

Competitive vs. Negotiated Methods of Bond Sale: A Fresh Look

February 1, 2023





Introduction

- This session will provide a fresh look at the two methods of sale to price bonds in the public market: the *competitive* and *negotiated* methods of sale.
- Topics include:
 - An Overview of Bond Pricing
 - The Competitive and Negotiated Methods of Sale: How, What and Why?
 - Examination of Sale Data from the State of California and Nationally
 - Conclusions:
 - Why are competitive sales not used more in California?
 - Myths dispelled
 - Keys to a successful competitive sale



Overview of Bond Pricing

Sample Bond Pricing Report

	Sample Bond Pricing Report					
Maturity	Par	Coupon	Yield	Dollar Price	Premium (Discount)	
10/1/2022	\$460,000	5.00%	0.10%	104.828	\$22,209	
10/1/2023	1,020,000	5.00%	0.14%	109.635	98,277	
10/1/2024	1,070,000	5.00%	0.20%	114.283	152,828	
10/1/2025	1,125,000	5.00%	0.33%	118.478	207,878	
10/1/2026	1,180,000	5.00%	0.46%	122.353	263,765	
10/1/2027	1,245,000	5.00%	0.59%	125.900	322,455	
10/1/2028	1,310,000	5.00%	0.73%	129.031	380,306	
10/1/2029	1,370,000	5.00%	0.85%	131.976	438,071	
10/1/2030	1,440,000	5.00%	0.93%	135.008	504,115	
10/1/2031	1,520,000	5.00%	1.02%	137.696	572,979	
10/1/2032	1,580,000	4.00%	1.12%	127.138 (428,780	
10/1/2033	1,655,000	4.00%	1.19%	126.383	436,639	
10/1/2034	1,715,000	4.00%	1.25%	125.741	441,458	
10/1/2035	1,785,000	3.00%	1.45%	114.361	256,344	
10/1/2036	1,820,000	2.00%	1.92%	100.723 (13,159	
10/1/2037	1,860,000	2.00%	2.00%	100.000	0	
10/1/2038	1,905,000	2.00%	2.11%	98.500	(28,575)	
10/1/2039	1,940,000	2.125%	2.19%	99.000	(19,400)	
10/1/2040	1,980,000	2.125%	2.26%	98.000	(39,600)	
10/1/2041	2,020,000	2.25%	2.31%	99.000	(20,200)	
	\$30,000,000				\$4,431,488	

Principal or Par Amount: Stated amount borrowed via a loan

Coupon Rate:

Interest due to the investor, typically paid semiannually

Yield:

Effective rate paid by issuer

Premium Bond:

Bond structure where coupon rate is higher than the yield

Serial Bond:

Bond with single maturity

Term Bond:

Bond with sinking fund principal payments over multiple years

c = priced to optional redemption of 10/1/2031.



Purchase Price and T.I.C. Calculations

Sample Purchase Price Calculation

Par Amount: \$30,000,000

+ Bond Premium: 4,431,488

- Underwriter's Discount:

177,107

Purchase Price: \$34,254,381

Sample T.I.C. Calculation

Principal: \$30,000,000

Total Interest Cost: 10,948,989

Total Debt Service: \$40,948,989

Dated Date of Bonds: 10/6/2021

Target Present Value: \$34,254,381

T.I.C. (Discount Rate): 1.75%

Underwriter's Discount:

Dollar amount of

compensation paid to the

broker/dealer firm to place

the bonds with investors

Purchase Price:

Dollar amount paid by underwriter to purchase the bonds from the issuer

True Interest Cost: (T.I.C.) Blended cost of borrowing that factors in time value of money. UW discount, but not COI, is part of the T.I.C.

calculation.

