



CALIFORNIA
DEBT AND
INVESTMENT
ADVISORY
COMMISSION

Session Five:

Managing Opportunities and Risks in Your Outstanding Debt

Holiday Inn Sacramento Downtown - Arena

Sacramento, California

September 4, 2019

Speakers



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Outline



- ❑ *Topic Overview*
- ❑ *The Life Cycle of Bonds*
- ❑ *Working with Professionals*
 - *How to Work with Your Municipal Advisor*
 - *How to Work with Your Bond Counsel*
 - *Managing Unsolicited Investment Banking Ideas*
 - *Issuer's Perspective*
- ❑ *Refinancing and Refunding Tools*
- ❑ *Other Portions of the Capital Portfolio that Need Maintenance*
- ❑ *Case Studies and Examples*
- ❑ *Wrap Up: Best Practices and Lessons Learned for Post Issuance Debt Management*
- ❑ *Questions and Answers*



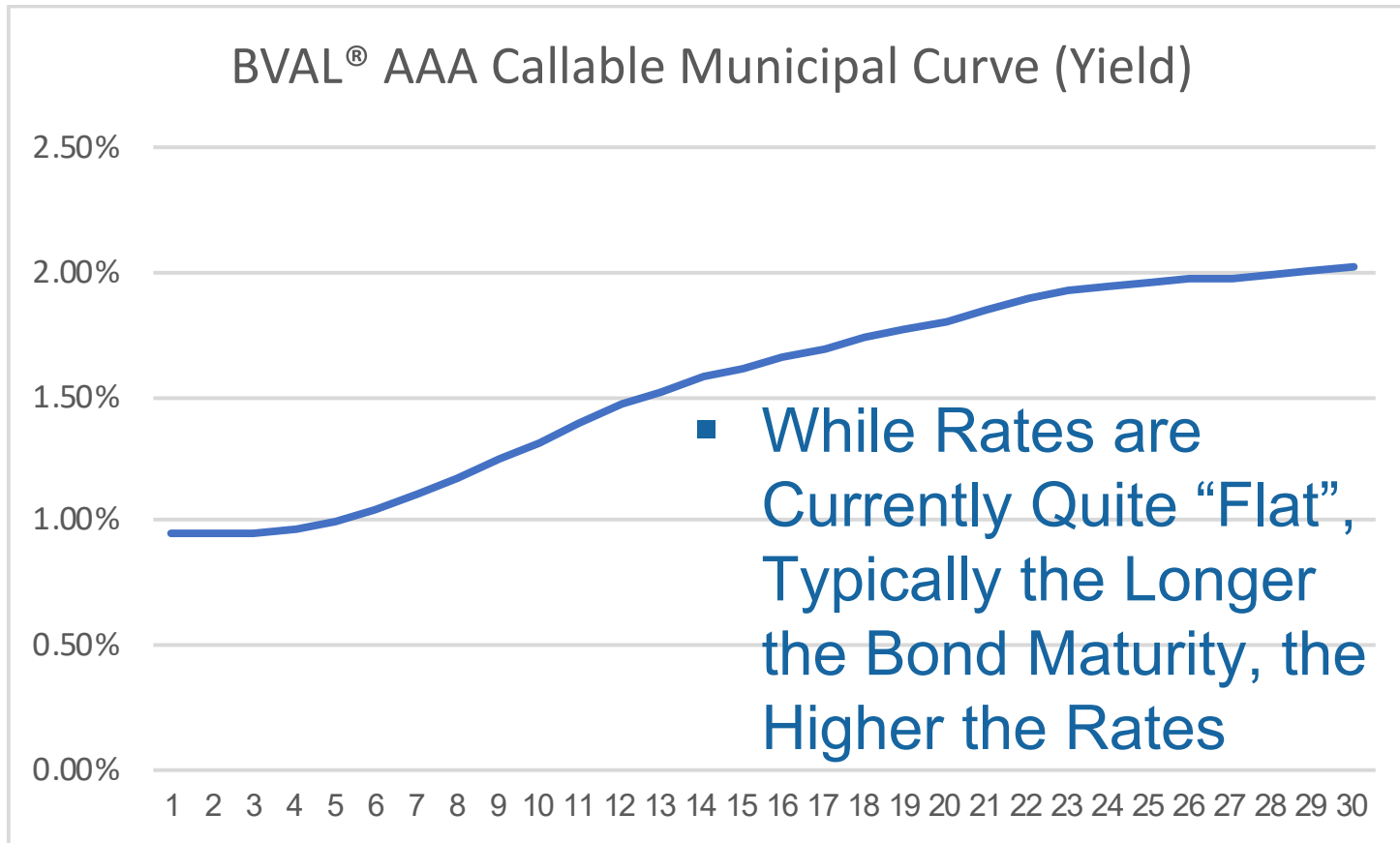
The Life Cycle of Bonds



The Tax-Exempt Yield Curve Today



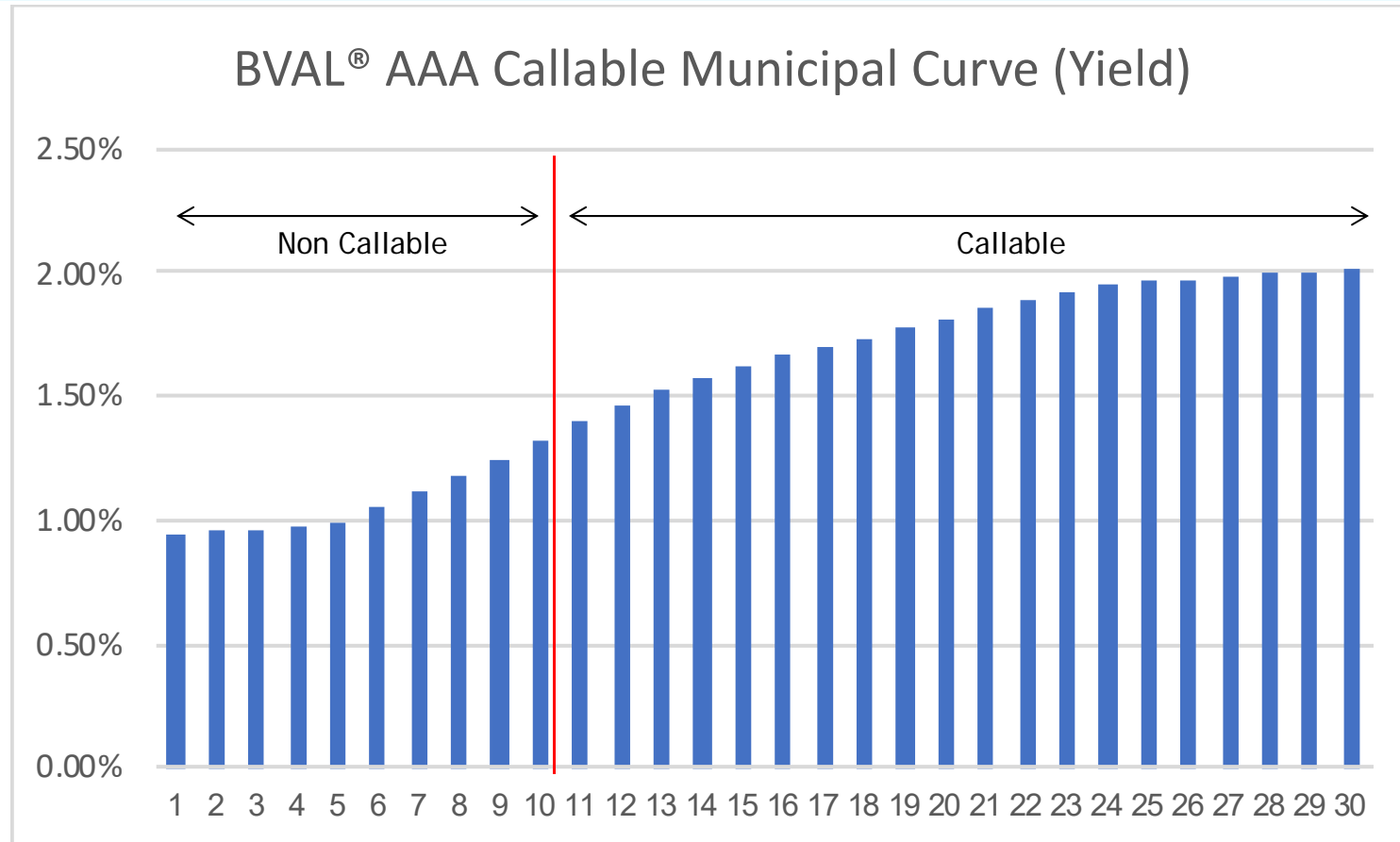
So Now You Have Issued a 30 year Fixed Rate Municipal Bond



