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INVESTING BOND PROCEEDS

presented to

California Debt and Investment Advisory Commission

Municipal Debt Essentials
Debt 3: Debt Administration
October 24, 2013

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Question #1

What makes investing bond proceeds different than investing any other type of asset?

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Answer

The Arbitrage Rebate and Yield Restriction Requirements

- **Limit the amount of earnings you are allowed to keep**

The Bonds Have Been Issued … Now What?

Congratulations!

- Months of careful planning are over
- At last, the Bonds have been issued
- You’ve locked in a low cost of funds
- Now it’s time to get back to your regular duties

Do Not Forget About the Bond Proceeds

- Probably on your “To Do List”
- Typically are forgotten
- Are unique assets considering the arbitrage rebate and yield restriction requirements

Question #2

Arbitrage Yield

4.70%

Investment Strategy "A"	**Investment Strategy "B"**
5.00%	5.40%

Investing Bond Proceeds

Arbitrage Yield	**Amount Invested**
4.70%	$50,000,000
Investment Strategy "A"	**Investment Strategy "B"**
.296%	.01%

Investing Bond Proceeds

Investment Strategy "A"	Investment Strategy "B"
$150,266	$5,097

Why Bother Worrying About Investments?

Costs

- Interest costs accrue on bonds immediately so…
  - Negative carry (i.e. negative arbitrage) on investments increases financing cost
- Improved investment performance will…
  - Reduce negative carry and even lower overall borrowing costs

Typical Funds

- Project Funds
  - Net funding + more earnings = smaller bond issue
  - Gross funding + more earnings = more project funds
- Reserve Funds
  - Earnings will offset debt service costs
  - Higher earnings here can offset costs of negative carry in Project Funds
- Debt Service Funds
  - More earnings = less net debt service (this is a good thing!)

Formulating an Investment Strategy – General Principles

Public Funds Investing Oath of Responsibility

- Bond proceeds are actually the public's assets

Safety

- Protect your principal by minimizing credit risk

Liquidity

- Ensure that funds are available ***when*** needed
- Too long…market price risk
- Too short…reinvestment rate risk
- Matched to expectations…just right

Yield

- Matching liabilities and assets
  - Floating or fixed rates
- Generate consistent risk-adjusted returns
  - Arbitrage rebate requirements may prohibit you from retaining additional earnings from higher yielding investments (i.e. riskier)

Formulating an Investment Strategy – Starts with Safety

"Permitted Investments" under applicable…

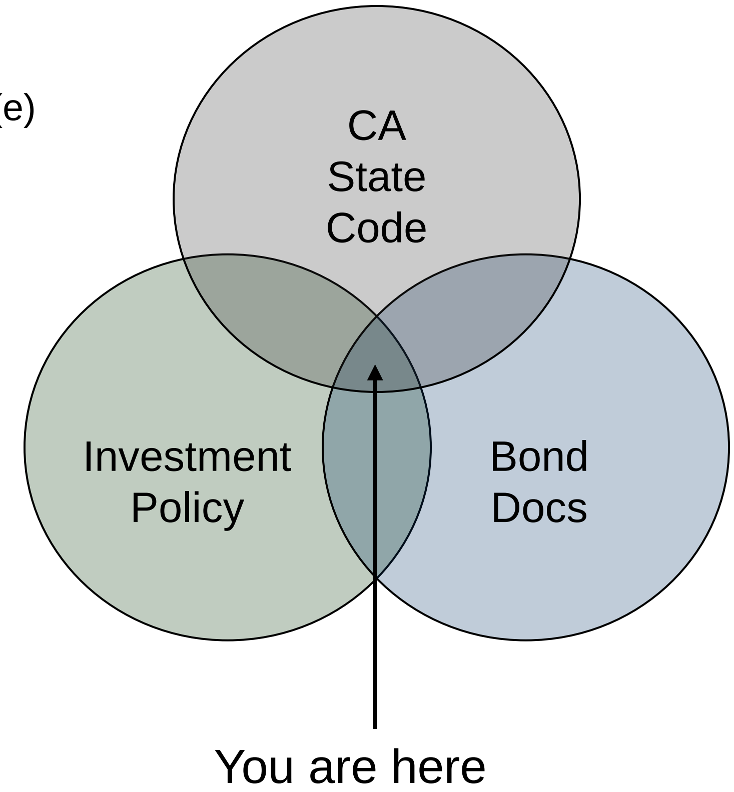
- Sections of State Code
  - California Government Code Sections 5903(e) and 5922(d)
- Investment policy
- Bond documents

