BARCLAYS CAPITAL

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Introduction to Bond Concepts

Presentation to CDIAC

Agenda

I. What is a Bond?

II. Federal Stimulus Package

III. Key Concepts of Municipal Bonds

IV. Yield Curve

V. Fixed vs. Variable Rate Debt

VI. Amortization Structures

VII. Key Calculations from a Bond Sale

VIII. Question and Answer

What is a Bond?

What is a Bond?

- A **bond** is a debt instrument that allows issuers to finance capital needs or refinance prior debt. It obligates the issuer to pay to the bondholder the **principal** plus **interest**.
  - A buyer of the bond is the lender or **investor**.
  - A seller of the bond is the borrower or **issuer**.
- When an investor purchases a bond, he is lending money to a government, municipality, corporation, federal agency or other entity.
- In return for buying the bond, the issuer promises to pay the investor interest during the life of the bond and to repay the face value of the bond (the principal) when it "matures," or comes due.
- In addition to operating covenants, the loan documents require issuer to spend the bond proceeds for the specific projects.
- Among the types of bonds an investor can choose from are: U.S. government securities, municipal bonds, corporate bonds, mortgage and asset-backed securities, federal agency securities and foreign government bonds, among others.
- A bond can also be thought of as a contract between the issuer and investor. This contract specifies, for example, the terms of the bonds, the funds from which debt service will be paid and any operating covenants.

Source of Repayment for Debt Service

- **General Obligation ("GO") Bonds** are secured by a pledge of the issuer's full faith, credit and taxing power. The "full faith and credit" backing of a General Obligation bond implies that all sources of revenue, unless specifically excluded, will be available to pay debt service on the bonds.
- **Appropriation Bonds** are secured by a "promise to pay" with legislatively approved appropriations. These are generally supported by the General Fund of issuer, unlike General Obligation bonds where funds are often not paid from the General Fund.
  - Examples include Certificate of Participation (COPs) and Leased Revenue Bonds (LRBs).
- **Revenue Bonds** are payable from a specific stream of revenues, such as a user fee or dedicated tax, and are not backed by the full faith and credit of the issuer. They are issued to finance specific enterprises or projects and are usually secured solely by revenues from those projects. Revenue bonds can generally be grouped into the following categories:
  - Utilities
  - Higher Education, Healthcare and Other Not-For-Profit
  - Housing
  - Transportation
  - Industrial Development, Pollution Control, and Other Exempt Facility Bonds
  - Securitized Revenue Bonds

Bond Covenants and Other Security Features of Revenue Bonds

- **Rate Covenants** – Under a rate covenant, the issuer pledges that rates will be set at a level sufficient to meet operation and maintenance expenses, renewal and replacement expenses, and debt service. An alternative form of rate covenant requires that rates be set so as to provide a safety margin above debt service, after operation and maintenance expenses are met.
  - Example: "*The Board will fix, charge and collect fees so that the Revenues will at all times be sufficient in each Fiscal Year to pay Operating and Maintenance Expenses and to provide funds at least equal to 115% of (1.15 times) the Principal and Interest Requirements for such Fiscal Year….*"

- **Additional Bonds Test (ABT)** – Protects existing bondholders from the risk that their security will be diluted by the issuance of additional debt. The Additional Bonds Test must be met by the issuer in order to borrow additional debt on parity with and secured by the same revenue source as the outstanding bonds.
  - Example: "*The Net Revenues in each of the two Fiscal Years immediately preceding the date of issuance of such proposed Additional Bonds must be equal to at least 130% of the estimated Annual Debt Service for the year following the proposed issuance.*"

Bond Covenants and Other Security Features of Revenue Bonds (cont.)

◆ **Debt Service Reserve Fund (DSRF)** – Provides a cushion to make timely debt service payments in the event of a revenue shortfall. Federal tax law limits the amount of tax-exempt bond proceeds that can be used to fund the DSRF to the lesser of:

- *10% of the principal amount of the issue;*
- *Maximum annual debt service; and*
- *125% of average annual debt service on an issue.*

– May also be required for appropriation debt.

– Many times a DSRF is not required for highly rated credits (e.g. UC Regents and CSU) on GO bonds.

◆ **Other Covenants** – Additional covenants might include a provision for insuring the project, a review by an independent auditor, or a prohibition against the sale of the project's facilities prior to repayment of outstanding debt, among others.

Uses of Bond Proceeds

New Money	Bonds issued to provide new or additional funding for a project.
Refunding	Bonds issued to refinance certain existing bonds (proceeds used to repay old bonds). Refundings can be used to produce savings, restructure debt service or release the issuer from restrictive operating covenants.

Federal Stimulus Legislation and Municipalities

- In addition to providing direct aid to states and municipalities in the form of grants, the American Recovery and Reinvestment Act of 2009 (a.k.a. ARRA) creates two new classes of municipal bonds: Direct Subsidy Bonds and Tax Credit Bonds.
  - In the case of Direct Subsidy Bonds, the federal government will pay the issuer a subsidy equal to a predetermined percentage of each interest payment.
  - In the case of Tax Credit Bonds, investors will receive a tax credit from the federal government in lieu of, or in addition to, traditional coupon interest payments.
- Direct Payment Bonds may be issued in two forms:

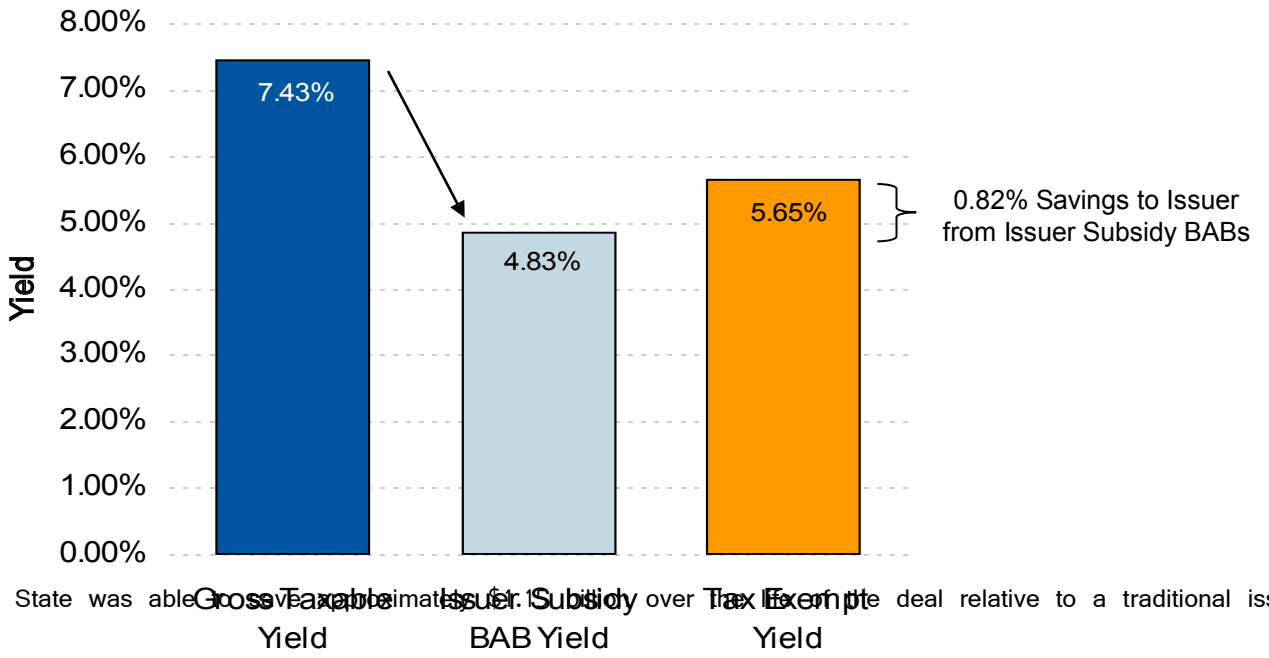
Program Under ARRA	Eligible Uses of Bond Proceeds	Federal Subsidy to Issuer	Maximum Issuance	Maturity Limit
Direct Payment Build America Bonds ("BABs")	Tax-exempt eligible (non-private activity) new money projects	35% of interest paid	No limit	None
Recovery Zone Economic Development Bonds	Qualified economic development projects*	45% of interest paid	No limit	None

* "Recovery Zone" is defined to mean, amongst others, any area designated by the issuer as having significant poverty, unemployment, rate of home foreclosures or general distress.

