in the submitted bids without producing better bids.

THE ISSUER'S ROLE IN PROMOTING EFFICIENCY

Despite the unique difficulties in the municipal market, municipal issuers are well-positioned to promote efficiency and achieve better bond pricing. In particular, the advancement of technology enables issuers to take a more active role in issuing and pricing bonds.

In 2014 the Commonwealth of Massachusetts introduced a program to provide investors with direct access to the state's general obligation bonds. The bonds were offered on a rolling basis for the last two weeks of every month for a six month period through TMC Bonds. Each month fixed rate tax-exempt general obligation bonds were offered. The offerings were repriced and allotted daily to account for demand. For each two week period, the bonds issued were the same; they had the same denomination, credit rating, and CUSIP. The bonds sold through this program represented a twelfth of Massachusetts' annual bond issuance.[13]

Massachusetts had several goals in launching this program. The first was to expand its investor base and democratize the market by giving retail investors the same access to purchasing securities that is normally reserved for institutional investors. The second goal was to make it convenient for retail investors to buy the bonds. Massachusetts achieved this in two unique ways: (1) offering the bonds daily for each two week period and (2) displaying the bonds on an open architecture platform. The platform expanded access beyond institutional dealers to reach independent dealers. Third, the state aimed for lower prices through enhanced transparency. The structure of the issuance – continuous provision of bonds over a two week period – necessitated greater sensitivity to investor concerns about risk. Massachusetts addressed these investor concerns by voluntarily filing financial and risk information on an almost daily basis through their investor site. Finally, the program attempted to determine the true demand for the state's general obligation bonds. The concern was that the typical model of coming to market a few times a year with a large offering overwhelmed the market with supply and resulted in higher prices. A baseline of $10 million in bonds were offered each day, but this amount was adjusted to match demand.

A number of other municipal issuers have devised creative solutions to increase liquidity and improve prices. The Israel Direct Bond Program offers bonds to investors worldwide and 75 percent of investments are held by retail investors.[14] The Denver Mini-Bond Program offers bonds in smaller denominations to individual investors that are Colorado residents.[15] Kenya recently offered M-Akiba treasury bonds exclusively on mobile phones and in lower denominations to encourage retail investment.[16]

Additionally, new platforms have been developed for direct community investment. For example, Neighborly provides citizens with access to investment in public projects in their communities.[18] Neighborly democratizes access to the municipal market and simplifies the process of investment. The site allows users to identify their location and interest in public issues (e.g., education, clean energy) and matches them with pertinent investment opportunities. This service contrasts with the traditional method of investing in the municipal market through the use of a broker which can be more costly and time-consuming.

The evolution of bond markets is driven primarily by big issuers, such as large state governments. Yet smaller issuers can be open to new technologies and communicate with investors about their needs and expectations. The greatest asset to issuers in approaching and utilizing new technology is adaptability. Outside of new innovations, issuers of all sizes can reference the above section, *Potential Approaches to Address Inefficiencies*, to develop better methods of communicating and interacting with the market. Issuers can actively work to improve pricing by issuing simpler bonds, fewer bonds, and improving their financial and risk disclosure. One way for issuers to provide value to investors is by posting disclosure information on an investor website and regularly updating that site with financial data supplemental to the requisite annual reports and material events notices.

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[13] The Commonwealth of Massachusetts offered $250 million of bonds through its MassDirect Notes program, and its annual bond issuance is approximately $3 billion.

[14] For more information on Israel's Direct Bond Program, *see* www.israelbonds.com/home.aspx.

[15] For more information on Denver's Mini-Bond Program, *see* www.denvergov.org/content/denvergov/en/denver-department-of-finance/cash-risk-capital-funding/better-denver-mini-bond-program.html.

[16] For more information on Kenya's M-Akiba bonds, *see* http://kenyabusinessideas.com/2015/10/15/invest-in-m-akiba-bond/.

[17] *See* https://neighborly.com/how-it-works.

STATE AND LOCAL BOND ISSUANCE

Public debt issuance increased 10.2 percent between 2014 and 2015 (from $61.4 billion to $67.7 billion) (Figure 2)[18, 19] as the number of debt transactions increased 37.9 percent (from 2,051 to 2,829).[20]

Figure 2

PRINCIPAL AMOUNT ISSUED AND NUMBER OF ISSUES
ALL CALIFORNIA ISSUERS, 2014 AND 2015 ($ IN MILLIONS)*

ISSUER TYPE	2014		2015		PERCENT CHANGE IN VOLUME FROM 2014 TO 2015
	VOLUME	NUMBER	VOLUME	NUMBER	
State Issuer	$16,082	197	$17,547	257	9.0%
Joint Powers Agency	11,562	810	10,342	1,152	-10.6
K-12 School District	8,640	436	11,610	469	34.4
City Government	5,235	113	7,049	146	34.7
County Government	2,754	33	2,574	234	-6.6
City and County Government	1,216	16	1,884	35	54.9
Other Issuers	15,941	446	16,715	536	4.9
TOTAL	61,430	2,051	$67,721	2,829	10.2%

*Totals may not add due to rounding.

18 Total includes short-term and long-term debt.

19 State and local issuers include the State of California and its financing authorities, city and county governments, joint powers authorities, school districts, and other public entities, including but not limited to special districts, successor agencies to redevelopment agencies, community facilities districts, and community college districts.

20 A "transaction" is defined as any financing or portion of a financing for which a CDIAC number was generated.

Figure 3

CALIFORNIA PUBLIC DEBT, ALL CALIFORNIA ISSUERS
TOTAL PAR AMOUNT BY CALENDAR YEAR, 2005 TO 2015 ($ IN MILLIONS)

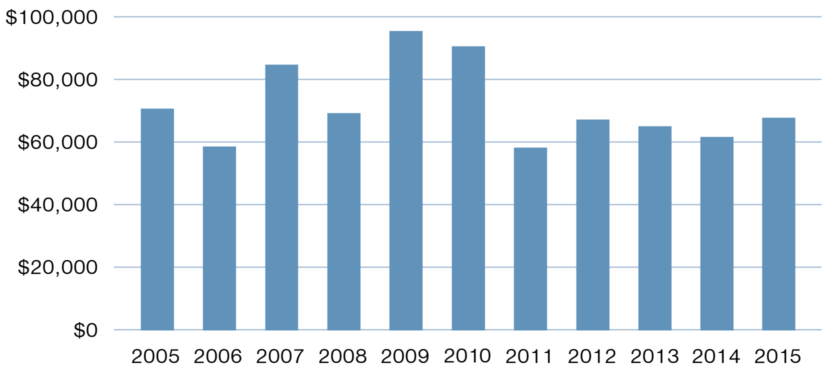
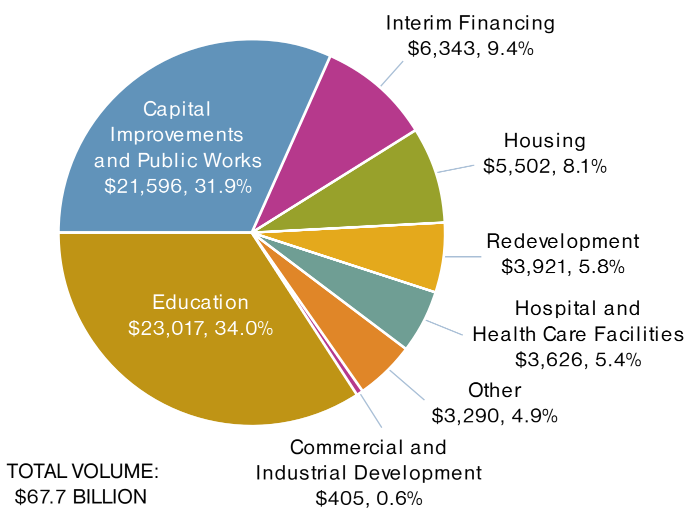


Figure 4

CALIFORNIA PUBLIC DEBT BY PURPOSE
ALL CALIFORNIA ISSUERS, 2015 ($ IN MILLIONS)



State and local debt issuance in 2015 was 5.5 percent below the 10-year average of $71.6 billion (Figure 3).

Nearly 32 percent of the debt issued in 2015 by state and local agencies was for capital improvements and public works. Approximately 34 percent was for education, and approximately 9 percent for interim financing (Figure 4). All other uses accounted for nearly 25 percent of the total debt issued.[21]

Debt issuance for "other" purposes increased 176.7 percent between 2014 and 2015. Issu-

[21] "Other" projects include commercial energy conservation/improvement, human resources, insurance and pension funds, residential energy conservation/improvement, state revolving fund, delinquent tax financing, tobacco securitization, and a settlement agreement.

Figure 5

CALIFORNIA PUBLIC DEBT BY PURPOSE
ALL CALIFORNIA ISSUERS, 2014 AND 2015 ($ IN MILLIONS)

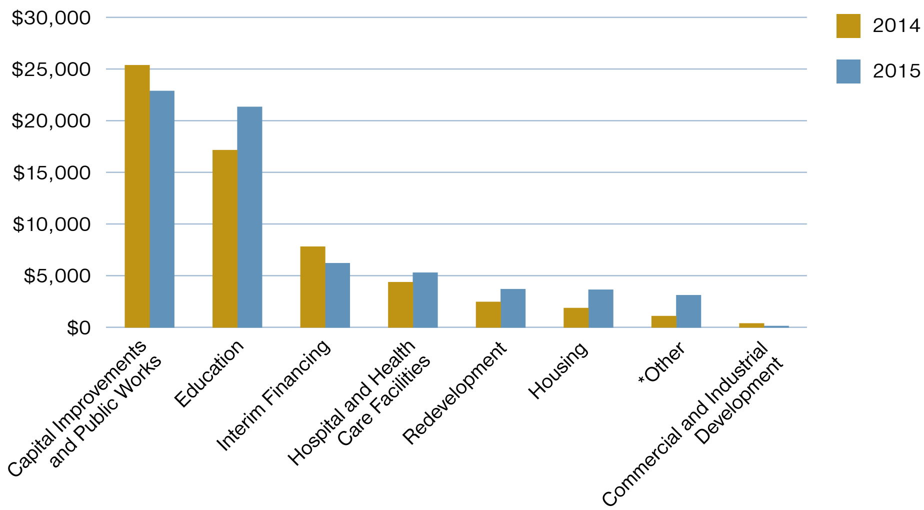
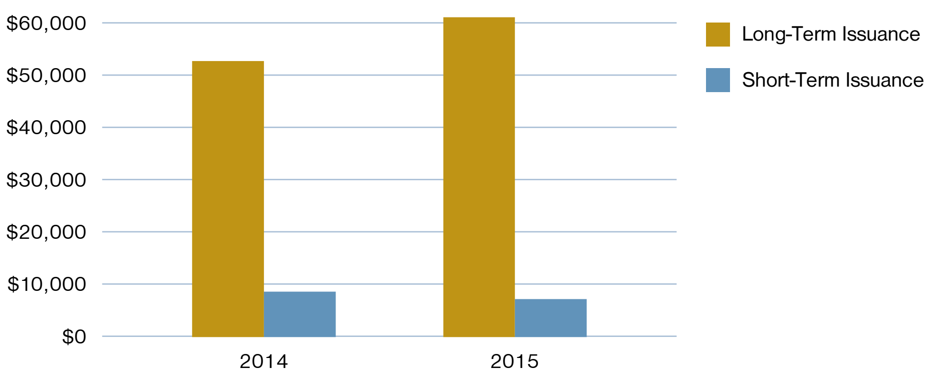


Figure 6

COMPARISON OF LONG-TERM AND SHORT-TERM DEBT
ALL CALIFORNIA ISSUERS, 2014 AND 2015 ($ IN MILLIONS)



ance for housing (97.5 percent), and redevelopment (52.3 percent) also increased from 2014 (Figure 5). The only purpose for which issuance declined was interim financing (22 percent decline) and capital improvements and public works (9.9 percent decline).