Determining Bond Pricing

- The coupons, yields, T.I.C. and Purchase Price (including underwriter's discount) are established at the time of sale.
- There are three primary methods of sale to facilitate the pricing of bonds:



- The optimal method of sale is dependent upon several factors, including:
 - Par Amount
 - Borrowing Term
 - Tax Status
 - Financing Structure
 - Bond Structure
 - Legal Requirements

- Credit Rating(s)
- Market Conditions
- Refunding Savings Thresholds
- Financing Deadlines
- Complexity of Financing Plan



Competitive vs. Negotiated Methods of Sale: What, How, and Why?

What . . . Are the Differences in the Sale Methods?

Competitive Sale

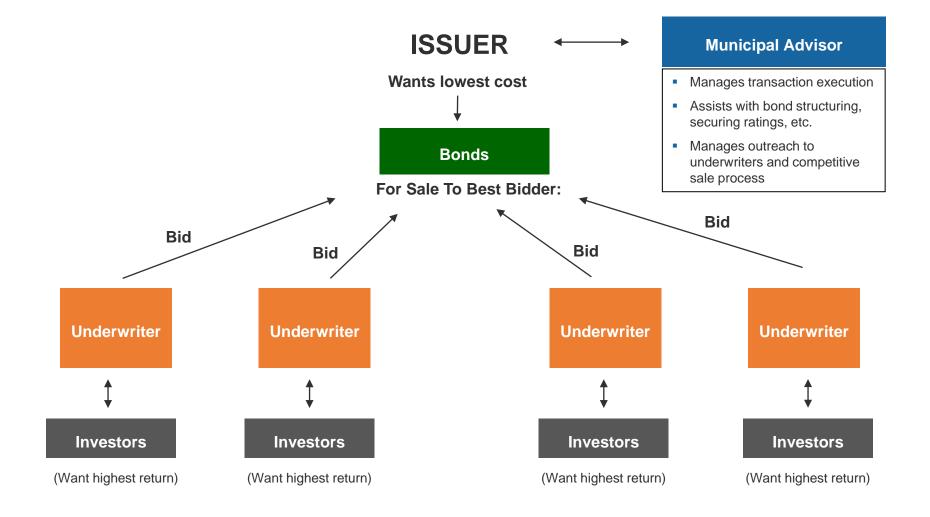
- Issuer's Municipal Advisor manages the competitive sale process. Establishes pre-arranged date and time for sale, distributes POS and Notice of Sale and invites bids from underwriters.
- Multiple underwriters compete by submitting purchase price bids consisting of coupons, yields and underwriter's discount. Bids are submitted on an electronic bidding platform.
- Winning underwriter selected by issuer based on lowest True Interest Cost.
- Once bonds are awarded to winning underwriter, coupons, yields and purchase price are locked in for issuer, whether or not the underwriter has orders from investors for all of the bonds at those coupons and yields.

Negotiated Sale

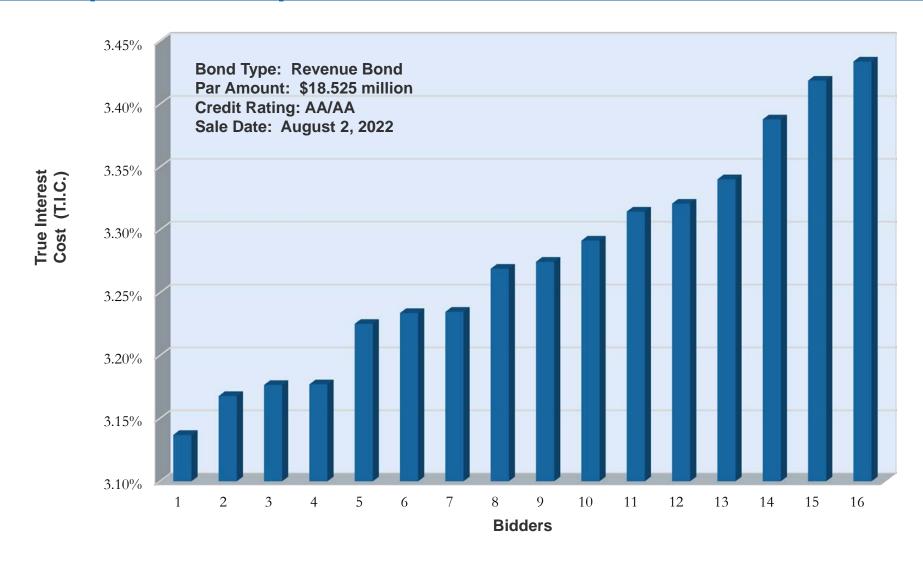
- Issuer selects underwriter at outset of financing, well in advance of the sale of bonds.
- Issuer can utilize an RFP process, soliciting qualifications and proposed amounts for underwriter's discount.
- Leading up to sale, underwriter proposes coupons and yields at which to solicit orders from investors.
- Issuer and Municipal Advisor review and agree to starting scale for initial "order period".
- At end of order period, underwriter recommends adjustments to the coupons/yields based on the strength (or weakness) of investor orders. Issuer approves final pricing after consulting with MA.
- Underwriter and issuer execute Bond Purchase Agreement, locking in coupons and yields for issuer.