Municipal Bonds Are Typically Serialized



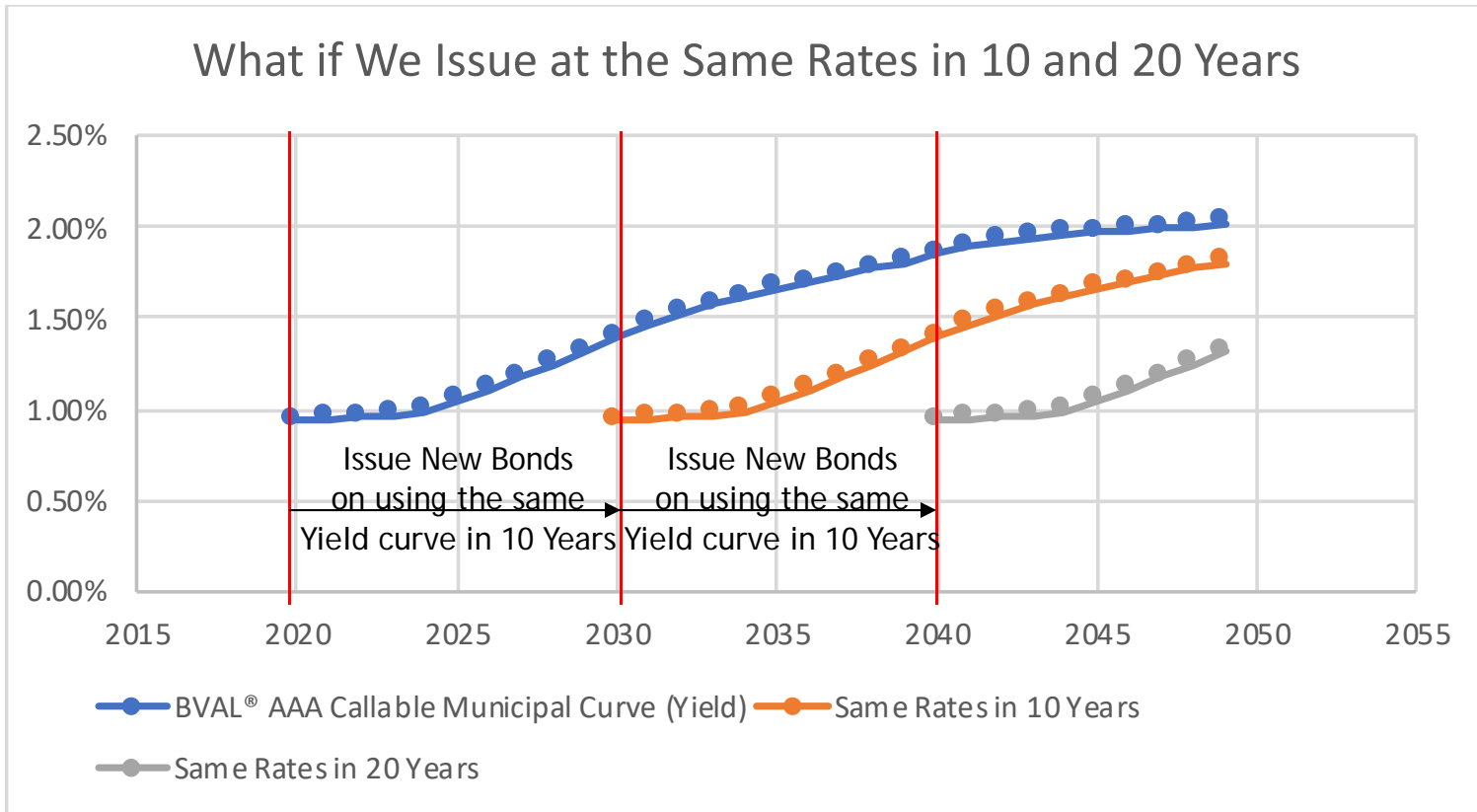
Unlike Corporate Bonds, the 30-year bond may have up to 30 maturities



- Typically, the bonds are sold with “call protection” and are then pre-payable at par or a modest penalty set at pricing

If Rates Don't Change, What Happens?

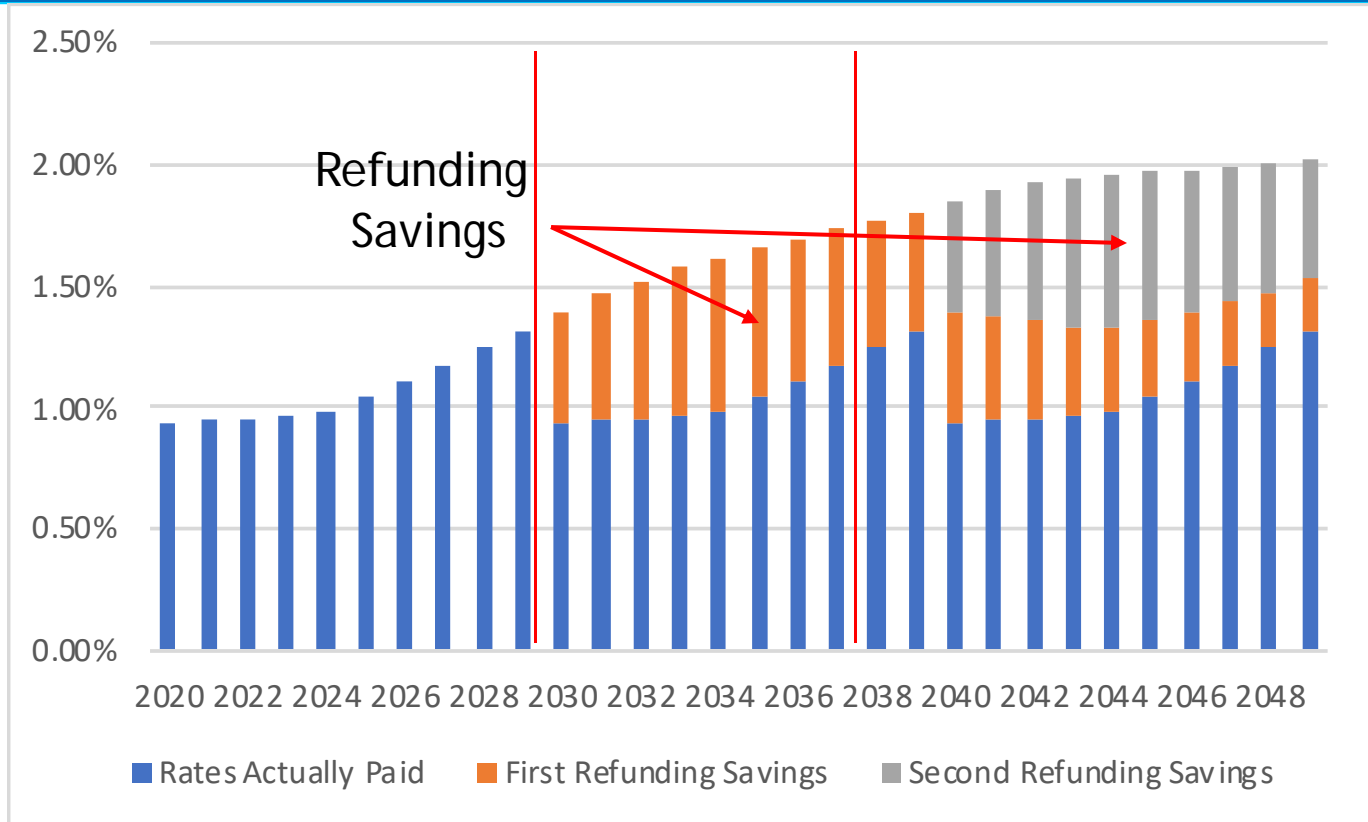
If We Call Bonds in 10 and 20 Years and Issue at the Same Rates What