- Since President Obama signed ARRA on February 17th, there has been $20.6 billion of BABs issued, including $5 billion issued by the State of California on April 22nd.
- In addition to creating Direct Subsidy Bonds and certain Tax Credit Bonds, ARRA provides relief to issuers of AMT debt by allowing private activity projects to be issued on a tax-exempt basis and allowing certain outstanding AMT debt to be refunded with non-AMT bonds.

BAB Pricing Comparison for California

- On April 22, 2009, the State of California sold $6.9 billion of taxable General Obligation bonds. These bonds were structured as:
  - $1.4 billion serial maturities maturing in 2014, 2015 and 2016;
  - $505 million bonds subject to mandatory tender;
  - $5.0 billion term bonds maturing in 2034 and 2039; and,
  - The term bonds and a portion of the bonds subject to mandatory tender were sold as Direct Subsidy Build America Bonds.



- For the $5 billion issuance, the State was able to save approximately $41 million over the life of the deal relative to a traditional issuance of tax-exempt bonds.

Tax Credit Bonds

- In addition to Direct Subsidy Bonds, ARRA also created new types of Tax Credit Bonds.
  - Unlike the case of Direct Subsidy Bonds, issuers of Tax Credit Bonds will NOT receive a direct subsidy from the federal government. Instead, investors will receive a tax credit from the federal government which is meant to reduce or eliminate the issuer's borrowing cost.
- Tax Credit Bonds may be issued under four newly created programs:

New Programs Created Under ARRA	Eligible Uses of Bond Proceeds	Federal tax credit to investor	Maturity Limit	Maximum Issuance	Interest Subsidy (percent of Taxable Rate)
Tax Credit Build America Bonds ("BABs")	Tax-exempt eligible (non-private activity) projects, including refunding and working capital	35% of interest paid	None	No limit	26%
Qualified School Construction Bonds ("QSCBs")	Construction or repair of schools or purchase of land for schools	Qualified Tax Credit Bond Rate, set Daily by US Treasury	Generally 14 or 15 years, as set by US Treasury	$11 billion in each of 2010 and 2011	100%
Qualified Energy Conservation Bonds	"Green" capital expenditures	70% of Qualified Tax Credit Bond Rate, set Daily by US Treasury	Generally 14 or 15 years, as set by US Treasury	$1.6 billion in each of 2010 and 2011	41%
"New" Clean Renewable Energy Bonds	Renewable energy projects, including wind, biomass, solar, etc.	70% of Qualified Tax Credit Bond Rate, set Daily by US Treasury	Generally 14 or 15 years, as set by US Treasury	$1.2 billion in each of 2010 and 2011	41%

- Since President Obama signed ARRA on February 17th, there have been seven issues of QSCBs with a total par amount of $248.2 million. These issues have been characterized by relatively small issue size and high ratings.

Key Concepts of Municipal Bonds

Key Concepts – Basic Terminology

- Principal
- Maturity
- Serial Bonds
- Term Bonds and Sinking Funds
- Coupon
- Yield
- Price
- Interest
- Debt Service
- Original Issue Discount
- Original Issue Premium
- Bond Proceeds
- Capital Appreciation Bonds
- Callable Bonds
- Bond Conventions

Principal and Maturity

- **Maturity** – Date on which principal payments are due
  - Typically, maturity dates are within 30 years
  - Most bond issues have principal maturing each year until the final maturity date of the series
- **Principal** – Also known par amount, or face value, of a bond to be paid back on the maturity date
  - Typically, bonds are sold in $5,000 principal denominations

Maturity Date	Principal
1/ 1/ 2012	$10,245,000
1/ 1/ 2013	$10,395,000
1/ 1/ 2014	$10,605,000
1/ 1/ 2015	$10,870,000
1/ 1/ 2016	$11,415,000
1/ 1/ 2017	$12,015,000
Total	$65,545,000

Serial and Term Bonds

- Bonds can either mature annually (serial bonds) or as term bonds.
- A term bond is a series of sequential amortizations. Payments of principal prior to the term bond's final maturity are referred to as sinking fund payments.

Maturity Date	Principal	Coupon	
1/ 1/ 2012	$10,245,000	1.50%	Serial Maturities
1/ 1/ 2013	$10,395,000	2.00%	
1/ 1/ 2014	$10,605,000	2.50%	
1/ 1/ 2015	$10,870,000	5.00%	
1/ 1/ 2016	$11,415,000 *	5.25%	Term Bond
1/ 1/ 2017	$12,015,000 **	5.25%	
Total	$65,545,000		

*Sinking fund payment

** Final maturity of term bond

Coupon, Interest and Debt Service

- **Coupon** – Percentage rate (based on principal/par amount) of annual interest paid on outstanding bonds
  - Can be fixed or variable
- **Interest** – Cost of borrowing money for the issuer
  - Usually paid periodically
    - Semi-annually for fixed-rate bonds
    - More frequently for variable-rate bonds
  - Interest is calculated by multiplying principal by coupon (adjusted for length of period between interest payments)
- **Debt Service** – Sum of all principal and interest on a bond

Fiscal Year Ending	Principal	Coupon	Interest	Debt Service
6/30/2011	-	-	$2,400,275	$2,400,275
6/30/2012	$10,245,000	1.50%	$2,400,275	$12,645,275
6/30/2013	$10,395,000	2.00%	$2,246,600	$12,641,600
6/30/2014	$10,605,000	2.50%	$2,038,700	$12,643,700
6/30/2015	$10,870,000	5.00%	$1,773,575	$12,643,575
6/30/2016	$11,415,000	5.25%	$1,230,075	$12,645,075
6/30/2017	$12,015,000	5.25%	$630,788	$12,645,788
Total	$65,545,000		$12,720,288	$78,265,288

Bond Pricing

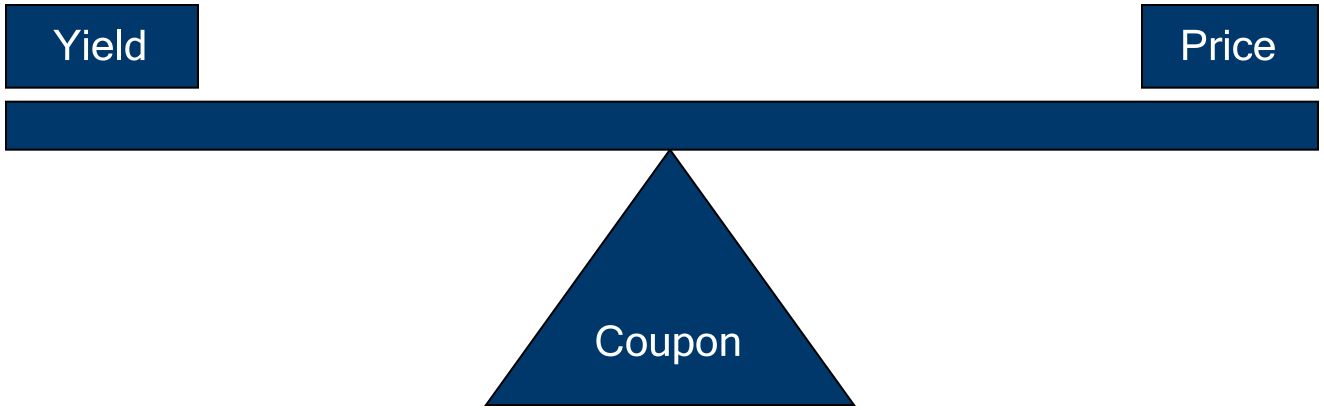
- **Price** – Discounted present value of debt service on an individual maturity. Debt service is calculated using the coupon and discounted at the yield.
  - Dated date: 1/1/2010
  - 2012 maturity yield: 1.69%