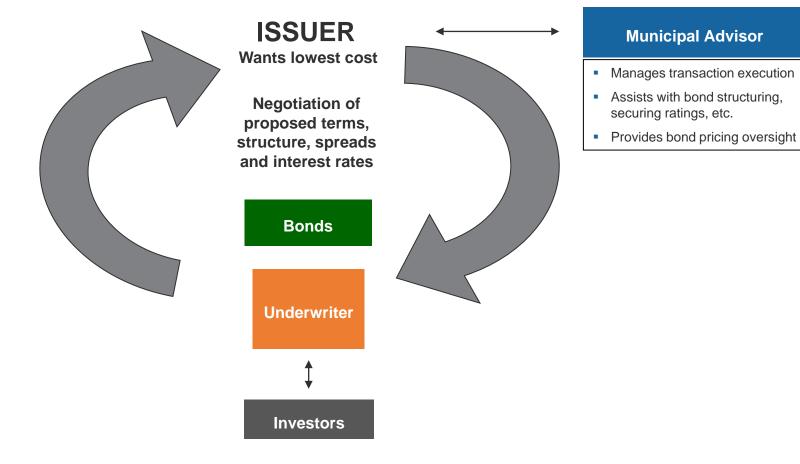
How . . . Does a Competitive Sale Work?



Sample Competitive Sale Result



How . . . Does a Negotiated Sale Work?



Pricing Progression and Order Summary

A	В	С	D	E	F	G	Н	I	J
	Prior to Start of Order Period				Post-Order Period				
•	Par			MMD	Total	Subscription	Spread	Final MMD	Final
Maturity	Amount*	Coupon	Yields	Spreads	Orders*	Level	Adjustments	Spreads	Yield
0 /1 /2022	#1 70 5	F 000/	1 (50/	0.110/	#0.255	4.6	0.050/	0.170/	1.700/
8/1/2022	\$1,785	5.00%	1.65%	-0.11%	\$8,255	4.6x	-0.05%	-0.16%	1.60%
8/1/2023	1,595	5.00%	1.79%	0.03%	6,995	4.4x	-0.05%	-0.02%	1.74%
8/1/2024	1,675	5.00%	1.97%	0.05%	8,575	5.1x	-0.05%	0.00%	1.92%
8/1/2025	1,760	5.00%	2.08%	0.06%	5,620	3.2x	-0.03%	0.03%	2.05%
8/1/2026	1,845	5.00%	2.15%	0.07%	4,050	2.2x	-0.03%	0.04%	2.12%
8/1/2027	1,945	5.00%	2.19%	0.08%	8,565	4.4x	-0.04%	0.04%	2.15%
8/1/2028	2,050	5.00%	2.23%	0.09%	8,395	4.1x	-0.04%	0.05%	2.19%
8/1/2029	2,145	5.00%	2.31%	0.10%	8,990	4.2x	-0.04%	0.06%	2.27%
8/1/2030	2,255	5.00%	2.35%	0.10%	7,885	3.5x	-0.04%	0.06%	2.31%
8/1/2031	2,375	5.00%	2.39%	0.10%	8,405	3.5x	-0.04%	0.06%	2.35%
8/1/2032	2,490	5.00%	2.43%	0.10%	11,140	4. 5x	-0.04%	0.06%	2.39%
	\$21,920			Total:	\$86,875				

^{*} Figures in 000s.