- So even if nothing changes with interest rates, we can issue new bonds at lower rates.

What is the Result?

Municipal bond market refunding savings can occur without lower interest rates



- Because of this dynamic, most 30-year bonds never reach maturity

Yield vs. Coupon Over the Bond Life Cycle

Yield, Price and Coupon are all Important, But that Importance Changes at Different Points in the Bond Life Cycle

At Bond Issuance

Post Issuance

Coupon, Price and Best Possible Yield

Coupon vs. Prevailing Yields

Choose to sell a 10 Year “Par Bond” with a coupon of 1.40% and yield of 1.40% today OR selling the same bond with a 5% coupon and a price (i.e. a Premium) to produce a yield comparable to 1.40%

Refinance a 1.40% Coupon versus a 5% Coupon versus yield in the future

Which is more likely to be refunded?

Summary



- Typically a “Fixed” Rate Bond Will Be Callable and Can Be Refinanced for Savings
- Unlike the Corporate Bond Market, Municipal Bonds Are Typically Serialized – We Are Typically Issuing Many Individual Bonds
- This Structure Creates a Life Cycle of Bonds Such That a Refinancing Can Occur Even If Rates Don’t Change
- Tax Law Allows A Current Refunding to Close Up to 90 Days Before the Call Date

Summary



- Actual Analysis Also Incorporates Costs of Issuing the New Bonds and any Prepayment Penalty or “Call Premium”
- Issuance Costs on Later Series of Bonds Will Be Amortized Over Fewer Years and this Also Impacts the Savings Dynamic
- The “Optimal” Refinancing Date May Not Be on the “Call Date” Set at Pricing
- But Each Passing Day After that, Results in a Shorter Period to Produce Savings

Tax Exempt Interest Rates Are Changing

- In the Actual Markets, Rates Are Constantly Changing and the Shape of the Yield Curve (the Relationship Between Rates at Different Maturities) Are Always Changing
- The Nature of Municipal Bonds is that Fixed Rate Bonds Almost Never Are Left Outstanding Until Maturity, And Monitoring of the Bonds Allows for Significant Savings

30 Year AAA Rates Have Fluctuated Over Last Several Years



How Do You Monitor and
Decide When to Act?



Working with Professionals



Your Bonds Have Been Issued, BUT...

Interest rates continue to decline and underwriters continue to present refunding opportunities...

The asset pledged to my 2012 COPS needs to be unencumbered...

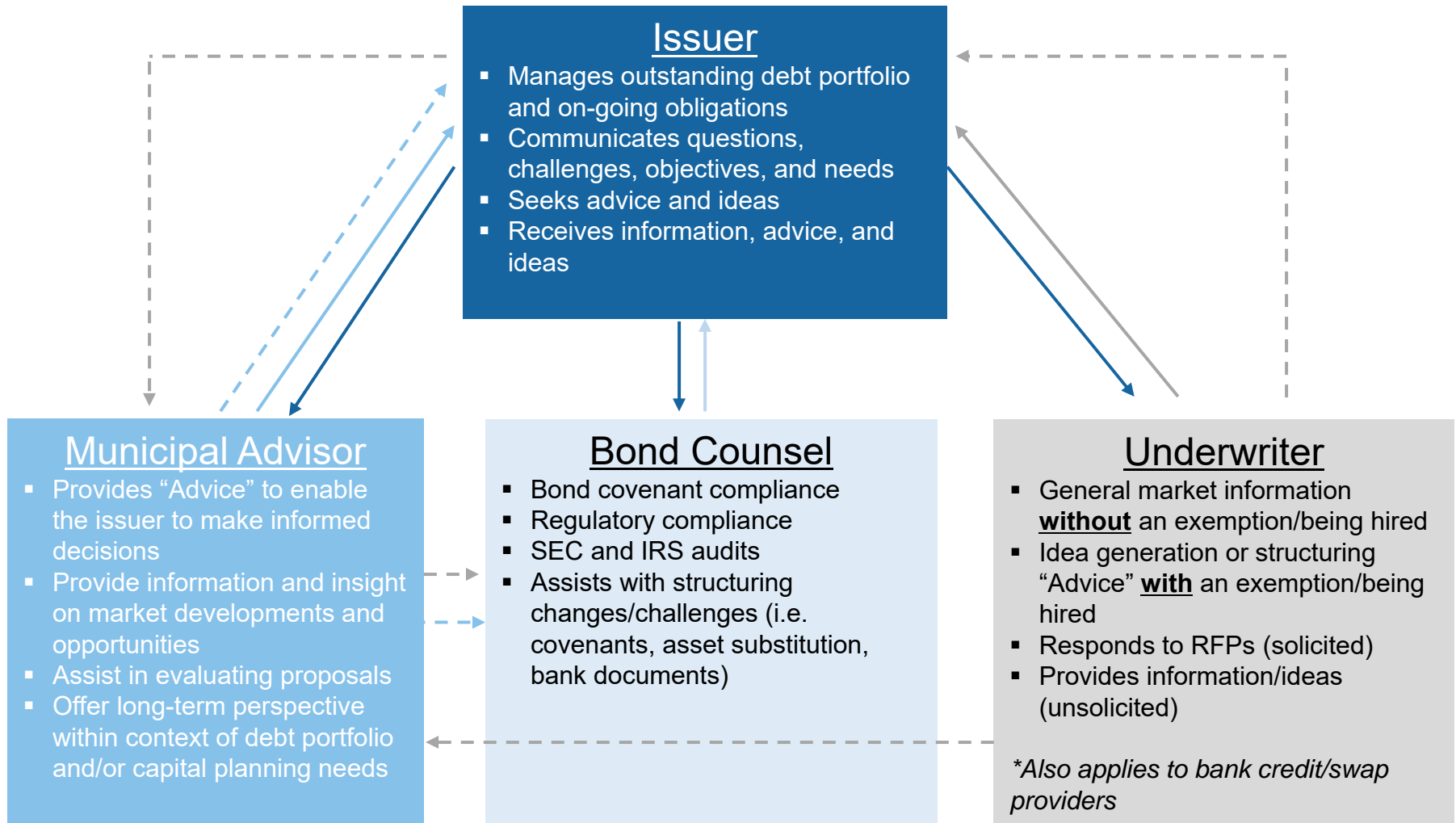
Our CIP needs have doubled and our capital structure is already constrained...