LONG-TERM DEBT VS. SHORT-TERM DEBT ISSUANCE[22]

In 2015, public agencies issued nearly $61 billion in long-term debt – approximately 90 percent of total issuance for the year (Figure 6). The remaining $6.8 billion was issued as short-term debt instruments, maturing in 18

[22] Definitions of short-term debt differ within the finance community. CDIAC considers all forms of debt with an 18 month term or less as short-term and applies this definition to all reports and analyses of public debt it issued.

months or less. Total long-term debt issuance increased by approximately 16 percent from 2014 to 2015 while short-term issuance declined by nearly 24 percent.

In 2015, long-term issuance consisted primarily of general obligation bonds, conduit revenue bonds, and public enterprise revenue bonds. Major increases from 2014 to 2015 occurred in special assessment bonds (133.5 percent) and "other" bonds (1,665.1 percent). The significant increase in the "other" bond category was due to one $1.7 billion tobacco securitization refunding.

NEW MONEY ISSUES VS. REFUNDING

New money issuance decreased in California by 6.5 percent between 2014 and 2015. However, refundings increased by 28.6 percent, from 2014 to 2015 (Figure 7).

The State of California refunded approximately $37.7 billion in outstanding debt in 2015, an increase of nearly 29 percent from the $29.3 billion refunded in 2014. Among local issuers with debt issuance of more than $1 billion, approximately half of their total issuance in 2015 was done to refund existing debt (50.5 percent).

COMPETITIVE VS. NEGOTIATED TRANSACTIONS

Public agencies have the ability to sell their debt through either a competitive or negotiated sale method. In a negotiated sale the issuer selects the underwriter and negotiates the sale prior to the issuance of the bonds. In a competitive sale underwriters submit sealed bids on a date specific and the issuer selects the best bid according to the notice of sale. In 2015, 89.7 percent of sales by California public debt issuers were negotiated. The trend over time has consistently favored negotiated sales by a wide margin. Since 2005, roughly 89 percent of California public debt has been issued through a negotiated sales approach. (Figure 8).

When considering the choice of sales methods, all issuers preferred a negotiated sale (Figure 9). Successor agencies, student loan corporations, and utility districts conducted all negotiated sales. Both issuer characteristics and financial conditions may contribute to the selection of one method over another. For example, the strength of the credit, size of issue, type of debt instrument, and/or complexity of the structure may warrant the use of a negotiated sale method. However, as clearly evident in the prevalence of the method in the California municipal market, the negotiated sale method is very commonly used in more routine "vanilla" offerings, as well.

Figure 7

COMPARISON OF NEW AND REFUNDING ISSUANCE
ALL CALIFORNIA ISSUERS, 2014-2015 ($ IN MILLIONS)

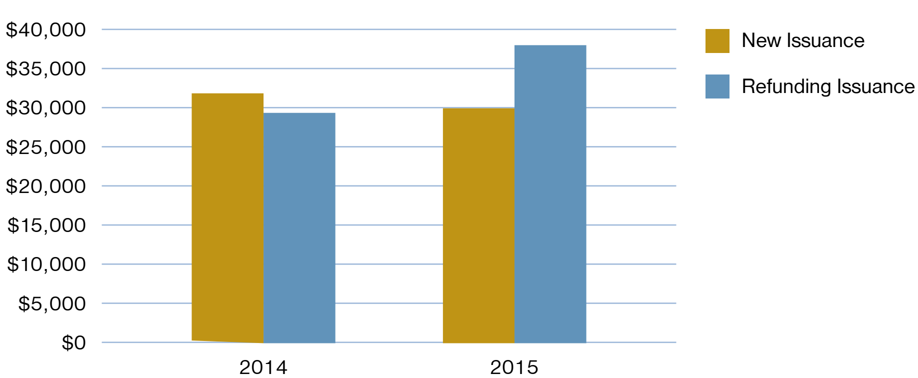


Figure 8

COMPETITIVE AND NEGOTIATED FINANCINGS
ALL CALIFORNIA ISSUERS, 2005-2015 ($ IN MILLIONS)

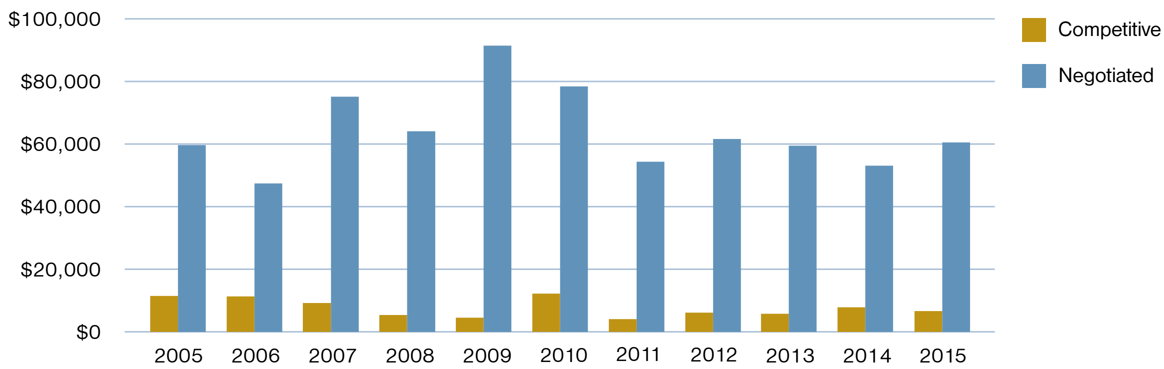
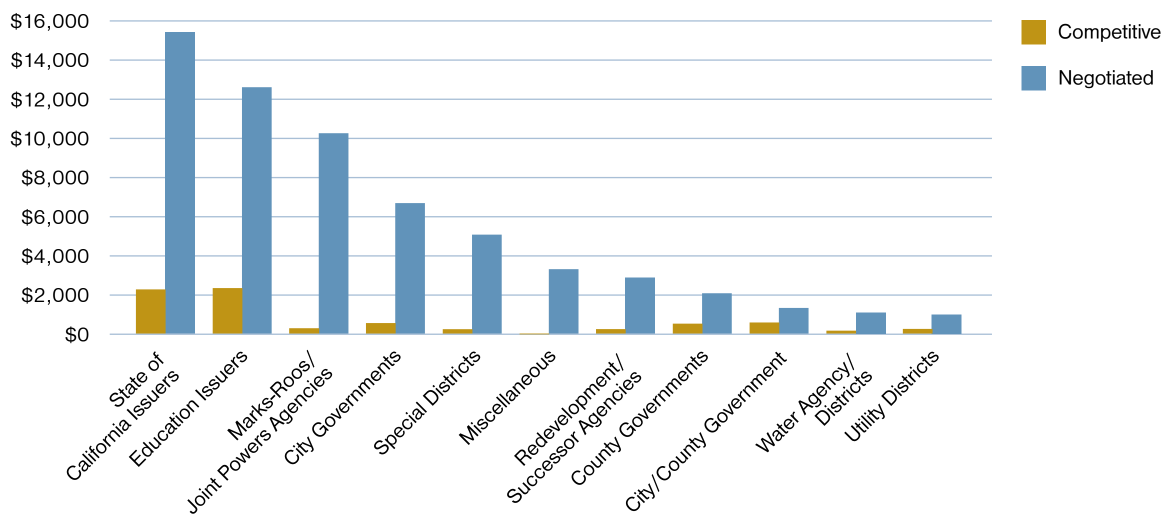


Figure 9

COMPARISON OF COMPETITIVE AND NEGOTIATED SALES
BY ISSUERS TYPE, ALL CALIFORNIA ISSUERS, 2015 ($ IN MILLIONS)



TAXABLE DEBT

Public issuers may utilize taxable bonds for certain projects or parts of a project that do not meet federal tax-exempt requirements (generally for projects that provide benefits to private entities as defined by tax code). Investor-led housing projects, local sports facilities, and borrowing to replenish a municipality's underfunded pension plan are examples of bond issues that are federally taxable. The percentage of taxable issuance in 2015 increased to 11.4 percent from 8.2 percent in 2014 (Figure 10).

CREDIT ENHANCEMENTS

In 2015, the percentage of credit enhanced debt increased to 14 percent from 8.1 percent in 2014 (Figure 11). Additionally, the overall volume of credit enhanced debt increased 81 percent to $7.5 billion from $4.1 billion.