Why . . . Use each Method of Sale?

Competitive Sale

- Some academic studies suggest that underwriter competition generates a lower cost of funds.
- More effective for:
 - Smaller and medium sized par amounts.
 - Credit rating in "A" category or higher.
 - Well established security structures (GO, Revenue, LRB/COPs, TRANs, etc.).

Negotiated Sale

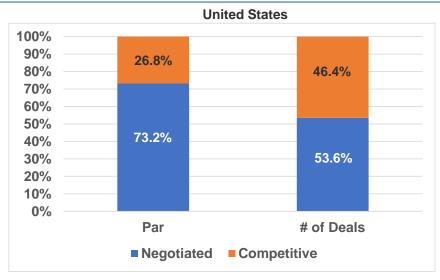
- Greater opportunity for investor outreach and price discovery.
- More effective for:
 - Very large par amounts.
 - Lower rated or unrated credits.
 - Complex plan of finance or security structures and "story" credits.
 - Pricing in highly volatile markets.
 - Tailoring coupon structure.

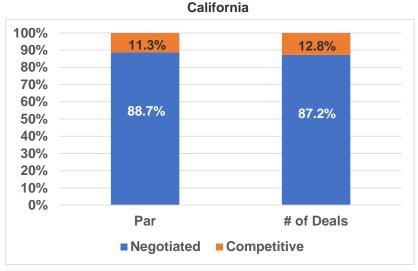


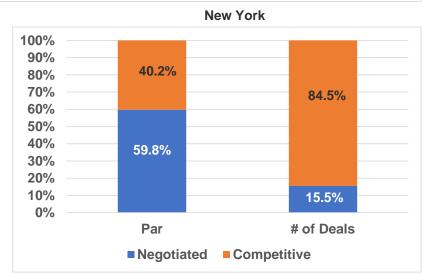
Method of Sale Statistics

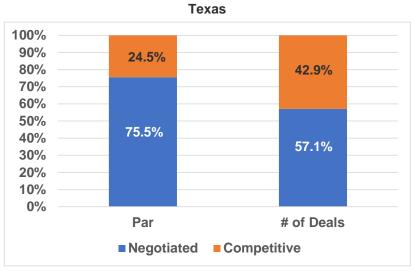


Method of Sale Use: National vs. State of CA









Source: Refinitiv, calendar years 2018-2022 (data for 2022 through 9/30/2022). Public sales only.

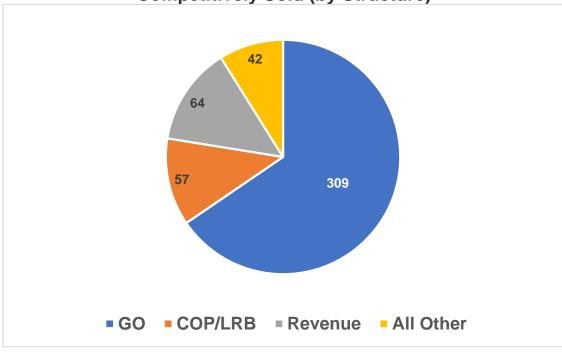


Competitive Sale Transactions in CA (2018-22)

California Par Amount Competitively Sold (by Structure)



California # of Transactions Competitively Sold (by Structure)