The Letter of Credit that supports our agency's variable rate bonds has expired...

Our swap counterparty tells us there is an opportunity to restructure our existing agreement to better align our variable rate cash flows...

Recent events triggered a provision in our legal documents – what is our exposure/risk?

Flow of Information, Ideas, and Advice



Municipal Advisor Role and the “MA Rule”

- MSRB Rule G-42 (the MA Rule) establishes standards of care and duties to the Municipal Advisor to when dealing with municipal entity clients – formalizes the Municipal Advisory as a “Fiduciary”

DUTY OF CARE

- Exercise due care in performing its municipal advisory activities
- Possess the degree of knowledge and expertise needed to provide client with informed advice
- Make a reasonable inquiry as to the facts that are relevant to client’s determination as to whether to proceed with a course of action or that form the basis for any advice provided to client; and
- Undertake a reasonable investigation to determine that the firm is not forming any recommendation on materially inaccurate or incomplete information

DUTY OF LOYALTY

- Deal honestly and with the utmost good faith with the client
- Act in the client’s best interests without regard to the financial/other interests of the municipal advisory firm
- Eliminate or provide full and fair disclosure about each material conflict of interest
- Not engage in municipal advisory activities with the client, if it cannot manage or mitigate its conflicts in a manner that will permit the MA to act in the client’s best interests

As a result of MA Rule, most issuers now have an established municipal advisor relationship to assist with their bond/financing programs

Municipal Advisor Relationship in Practice



Understanding of the Issuer and its Objectives

- Offers comprehensive long-term perspective
- Maintains knowledge of the debt portfolio intricacies (i.e. covenants, constraints, commitments)

Assists with Opportunities and Challenges

- Provides information and insights about evolving market developments and opportunities
- Utilizes experience with comparable issuers and similar needs/challenges
- Prepares analysis of alternatives – identifies benefits and considerations

Operates as an Extension of Staff

- Underwriter and other team member procurement
- Transaction and other execution
- Staff reports and board/council communication and training

Underwriter Information and “Advice”



- In order to provide “Advice” to an issuer, one must be registered as a Municipal Advisor under the MA Rule
- To provide “Advice” to an issuer, an underwriter must rely upon one of three exemptions; without an exemption, underwriter information flow is limited

Types of Information: Without MA Rule Exemption

- ✓ Market update
- ✓ Recent transaction results
- ✓ Case studies
- ✓ General interest rate levels

Types of Information/”Advice”: With MA Rule Exemption

- ✓ Tailored ideas
- ✓ Market alternatives
- ✓ Structuring options & investor preferences
- ✓ Specific bond sizing
- ✓ Detailed analyses

Underwriter Exemptions from the MA Rule



1. Underwriting Activity Exemption

- Advice regarding the structure, timing, terms, and other similar matters concerning a particular issuance of municipal securities

2. RFP/RFQ Exemption

- Advice provided in response (written or orally) to an RFP/RFQ from a municipal entity for services in connection with a municipal financial product or the issuance of municipal securities

3. Independent Registered Municipal Advisor (“IRMA”) Exemption

- Advice permitted when a municipal entity is represented by an IRMA and within the past two years have not been associated with the underwriter relying on this exemption

Bond Counsel Guidance



- Laws governing municipal bonds are constantly changing and becoming more complex
- Documents, security and covenants also constantly evolving
 - Document changes can trigger “reissuance” of debt under tax law
 - Document amendments may also have tax considerations
 - Is a change not material or otherwise allowed by documents?

- Who owns your debt and is there credit enhancement
 - Credit enhancers often have right to approve certain covenant changes without bondholder consent
 - Private placements usually only require consent of one or a few lenders
 - Publicly offered unenhanced (i.e. no credit enhancement) bonds may have many holders and consent impractical
 - Are there swaps or other creditors that have consent rights?
- Tax Considerations

Don't be afraid to call your bond counsel!

An Underwriting Perspective



- Underwriters Typically Try to Identify and Show Their Clients or Prospects Refinancing Ideas
 - Based on Economic Savings
 - Opportunities to Improve Credit Ratings
 - Opportunities to Change Credit Terms
 - Changes in Revenues

- Underwriter's Maintain “Debt Maps” (or “Debt Paints”) or Other Detailed Summaries of Bonds and All Their Components and Refinancing History

An Underwriting Perspective



- Call optionality and call horizons
- Tracking and managing legal provisions and covenants
- Changes in market standards for covenants and leveraging those:
 - Debt service coverage
 - Debt service timing
 - Debt service reserve funds
 - Lease Assets

Debt Affordability Advisory Committee

- Composed of:
 - Auditor-Controller (Elected)
 - Treasurer-Tax Collector (Elected)
 - County Finance Director
 - Director of Conservation and Development (this department operated County's Redevelopment Agency prior to statewide dissolution)
- Reviews County Debt Management Policy annually and proposes updates to the Board of Supervisors
- Reviews all new issuance proposals and determines structure

County Administration as Lead Agency



- County Administration serves as the lead agency for debt management and capital projects in the County
 - Liaison with external and internal consultants and stakeholders
 - Initiates new issuance or refunding analysis
 - Sets tone for infrastructure priorities

Ongoing Debt Administration



- Inventory of Bonds Outstanding
- Catalog of disclosure and post-issuance compliance responsibilities
- Listing of properties included in transactions



