

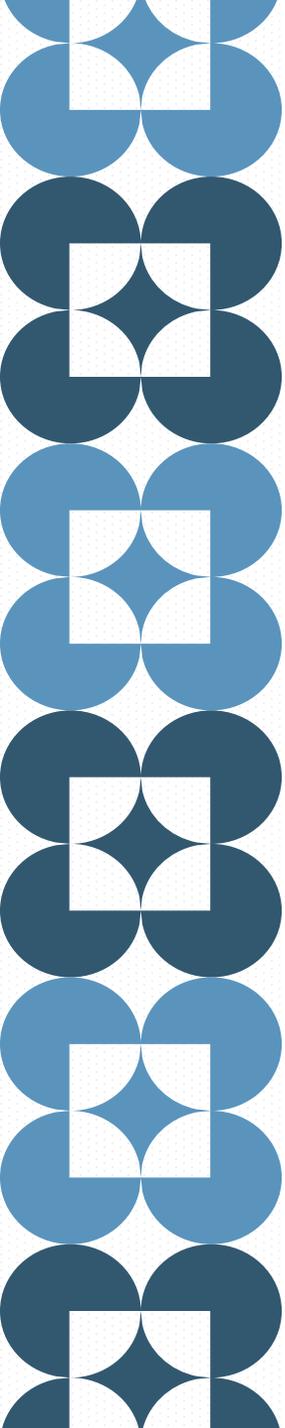
# SESSION ONE

## Bond Concepts

**CRAIG HILL**

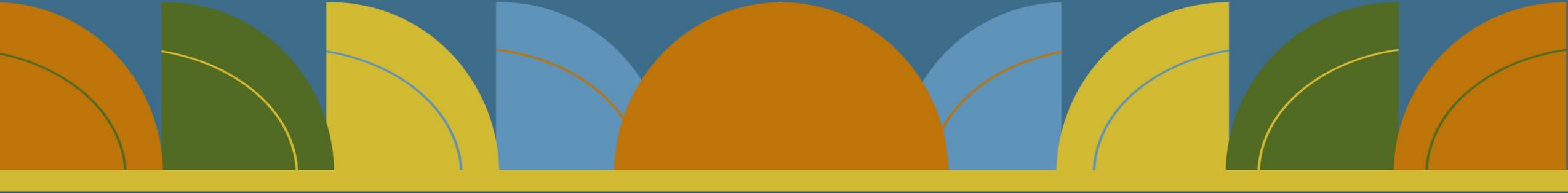
*Managing Principal*  
NHA Advisors





# Table of Contents

- Introduction to Bonds
- Process of Issuing Bonds
- Basic Bond Characteristics
- Basic Bond Math
- Fun Stats