External Investment Approvals

- Rating agencies

Federal Tax Law Compliance

- Arbitrage rebate and yield restriction requirements



Formulating an Investment Strategy – Practical Considerations

When Do I Start?

- Once the structure and sizing of the debt is known
- Considering adding investment advisor to the “Financing Team”

Integral Part of Debt Strategy

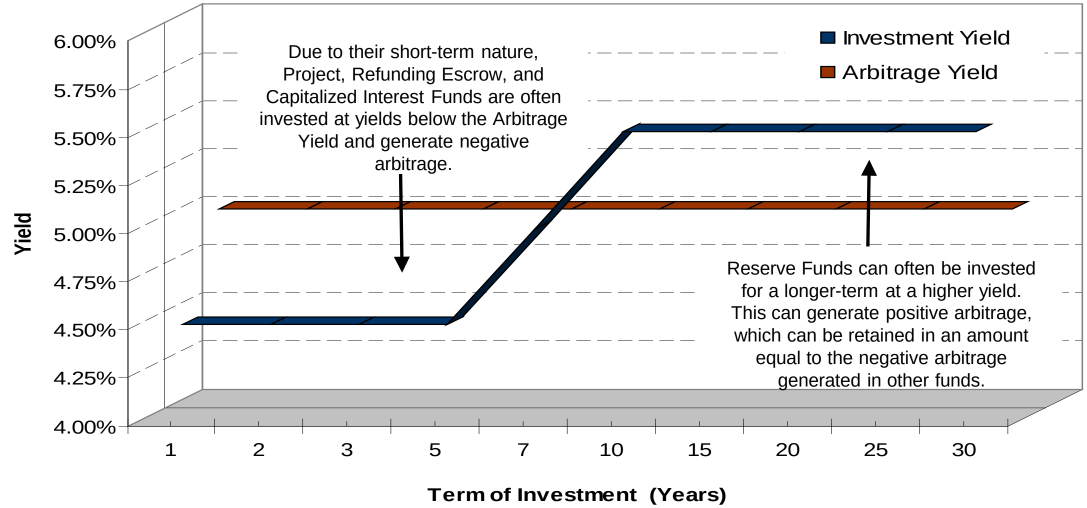
- Do you net fund or gross fund?
- Earnings serve to reduce net financing costs

Can’t I wait for rates to go higher, it seems like a good bet?

- Yes….No….Maybe….Did you say “bet”?

Recalling the Implications of the Arbitrage Rebate Requirements

- Goal: Positive arbitrage without compromising safety or liquidity
- Prepare prospective arbitrage rebate models for competing investment alternatives



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Formulating an Investment Strategy – Arbitrage Rebate Requirements

Prior Bonds Reserve Fund used to fund Escrow Fund

Sources of Funds		Refunding Bond Proceeds	Prior Bonds Proceeds	Total
Par Amount	9,595,000.00			
+ Original Issue Premium	387,863.20			
- Original Issue Discount	0.00			
Net Production		9,982,863.20		9,982,863.20
Prior Bonds Debt Service Fund			651,103.13	651,103.13
Prior Bonds Reserve Fund			936,606.26	936,606.26
Total Sources:		**9,982,863.20**	**1,587,709.39**	**11,570,572.59**
Uses of Funds				
Deposit to Escrow Fund		8,940,572.09	1,587,709.39	10,528,281.48
Deposit to Reserve Fund		824,300.00		824,300.00
Deposit to Costs of Issuance Fund		217,991.11		217,991.11
Total Uses:		**9,982,863.20**	**1,587,709.39**	**11,570,572.59**