Inventory of Bonds Outstanding

Name of Issue	Issuing Entity	Principal Amount	Date of Issue	Final Maturity Date	CUSIP for Final Maturity	Trustee or Paying Agent	Annual Report Due Date	Disclosure Representative	Disclosure Coordinator
Lease Revenue Bonds/Obligations:									
Lease Revenue Bonds, 2017 Series B (Capital Projects) ***Private Placement***	County of Contra Costa Public Financing Authority	\$ 100,285,000	5/26/2017	6/1/2032	N/A	Wells Fargo	N/A	County Finance Director	Chief Asst. CAO
Lease Revenue Bonds, 2017 Series A (Refunding and Capital Projects) ***Private Placement***	County of Contra Costa Public Financing Authority	\$ 99,810,000	3/3/2017	6/1/2027	21226PNH7	Wells Fargo	N/A	County Finance Director	Chief Asst. CAO
Lease Revenue Bonds, 2015 Series A (Capital Projects) and 2015 Series B (Refunding)	County of Contra Costa Public Financing Authority	\$ 71,150,000	8/25/2015	6/1/2035 (A) 6/1/2028 (B)	21226PLV8 (A) 21226PMJ4 (B)	Wells Fargo	3/31	County Finance Director	Chief Asst. CAO
Lease Revenue Obligations (Capital Projects Program) 2012 Series A, \$13,102,304 ***Private Placement***	County of Contra Costa Public Financing Authority	\$ 13,102,304	10/11/2012	6/1/2027	N/A	Wells Fargo	N/A	County Finance Director	Chief Asst. CAO
Lease Revenue Bonds, \$58,055,000 comprised of Capital Project I - Tax Exempt Bonds, Series A-1, \$6,790,000 and Capital Project I - Taxable Build America Bonds, Series A-2, \$13,130,000 and Capital Project I - Taxable Recovery Zone Bonds, Series A-3, \$20,700,000 and 2010 Series B (Refunding), \$17,435,000	County of Contra Costa Public Financing Authority	\$ 58,055,000	11/16/2010	6/1/2020 (A-1) 6/1/2030 (A-2) 6/1/2040 (A-3) 6/1/2025 (B)	21226PJRO (A-1) 21226PKU1 (A-2) 21226PKE7 (A-3) 21226PKV9 (B)	Wells Fargo	3/31	County Finance Director	Chief Asst. CAO
Pension Obligation Bonds:									
California Taxable Pension Obligation Bonds, Series 2003A, \$322,710,000	Contra Costa County	\$ 322,710,000	5/1/2003	8/1/2022	212257BV0	Wells Fargo	3/31	County Finance Director	Chief Asst. CAO
Tax Allocation Bonds:									
Tax Allocation Refunding Bonds, Series 2017A, \$49,530,000	Successor Agency to the Contra Costa County Redevelopment Agency	\$ 49,530,000	8/16/2017	8/1/2036	212263AM9	US Bank	3/31	DCD Director	Asst. Deputy Director - DCD
Taxable Tax Allocation Refunding Bonds, Series 2017B, \$23,095,000	Successor Agency to the Contra Costa County Redevelopment Agency	\$ 23,095,000	8/16/2017	8/1/2025	212263AV9	US Bank	3/31	DCD Director	Asst. Deputy Director - DCD
Special Assessment Districts:									
2013 Special Tax Refunding Bonds (Norris Canyon), \$5,605,000	County of Contra Costa Community Facilities District No. 2001-1	\$ 5,605,000	1/24/2013	9/1/2031	212288CT9	BNY Mellon	3/31	DCD Director	Asst. Deputy Director - DCD

**EXHIBIT B:
REQUIRED INFORMATION FOR ANNUAL REPORTS OF COUNTY AND AUTHORITY**

CDIAC

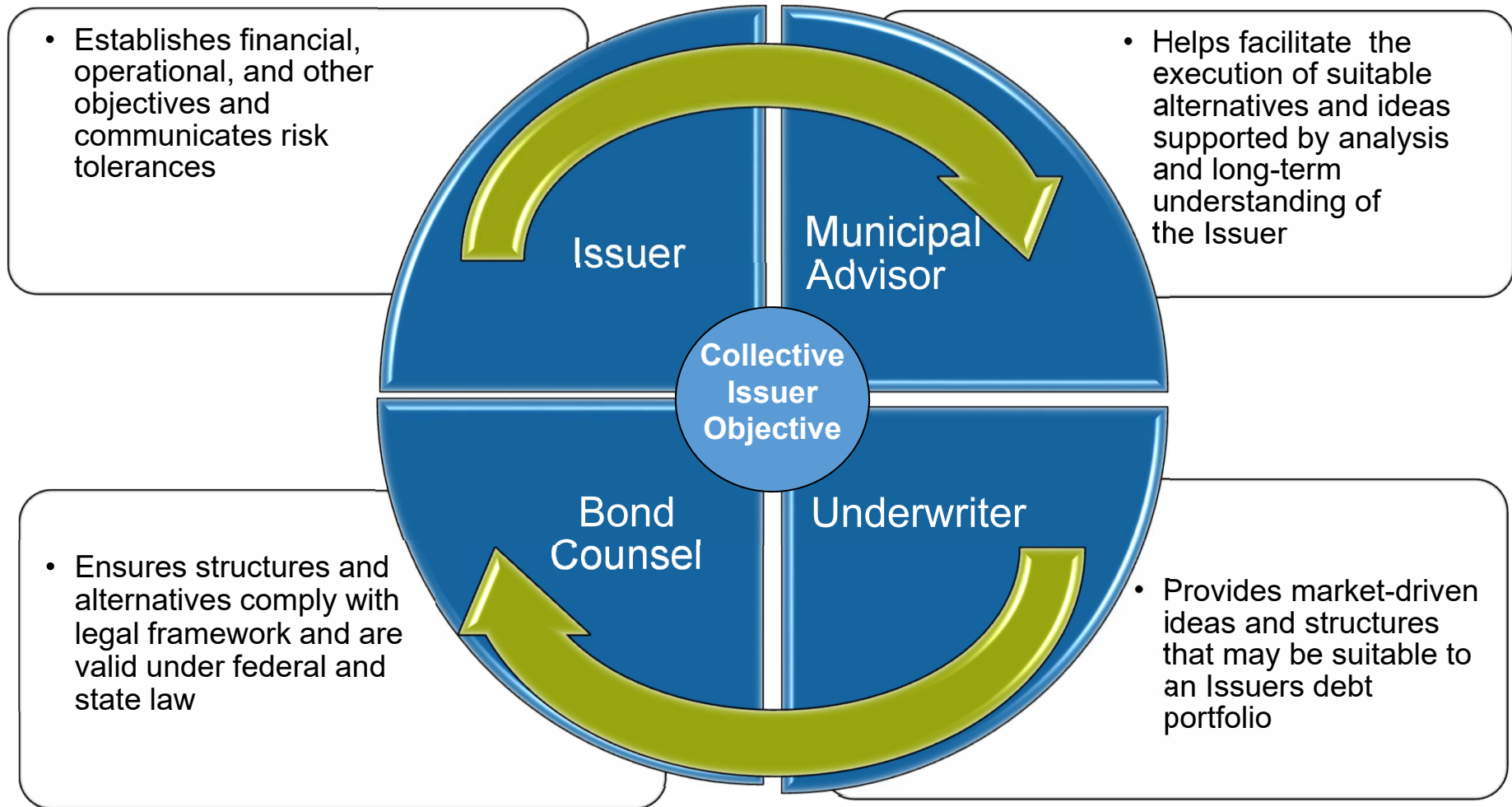
Issue Description	Due Date	Filing Requirements
Lease Revenue Bonds:		
County of Contra Costa Public Financing Authority Lease Revenue Bonds, \$71,115,000 consisting of \$19,055,000 2015 Series A (Capital Projects) and \$52,060,000 2015 Series B (Refunding)	Nine months after FYE 6/30 (3/31)	<p>(a) The audited financial statements of the County for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board. If the County's audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the final Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.</p> <p>(b) Numerical and tabular information for the immediately preceding Fiscal Year of the type contained in the Official Statement under the following captions:</p> <ol style="list-style-type: none"> 1. The status of the construction and installation of the improvement constituting the 2015 Project, until such time as the 2015 Project is completed; 2. Report of changes in "DEBT SERVICE SCHEDULE;" 3. Table B-1-"County of Contra Costa General Fund Budget Summary;" 4. Table B-2-"County of Contra Costa Summary of Secured Assessed Valuations and <i>Ad Valorem</i> Property Taxation;" 5. Table B-5-"County of Contra Costa General Fund Statement of Revenues, Expenditures and Changes in Fund Balances;" 6. Table B-8-"Contra Costa County Employees' Retirement Association Schedule of Funded Status;" 7. Table B-16-"Contra Costa County Other Post Employment Benefit Plan Summary of Contributions;" and 8. Table B-19-"Contra Costa County Outstanding Lease Revenue Obligations and Pension Obligation Bonds").
County of Contra Costa Public Financing Authority Lease Revenue Bonds, \$58,055,000 consisting of \$6,790,000 2010 Series A-1 (Capital Project I - Tax Exempt Bonds); \$13,130,000 2010 Series A-2 (Capital Project I - Taxable Build America bonds); \$20,700,000 2010 Series A-3 (Capital Project I - Taxable Recovery Zone Bonds); and \$17,435,000 2010 Series B (Refunding)	Nine months after FYE 6/30 (3/31)	<p>(a) The audited financial statements of the County for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board. If the County's audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the final Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.</p> <p>(b) Numerical and tabular information for the immediately preceding Fiscal Year of the type contained in the Official Statement under the following captions:</p> <ol style="list-style-type: none"> 1. The status of the construction and installation of the improvement constituting Capital Project I and Capital Project II until such time as each Capital Project has been completed; 2. Report of changes in "DEBT SERVICE SCHEDULE;" 3. APPENDIX B-"COUNTY FINANCIAL INFORMATION-Recent County General Fund Budgets" (update Table B-1 "COUNTY OF CONTRA COSTA GENERAL FUND BUDGET"); 4. APPENDIX B-"COUNTY FINANCIAL INFORMATION-Ad Valorem Property Taxes" (update Table B-2 "COUNTY OF CONTRA COSTA SUMMARY OF SECURED ASSESSED VALUATIONS AND AD VALOREM PROPERTY TAXATION");