Interest Payment Date	Principal	Coupon	Interest	Present Value to 1/1/2010 at 1.69%
7/1/2010	-	-	$0.75	$0.744
1/1/2011	-	-	$0.75	$0.737
7/1/2011	-	-	$0.75	$0.731
1/1/2012	$100	1.50%	$0.75	$97.415
Total	$100		$3.00	$99.627

Price:	*$99.627*
Par Amount:	*$10,245,000.00*
Purchase Price:	*$10,206,786.15*

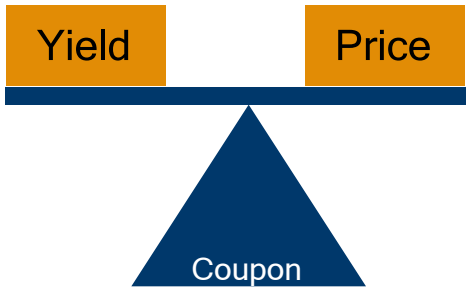
Bond Pricing （cont.）

◆ As a result, price and yield move in opposite directions.

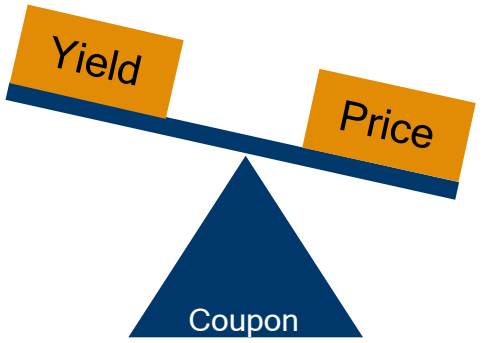


Par, Discount and Premium Bonds

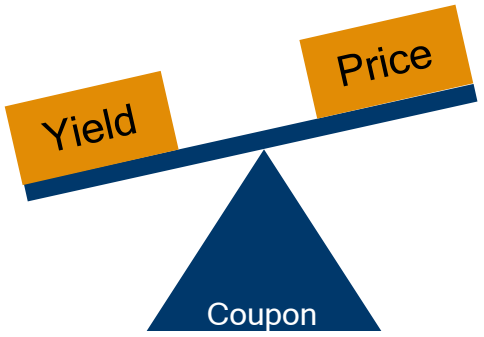
- **Par Bonds**
  - Coupon equals yield
  - Purchase price equals principal amount



- **Discount Bonds**
  - Coupon less than yield
  - Purchase price less than principal amount



- **Premium Bonds**
  - Coupon greater than yield
  - Purchase price greater than principal amount



Par, Discount and Premium Bonds (cont.)

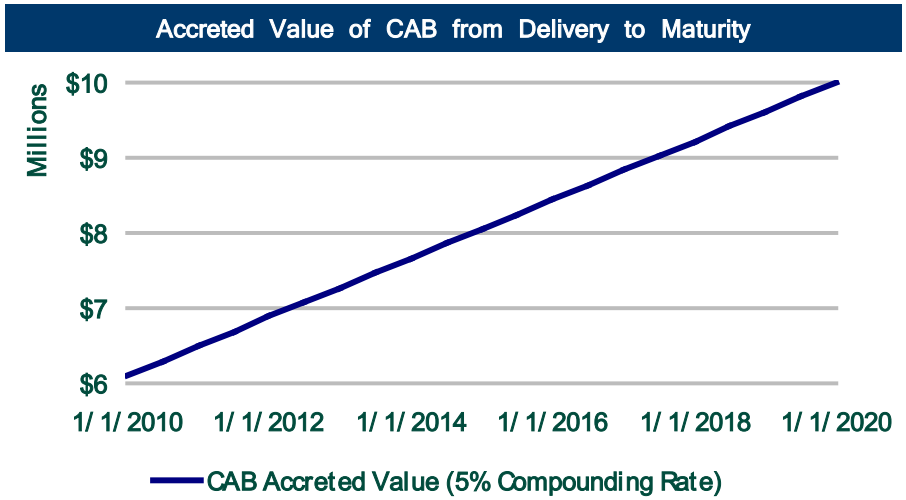
Maturity Date	Principal	Coupon	Yield	Price	
1/ 1/ 2012	$10,245,000	1.50%	1.69%	99.627	Discount Bonds
1/ 1/ 2013	$10,395,000	2.00%	2.08%	99.768	
1/ 1/ 2014	$10,605,000	2.50%	2.50%	100.000	Par Bond
1/ 1/ 2015	$10,870,000	5.00%	2.80%	110.198	Premium Bonds
1/ 1/ 2017	$23,430,000	5.25%	3.34%	111.834	
Total	$65,545,000				

Original Issue Discount and Original Issue Premium

Maturity Date	Principal	Price	Original Issue Premium	Original Issue Discount	Proceeds
1/ 1/ 2012	$10,245,000	99.627		($38,214)	$10,206,786
1/ 1/ 2013	$10,395,000	99.768		($24,116)	$10,370,884
1/ 1/ 2014	$10,605,000	100.000			$10,605,000
1/ 1/ 2015	$10,870,000	110.198	$1,108,523		$11,978,525
1/ 1/ 2017	$23,430,000	111.834	$2,772,706		$26,202,706
Total	$65,545,000		$3,881,229	($62,330)	$69,363,899

Capital Appreciation Bonds （CABs）

- CABs pay no periodic interest until maturity. The bonds accrete in value as interest accrues.
  - Usually sold as serial bonds, but can be structured as term bonds.
- At maturity an amount equal to the initial principal invested plus the interest earned, compounded semiannually at the stated yield, is paid.
- They are sold in denominations of less than $5000 representing their present value and pay $5000 at maturity.
- Though CABs are sold at a higher yield than current interest bonds, they are used to achieve particular debt service patterns.
  - Example: A CAB maturing in 2020 with an interest rate of 5.00% may have a par amount of $6,102,700 but will have a value of $10,000,000 when it matures. The difference between $10,000,00 and $6,102,700 represents the compounded interest on the bond.



Callable Bonds

- Callable bonds can be redeemed by an issuer prior to the bonds' actual maturity on and after a specified call date (an optional redemption provision).

- Many times, fixed-rate bonds will be callable 10 years after issuance at a price of par.

- Municipal bonds are sold with embedded call features to provide restructuring flexibility and/or the possibility to generate refinancing savings in the future.