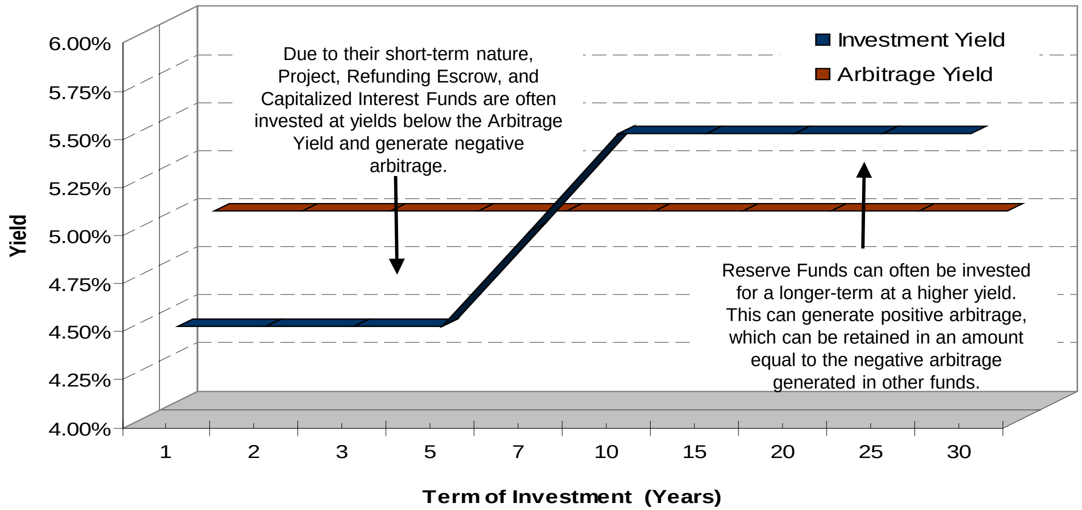
Prior Bonds Reserve Fund used to fund Reserve Fund

Sources of Funds		Refunding Bond Proceeds	Prior Bonds Proceeds	Total
Par Amount	9,595,000.00			
+ Original Issue Premium	387,863.20			
- Original Issue Discount	0.00			
Net Production		9,982,863.20		9,982,863.20
Prior Bonds Debt Service Fund			651,103.13	651,103.13
Prior Bonds Reserve Fund			936,606.26	936,606.26
Total Sources:		**9,982,863.20**	**1,587,709.39**	**11,570,572.59**
Uses of Funds				
Deposit to Escrow Fund		9,764,872.09	763,409.39	10,528,281.48
Deposit to Reserve Fund			824,300.00	824,300.00
Deposit to Costs of Issuance Fund		217,991.11		217,991.11
Total Uses:		**9,982,863.20**	**1,587,709.39**	**11,570,572.59**

Arbitrage/Bond Yield:	3.362%
Positive or (Negative) Arbitrage in Escrow Fund:	(362,593.85)
Prior Bonds Reserve Fund invested in FNMA yielding 5.00%	

Recalling the Implications of the Arbitrage Rebate Requirements

- If positive arbitrage is attainable, consider enhancing safety and liquidity
- Consider expenditure exceptions if positive arbitrage can be achieved in the project funds



Formulating an Investment Strategy – Arbitrage Rebate Requirements

Cumulative Rebate Liability (Applying Two-Year Spending Exception)

Issue Date: March 7, 1996
Rebate Computation Date: March 7, 2001

Summary of Arbitrage Rebate Analysis - Applying Two-Year Spending Exception

Fund Reference Number	Fund Description	Current Fund Status	Computation Date Valuation	Gross Earnings	Internal Rate of Return	Excess Earnings
1	Construction Fund	NA	NA	NA	NA	$0.00
2	Reserve Account	Inactive	$0.00	$1,002,397.80	4.910626%	($14,816.48)
		Totals:	**$0.00**	**$1,002,397.80**		**($14,816.48)**