STATE DEBT ISSUANCE IN 2015

In 2015, the State sold $15.8 billion in debt, of which approximately $14.4 billion was in the form of long-term debt and $1.5 billion in

Figure 10

COMPARISON OF TOTAL VOLUME TO TAXABLE FINANCINGS
ALL CALIFORNIA ISSUERS, 2014 AND 2015 ($ IN MILLIONS)

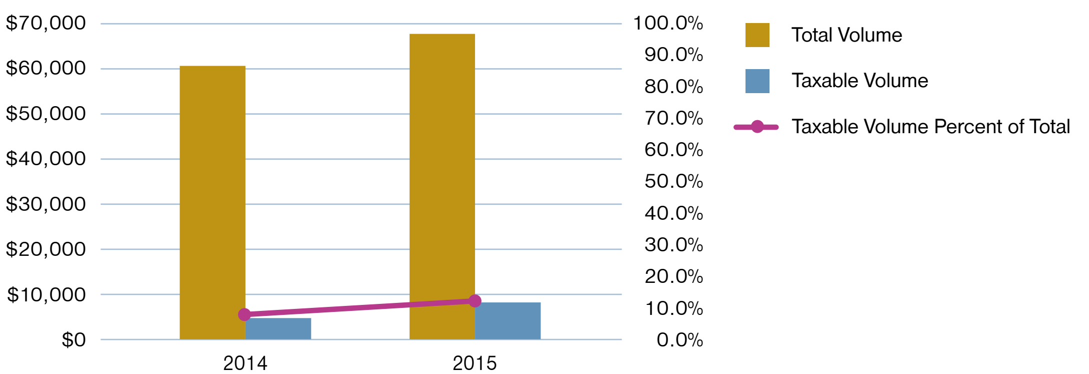
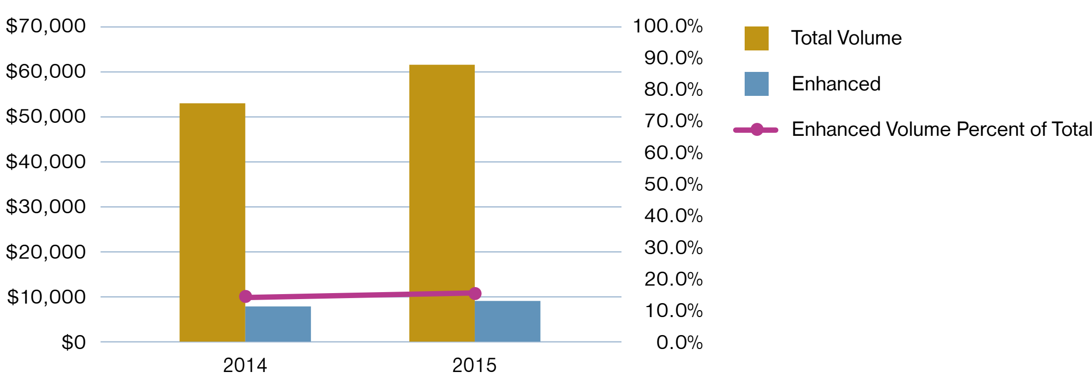


Figure 11

COMPARISON OF TOTAL VOLUME TO ENHANCED VOLUME*
ALL CALIFORNIA ISSUERS, 2014 AND 2015 ($ IN MILLIONS)



*Does not include interim financing.

short-term notes.[23] State issuance accounted for approximately 23 percent of all debt issued by public agencies in California.

Between 2014 and 2015, the only debt category that exhibited a decline in issuance by State entities was revenue anticipation notes (100 percent decline). The remaining debt categories each exhibited an increase in issuance: general obligation bonds (2.2 percent), revenue bonds (44.6 percent), commercial paper (100 percent) and other bond (100 percent). No State issuance of commercial paper or "other" bonds was reported in 2014 (Figure 12).

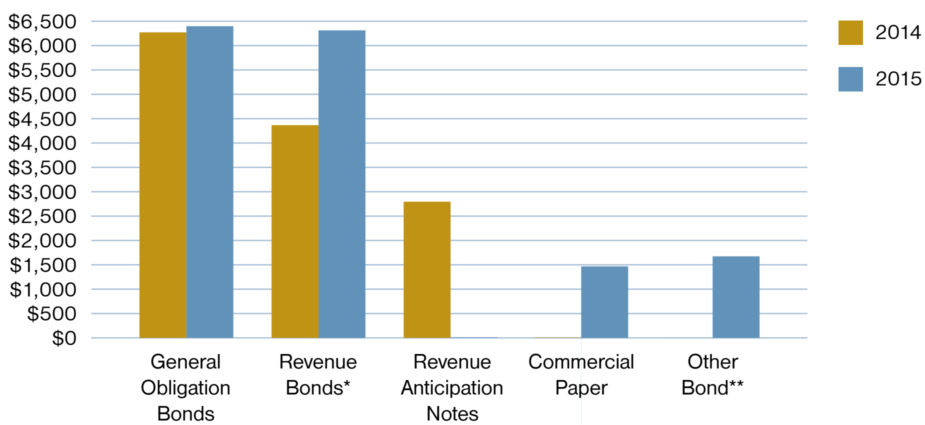
Between 2014 and 2015, State issuance increased for education (72.6 percent), housing (780.7 percent), and "other" (100 percent) (Figure 13). In recent years, State housing issuance has steadily increased from under a million dollars in 2013 to $300 million in 2014 and to $2.6 billion in 2015. Of the $2.6 billion State financing for housing, $1.4 billion is due to refundings by the Regents of the University of California for campus housing. Decreases in State issuance occurred with capital improvements and public works (37.3 percent decline), interim financing (48.1 percent decline), and hospital and health care facilities (56.6 percent decline).

OTHER STATE ISSUERS AND CONDUIT ISSUANCE IN 2015

Issuance by State instrumentalities, including conduit bond issuers, increased approximately 27 percent in 2015, but comprised approximately 5 percent ($3.4 billion) of all public agency issuance in 2015.[24]

Figure 12

VOLUME OF STATE DEBT, 2014 AND 2015 ($ IN MILLIONS)



* Revenue bonds include public lease and public enterprise revenue bonds.

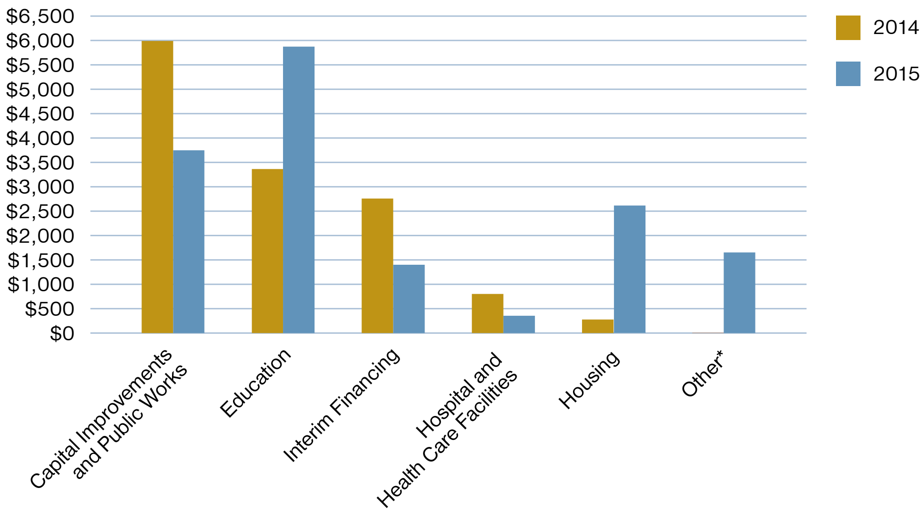
** Other bond is a tobacco securitization bond.

[23] In addition to the State of California, state issuers include the California Department of Water Resources, California State Public Works Board, Golden State Tobacco Securitization Corporation, The Regents of the University of California, and the Trustees of the California State University.

[24] State instrumentalities include the California Earthquake Authority, California Educational Facilities Authority, California Health Facilities Financing Authority, California Housing Finance Agency, California Infrastructure & Economic Development Bank, California Pollution Control Financing Authority, California School Finance Authority, Del Mar Racetrack Authority, Oakland State Building Authority, and the San Francisco State Building Authority.

Figure 13

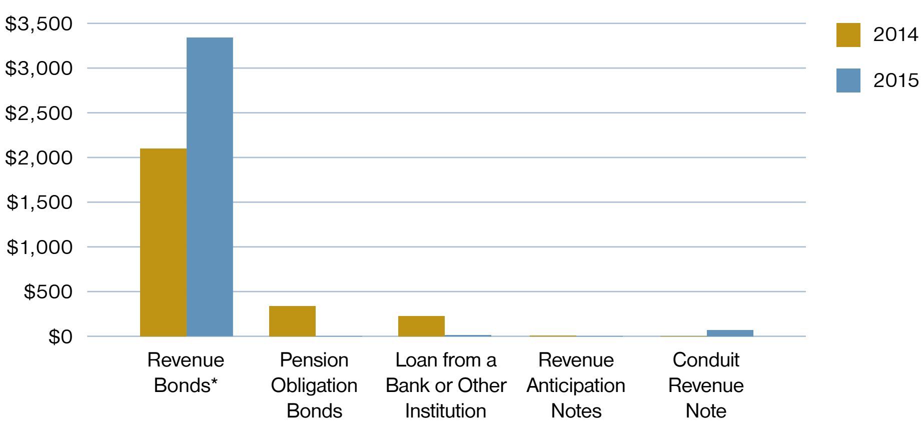
STATE DEBT ISSUANCE BY PURPOSE, 2014 AND 2015 ($ IN MILLIONS)



*Other purpose is for a tobacco securitization bond.

Figure 14

STATE CONDUIT AND DEBT ISSUANCE, 2014 AND 2015 ($ IN MILLIONS)



*Includes conduit and public enterprise revenue bonds.

Unlike 2014, there was no issuance for pension obligation bonds, loans from a bank or other institution, or revenue anticipation notes in 2015. In 2014, State conduit issuers did not issue conduit revenue notes; however, that financing instrument was used for multifamily housing projects ($87 million) in 2015 (Figure 14).

Among State conduit bond issuers, financings for most purposes increased from 2014 to 2015. The most notable is the increase in capital improvements and public works (1,163.2 percent) issuance. The increase is attributable to financings by the Del Mar Race Track Authority ($22.9 million), Oakland State Building Authority ($59.1

million), and San Francisco State Building Authority ($103.4 million). Other increases occurred in housing (161.4 percent), commercial and industrial development (31.4 percent), hospital and health care facilities (28.5 percent) and education (7.6 percent) (Figure 15).

STUDENT LOAN FINANCE CORPORATION ISSUANCE IN 2015

CDIAC typically receives filings from three classifications of student loan entities: private corporations, non-profit corporations, and the California Education Facilities Authority (CEFA). CDIAC received no reports of debt issuance by student loan entities in 2015.