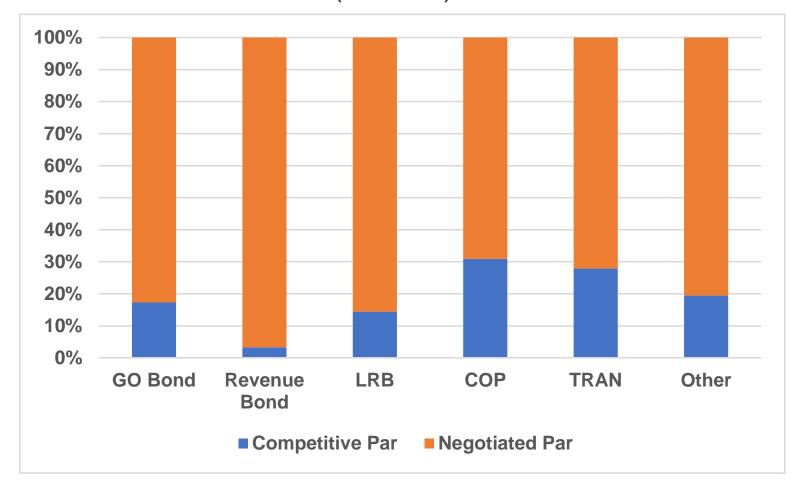


Source: Refinitiv, calendar years 2018-2022 (data for 2022 through 9/30/2022). Public sales only.



CA: Breakdown of Par by Security Structure

Par Sold by Structure (CY 2018-2022)

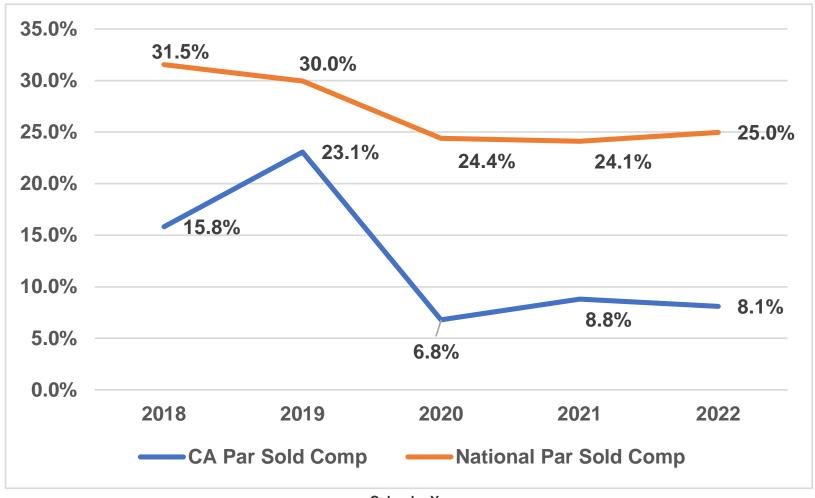


Source: Refinitiv, calendar years 2018-2022 (data for 2022 through 9/30/2022).



Pandemic Impact Upon Method of Sale

Percentage of Par Amount Sold Competitively



Calendar Year

Source: Refinitiv, calendar years 2018-2022 (data for 2022 through 9/30/2022). Public sales only.



STO Experience with Competitive Sales

State of California GO Bond Program

Outstanding Debt:	\$69.5 billion (as of 12-	1-22)			
Ratings:	Moody's: Aa2	S&P: AA-	Fitch: AA		
Security:	Full faith and credit of the State of California				
Method of Sale Requirements:	Pursuant to State law, all fixed rate new money GO bonds must be sold on a competitive basis unless the Treasurer makes a determination on the public record that a negotiated sale will result in a lower interest cost. Must be awarded to bidder with the lowest T.I.C.				
Method of Sale Stats:		Par (\$B)	Par (%)	Issues (#)	Issues (%)
(2018 - 2022)	Negotiated	\$26.80	74%	14	58.30%
	Competitive	\$9.40	26%	10	41.70%
		\$36.20	100%	24	100%
Average par amount:	\$2.06 billion (Negotiated); \$946 million (Competitive*)				
Average par amount of Competitive bids:	\$411 million				
Largest Competitive Sale:	\$1.25 Billion (three separate bids - \$444.5M taxable, \$390.1M tax-exempt, \$410.6M tax-exempt)				
Number of Bids on Competitive Sales:	Avg: 10.5	Most: 14	Fewest: 8		
Spread Between High and Low Competitive Bids:	Avg: 22.5 bps	TE: 13.7bps	Taxable: 30.5 bp	S	
Average Spread Between Winning Bid and Cover Bid:	All: 3.2bps	TE: 1.8bps	Taxable: 4.4bps		