Listing of Properties



Contra Costa County Public Financing Authority			
Lease Revenue Bond Program			
Leased Assets, by Issuance			
2017 SERIES B (Private Placement) (Proposed, transaction not yet closed)			
<i>Summit Center - Multiple Depts.</i>	2530	ARNOLD DRIVE	MARTINEZ
<i>CCC District Attorney's Office</i>	900	WARD STREET	MARTINEZ
<i>Department of Conservation and Development</i>	30	MUIR ROAD	MARTINEZ
<i>Health Services Administration</i>	597	CENTER AVENUE	MARTINEZ
<i>Employment and Human Services Department</i>	40	DOUGLAS DRIVE	MARTINEZ
2017 SERIES A (Private Placement)			
<i>Public Works Administration</i>	255	GLACIER DRIVE	MARTINEZ
<i>Martinez Health Clinic</i>	2500	ALHAMBRA AVENUE (Clinic)	MARTINEZ
<i>Family Law Center Courthouse</i>	751	PINE STREET	MARTINEZ
<i>West County Detention Facility (WCDF) (Adult Jail)</i>	5555	GIANT HIGHWAY	RICHMOND
2015 SERIES A&B			
<i>Sheriff's Forensic Services Building/Coroner's Office</i>	1960	MUIR ROAD	MARTINEZ
<i>Department of Information Technology</i>	30	DOUGLAS DRIVE	MARTINEZ
<i>Contra Costa Health Plan (CCHP) Administration</i>	595	CENTER AVE.	MARTINEZ
<i>Workforce Services/Aging & Adult Services Building</i>	4545	DELTA FAIR BLVD	ANTIOCH
<i>John A. Davis Juvenile Hall</i>	202	GLACIER DRIVE	MARTINEZ
<i>Sheriff's Field Operations Building</i>	1980	MUIR ROAD	MARTINEZ
2012 LEASE REVENUE OBLIGATIONS (Private Placement)			
<i>Probation Department/Health Services Administration/ Child Support Services Building</i>	50	DOUGLAS DRIVE	MARTINEZ
2010 SERIES A-1, A-2, A-3			
<i>West County Health Clinic</i>	13601	SAN PABLO AVENUE	SAN PABLO
2010 SERIES B			
<i>Workforce Services/Aging & Adult Services Building</i>	1305	MACDONALD AVE	RICHMOND
<i>County Clerk-Recorder Election Department</i>	555	ESCOBAR STREET	MARTINEZ

Facilitating the Exchange and Execution of Ideas and Alternatives



Refinancing and Refunding Tools

Refinancing Strategies

a. Impact of the 2018 Federal Tax Changes



No More "Advance Refundings"



Reduction of Corporate Tax Rate from 35% to 20%
Caused Changes in Many Bank Documents

b. Alternatives to Advance Refundings



i. Current Refundings

ii. Cash Optimizations

iii. Bank Placements/Private Placements

iv. Alternative Call Provisions

Other Parts of Debt Portfolio in Need of Maintenance and Monitoring

Non-Rate Driven Structuring Issues



- The Disappearing Debt Service Reserve Fund
 - Rating Agency Transparency
 - Changing Investor Appetite
 - The cost (or carry) of a reserve

- But if a DSRF is Needed...Reserve fund “alternatives”
 - Handing the DSRF Sureties from “Fallen” Bond Insurers
 - Using New Sureties vs. Cash Funding a Reserve Fund

- Other Covenant Changes
 - Flow of funds
 - Coverage

Bank Facilities, Interest Rate Swaps, and Leases



- Rate Mechanism
- Overlay of Bank Requirements
- Rating Changes
- Interest Rate Risk
- Index Changes
 - The Phase Out of LIBOR
- Assets Pledged (Physical and Financial Assets)
 - As debt matures, debt can be over collateralized or assets may be needed for other purposes

Bond Counsel Thoughts



- Can the security for a bond or debt be changed and/or improved?
- Some documents are flexible, others not
- Large issuers of COPs able to substitute or add to leased assets flexibly
- Borrowers in private placements able to sell mortgaged assets
- Springing release of security and financial covenants possible in refundings

Case Study:
Contra Costa Transportation Authority

CCTA's Debt Management Challenge



- CCTA's \$201.5 million Series 2012A Bonds were issued as floating rate notes ("FRNs") and privately placed with a bank with interest that reset on monthly based on an underlying index
- Variable rate exposure on the FRNs is hedged by an interest rate swap (the Swap)
- Tax Cuts and Jobs Act (Tax Reform) had an adverse impact on the FRNs (not the Swap)
- FRN interest rates before/after tax reform:
 - Before 70% of LIBOR + 0.48%
 - After (70% of LIBOR + 0.48%) * 1.2154

"Margin Rate Factor" adjustment applied by bank to be "made whole" on their tax-exempt investment after the reduction in corporate tax rate

- 1) Mitigate the cost impact from tax reform
 - Higher interest rate costs on FRNs
 - Cash flow mis-match between FRN payment and Swap receipt

- 2) Explore options for a partial or full termination of the interest rate swap
 - Reduce exposure to swap-related risks
 - Limit the potential requirement to post collateral

Identify Alternatives



Do Nothing

- Incur higher interest costs on the FRN thru the Mandatory Tender Date – December 2020
- Retain swap exposure

Option A (FRNs/Swap)

- Refinance FRNs and reduce interest costs
- Retain swap exposure

Option B (FRNs/Fixed Rate Bonds/Partial Swap Termination)

- Refinance FRNs with public FRNs and Fixed Rate Bonds
- Reduce swap exposure

Option C (Fixed Rate Bonds/Full Swap Termination)

- Refinance FRNs with Fixed Rate Bonds
- Terminate swap

Market Information and Roles



Direct Purchase Bank

- Presented alternative bank products and pricing

Underwriters

- Generated unsolicited ideas for the 2012A Bonds
- Responded to RFP and presented restructuring options
- Provided FRN and bond market rates the CCTA credit
- Structured and priced FRNs and Bonds

Swap Provider

- Provided termination values and structuring alternatives

Municipal Advisor

- Analyzed market information
- Advised on suitable alternatives
- Assisted staff in communicating alternatives to Board
- Executed desired plan of finance