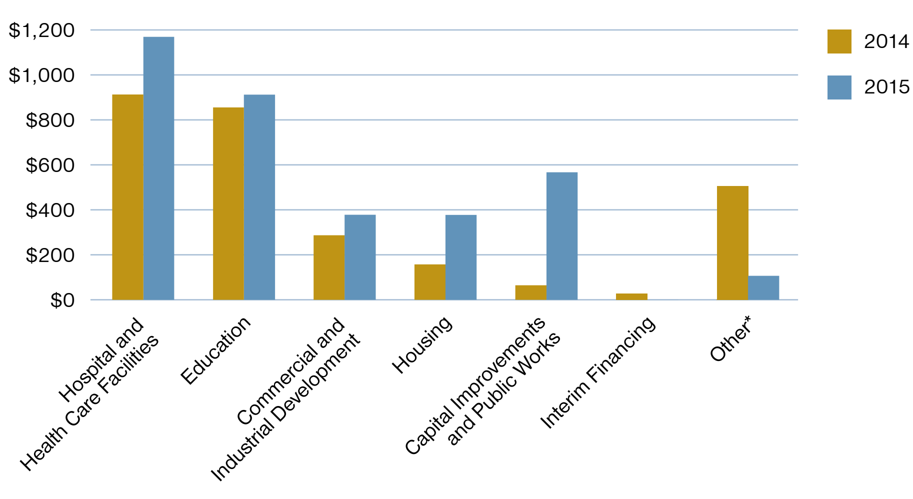
LOCAL DEBT ISSUANCE IN 2015

In 2015, local agencies issued nearly $48.5 billion in short- and long-term debt, a 6.9 percent increase from 2014. The overall increase adjusts for the declines in certain types of debt, including: commercial paper (3.4 percent decline), tax and revenue anticipation notes (12.4 percent decline), revenue bonds (17.4 percent decline) bond anticipation notes (54.9 percent decline), and other types of debt (59 percent decline) (Figure 16).

Between 2014 and 2015, there was an increase in local issuance in several of the purpose categories: "other" (114.8 percent), housing (78.6 percent), redevelopment (52.3 percent), and education (24.7 percent). The remaining purpose categories each experienced a decline in issuance: commercial and industrial development (38.6 percent decline), hospital and health care facilities (23.2 percent decline), capital improvements and public works (11.4 percent decline), and interim financing (8.2 percent decline) (Figure 17).

Figure 15

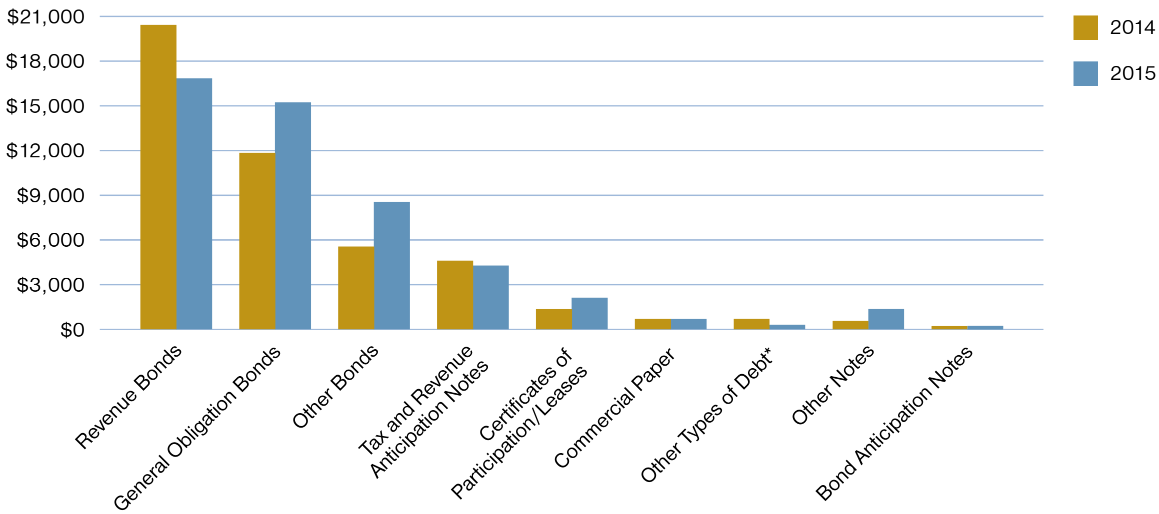
CONDUIT STATE DEBT ISSUANCE BY PURPOSE
2014 AND 2015 (VOLUME IN MILLIONS)



*Other includes human resources, California Earthquake Authority claims, and a State revolving fund.

Figure 16

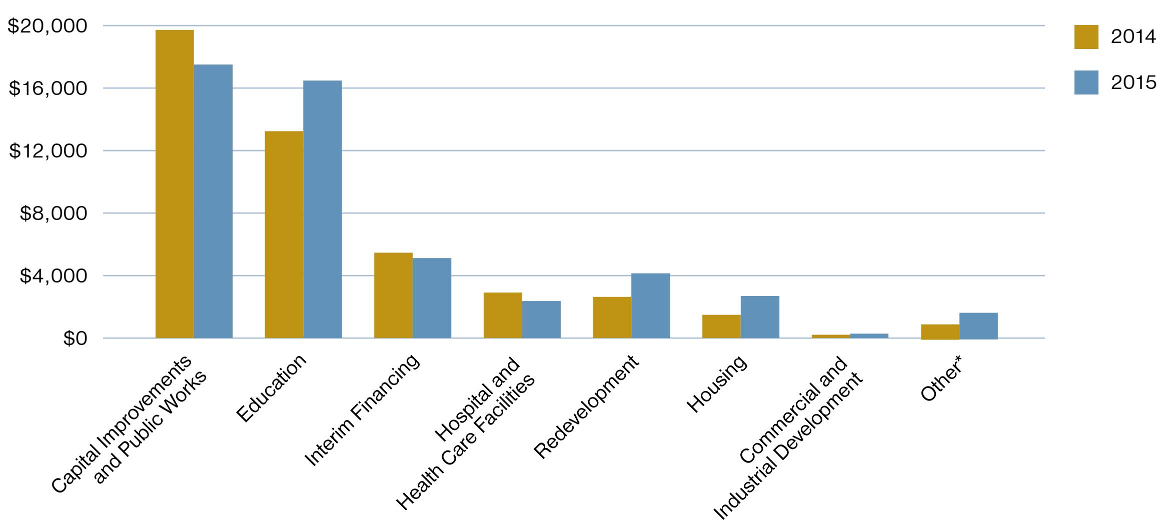
VOLUME OF LOCAL AGENCY BOND ISSUANCE, BY DEBT TYPE, 2014 AND 2015 ($ IN MILLIONS)



* Other types of debt: Loan from a bank or other institution, Marks-Roos Authority loan, and State agency loan.

Figure 17

VOLUME OF LOCAL AGENCY ISSUANCE BY PURPOSE, 2014 AND 2015 ($ IN MILLIONS)



* Other includes commercial energy conservation/improvement, human resources, insurance and pension funds, and residential energy conservation/improvement.

2015 REPORT OF OPERATIONS

DATA COLLECTION AND ANALYSIS UNIT

In compliance with its statutory requirements, CDIAC's Data Collection and Analysis Unit (Data Unit) maintains the California Debt Issuance Database (Database), which is considered the most comprehensive and accessible database of California public debt issuance in existence. The Database is the source for the debt statistics and analysis regularly released by CDIAC and now published through DebtWatch.

Data Collection

Reports of proposed and issued debt as well as annual fiscal status reports for Mello-Roos and Mark-Roos bonds submitted by public issuers to CDIAC are maintained in the Database.[25] The Database contains information from 1984 to the present and is updated continuously by Data Unit staff. As of December 31, 2015, the Database contained more than 54,000 issuance records.

For calendar year 2015, the Data Unit received and processed 9,526 reports including Reports of Proposed Debt Issuance (RPDIs),[26] Reports of Final Sale (RFSs),[27] Marks-Roos Local Bond Pooling Yearly Fiscal Status Reports (MKR YFSRs), Mello-Roos Community Facilities Districts Yearly Fiscal Status Reports (MLR YFSRs), and Mello-Roos/Marks-Roos Draw on Reserve/Default filings (DFDs). Figure 18 contains a breakdown of the reports processed by the Data Unit during calendar year 2015. This represents a 21.5 percent increase over the total number of reports received in calendar 2014.

The increase in reporting may be attributed to the amendment to CDIAC's statute which went into effect on January 1, 2015. This amendment clarified that all debt issued by state and local governments, not just debt associated with the issuance of bonds, was reportable to CDIAC.

The Data Unit has continued its transition to electronic (on-line) submission of data and re-

[25] The Data Unit receives annual fiscal status reports for Mello-Roos and Marks-Roos bonds issued after January 1, 1993 and January 1, 1996, respectively.

[26] Per Government Code Section 8855(i) issuers of proposed new debt must give notice no later than 30 days prior to the sale date.

[27] 2015, per Government Code Section 8855(j), issuers are required to submit reports of final sale no later than 21 days after the sale of the debt.

Figure 18

REPORTS PROCESSED, CALENDAR YEAR 2015 VS. 2014

TYPE OF REPORT	2015	2014	INCREASE/ DECREASE
Reports of Proposed Debt Issuance	2,927	2,177	34.5%
Reports of Final Sale	2,857	2,003	42.6
Mello-Roos Yearly Fiscal Status Reports	1,438	1,471	-2.2
Marks-Roos Yearly Fiscal Status Reports	2,292	2,167	5.8
Mello-Roos/Marks-Roos Draw on Reserve/Default/Replenishment Filings	12	21	-42.9
TOTAL REPORTS RECEIVED	9,526	7,839	21.5%

ports as the primary means of data collection. Electronic submissions enhance data collection efficiencies and help to ensure reporting accuracy. Effective January 1, 2016, issuers must file reports with CDIAC electronically.

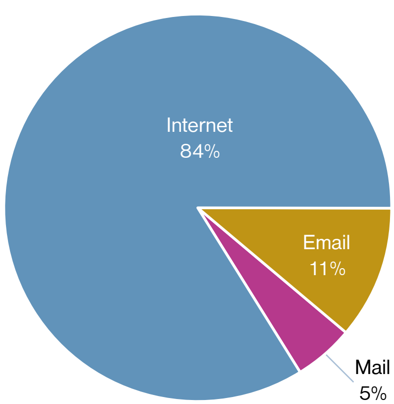
During 2015, online submissions of RPDIs and RFSs accounted for 84 percent of all submissions, an increase over 2014 when they accounted for 67 percent. Of the 5,784 RPDIs and RFSs received for the year, 918 were sent in hardcopy form by mail or e-mail. Staff manually entered the data contained in reports received in this manner.

Figure 19 displays the methods used to submit RPDIs and RFSs in 2015.

The online submission rate increases when all reports are considered. More than 87 percent of all reports were submitted electronically during 2015 versus the 79 percent filing rate during 2014 (Figure 20). Even though only 13 percent of all reports were filed by traditional mail and email, this translated to approximately 1,238 reports that required manual data entry by Data Unit staff.