^{*}Multiple bids taken on the same day are counted as a single issue.

Case Study: October 2022 \$1.2B Competitive GO Bond Sale

	Bid Group A	Bid Group B	Bid Group C			
Par Amount	\$398,000,000	\$323,235,000	\$522,320,000			
Time of Bid (CA)	7:30 AM	8:15 AM	9:00 AM			
Tax Status	Tax-Exempt					
Maturities	2023 through 2028 2029 through		2037 through 2042			
Number of Bids	12	10	8			
Cover Bid Spread	+1.7 bps (incremental NPV cost of \$247K)	+4.0 bps (incremental NPV cost \$1M)	+3.7 bps (incremental cost \$2.4M)			
Spread Between High and Low Bids	+21.7 bps (incremental NPV cost \$3.1M)	+20.2 bps (incremental cost of \$4.9M)	+19.4 bps (incremental cost of \$12.4M)			

Bidders	Bid Group A	Bid Group B	Bid Group C
Barclays Capital	✓	✓	✓
BNY Mellon	✓		
BofA Securities	✓	✓	✓
Citigroup	✓	✓	✓
Goldman Sachs	✓	✓	✓
Jefferies	✓	✓	✓
J.P Morgan	✓	✓	✓
Mesirow Financial	✓		
Morgan Stanley	✓	✓	✓
RBC Capital	✓	✓	
TD Securities		✓	
UBS	✓		
Wells Fargo	✓	✓	✓



Successful Competitive Sale Despite Volatile **Market Conditions**

- Volatile Market Conditions. On the Friday prior to the bid, AAA GO MMD increased 15-18 bps across the curve (largest one-day increase since June 2022 and 11th largest increase in more than the three-decade history of MMD). On the bid date, AAA GO MMD increased by as much as 12 bps starting in year 14.
- **Credit Spreads.** The 5-, 10- and 20-year spreads were +6, +10, and +29 bps to AAA GO MMD.
- Comparison to Prior Cal GO Sales. The spreads were notably tighter than other Cal GO sales in 2022, all of which were larger negotiated transactions.
- **Comparison to Other Sales.** On the same day, though not directly comparable, other large, higher-rated transactions priced at atypically wide spreads—as much as 40 bps wider than CA GOs.
- **Impact of Bid Groups**. Combination of the bid groups was an estimated \$1 million better than the aggregate bid from any one bidder.

State Public Works Board Lease Revenue Bond Program

Outstanding Debt:	\$8.05 billion (as of 12-1-22)				
Ratings:	Moody's: Aa3	S&P: A+	Fitch: AA-		
Security:	The bonds are primarily payable from base rental payments, which are equal to debt service, made by participating state departments/agencies to the State Public Works Board from first lawfully available funds for the use and occupancy of the facilities, subject to annual legislative appropriation. The payments are subject to abatement.				
Method of Sale Requirements:	No State law requirements regarding which method of sale must be used.				
Method of Sale Stats:		Par (\$B)	Par (%)	Issues (#)	Issues (%)
(2018 - 2022)	Negotiated	\$2.85	79%	7	54%
	Competitive	\$0.66	21%	6	46%
		\$3.94	100%	13	100%
Average par amount:	\$405.3 million (Negotiated); \$117.7 million (Competitive)				
Largest Competitive Sale:	\$293.3 million				
Number of Bids on Competitive Sales:	Avg: 12.5 Most: 15 Fewest: 10				
Spread Between High and Low Competitive Bids:	Avg: 22.5 bps Highest: 31.3 bps Lowest: 15.1 bps				
Spread Between Winning Bid and Cover Bid:	Avg: 2.0 bps	Highest: 3.2 bps	Lowest: .8 bps		