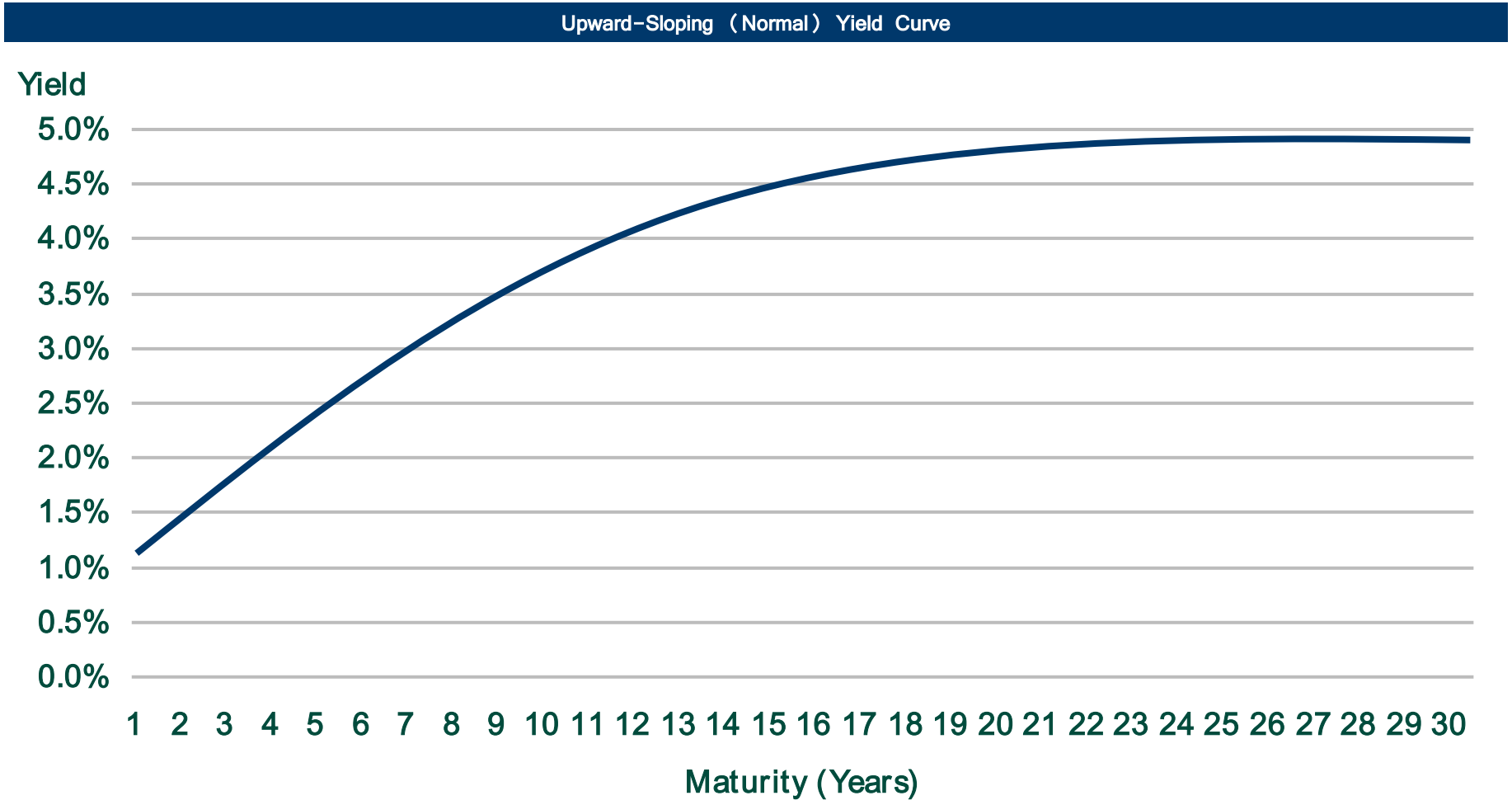
- Investors often charge the issuers for this flexibility – through a higher yield and lower price – thereby increasing the cost of the financing at the time of issuance.
  - Issuers need to weigh this increased flexibility and the possibility of savings down the road against this increased cost.

Bond Conventions

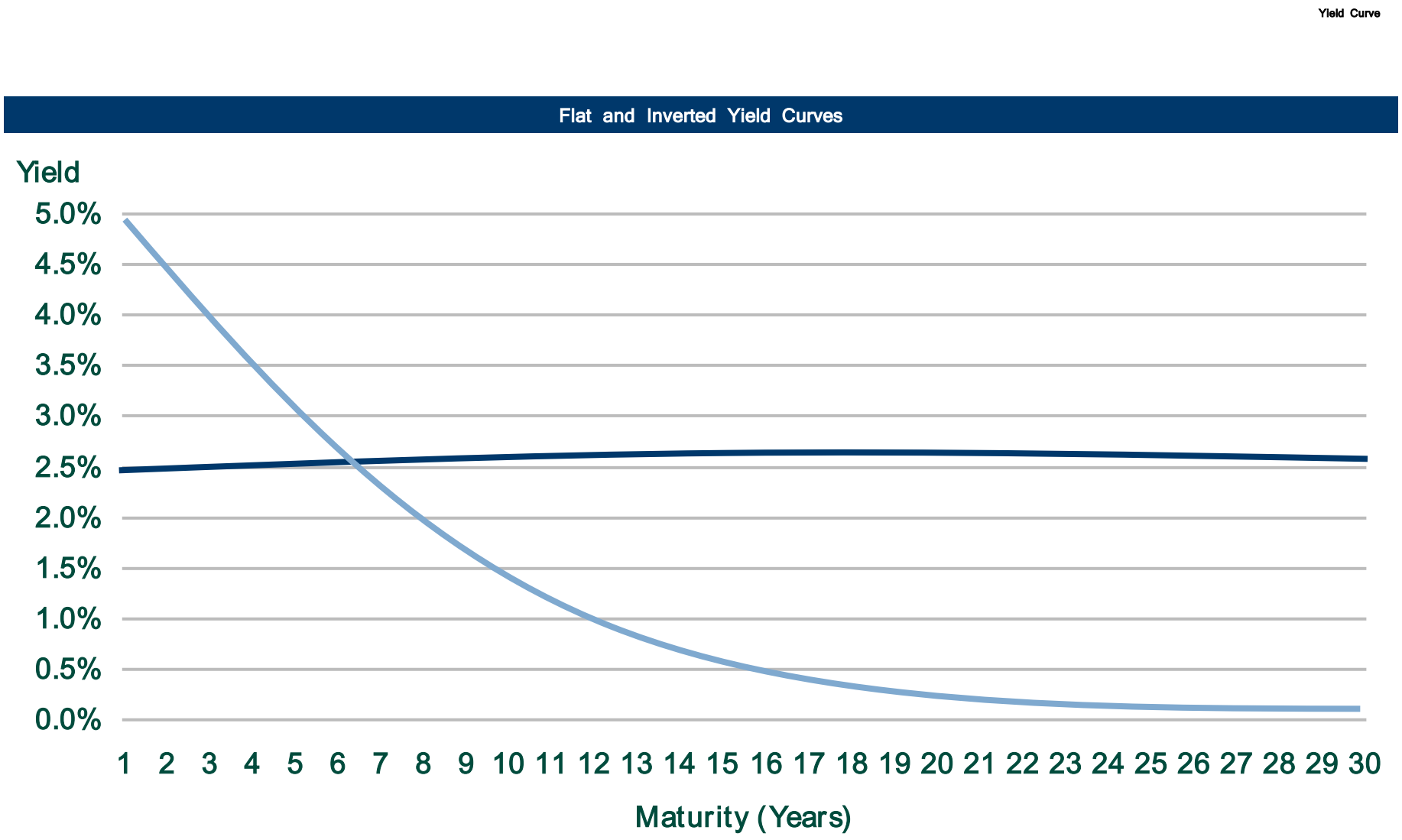
- **Basis Point**
  - Yields on bonds are usually quoted in terms of basis points, with one basis point equal to one one-hundredth of one percent.
    - .50% = 50 basis points
- **Day Count**
  - 30/360
    - Usually for tax-exempt fixed rate bonds
  - Actual/Actual
    - Usually for tax-exempt variable rate bonds
- **Pricing**
  - Truncate to 3 decimals