Issue Date: March 7, 1996
Rebate Computation Date: March 7, 2001

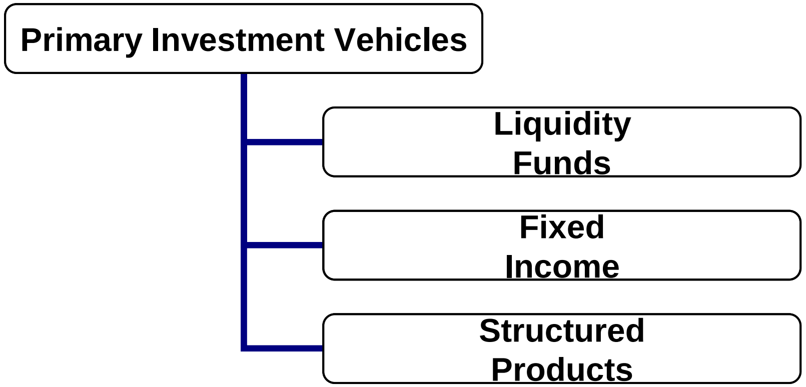
Summary of Arbitrage Rebate Analysis

Fund Reference Number	Fund Description	Current Fund Status	Computation Date Valuation	Gross Earnings	Internal Rate of Return	Excess Earnings
1	Construction Fund	Inactive	$0.00	$8,139,455.99	5.787138%	$1,228,239.38
2	Reserve Account	Inactive	$0.00	$1,002,397.80	4.910626%	($24,694.13)
		Totals:	**$0.00**	**$9,141,853.79**		**$1,203,545.25**

Evaluating Investment Vehicles

Identify Investment Vehicle Candidates

- Liquidity Funds
  - Money Market Funds, Local Agency Investment Pools, Internal Investment Pools
- Fixed Income
  - Treasuries, Agencies, Medium-Term Notes
- Structured Products
  - Guaranteed Investment Contracts, Forward Delivery Agreements, Repurchase Agreements



Fund Name/ *Average Life*	LAIF	Portfolio w/ Agencies	Uncollateralized Structured Product
Project Fund *12 Months*	.250% *245 Days*	.296% *12 Months*	.277% *12 Months*
Reserve Fund *3 Years*	.250% *245 Days*	.779% *3 Year*	.732% *3 Year*

Evaluating Investment Vehicles – Liquidity Funds

General

- Funds that provide on demand withdrawals and investments of proceeds, typically at a constant $1 NAV (or $1/share)
- “Sweep” funds are money markets that automatically invest (or sweep) any dollars that would otherwise go uninvested
  - Be aware of management and 12b-1 fees
- Money market funds are SEC regulated and have specific maturity limits on assets held; 90 day maximum or 60 day max for AAA rating
- Local, state, or internal “pooled investments” may have different guidelines and required notice periods, but may offer higher returns as a result in certain market conditions
  - LAIF currently around .250%
  - 245 days average life
  - Accounts with bond proceeds allowed 1 withdrawal a month on anniversary date of deposit

Evaluating Investment Vehicles – Liquidity Funds

General

- The Financial Crisis of 2008/2009
  - Problems occurred with liquid type funds – withdrawals suspended
  - Government Funds vs Prime Funds – worth the risk?
    - 0.00% vs 0.10%

Evaluating Investment Vehicles – Liquidity Funds

Liquidity Funds	
Safety	Very High / routine rating confirmations
Liquidity	Very High / Anytime / $1 in, $1 out
Yield	Variable rate / Can change daily/ Generally lowest yielding
Fees	Management estimated 10bps to 60bps / sweep function extra (currently suspended)
Administrative	Very little to nonexistent; LAIF limitations on withdrawals

Evaluating Investment Vehicles – Portfolio Management

General

- Portfolio management is a true discipline
- Markets are very transparent, but also very fast

Safety Considerations

- Market price (interest rate risk)
- Reinvestment rate risk

Liquidity Considerations

- Fund characteristics
- Expenditure dates determine liquidity/duration characteristics
- Matching cash flows reduces risks

Yield Considerations

- Yields measured from purchase to actual disposition date
- Careful not to reach - consider liquidity
- Combining different maturities reduces risk