Analysis of Alternatives



	Do Nothing	Option A	Option B	Option C
Variable Rate Debt				
Par Amount Outstanding	\$200M	\$200M	\$100M	\$0
Type	Bank FRNs	Public FRNs	Public FRNs	N/A
Variable Interest Rate	High bank rate	Lower public market rate	Lower public market rate	N/A
Variable Rate Exposure	40% of debt portfolio	40% of debt portfolio	20% of debt portfolio	0% of debt portfolio
Ongoing Administration	--Reissuance (every 3 to 5 years) --Uncertainty about LIBOR	--Reissuance (every 3 to 5 years) --Uncertainty about LIBOR	--Reissuance (every 3 to 5 years) --Uncertainty about LIBOR	N/A
Interest Rate Swap				
Notional Amount Outstanding	\$200M	\$200M	\$100M	\$0
Collateral Potential	Yes	Yes	Reduced	None
Swap Exposure	Unchanged	Unchanged	Reduced by 50%	Eliminated
Overall Costs and Programming Impact				
	--High cost	--Lowest estimated cost	--Achieved cost objective	--Highest estimated cost
	--High variable interest cost (MRF)	--Improves cash flow match with swap	--Improves cash flow match with swap	--High swap termination cost
	--Reduces programming capacity	--Increases program capacity	--Manageable swap termination cost --Maintains program capacity	--Reduces programming capacity

Results



- Issued 2018 Refunding Bonds in two separate series:
 - Series 2018A: \$100 million Floating Rate Bonds
 - Series 2018B: \$95 million Fixed Rate Bonds
- Reduced variable rate exposure from 40% of debt portfolio to 20%
- Reduced swap exposure from \$200 million to \$100 million
- Added optionality to debt portfolio
 - Series 2018A Bonds are callable 12 months before mandatory tender date
 - Series 2018B Bonds are callable/aligned with 2017A Bonds
- Reduced debt service costs and reduced risks!!!

Debt Portfolio: Before and After



- Before Issuance of Series 2018A and Series 2018B Bonds
 - 60% fixed rate debt /40% variable rate debt
 - \$200 million outstanding variable rate and swap notional

Series	Dated Date	Original Par	Outstanding Par	Call Date	Tender Date	Mode	Maturity Date
Series 2012A Bonds	12/18/2012	\$201,450,000	\$201,450,000	Currently Callable	12/14/2020	Index	3/1/2034
Series 2012B Bonds	12/18/2012	188,770,000	41,445,000	3/1/2023		Fixed	3/1/2034
Series 2015A Bonds	10/15/2015	166,640,000	164,260,000	3/1/2025		Fixed	3/1/2034
Series 2017A Bonds	6/1/2017	83,570,000	81,860,000	3/1/2027		Fixed	3/1/2034
Total		\$640,430,000	\$489,015,000				

- After Issuance of Series 2018A and Series 2018B Bonds
 - 79% fixed rate debt / 21% variable rate debt
 - \$100 million outstanding variable rate and swap notional

Series	Dated Date	Original Par	Outstanding Par	Call Date	Tender Date	Mode	Maturity Date
Series 2012B Bonds	12/18/2012	188,770,000	41,445,000	3/1/2023		Fixed	3/1/2034
Series 2015A Bonds	10/15/2015	166,640,000	164,260,000	3/1/2025		Fixed	3/1/2034
Series 2017A Bonds	6/1/2017	83,570,000	81,860,000	3/1/2027		Fixed	3/1/2034
Series 2018A Bonds	8/30/2018	100,000,000	100,000,000	9/1/2020	9/1/2021	Index	3/1/2034
Series 2018B Bonds	8/30/2018	95,030,000	95,030,000	3/1/2027		Fixed	3/1/2030
Total		\$634,010,000	\$482,595,000				

Case Study:
Contra Costa County

Contra Costa County, California

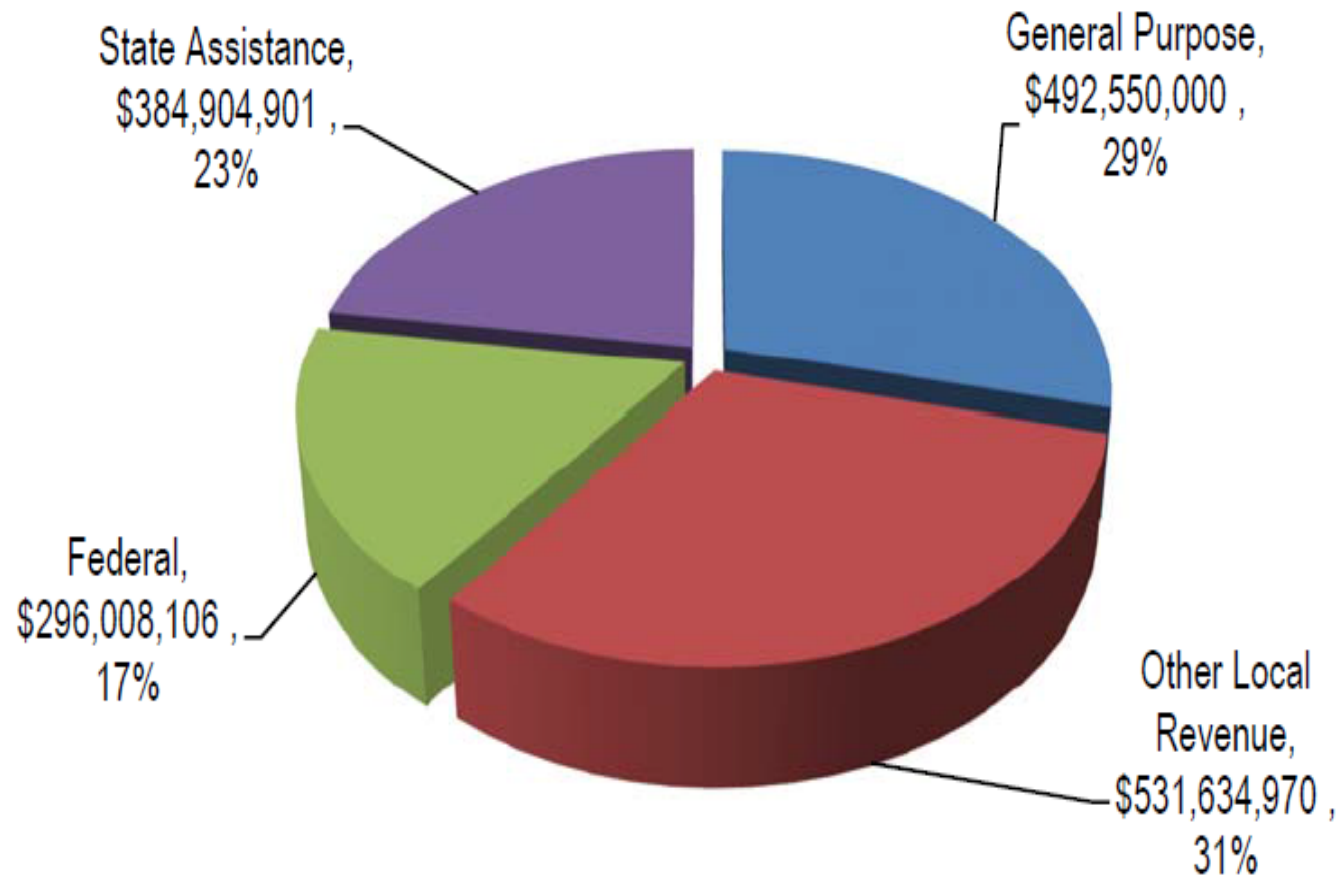
- Located in the San Francisco Bay Area about 20 miles East of San Francisco
- Ninth most populous County in California (1.1 million)
- 733 Square Miles
- 19 incorporated cities, plus unincorporated area