Figure 19

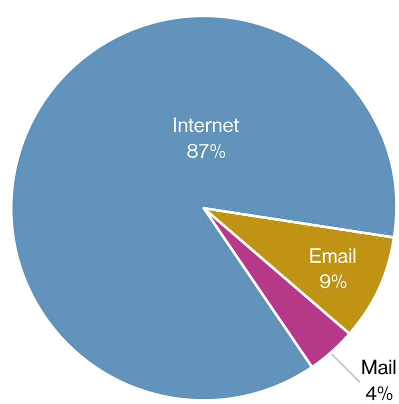
STATE AND LOCAL ISSUANCE
METHODS OF SUBMITTAL, RPDIs AND RFSs
JANUARY 1, 2015 TO DECEMBER 31, 2015



TOTAL REPORTS RECEIVED: 5,784

Figure 20

STATE AND LOCAL ISSUANCE,
METHOD OF SUBMITTAL
ALL REPORTS RECEIVED
JANUARY 1, 2015 TO DECEMBER 31, 2015



TOTAL REPORTS RECEIVED: 9,526

Debt Issuance Fees

A critical function of the Data Unit is the collection of CDIAC debt issuance fees, the source of CDIAC's operational funding. CDIAC's issuance fees are assessed based on the principal amount and maturity of the issue.[28] In general, a flat fee of $150 is currently assessed for short-term maturities. Long-term maturities are assessed a fee equal to 1.5 basis points (0.015 percent) times the principal amount issued, not to exceed $3,000. A detailed fee schedule is available on CDIAC's website.[29]

For 2015, the Data Unit issued 1,404 invoices totaling approximately $2.5 million. Figure 21 reflects the breakdown of fees assessed for state and local agencies in 2015.

Public Access to Debt Issuance Data

CDIAC used a variety of online methods to provide public officials and members of the public immediate access to debt issuance data, including:

DEBTWATCH DATA PORTAL. As a part of the Treasurer's ongoing effort to increase government transparency and accountability, the Treasurer's Office launched the DebtWatch website in November 2015.[30] DebtWatch provides citizens, the media, policy makers and others a new resource for understanding state and local government debt issuance. Containing easily accessible information relating to debt issued during the past thirty years, DebtWatch gives users the ablity to compare, contrast, and analyze debt issuance data in unique, user-specific ways. As opposed to the searchable database discussed below, DebtWatch provides data on both proposed and completed financial transactions.

Figure 21

FEES ASSESSED, STATE AND LOCAL ISSUERS
JANUARY 1, 2015 TO DECEMBER 31, 2015

	FEES ASSESSED	# OF INVOICES
STATE		
Long-Term Debt	$200,117	74
Short-Term Debt	0	0
LOCAL		
Long-Term Debt	$2,336,601	1,269
Short-Term Debt	12,300	61
TOTAL	$2,549,018	1,404

DEBT LINE NEWSLETTER. CDIAC publishes a monthly newsletter describing the operations of the Commission during the prior month.[31]CDIAC's monthly publication, *Debt Line*, included a monthly calendar of issues which provides comprehensive information on all reports of proposed and finalized debt issuances received during the prior month.

ONLINE TABLES AND GRAPHS. CDIAC posts monthly California state and local debt issuance data to its website in the form of tables and graphs. Data on principal amount issues, the type of debt, and the purpose of issuance is summarized year-to-date and by the month. Tables showing data for the two prior calendar years is also available on line.

ONLINE ISSUANCE DATA – EXCEL FORMAT. This report contains the same information reported on the monthly calendar of issues, but only for debt for which CDIAC has received a report of final sale. The information is provided by month, as received. Aggregated data for prior years is also available.

[28] Maturities of 18 months or less are considered as short-term maturities for the purpose of assessing the issuance fee. Maturities greater than 18 months are considered as long-term maturities for fee assessment.

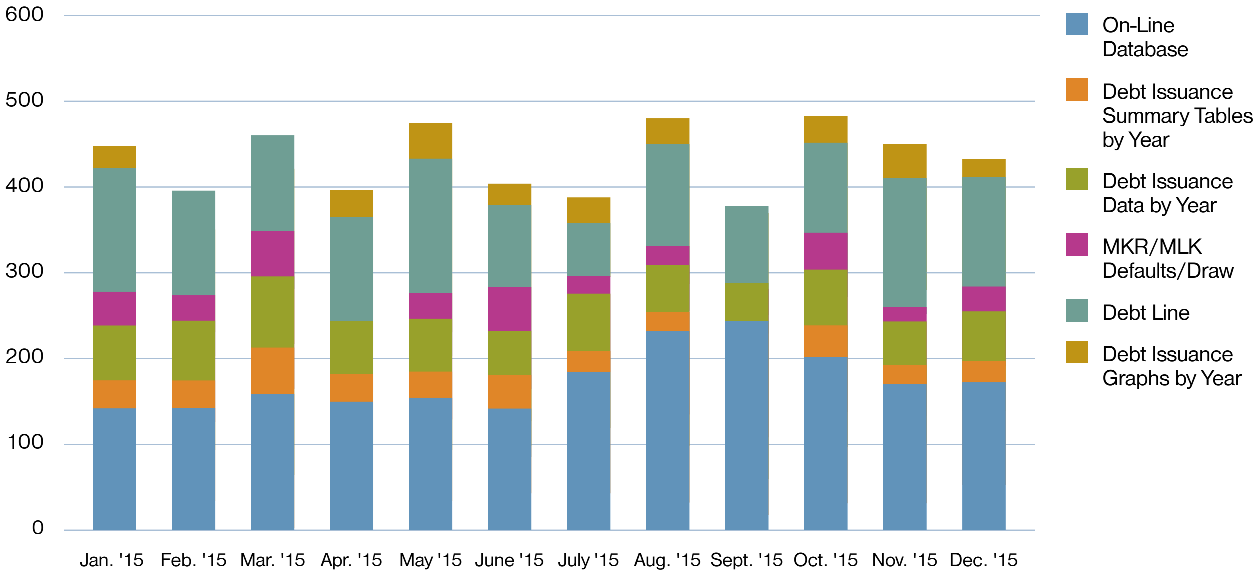
[29] www.treasurer.ca.gov/cdiac/reporting/feeschedule.asp.

[30] DebtWatch is located at: http://debtwatch.treasurer.ca.gov.

[31] Government Code Section 8855(h)(9).

Figure 22a

DEBT ISSUANCE DATA WEBSITE ACTIVITY, JANUARY 1, 2015 TO DECEMBER 31, 2015



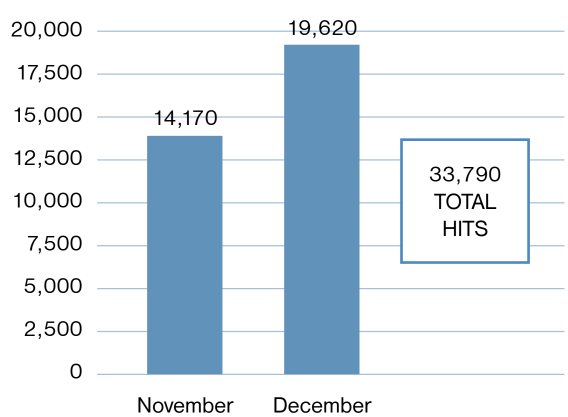
SEARCHABLE DATABASE. State and local debt issuance data is available through a searchable database that contains information from 1984 through the present on all completed debt transactions reported to CDIAC. The online database was accessed more than 2,103 times during 2015.

MARKS-ROOS AND MELLO-ROOS DRAW ON RESERVES/DEFAULT REPORTS. Data on draws on reserve and defaults are posted as the reports are received. Reports are listed by issuer and date of occurrence.

CDIAC recorded 5,192 hits to its website in 2015. Each "hit" or inquiry is recorded as well as the purpose for which the individual visited the site (Figure 22a). CDIAC recorded 33,790 hits to the new DebtWatch website for the period of November 17 – December 31, 2015 (Figure 22b).

Figure 22b

DEBTWATCH WEBSITE ACTIVITY
NOVEMBER 17, 2015 TO DECEMBER 31, 2015



Reports

CDIAC published a number of summary reports on the debt data it received.

MARKS-ROOS LOCAL BOND POOLING ACT YEARLY FISCAL STATUS REPORT AND MELLO-ROOS COMMUNITY FACILITIES DISTRICT YEARLY FISCAL STATUS REPORT. The Marks-Roos and Mello-Roos Yearly Fiscal Status Reports received annually by CDIAC during the fiscal year (July 1 through June 30) are the basis for these reports.[32] In an effort to bring The Marks-Roos Bond Pooling Act Participants Yearly Fiscal Status Report to a current status, the Data Unit will be publishing reports for FY 2009-10 and 2010-11 in 2016 and staff is currently compiling and verifying data for the remaining intervening fiscal years and expects to post the remaining reports to the CDIAC website prior to the end of 2016.

CDIAC expects that the Mello-Roos Community Facilities District Yearly Fiscal Status Report, covering the period of July 1, 2014 through June 30, 2015 will be published by mid-2016. All prior year reports have been published.

CALENDAR OF PUBLIC DEBT ISSUANCE. This annual report provides details on each issuance of public debt in California. Each listing includes the issuer name, county, debt type, purpose of the issue, date of sale, debt principal amount, and whether or not the issue is a refunding. Each listing also shows the interest rate, rating, credit enhancement information, final maturity date, and major participants in the financings. The report is organized chronologically by issuer, beginning with the State of California and its departments and agencies, then local agencies (further sorted by county, agencies within counties, and by the sale date of the issue) and student loan corporations.

SUMMARY OF CALIFORNIA PUBLIC DEBT ISSUANCE. This annual report provides aggregate summary information by issuer on major components of debt, such as long-term and short-term debt, tax-exempt and taxable debt, and refunding existing indebtedness. The tables included in the report contain statistics on both state and local agencies broken out by type of issuer, type of debt, purpose of financing, federal taxability, and whether the issue is a refunding or not.

ANNUAL REPORT. CDIAC's Annual Report provides more global analyses (as opposed to the "by issuer" structure of the previous two reports) of public debt issued in California for the calendar year. The report includes comparisons of previous years' debt issuance; categories of issuance (such as, purpose of debt, competitive and negotiated, credit enhanced debt); and displays California's Mello-Roos and Marks-Roos issues, purpose, and defaults and draws on reserves.

Other 2015 Data Unit Projects and Initiatives

ELECTRONIC DOCUMENT STORAGE. In late 2009 the Data Unit began a project to reduce the amount of archived materials stored on site by systematically reviewing, digitizing, and electronically storing all paper documents in an electronic document storage facility (FileNet). Staff began digitization with calendar year 2008 documents. To date, all 2008 through 2011 documents have been scanned and stored. The scanning process for the 2012 files is approximately 55 percent complete.