Evaluating Investment Vehicles – Portfolio Management

Portfolio Management	
Safety	Per issuer's policies and guidelines but typically only highest rated instruments are permitted
Liquidity	Very; typically only the most liquid securities permitted. Consider duration of underlying fund
Yield	Fixed purchase yield; average life and duration driven
Fees	Transparent pricing on individual securities *Externally Managed:* Very competitive with money funds, 2-20bps, plus personalized attention and control over fund characteristics unlike money market funds *Internally Managed:* Cost of prerequisite expertise goes from "working" knowledge to "trading" knowledge
Administrative	Ranging from minimal to significant depending on whether externally or internally managed. However external solution does not relieve issuer from responsibility

Evaluating Investment Vehicles – Portfolio Management

Portfolio Summary

Description	Par Value	Maturity Date	Coupon	Purchase Price	Yield to Maturity	Accrued Interest	Total Price
T-Note	5,853,000	11/15/2013	4.250%	100.401	0.252%	99,365.81	5,975,864.19
FNMA Disc Nt	6,123,000	2/26/2014	0.000%	99.946	0.138%	-	6,119,717.82
T-Note	5,978,000	5/15/2014	4.750%	102.755	0.159%	113,427.68	6,256,100.27
FNMA	6,123,000	8/28/2014	0.875%	100.622	0.172%	6,101.74	6,167,214.38
T-Note	6,119,000	11/30/2014	2.125%	102.183	0.210%	46,540.34	6,299,115.02
FHLMC	6,150,000	2/9/2015	2.875%	103.491	0.250%	29,468.75	6,394,181.45
T-Note	6,184,000	5/31/2015	2.125%	102.960	0.316%	47,034.73	6,414,080.43
T-Note	6,238,000	8/31/2015	0.375%	100.045	0.351%	2,520.19	6,243,326.53
	48,768,000.00				**Total Portfolio Cost:**		**49,869,600.09**

Evaluating Investment Vehicles – Portfolio Management

Portfolio Cash Flow

Date	Principal	Interest	Total Receipts	Withdrawals	Balance
10/9/2013			225.63		225.63
11/15/2013	5,853,000.00	266,353.75	6,119,353.75		6,119,579.38
11/30/2013		130,719.38	130,719.38		6,250,298.76
12/1/2013			0.00	(6,250,000.00)	298.75
2/9/2014		88,406.25	88,406.25		88,705.00
2/26/2014	6,123,000.00		6,123,000.00		6,211,705.01
2/28/2014		38,484.38	38,484.38		6,250,189.38
3/1/2014			0.00	(6,250,000.00)	189.38
5/15/2014	5,978,000.00	141,977.50	6,119,977.50		6,120,166.88
5/31/2014		130,719.38	130,719.38		6,250,886.26
6/1/2014			0.00	(6,250,000.00)	886.25
8/9/2014		88,406.25	88,406.25		89,292.50
8/28/2014	6,123,000.00	26,788.13	6,149,788.13		6,239,080.63
8/31/2014		11,696.25	11,696.25		6,250,776.88
9/1/2014			0.00	(6,250,000.00)	776.88
11/30/2014	6,119,000.00	130,719.38	6,249,719.38		6,250,496.26
12/1/2014			0.00	(6,250,000.00)	496.25
2/9/2015	6,150,000.00	88,406.25	6,238,406.25		6,238,902.51
2/28/2015		11,696.25	11,696.25		6,250,598.76
3/1/2015			0.00	(6,250,000.00)	598.75
5/31/2015	6,184,000.00	65,705.00	6,249,705.00		6,250,303.76
6/1/2015			0.00	(6,250,000.00)	303.75
8/31/2015	6,238,000.00	11,696.25	6,249,696.25		6,250,000.01
9/1/2015				(6,250,000.00)	0.00
	48,768,000.00	1,231,774.38	50,000,000.01	(50,000,000.00)	

Evaluating Investment Vehicles – Structured Products

General

- Contract/Agreement between issuer/trustee and financial institution/insurance company
- Structured Products are custom tailored to the expected drawdown requirements of fund
- Issuer agrees to make W/D's only for specified purposes (e.g. project costs, debt service)
- In exchange, providers are willing to make all draws at par value (e.g. assume market price and reinvestment risk)
- Since 2008/2009
  - Contracts worked as written
  - Number of providers have diminished
    - Difficult to receive 3 bids