Case Study: September 2020 \$86.3M Competitive SPWB Lease Revenue Bond Sale

- Purpose of Financing: Various new money projects (Series D) and refunding of 4 outstanding LRB series (Series E).
- Bid Structure: Multi-series bid with combined T.I.C. award.

	2020 Series D	2020 Series E			
Par Amount	\$55,655,000	\$30,660,000			
Time of Bid (CA)	8:45 AM (joint bid)				
Tax Status	Tax-Exempt				
Maturities	2021 through 2045	2021-2031			
Number of Bids	13				
Cover Bid Spread	+3.2 bps				
Spread Between High and Low Bids	+24.2 bps				
Refunding PV Savings	\$8.78 million or 21.2% of par				



SPWB Case Study: Bid Results



- Market Conditions: First competitive SPWB sale after post-COVID pandemic market volatility era.
- Credit Spreads: The 5-year and 10year spreads were +11 and +21 bps to AAA MMD GO index.
- Comparison to Prior SPWB Sales:
 Priced at tighter spreads (10 to 26 bps)
 as compared to most recent SPWB LRB
 negotiated sale that priced earlier in
 2020 for non-callable maturities.
- Comparison to CA GO MMD Index: Priced at spreads -3 bps to +3 bps to California GO MMD index in noncallable maturities.

Conclusions and Myths Dispelled



Why are Competitive Sales Not Used More in CA?

- Few, if any, legal requirements to utilize competitive method of sale.
- Lack of knowledge among issuers about potential benefits of competitive sale.
- Issuer inertia staying with how things were done in the past.
- Investment banker relationships.
- Role of Municipal Advisors.
 - Certain MA's have more or less experience managing successful competitive sales



Myths Dispelled...

- Only General Obligation Bonds price efficiently in the competitive market...
 - Lease Revenue Bonds, Revenue Bonds, TRANs all price efficiently in the competitive market.
- Difficult to price taxable bonds competitively...
 - Not true, many successful taxable competitive sales accomplished.
- Lack of flexibility to change sale date, if necessary...
 - Early posting of sale advertisement provides forward flexibility to change pricing date.
- Low control over couponing structure...
 - Not true; the Notice of Sale can establish min. or max. coupons or other pricing parameters. There is flexibility to change structure and bid parameters up to the day prior to bid opening.
- Can't use competitive sale during periods of high interest rate volatility or for novel structures such as "green bonds"...
 - Many CA issuers successfully sold issues via competitive sale both during the pandemic and during a rising rate environment in 2022, including many "green bond" issues.
- Not effective for infrequent issuers...
 - Mitigated by Municipal Advisor's pro-active market outreach.



Keys to Successful Competitive Sale

- Early and frequent communication with potential bidding underwriters
- Clear bid parameters
 - Coupon, dollar price, UW discount restrictions, etc.
- Careful selection of pricing date and time
 - Close monitoring of market conditions including economic releases, FOMC actions, timing of other supply, especially large par amount transactions
- Flexibility
 - Ability to switch between methods of sale built into Resolution in order to pivot quickly in event of change in market conditions.
- Avoid Monday and Friday and days after holidays as pricing days
- Use a good Municipal Advisor ©



Questions?

Speaker contact information:

Blake Fowler

Director, Public Finance Division State Treasurer's Office blake.fowler@treasurer.ca.gov 916-653-3451

David Leifer

Senior Managing Director KNN Public Finance LLC dleifer@knninc.com 510-208-8264



MSRB Rule G-42 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.

<u>Compensation.</u> 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.