Yield Curve: Normal

Yield Curve

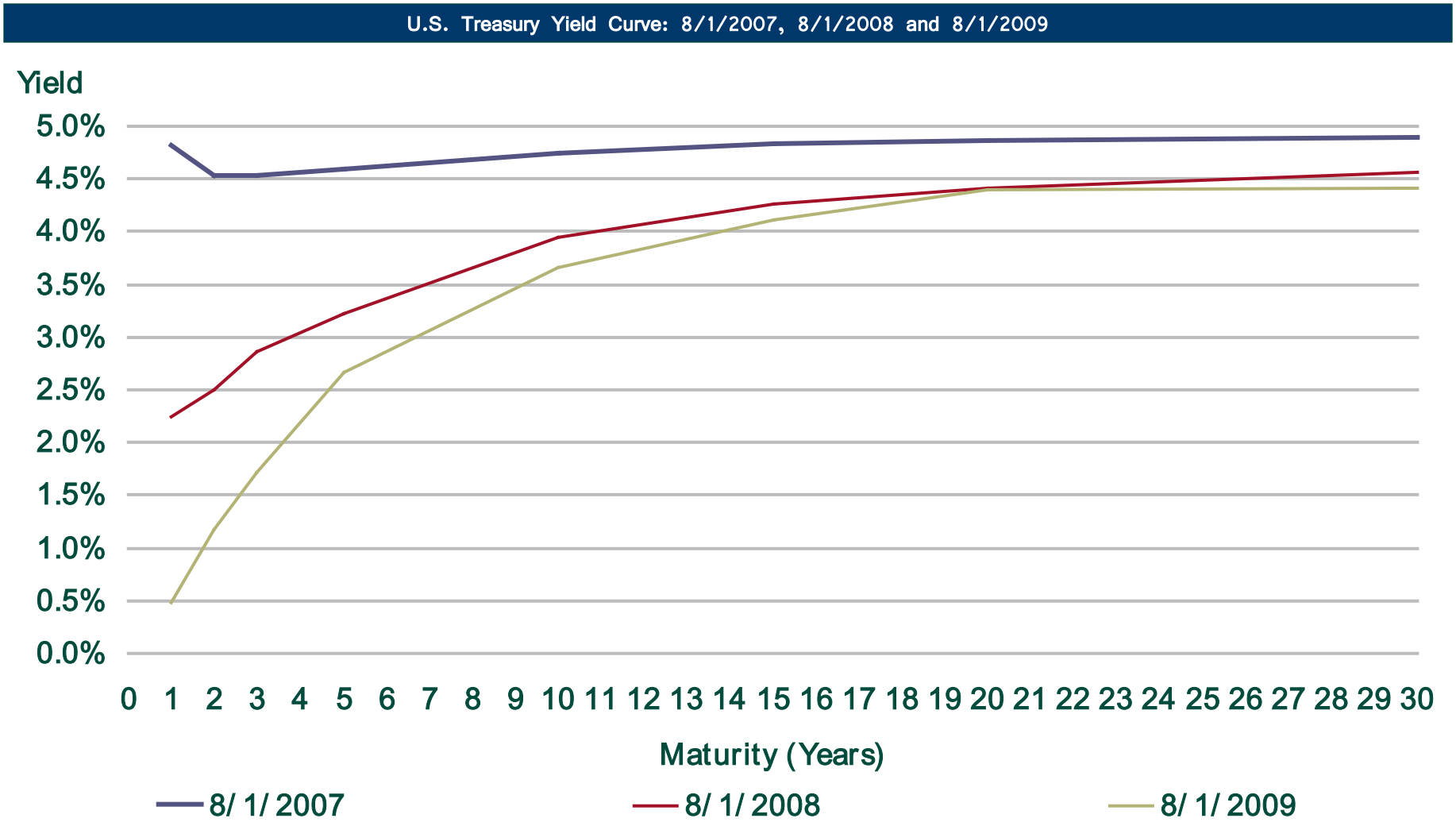


Yield Curves: Flat and Inverted



Current Yield Curve Compared to Yield Curves from One and Two Years Ago

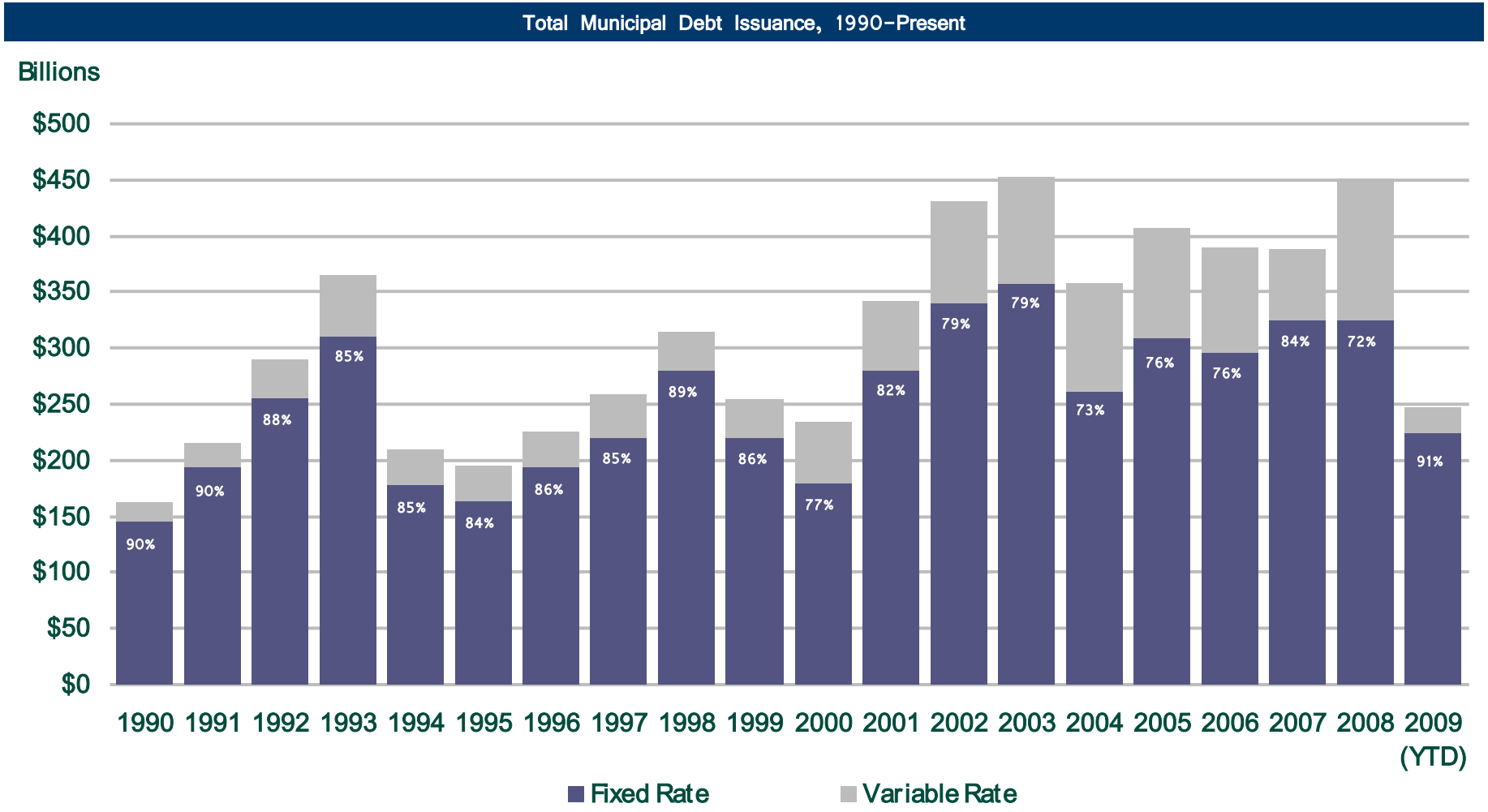
Yield Curve



Fixed vs. Variable Rate Debt

Fixed and Variable Rate Debt Issuance

Fixed vs. Variable Rate Debt



Fixed vs. Floating-Rate Bonds

Fixed vs. Variable Rate Debt

Fixed-Rate Bonds

Advantages

- No Interest Rate Risk - Budget Certainty
- No Ongoing Credit Support Needed
- Traditional Investors Include: Bond Funds, Insurance Companies, Arbitrage Accounts, Trust Departments and Retail Investors

Disadvantages

- Higher Initial and Expected Interest Expense
- Less Flexible Call Feature than Floating Rate Bonds
- Potentially Higher Issuance Costs

- Fixed rate financings remain the most common approach in the current market.