DATABASE UPDATES – APPLICATION BASED REPORTS AND PUBLIC INTERFACE. Working with the State Treasurer's Office Information Technology Division (ITD), the Data Unit was able to add a field in the Database that will allow staff to identify the community facility district type when compiling the Mello-Roos Yearly Fiscal Status Summary Report. This change will help staff by reducing the time spent manually

[32] Pursuant to Government Code Sections 6599.1(b) and 53359.5(b) issuers of Mark-Roos (after January 1, 1996) and Mello-Roos (after January 1, 1993) bonds must submit Yearly Fiscal Status Reports to CDIAC.

manipulating the data. Also, in connection with the DebtWatch launch, the Data Unit staff coordinated with ITD to categorize issuers into "issuer types" to ensure better presentation on the site. This required staff to manually associate more than 4,200 public issuers to the new issuer types.

CAPTURING PROCESS EFFICIENCIES. The Data Unit continues to work with ITD to enable issuers to easily submit data to CDIAC via the Internet when submitting RPDIs and RFSs for TRAN pool sales. Currently all TRAN pool data must be manually entered by Data Unit staff. Developing web-based reports that can be electronically submitted by users will improve staff processing time.

TECHNICAL ASSISTANCE. Data Unit staff responded to 60 requests for technical assistance during the year. Inquiries for cost of issuance data on fees paid to financing team members and information on school district debt were the two most common requests. Data on Mello-Roos bonds was the third most requested item.

2016 Outlook

DEBTWATCH. The Data Unit is currently exploring opportunities to use DebtWatch to reduce or eliminate many of the debt issuance reports now published by CDIAC and to provide access to CDIAC's rapidly expanding library of digitized issuance documents.

DEBT ISSUANCE DATABASE REVIEW AND DEVELOPMENT PROJECT. CDIAC has undertaken an extensive analysis of the database to identify improvements in functionality, performance, and utility. As a result of this effort, CDIAC has developed a detailed vision that reflects current uses, third-party data, and the potential to embrace new technologies to achieve expanded program and policy goals. In conjunction with legislation sponsored by Treasurer John Chiang, CDIAC hopes to create a new Debt Issuance Database.

SECONDARY DATA SOURCING. CDIAC staff will explore opportunities to develop or procure secondary data sets that can be used to expand information provided through both DebtWatch and the new Debt Issuance Database. For example, CDIAC is aligning data it has collected since 2004 on bond elections with its debt issuance data to tie the issuance of debt to the relevant bond measure. Staff is currently reviewing the database updates needed to align the two sources of data.

SYSTEM AND PROCESS IMPROVEMENTS. CDIAC staff continue to identify ways to maximize the existing system's performance by modifying work processes and reports whenever possible.

DEBT DATA REGULATIONS. With the passage of AB 2274, Gordon (Chapter 181, Statutes of 2014), making technical changes to Government Code Section 8855, CDIAC's data collection processes are better aligned with current municipal financing practices. Specifically, AB 2274 made explicit CDIAC's authority to capture reports of debt issuance and collect issuance fees on traditional financing structures as well as new and emerging structures that public entities may employ in the future, including direct loans. To clarify and communicate these reporting requirements to the issuing community, CDIAC plans to establish regulations through the state's rulemaking process.

ELECTRONIC DOCUMENT STORAGE. In order to support the improvements made to the database in the future and to support the functionality provided by the DebtWatch, staff are digitizing bond documents, including reports and supplemental documents submitted by issuers pursuant to law. Although CDIAC now requests and many issuers submit these documents in an electronic form, hard copy documents must be scanned and indexed in a searchable database. CDIAC hopes to complete digitization of issuance documents received between 2012 and 2013 by the end of 2016.

EDUCATION AND OUTREACH UNIT

CDIAC's Education and Outreach Unit (Education Unit) provides continuing education to municipal finance officers, elected officials, and the public, develops and maintains relationship with allied organizations to provide training, and monitors the informational and educational needs of its constituents.

Education Programs

CDIAC's education programs include "core" seminars given on an annual or biennial basis (Figure 23), webinar trainings that allow for a timely response to current issues or technical training needs, and co-sponsored seminars with allied organizations that expand CDIAC's outreach.

In 2015, CDIAC conducted fifteen educational programs: one core seminar, one current topic seminar, ten webinars, and three co-sponsored seminars in various locations of the state.

CORE SEMINAR

MUNICIPAL DEBT ESSENTIALS. In March 2015, CDIAC held its three-day core seminar on the basics of understanding, issuing and administering municipal debt. This seminar series provided sessions presented sequentially in order of the debt financing process. However, the curriculum was designed so that participants had the option of attending one day or any combination of days based upon their educational needs and background.

Figure 23

CDIAC'S CORE SEMINARS

SEMINAR	DESCRIPTION
MUNICIPAL DEBT ESSENTIALS	This is a 3-day seminar detailing the basics of issuing and administering municipal debt. DAY ONE: DEBT BASICS covers the fundamental elements of debt financing, including an introduction to the bond market, definition of bond financing terms and concepts, description of the variety of short and long-term financing options, discussion of roles and responsibilities of issuers and consultants, explanation of the various costs of issuance, and description of initial disclosure requirements. DAY TWO: ACCESSING THE MARKET is focused on the preparation, planning, and processes involved in issuing publically offered municipal debt, including understanding and measuring debt capacity and affordability, the importance and utility of debt policies, the function of a plan of finance, sizing and debt structuring options, the relevance of credit quality and ratings, bond pricing and marketing dynamics, and effectively reaching key investors. DAY THREE: DEBT ADMINISTRATION provides a foundational understanding of the issuer's roles and responsibilities after the sale of debt, including the management of debt service, post-issuance tax compliance, investment of bond proceeds, reorganization and refunding of debt obligations, and continuing disclosure.
INVESTING PUBLIC FUNDS	This one and a half-day seminar covers investment related topics. In alternating years, the course material varies covering municipal investment topics of varying complexity – basic to advanced concepts and topics are discussed.
MUNICIPAL MARKET DISCLOSURE	This one and a half-day seminar is an in-depth presentation on the disclosure requirements of municipal securities information to the market. Topics include federal securities laws and regulations, issuer responsibilities, and continuing disclosure compliance.
FUNDAMENTALS OF LAND SECURED FINANCING	This one-day seminar focuses on the use of Mello-Roos and assessment district financing techniques, including how to form a district, issue debt, and administer liens.

CURRENT TOPIC

LAND-SECURED FINANCING CURRENT TOPICS AND PRACTICES. This program, held in May 2015, offered an intermediate discussion on community facilities and assessment district financings with an update on current topics and practices related to their use and administration.

WEBINARS

In 2015, CDIAC provided webinars emphasizing public investment and the importance of disclosure policies. Each presentation is described below.

THE PUBLIC INVESTMENT PORTFOLIO SERIES. This comprehensive nine-part webinar series gave a detailed look at public local agency investment instruments permissible under California Government Code sections 16429.1, 53601, 53601.6, 53601.7, 53601.8, 53635, 53635.2, 53638 and 53684. These webinars examined each instrument type, reviewed the statutory authority, and analyzed how the investment's features may or may not achieve a local agency's investment policy objectives:

1. THE PUBLIC INVESTMENT PORTFOLIO: INVESTING IN TREASURIES. This webinar, hosted in May 2015, defined U.S. Treasury securities and included a presentation on the different types of Treasuries, including bills, notes, bonds, etc., price and yield information, the market risks of investing in Treasuries, the interpretation of Government Code section 53601(b), and the role Treasuries play in an investment portfolio.

2. THE PUBLIC INVESTMENT PORTFOLIO: DEMYSTIFYING THE WORLD OF AGENCIES. This webinar, offered in June 2015, focused on the types of federal agency securities, the underlying credits, and their structures, including bullets and callables. The federal agency discussion also included government sponsored enterprises and supranationals, the analytics and risk analysis for incorporating these securities in a public investment portfolio, and the determination of the appropriate allocation of these securities pursuant to Government Code sections 53601(f) and 53601(q).

3. THE PUBLIC INVESTMENT PORTFOLIO: WHEN IT MAKES SENSE TO BUY MUNICIPALS. This webinar, presented in June 2015, addressed topics including the types of notes, bonds and other obligations issued by state and local agencies; how their characteristics compared to corporate bonds and notes; the interpretation of Government Code sections 53601 (a) and 53601(c) (d) (e); the call, credit, interest, inflation and liquidity risks; the tax implications and buying municipals from brokers; and the analysis needed prior to investing in municipals to ensure that they meet the objectives in the investment policy and plan.

4. THE PUBLIC INVESTMENT PORTFOLIO: PART 1 – INTRODUCTION TO MONEY MARKETS: UNDERSTANDING BANKER'S ACCEPTANCES AND COMMERCIAL PAPER. In July 2015, the first of three presentations on money market securities was presented. The webinar began with a brief overview on the function of the money market and the wide variety of products. The focus then turned to the features and characteristics of banker's acceptances and how they are created; commercial paper and its characteristics as an unsecured instrument; the restrictions for both securities under Government Code sections 53601(g), 53601(h), and 53635; the associated credit criteria, risks, and ratings; and the investment analytics for the public portfolio.

5. THE PUBLIC INVESTMENT PORTFOLIO: PART 2 – MONEY MARKETS: CERTIFICATES OF DEPOSIT, DEPOSIT PLACEMENT SERVICES AND COLLATERALIZED BANK DEPOSITS. This webinar, conducted in September 2015, delved into the definition, description, and characteristics of certificates of

deposits, deposit placement services, and collateralized bank deposits. Also discussed were the use of negotiable certificates of deposit in the public portfolio and the restrictions under Government Code 53601(i); the strength and reporting requirements of collateralized bank deposits in California and the legal restrictions under Government Code section 53635.2; the interpretation of Assembly Bill 279 as it affects insured deposits through placement services and legal restrictions under Government Code sections 53601.8 and 53635.8; and the portfolio allocation limits and analysis needed prior to including these instruments in the public portfolio.

6. THE PUBLIC INVESTMENT PORTFOLIO: PART 3 – MONEY MARKETS UTILIZING REPURCHASE AGREEMENTS, REVERSE REPOS AND SECURITIES LENDING AGREEMENTS. In August 2015, the third and final presentation on money market securities covered repurchase agreements, reverse repos and securities lending agreements. Noted were the legal limitations under Government Code section 53601(j); the types of collateral and safeguards; the analysis in determining if using any of these agreements is a good strategy for the public portfolio; the steps to monitor and report these securities; and ways to ensure that the securities fit the agency's investment policy or credit guidelines.