Contra Costa County – Budget Information



- FY 2019/20 Recommended Budget - \$3.698 billion (\$1.705 billion General Fund)



Contra Costa County – Credit Ratings



Notes	FY Ending June 30	Implied General Obligation Bond/Issuer Rating		Pension Obligation Bond		Lease Revenue Bond/Certificates of Participation	
		Moody's	S&P	Moody's	S&P	Moody's	S&P
1	1995	Aa2	AA	A1	AA-	A1	A+
2	1996	Aa2	AA	Aa3	AA-	A1	A+
3	2001	Aa2	AA	Aa3	AA-	A1	AA-
4	2006	Aa3	AA	A1	AA-	A2	AA-
5	2007	Aa3	AA	A1	AA-	A2	AA-
6	2010	Aa2	AA	Aa3	AA-	A1	AA-
7	2013	Aa2	AA	A1	AA-	A1	AA-
8	2014	Aa2	AAA	A1	AA+	A1	AA+
9	2017	Aa2	AAA	A1	AA+	Aa3 ^a	AA+
10	2018	Aa2	AAA	A1	AAA	Aa3	AA+

Debt Portfolio



<u>Bond Issues</u>	<u>Date of Issue</u>	<u>Final Maturity Date</u>	<u>Principal Amount Issued</u>	<u>Outstanding Principal</u>	<u>True Interest Cost (%)</u>
<u>Lease Revenue Bond and Obligation Issues (LRBs and LROs):</u>					
2010 Series A-1 (Capital Project I – Tax Exempt)	11/16/10	06/01/20	6,790	2,120	4.15% ¹
2010 Series A-2 (Capital Project I – Taxable BABs)	11/16/10	06/01/30	13,130	13,130	4.15% ¹
2010 Series A-3 (Capital Project I – Taxable RZBs)	11/16/10	06/01/40	20,700	20,700	4.15% ¹
2010 Series B (Refunding)	11/16/10	06/01/25	17,435	9,975	3.84%
2012 Lease Revenue Obligations	11/11/12	06/01/27	13,102	8,975	2.68%
2015 Series A (Refunding and Capital Projects)	08/25/15	06/01/35	19,055	16,945	3.18%
2015 Series B (Refunding and Capital Projects)	08/25/15	06/01/28	52,060	43,300	2.40%
2017 Series A (Refunding and Capital Projects)	03/03/17	06/01/27	99,810	81,890	2.33%
2017 Series B (Capital Projects)	05/26/17	06/01/32	100,285	94,675	2.39%
	Total LRBs and LROs		<u>\$342,367</u>	<u>\$291,704</u>	
<u>Pension Obligation Bond Issues (POBs):</u>					
Series 2003 A (Taxable)	05/01/03	06/01/22	322,710	155,880	5.36%
	Total POBs		<u>\$322,710</u>	<u>\$155,880</u>	
	Grand Total		<u>\$665,077</u>	<u>\$447,584</u>	

- \$447.58 million outstanding as of June 30, 2018;
- Milestone: Majority of Lease Revenue Bond/Obligation portfolio now composed of Private Placements/Bank Loans.

Bond Team

- Outside Members

- Bond/Tax Counsel (Typically the same firm)
- Municipal Advisor
- Dissemination Agent
- Trustee
- Trustee's Counsel
- Arbitrage Rebate Consultant
- Title Company

You Shouldn't Be
The Only One
Involved!

- Internal Members

- County Administrator's Office
- Auditor-Controller (Elected Office)
- Treasurer Tax Collector (Elected Office)
- County Counsel
- Public Works
 - Capital Projects
 - Real Estate
- Risk Management

Lessons Learned and Best Practices



- Typically, a Fixed Rate Bond, Does Not Remained “Fixed” for the Life of the Bonds
- This Requires Active Monitoring of Rates and Other Changes in the Market
- Best Practices for Monitoring and Acting on ‘Expert’ Advice
- Issuer Perspectives
- Practitioner Perspectives

Summary and Q & A



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Disclosures



MSRB Rule G-42: Disclosure of Conflicts of Interest and Legal or Disciplinary Events

Pursuant to Municipal Securities Rulemaking Board (“MSRB”) Rule G-42, on Duties of Non-Solicitor Municipal Advisors, Municipal Advisors are required to make certain written disclosures to clients which include, amongst other things, Conflicts of Interest and any Legal or Disciplinary events of KNN Public Finance, LLC (“KNN Public Finance”) and its associated persons.

Conflicts of Interest

Other Municipal Advisor Relationships. KNN serves a wide variety of other clients that may from time to time have interests that could have a direct or indirect impact on the interests of another KNN client. For example, KNN serves as municipal advisor to other municipal advisory clients and, in such cases, owes a regulatory duty to such other clients just as it will to your entity, if hired. These other clients may, from time to time and depending on the specific circumstances, have competing interests. In acting in the interests of its various clients, KNN could potentially face a conflict of interest arising from these competing client interests. KNN fulfills its regulatory duty and mitigates such conflicts through dealing honestly and with the utmost good faith with its clients.

Compensation. KNN Public Finance represents that in connection with the issuance of municipal securities, KNN Public Finance may receive compensation from an Issuer or Obligated Person for services rendered, which compensation is contingent upon the successful closing of a transaction and/or is based on the size of a transaction. Consistent with the requirements of MSRB Rule G-42, KNN Public Finance hereby discloses that such contingent and/or transactional compensation may present a potential conflict of interest regarding KNN Public Finance’s ability to provide unbiased advice to enter into such transaction. This conflict of interest will not impair KNN Public Finance’s ability to render unbiased and competent advice or to fulfill its fiduciary duty to the Issuer. If KNN Public Finance becomes aware of any additional potential or actual conflict of interest after this disclosure, KNN Public Finance will disclose the detailed information in writing to the Issuer in a timely manner.

Legal or Disciplinary Events

KNN Public Finance, LLC, has never been subject to any legal, disciplinary or regulatory actions nor was it ever subject to any legal, disciplinary or regulatory actions previously, when it was a division of Zions First National Bank or Zions Public Finance, Inc.

A regulatory action disclosure has been made on Form MA-I for one of KNN Public Finance municipal advisory personnel relating to a 1998 U.S. Securities and Exchange Commission (“SEC”) order that was filed while the municipal advisor was employed with a prior firm, (not KNN Public Finance). The details of which are available in Item 9; C(1), C(2), C(4), C(5) and the corresponding regulatory action DRP section on Form MA and Item 6C; (1), (2), (4), (5) and the corresponding regulatory action DRP section on Form MA-I. Issuers may electronically access KNN Public Finance’s most recent Form MA and each most recent Form MA-I filed with the Commission at the following website:
www.sec.gov/edgar/searchedgar/companysearch.html.

The SEC permits certain items of information required on Form MA and Form MA-I to be provided by reference to such required information already filed on a regulatory system (e.g., FINRA CRD). The above noted regulatory action has been referenced on both Form MA and MA-I due to the information already filed on FINRA’s CRD system and is publicly accessible through BrokerCheck at <http://brokercheck.finra.org>. For purposes of accessing such BrokerCheck information, the Municipal Advisor’s CRD number is 4457537.