Variable-Rate Bonds

Advantages

- Easy to Restructure
- Lower Expected Cost of Capital
- Used to Diversify Debt Portfolio
- Traditional Investors Include: Money Market Funds, Corporations and Retail Investors

Disadvantages

- Interest Rate Risk
- Budgeting Uncertainty
- Unpredictable Pricing of Ongoing Credit Support Costs
- Additional Administrative Involvement

- Though SIFMA – the principal short-term index in the municipal market – remains extremely low, averaging 0.48% since January 1, 2009, many issuers are finding it difficult to procure bank credit and liquidity support.

Credit Enhancement for VRDBs

◆ **Credit enhancement** is a means of substituting the credit of the issuer with that of a higher rated third party guarantor.

- Similar to insurance in the case of fixed-rate bond, credit enhancement improves the marketing for bonds.
- Credit enhancement typically takes the form of bond insurance or letters of credit (LOC).

Bond Insurance	Letters of Credit (LOC)
◆ Premium is based on projected total debt service and paid up-front as a one time fee. ◆ In effect for life of bond issue.	◆ Typically provided by commercial banks. ◆ Premium is based on amount of debt outstanding and paid over time. ◆ Most LOCs carry an initial term shorter than the term of the bonds and must be renewed or replaced at each expiration date.

◆ The reduction in the number of insurers and the increase in insurance costs together with contraction in the market for bank facilities has led to a decline in the portion of municipal debt issued as VRDBs (9% in 2009 versus 28% in 2008).

Amortization Structures

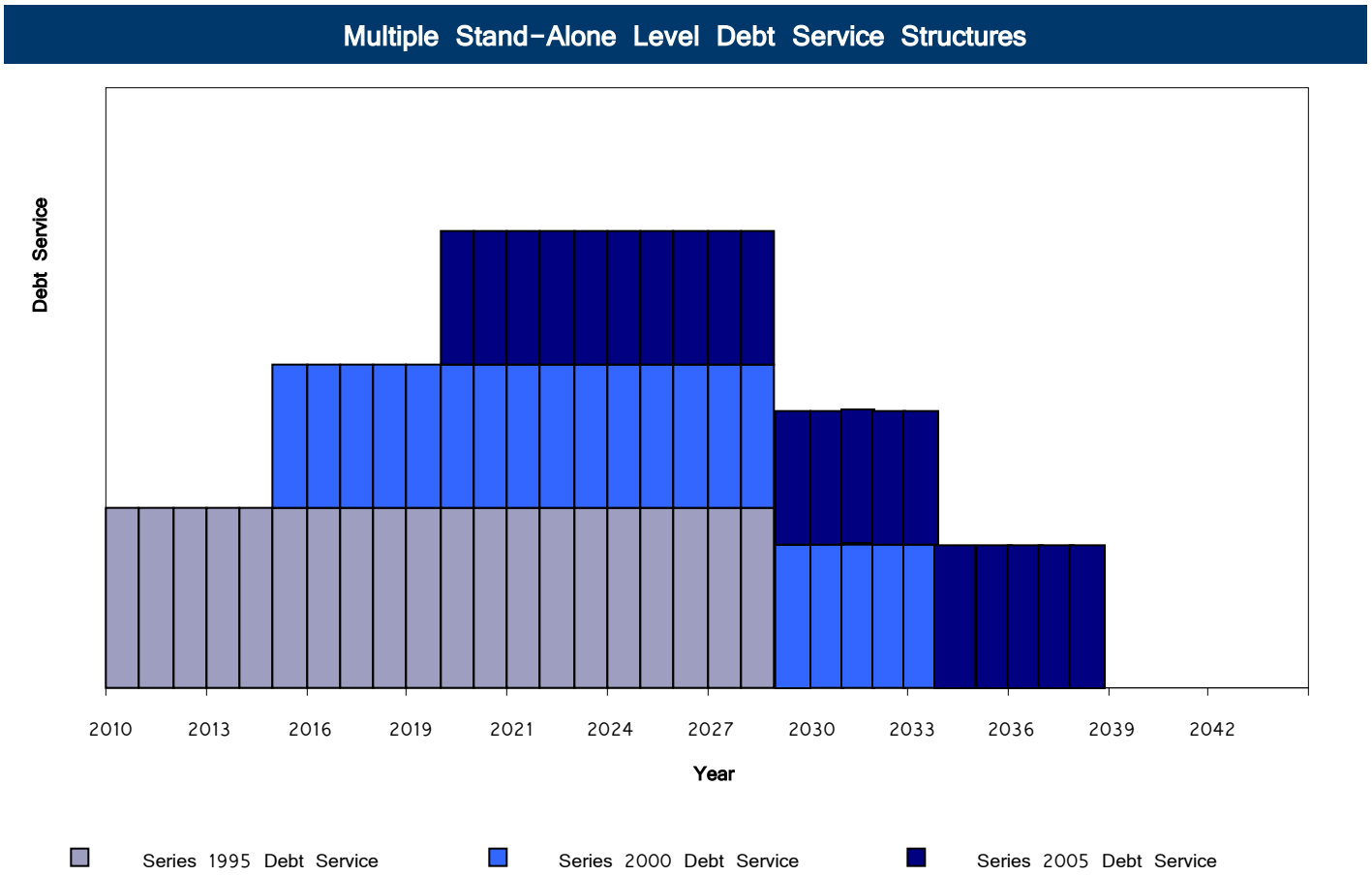
Alternate Amortization Structures

- Issuers can use amortization structures to shape their overall debt structure pattern.

Level Principal			
Date	Principal	Interest	Debt Service
1/ 1/ 2011	-	$2,353,988	$2,353,988
1/ 1/ 2012	$10,950,000	$2,353,988	$13,303,988
1/ 1/ 2013	$10,950,000	$2,189,738	$13,139,738
1/ 1/ 2014	$10,950,000	$1,970,738	$12,920,738
1/ 1/ 2015	$10,950,000	$1,696,988	$12,646,988
1/ 1/ 2016	$10,950,000	$1,149,488	$12,099,488
1/ 1/ 2017	$10,945,000	$574,613	$11,519,613
Total	$65,695,000	$12,289,538	$77,984,538

Level Debt Service			
Date	Principal	Interest	Debt Service
1/ 1/ 2011	-	$2,400,275	$2,400,275
1/ 1/ 2012	$10,245,000	$2,400,275	$12,645,275
1/ 1/ 2013	$10,395,000	$2,246,600	$12,641,600
1/ 1/ 2014	$10,605,000	$2,038,700	$12,643,700
1/ 1/ 2015	$10,870,000	$1,773,575	$12,643,575
1/ 1/ 2016	$11,415,000	$1,230,075	$12,645,075
1/ 1/ 2017	$12,015,000	$630,788	$12,645,788
Total	$65,545,000	$12,720,288	$78,265,288