7. THE PUBLIC INVESTMENT PORTFOLIO: MAKING SENSE OF CORPORATE NOTES AND BONDS. This webinar, held in August 2015, considered the various aspects of investing in corporates. The presentation included a description of corporate notes and bonds, medium-term notes and their differences; maturities, yield and duration risk of corporates; credit criteria for public investments in corporates; Government Code section 53601(k) regarding issuer restrictions and rating requirements; the analysis required prior to investing in corporates; and the risks associated with corporates in comparison to other asset classes.

8. THE PUBLIC INVESTMENT PORTFOLIO: UNDERSTANDING STRUCTURED POOLED SECURITIES – ASSET-BACKED, MORTGAGE-BACKED AND COLLATERALIZED MORTGAGE SECURITIES. This webinar in September 2015 described asset-backed securities, mortgage-backed securities and collateralized mortgage obligations. The discussion included Government Code section 53601(o) with regard to maturity, ratings and portfolio limits; valuations, transactions, and credit monitoring; analysis required to determine if they meet the investment objectives of local government investment policies; and the risks associated with each type of instrument.

9. THE PUBLIC INVESTMENT PORTFOLIO: DIFFERENTIATING MUTUAL FUNDS FROM MONEY MARKET MUTUAL FUNDS AND UNDERSTANDING INVESTMENT POOLS. The final webinar in the entire series was held in September 2016. It provided an in-depth view on money market funds and mutual funds as defined in Government Code section 53601(l). The presentation showed the dynamics of net asset value (NAV); the effect of reform on the NAV and money market funds; the changes to money market funds, effective in 2016, that are important to local governments; the differences, including the benefits and risks, between various types of investment pools as defined by Government Code sections 53601(p), 16429.1, and 53684; and the analysis of these investment options to determine if they meet the criteria of an agency's investment plan and investment policy.

DISCLOSURE POLICIES: WHAT EVERY ISSUER SHOULD CONSIDER. In October 2015, CDIAC hosted this webinar in light of the Securities Exchange Commission's emphasis on the importance of written disclosure policies and procedures and the National Association of Bond Lawyers' report titled *Crafting Disclosure Policies*. The presentation provided a detailed discussion of the report as well as the key elements to address in the policy development process: the core components of a good policy; the types of disclosure to include; how to conduct a review of current procedures to determine what improvements need to be made; the internal controls and systems crucial to the disclosure process; how compliance with disclosure policy can be documented; and considerations regarding what form of training is necessary to ensure that personnel sufficiently understand the policy and the issuer's obligations.

CO-SPONSORED SEMINARS

BOND BUYER PRE-CONFERENCE. In October 2015, CDIAC offered *Electronic Trading: Market Efficiency and Why It Matters to Issuers* at *The Bond Buyer*'s 25th Annual California Public Finance Conference. The event marked the 14th consecutive year that CDIAC has partnered with *The Bond Buye*r for the pre-conference. This program examined the opportunities for market participants to benefit from advances in technology and the market, in particular the benefits derived from heightened information on pricing and transaction costs offered by electronic trading. It also considered the role of existing alternative trading systems already in operation and the challenges they face in expanding transparency, efficiency, and fairness to the entire municipal market.

CDIAC AND CSMA CALIFORNIA LEASE FINANCING: A NEW LOOK AT AN OLD TOOL. The high profile Chapter 9 bankruptcy of Stockton raised many complex questions about lease financing. Because the court did not rule on many of these questions, they continue to pose a risk to issuers and investors. This program considered the structure of tax-exempt lease financing and asset transfer financing, uses and benefits, and the nature of the security. It then considered the implications of Stockton and the uncertainty that may remain with respect to the nature of a lease in Chapter 9.

CDIAC WITH UCD EXTENSION RETHINKING DEVELOPMENT FINANCE: FINANCING DEVELOPMENT IN A POST-REDEVELOPMENT WORLD. In November 2015, CDIAC partnered with the University of California, Davis (UCD) Extension to conduct this seminar, which examined the current programs and strategies available for development finance in post-redevelopment California. It addressed how communities could achieve the goals of redevelopment with available authorities and financing opportunities as well as promising new strategies.

Attendance

Two thousand and twenty (2,020) municipal finance professionals, public and private, attended CDIAC's educational programs in 2015, a nominal difference in participation from 2014 (1,929). CDIAC conducted the same number of programs in both years. The 2015 event names, dates, locations, and number of participants are given in Figure 24.

The composition of attendance for in-person and web-based trainings can be viewed in Figure 25. In 2015 as in 2014, the majority of attendees participated through web-based training.

Figure 26 provides the organizational affiliation of seminar attendees in 2015. Eighty seven percent of the participants were from the public sector, a 14 percent increase from last year. If registration from the partnerships with CSMA and *The Bond Buyer* were excluded, 90 percent of the attendees were from the public sector.

Of the public and private sectors, approximately 55 percent of attendees were from cities and counties; 29 percent were from state agencies, special districts, school districts, and joint powers authorities; and 13 percent were from private agencies. Figure 27 reflects attendees by organization type at all CDIAC educational programs for the year.

Figure 24

PARTICIPATION AT CDIAC EVENTS, 2015

EVENT TITLE	DATE	LOCATION	TOTAL PARTICIPANTS
CDIAC SEMINARS			
Municipal Debt Essentials-Day 1	3/17/2015	Riverside, CA	83
Municipal Debt Essentials-Day 2	3/18/2015	Riverside, CA	77
Municipal Debt Essentials-Day 3	3/19/2015	Riverside, CA	78
Land-Secured Financing Current Topics and Practices	5/1/2015	Concord, CA	67
CDIAC WEBINARS			
The Public Investment Portfolio Nine-Part Series			
1) Investing In Treasuries	5/21/2015	Online	226
2) Demystifying the World of Agencies	6/17/2015	Online	181
3) When It Makes Sense To Buy Municipals	6/24/2015	Online	165
4) Understanding Banker's Acceptances and Commercial Paper	7/8/2015	Online	169
5) Certificates Of Deposit, Deposit Placement Services And Collateralized Bank Deposits	Postponed to 9/9/2015	Online	121
6) Utilizing Repurchase Agreements, Reverse Repos And Securities Lending Agreements	8/5/2015	Online	140
7) Making Sense of Corporate Notes And Bonds	8/19/2015	Online	131
8) Understanding Structured Pooled Securities – Asset-Backed, Mortgage-Backed And Collateralized Mortgage Securities	9/2/2015	Online	113
9) Differentiating Mutual Funds From Money Market Mutual Funds And Understanding Investment Pools	9/16/2015	Online	126
Disclosure Policies: What Every Issuer Should Consider	10/14/2015	Online	160
OTHER CDIAC ENGAGEMENTS			
The Bond Buyer Pre-conference	10/21/2015	San Francisco, CA	69
CDIAC and CSMA Lease Financing Symposium	11/6/2015	Napa, CA	54
CDIAC and UCDE Rethinking Development Finance	11/17/2015	Sacramento, CA	60
		TOTAL	2,020

Figure 25

ATTENDANCE AT CDIAC PROGRAMS
IN-PERSON VS. WEB-BASED, 2015

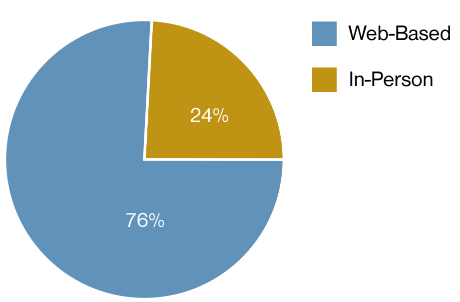


Figure 26

ATTENDANCE AT CDIAC PROGRAMS
BY ORGANIZATIONAL AFFILIATION
PUBLIC OR PRIVATE, 2015

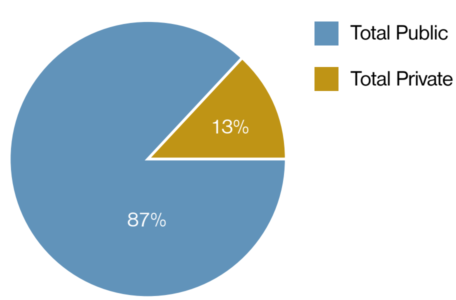


Figure 27

ATTENDANCE AT CDIAC PROGRAMS BY ORGANIZATION TYPE, 2015

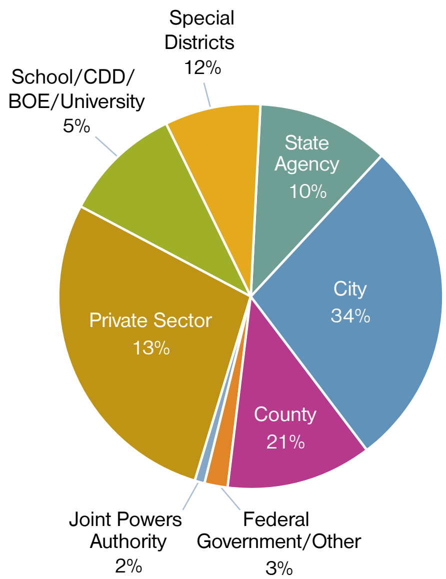
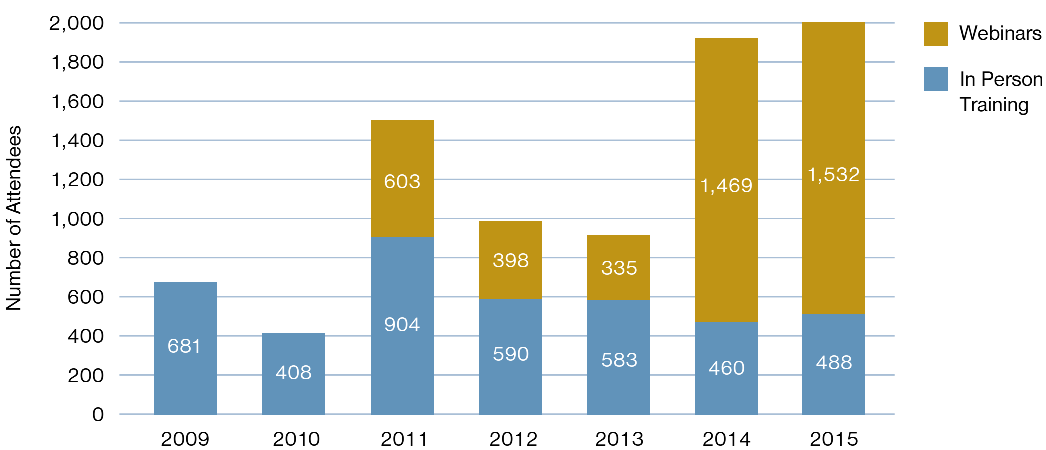


Figure 28

ATTENDANCE AT CDIAC PROGRAMS, 2009 TO 2015



Historical Comparison of Seminar Attendance

Over the past seven years CDIAC has attracted approximately 8,451 attendees to its programs, including educational offerings held in partnership with other organizations. Figure 28 reflects enrollment activity in CDIAC programs from 2009 through 2015.[33]

Based on this seven year time span, CDIAC continues to serve its primary audience, public agencies, as reflected in Figures 29 and 30. Since 2009, cities, counties, and special districts represent 48 percent of all attendees at CDIAC programs.