Evaluating Investment Vehicles – Structured Products

Structured Products

- Guaranteed Investment Contracts
  - Involves a deposit with a “provider”, which can be collateralized at execution or under certain events (e.g. downgrade)
  - Tough initial counterparty credit rating
  - Collateralized vs Uncollateralized
- Forward Delivery Agreements (broker/dealers)
  - Not itself an investment, but rather a contract pursuant to which investments will be purchased now and in the future
  - Those investments must be permitted investments
- Repurchase Agreements (banks, broker/dealers, and financial institutions)
  - Underlying securities are delivered and held by third party

Evaluating Investment Vehicles – Structured Products

Project / Acquisition Fund

- Usually “full flex” to accommodate actual versus projected draw schedule
- Permissible draws made at par value but providers will want a rule to prevent draws being made simply to invest elsewhere

Reserve Funds

- By agreeing to draw only for purposes under the Indenture (e.g. need to pay D/S!), the provider agrees to par value W/D’s.
- Removes market price risk associated with a fixed income investment (e.g. Treasury note)
- Cannot make a W/D to reinvest in another investment

Debt Service Funds (e.g. 1/6 and 1/12 deposits)

- Only makes sense if you can earn positive arbitrage

Evaluating Investment Vehicles – Structured Products

Special Federal Tax Law Considerations

- Purchase at Fair Market Value
- Competitive bid process, best bid wins
- Bids awarded on rate alone, so bids must be uniform (can be easier said than done)

Evaluating Investment Vehicles – Structured Products

Safety	Per documents and insurer provisions, if applicable. Watch out for subtle variations
Liquidity	Very high, but only for purposes under Indenture (project, D/S, etc.). No W/D's to reinvest elsewhere
Yield	Fixed or variable yield based on average life, duration , size, ***and*** credit of issuer
Fees	Treasury Regulations "safe harbor"; commonly expressed in terms of .20% of amounts to be invested, with upper and lower limits consistent with current regulations ($4,000 min. & $37,000 max. per fund, $106,000 per bond issue). Other fees may be incurred (e.g. counsel, trustee). Provider pays fees as costs are reflected in the rate bid.
Administrative	Potential significant upfront depending on issuer's experience and complexity of transaction. Post execution, minimal

Summary – Project Fund

Project Fund - $50mm w/ 12 month Average Life

	Portfolio	Uncollateralized Structured Product	Money Market/ Sweep Account	LAIF
Liabilities = Assets	Yes	Yes	No	No
Risks				
Credit/Counterparty	No	Yes	No	No
Interest Rate	No	No	Yes	Yes
Market (Par)	Yes	No	No	No
Reinvestment	Yes	No	Yes	Yes
Fees	0.02%	0.20%/$4k to $37k	.20% - 0.60% (suspended)	NA
Net Investment Rate	0.296%	0.277%	0.010%	0.250%
Total Expected Earnings	150,266.31	141,884.26	5,097.83	127,807.97

Summary – Reserve Fund

Reserve Fund - $5mm w/ 3 Yr Average Life

	Portfolio	Uncollateralized Structured Product	Money Market/ Sweep Account	LAIF
Liabilities = Assets	Yes	Yes	No	No
Risks				
Credit/Counterparty	No	Yes	No	No
Interest Rate	No	No	Yes	Yes
Market (Par)	Yes	No	No	No
Reinvestment	Yes	No	Yes	Yes
Fees	0.02%	0.20%/$4k to $37k	.20% - 0.60% (suspended)	NA
Net Investment Rate	0.779%	0.732%	0.010%	0.250%
Total Expected Earnings	116,045.36	108,981.94	1,488.89	37,222.22

DON'T FORGET ABOUT THE BOND PROCEEDS!

- As with investing any public funds, your objectives are Safety / Liquidity / Yield
- The difference is that you usually have less flexibility and unique cash flow considerations
- It's GOOD to owe rebate!