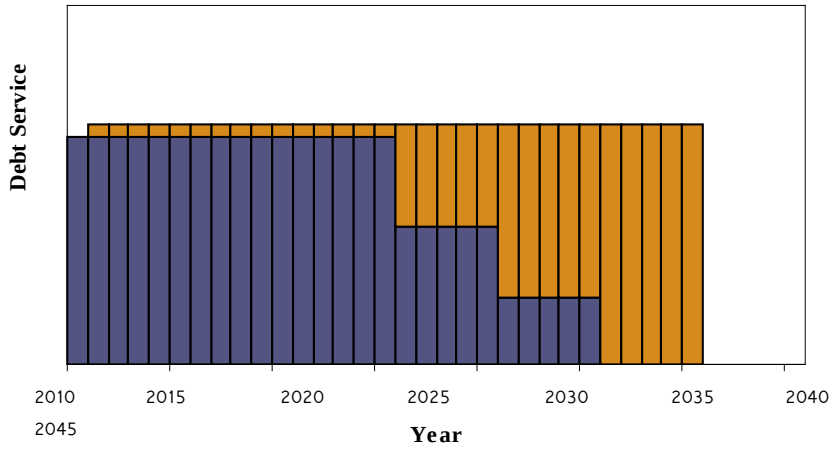
Impact of Issuing Multiple Stand-Alone Level Debt Service Issues Over Time



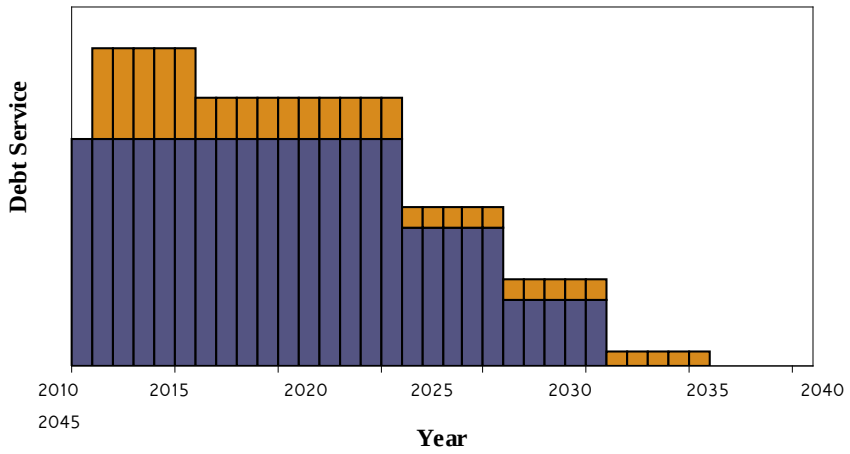
Principal Amortization Options

Amortization Structures

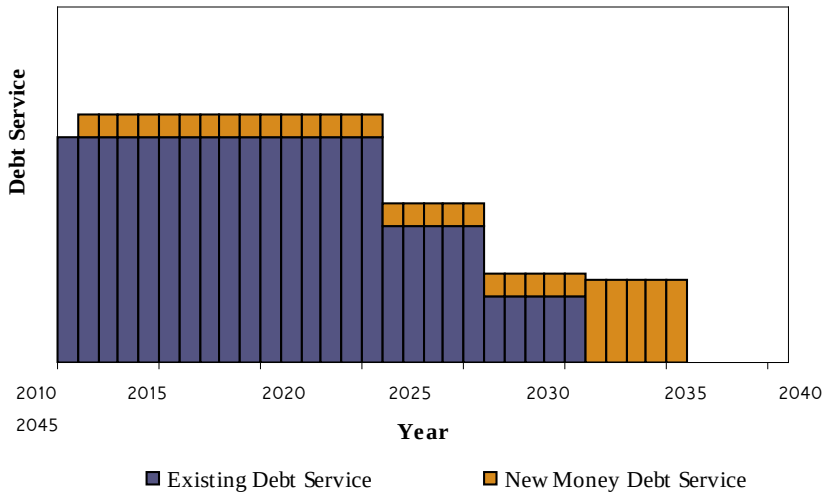
Wrapped Debt Service Structure



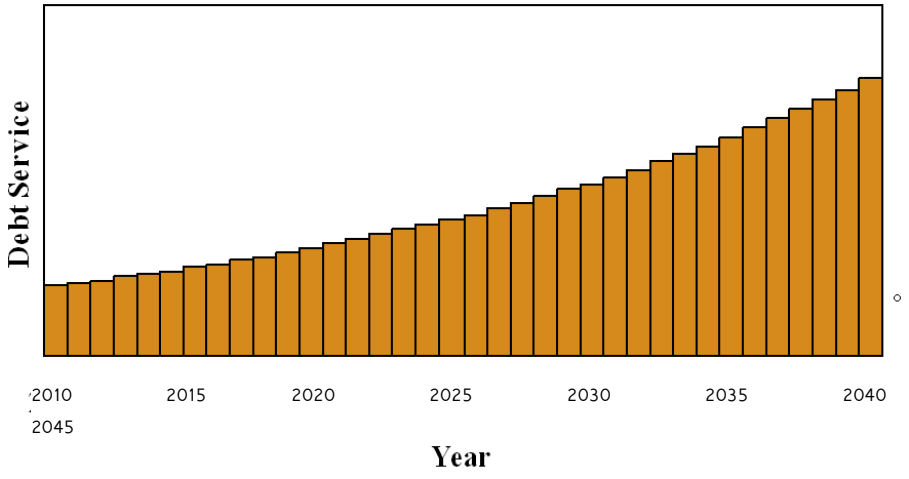
Accelerated/Front-Loaded Debt Service Structure