2016 Outlook

CURRICULUM AND PROGRAM DEVELOPMENT. CDIAC foresees two areas that will affect the educational needs of California's public agencies:

[33] A seven year span is used in this report because in 2009-2011 reporting totals agency types were lumped together in the analysis. Attendance counts will significantly change (reduced) starting annual report 2016 when CDIAC can revisit a five year reporting span.

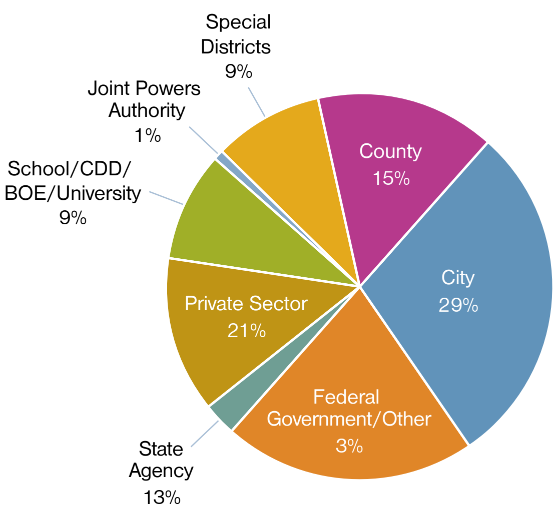
Figure 29

ATTENDANCE AT CDIAC PROGRAMS
PUBLIC VS. PRIVATE, 2009 TO 2015

YEAR	% PUBLIC	% PRIVATE
2009	74%	26%
2010	74	26
2011	74	26
2012	67	33
2013	76	24
2014	73%	27%
2015	87%	13%

Figure 30

ATTENDANCE AT CDIAC PROGRAM BY
ORGANIZATION TYPE, 2009 TO 2015



a) the retirement of senior debt and treasury staff and b) changes to the method and manner in which debt is issued in the municipal market. In response, CDIAC must continue to develop programming that addresses these two critical environmental forces. To do so, CDIAC will convene an advisory group on curriculum development to assist CDIAC in developing educational programming and update its core seminars.

INTERNET-BASED TRAINING ON DEMAND. CDIAC will explore the opportunity to utilize electronic learning management systems to provide information and training to public officials. These learning management systems offer the possibility to deliver material, monitor participation, test learning acquisition, and track enrollment. This will enable CDIAC to develop certification-based training programs in the future.

OUTREACH AND COLLABORATION. CDIAC plans to continue it collaboration with local, state, and national organization such as the Government Finance Officers Association (GFOA) and the State Debt Management Network (SDMN). Staff will also attend regional and divisional association meetings and events to interface with professional groups to build networks and maintain a presence in the industry.

EXISTING PARTNERSHIPS. In 2016, CDIAC will continue its partnerships with the California Society of Municipal Analysts (CSMA) and *The Bond Buyer*. Building on the successful collaborative investment's workshop held in 2015, CDIAC hopes to expand its partnership with the California Municipal Treasurer's Association (CMTA) to provide core public investment training workshops. In addition, CDIAC aims to further its existing relationship with the California Special District Association (CSDA) to develop a financing workshop specific to special districts.

DIRECT PROMOTION OF PROGRAMS. CDIAC will continue to promote its programs through its subscribed email list and newsletter emails with association groups, postings on association webpages and when necessary, through targeted mailing of printed brochures to local public agency officials. Social media, such as Twitter and LinkedIn, will continue to be used along with the support from the State Treasurer's Office for effective focused messaging.

STATE FINANCING BOARDS, COMMISSIONS, AND AUTHORITIES. CDIAC will continue to offer educational and outreach services to support state financing boards, commissions, and authorities.

RESEARCH UNIT

California Government Code Section 8855(h)(5) authorizes CDIAC to undertake research projects that improve practices or reduce the borrowing costs of public issuers in California. For calendar year 2015, CDIAC staff have either completed or initiated the following research projects:

CDIAC Projects Completed

A PRELIMINARY REVIEW OF THE INITIAL DISCLOSURE PRACTICES OF CALIFORNIA CONDUIT BORROWERS. This issue brief reviews the initial disclosure documents of conduit borrowers in the state of California, including a content analysis of those documents to determine the similarities and differences between and among the different sectors of conduit issuance.

ALTERNATIVE FINANCING IN THE MUNICIPAL MARKET: FINANCIAL AND POLICY CONSIDERATIONS. The expanded availability and demand for alternative debt structures in the municipal market provides unique opportunities and risks to both issuers and investors. This issue brief explains the benefits and drawbacks, the pertinent disclosure issues, and the policies and procedures municipal issuers should consider before issuing alternative debt.

FINAL REPORT OF THE TASK FORCE ON BOND ACCOUNTABILITY. The Task Force on Bond Accountability, formed in February 2015 by State Treasurer Chiang, has issued its final report on its analysis, findings, and recommendations. The report includes a set of best practice guidelines that, if adopted, will help to provide public agencies that issue debt a reasonable assurance that the proceeds are being used for legal and intended purposes and in compliance with administration and legal requirements.

LOCAL AGENCY INVESTMENT GUIDELINES: UPDATE FOR 2015. CDIAC, working collaboratively with investment professionals, reviewed and updated the CDIAC Local Agency Investment Guidelines. This document provides references and recommendations (developed by public and private sector professionals) for interpreting and applying California statute to common public fund investment topics related to local agencies. The 2015 Update reflected statutory changes effective January 1, 2015.

OPPORTUNITIES TO USE ASSESSMENT DISTRICTS TO FINANCE FACILITIES AND SERVICES IN CALIFORNIA TODAY. A series of recent court decisions challenging the methods of apportioning general and special benefits used for certain assessments in California has led local agencies to question the viability of assessment financing, which in turn has limited the use of this important financing tool. This report seeks to inform local agencies as well as others in the public finance community about the opportunities for using assessments within the constraints imposed by these decisions.

REGULATORY RESOURCES FOR MUNICIPAL ISSUERS. CDIAC's website features a new webpage, Regulatory Resources for Municipal Issuers that contains resources on selected topics of municipal market regulations and information on the municipal market's regulatory agencies. CDIAC's "Dodd-Frank Calendar" and "Legislative Update" published as part of Debt Line will now also be available on this webpage, www.treasurer.ca.gov/cdiac/mmra/index.asp.

2016 Outlook

PROPOSED OR INITIATED
PROJECTS AND ACTIVITIES

SECURITIZED INVESTMENTS. This issue brief will provide an overview of asset-backed and mortgage-backed securities, identify the risk associated with these investment products in a public portfolio, and describe the current status of proposed federal initiatives that may affect these securities.

K-14 VOTER APPROVED GENERAL OBLIGATION BONDS: AUTHORIZED, BUT UNISSUED – 2016 UPDATE. CDIAC will update earlier research that cross referenced K-14 general obligation bond issuance with the underlying voter approved authority to determine the amount of general obligation bonds that were authorized, but unissued since 2002.

INFRASTRUCTURE FINANCING DISTRICTS (IFDs). CDIAC will examine IFDs in this issue brief with a focus on the newly authorized Enhanced Infrastructure Financing Districts (EIFDs). This review will analyze the limitations of the new law, explain how tax increment revenues are diverted, identify eligible projects, and compare IFDs to EIFDs.

UPDATE OF LOCAL GOVERNMENT GENERAL OBLIGATION BOND ISSUANCE TRENDS (2005-2015). In 2008, CDIAC published *An Overview of Local Government General Obligation Bond Issuance Trends (1985-2005)*, which focused on the changes in the volume of general obligation (GO) bonds. This issue brief will update the 2008 report by addressing GO bond issuance activity from 2006 to 2014 and examine any changes in issuance patterns.

INDEPENDENT REGISTERED MUNICIPAL ADVISOR (IRMA) DISCLOSURE. This issue brief will review the IRMA exemption contained in the MA Rule and address how issuers utilize this exemption. The brief will examine the steps municipal issuers have taken to address the IRMA exemption and incorporate it into their debt issuance process, assess which municipal issuers have publicly posted IRMA exemption letters, provide a profile of issuers that have publicly posted IRMA exemption letters, and compare the text of the existing letters.

PRIVATE ACTIVITY BONDS (PABs). This issue brief will provide an overview of private activity bonds (PABs) including issuance trends, eligible projects/purposes, and limitations on use. The brief will also examine potential changes to the market that may affect the use of PABs.

LOCAL AGENCY INVESTMENT GUIDELINES: UPDATE FOR 2016. CDIAC, working collaboratively with investment professionals, reviewed and updated the CDIAC *Local Agency Investment Guidelines*. This document provides references and recommendations (developed by public and private sector professionals) for interpreting and applying California statute to common public fund investment topics related to local agencies. The 2016 Update will reflect statutory changes effective January 1, 2016.

DISCLOSURE PRIMER. CDIAC will develop a concept to create a primer on municipal market disclosure. It is envisioned this primer would be a companion to the *California Debt Issuance Primer* and provide a detailed desk-reference for public finance officials on disclosure requirements and best practices.

UPDATE TO THE CALIFORNIA DEBT ISSUANCE PRIMER. CDIAC plans to update the California Debt Issuance Primer.

OUTREACH AND COLLABORATION WITH PUBLIC FINANCE ORGANIZATIONS. CDIAC will continue to work with public finance organizations, public agencies, and research organizations to identify and assess new forms of public debt and investments coming into the market. This collaboration helps to keep CDIAC informed of market trends and emerging products and practices to produce research that is timely and relevant.

DEBT AND INVESTMENT LEGISLATION AFFECTING STATE AND LOCAL GOVERNMENTS. CDIAC will continue to monitor the status and maintain an inventory of important state and federal legislation affecting public finance, municipal bond issuance, and public funds investing. Published periodically in *Debt Line* during the legislative session, the online inventory includes helpful links to the most current information on pending legislation.

DEBT LINE. CDIAC will continue to publish *Debt Line*, a monthly newsletter including issuance statistics and analysis, research articles, important dates and details arising from MSRB and SEC regulatory activities, and announcements of educational programming provided by CDIAC and allied organizations.

CDIAC

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