Deferred/Back-Loaded Debt Service Structure



Increasing Debt Service Structure

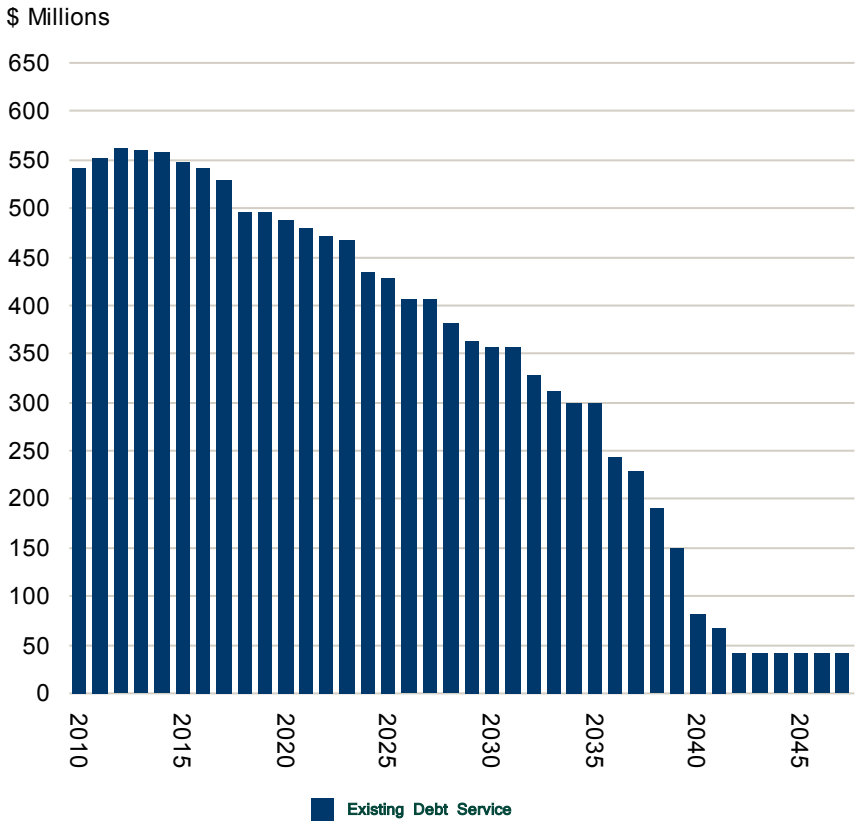


University of California Debt Service Structure

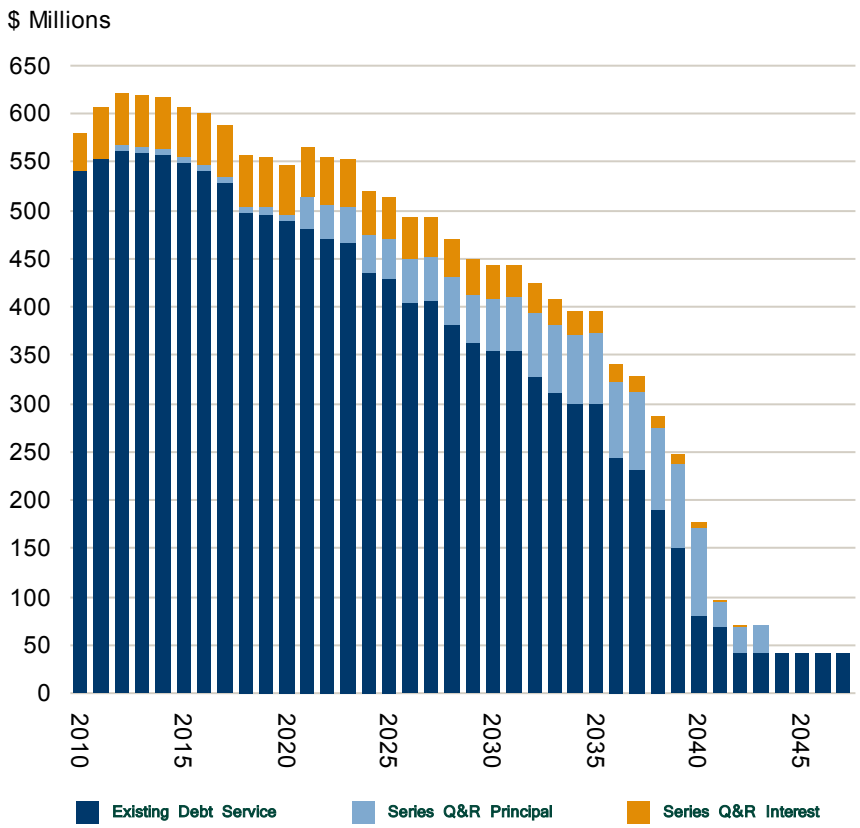
Amortization Structures

- The Regents of the University of California issued $1.3 billion in General Revenue Bonds (2009 Series Q & R) on August 19th, 2009.
- Due to the existing front-loaded debt service structure, Series Q & R were structured with a deferred principal amortization to minimize debt service increases prior to 2021.

Existing Debt Service



Debt Service Post Series Q & R Issuance



Key Calculations from a Bond Sale

Key Calculations From a Bond Sale

- Sources and Uses of Funds
- Issuance Expenses
- Net Debt Service Schedule
- Yield Calculations

Sources and Uses of Funds

Key Calculations from a Bond Sale

Sources:

Bond Proceeds	
Par Amount	$65,545,000
Net Premium	3,818,899
Total Sources	$69,363,899

Uses:

Project Fund Deposit	$60,000,000
Other Fund Deposits	
Debt Service Reserve Fund	6,554,500
Capitalized Interest Account	2,350,382
Delivery Date Expenses	
Costs of Issuance	131,090
Underwriter's Discount	327,725
Other Uses of Funds	
Additional Proceeds	202
Total Uses	$69,363,899

Issuance Expenses

Borrower's Costs of Issuance
Rating Agency Fees
Issuer/ Authority Fee
Bond Counsel Fee
Borrower's Counsel Fee
Trustee Fees
Auditor's Fee
Printing and Mailing Costs
Miscellaneous and Contingency

Components of Underwriters' Discount
Takedown
Management Fee
Underwriters' Counsel
DTC
CUSIP
SIFMA Special Assessment
Dalcomp
Electronic Order Entry/Order Monitoring
Dalcomp Wire Charge
Interest on Good Faith Wire
Cal PSA
CDIAC
Day Loan
Out-of-Pocket and Closing Costs
Verification Agent (if refunding)

Net Debt Service Schedule

- Capitalizing interest for up to three years following issuance permits zero net debt service while a project is under construction.
- Release of the Debt Service Reserve Fund at final maturity may be used to reduce net debt service or for any other lawful purpose.

Fiscal Year Ending	Principal	Coupon	Interest	Gross Debt Service	Capitalized Interest	Net Debt Service
6/ 30/ 2011	-	-	$2,163,825	$2,163,825	$2,163,825	-
6/ 30/ 2012	$9,235,000	1.50%	$2,163,825	$11,398,825		$11,398,825
6/ 30/ 2013	$9,375,000	2.00%	$2,025,300	$11,400,300		$11,400,300
6/ 30/ 2014	$9,560,000	2.50%	$1,837,800	$11,397,800		$11,397,800
6/ 30/ 2015	$9,800,000	5.00%	$1,598,800	$11,398,800		$11,398,800
6/ 30/ 2016	$10,290,000	5.25%	$1,108,800	$11,398,800		$11,398,800
6/ 30/ 2017	$10,830,000	5.25%	$568,575	$11,398,575		$11,398,575
Total	$59,090,000		$11,466,925	$70,556,925	$2,163,825	$68,393,100

Yield Calculations

- **Yield** is the discount rate at which the present value of future debt service payments are equal to the proceeds of the issue.

- The most common measures of the borrowing cost of a bond issue are the arbitrage yield, true interest cost (TIC) and all-in TIC.

- For short or non-callable issues, each is differentiated by which costs it takes account of. For example…

	TIC	All-In TIC	Arbitrage Yield
Par Value	$65,545,000.00	$65,545,000.00	$65,545,000.00
+ Accrued Interest	-	-	-
+ Premium (Discount)	$3,818,898.55	$3,818,898.55	$3,818,898.55
- Underwriter's Discount	($327,725.00)	($327,725.00)	
- Cost of Issuance Expense		($131,090.00)	
Target Value	$69,036,173.55	$68,905,083.55	$69,363,898.55
Target Date	1/ 1/ 2010	1/ 1/ 2010	1/ 1/ 2010
Yield	2.936600%	2.981928%	2.823768%

Yield Calculations for a Bond Issue

◆ In this example, the debt service used to calculate the Arbitrage Yield, TIC and All-In TIC are the same. The difference between them is the "target value".

Fiscal Year Ending	Arbitrage Yield	TIC	All-in TIC
Discount Rate:*	*2.82%*	*2.94%*	*2.98%*
1/ 1/ 2010	($69,363,899)	($69,036,174)	($68,905,084)
7/ 1/ 2010	$1,200,138	$1,200,138	$1,200,138
1/ 1/ 2011	$1,200,138	$1,200,138	$1,200,138
7/ 1/ 2011	$1,200,138	$1,200,138	$1,200,138
1/ 1/ 2012	$11,445,138	$11,445,138	$11,445,138
7/ 1/ 2012	$1,123,300	$1,123,300	$1,123,300
1/ 1/ 2013	$11,518,300	$11,518,300	$11,518,300
7/ 1/ 2013	$1,019,350	$1,019,350	$1,019,350
1/ 1/ 2014	$11,624,350	$11,624,350	$11,624,350
7/ 1/ 2014	$886,788	$886,788	$886,788
1/ 1/ 2015	$11,756,788	$11,756,788	$11,756,788
7/ 1/ 2015	$615,038	$615,038	$615,038
1/ 1/ 2016	$12,030,038	$12,030,038	$12,030,038
7/ 1/ 2016	$315,394	$315,394	$315,394
1/ 1/ 2017	$12,330,394	$12,330,394	$12,330,394

* Also known as the Internal Rate of Return

Question and Answer

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