# INTRODUCTION TO BONDS



# Purpose of Municipal Bonds

## Infrastructure

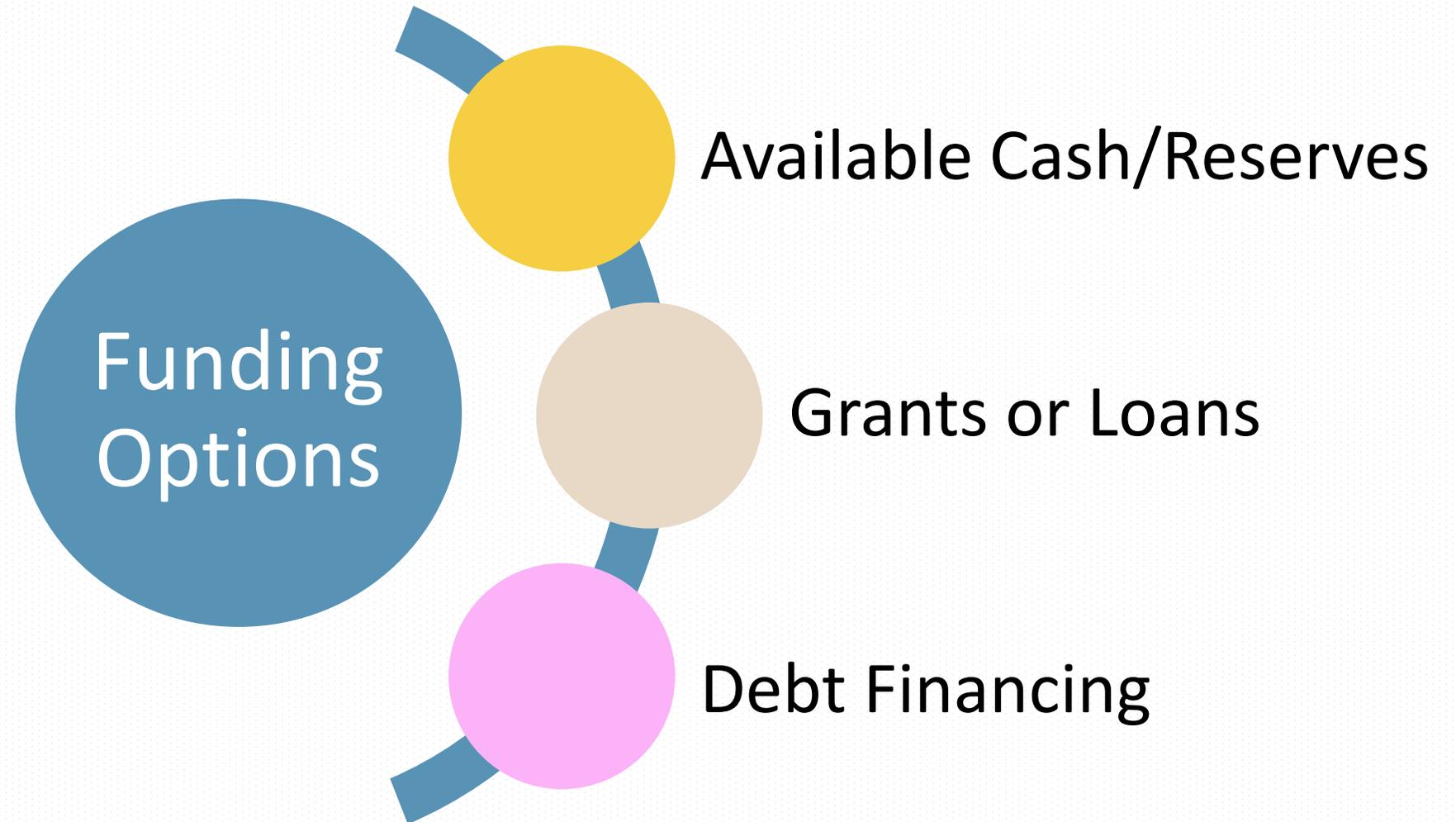


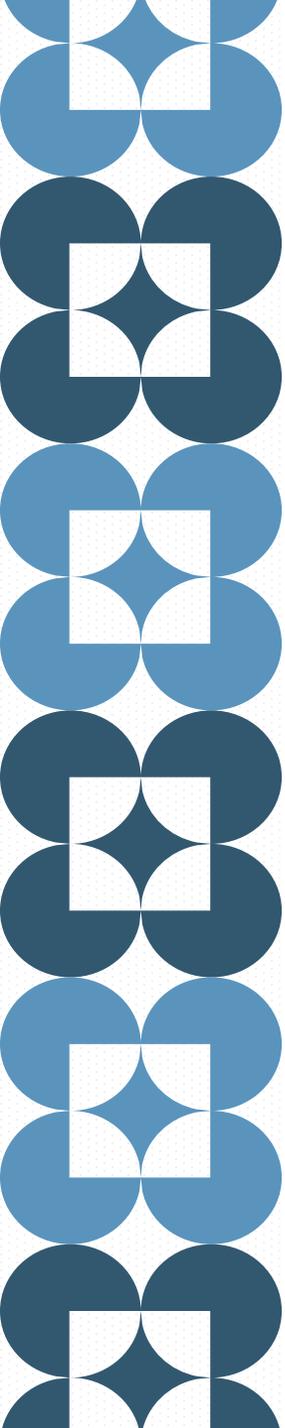
## Capital Improvement Projects



- Spread out the cost of constructing the asset over the life of the asset
- Ensures the benefits are paid for by those who enjoy them

# Ways to Fund Projects





Project Financing

Restructuring or  
Refinancing

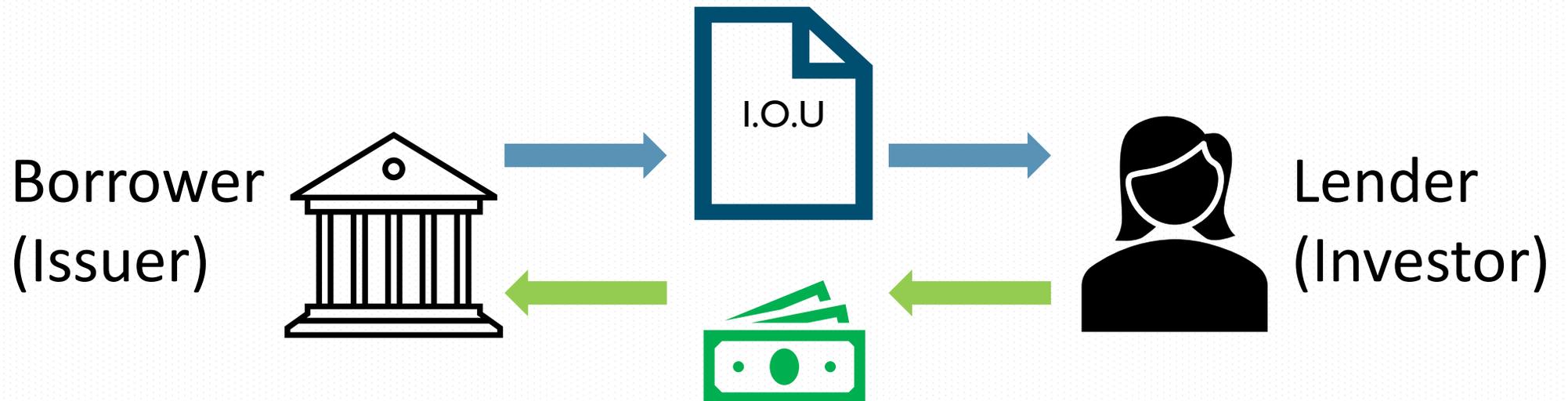
Common  
Objectives

Cash Flow

Regulatory  
Requirements

# What Is A Bond?

- Financing mechanism whereby the borrower (“issuer”) receives upfront funds from a lender (“bondholder”) in exchange for future repayments
- Can be thought of as an IOU between lender and borrower



# Elements Of A Bond

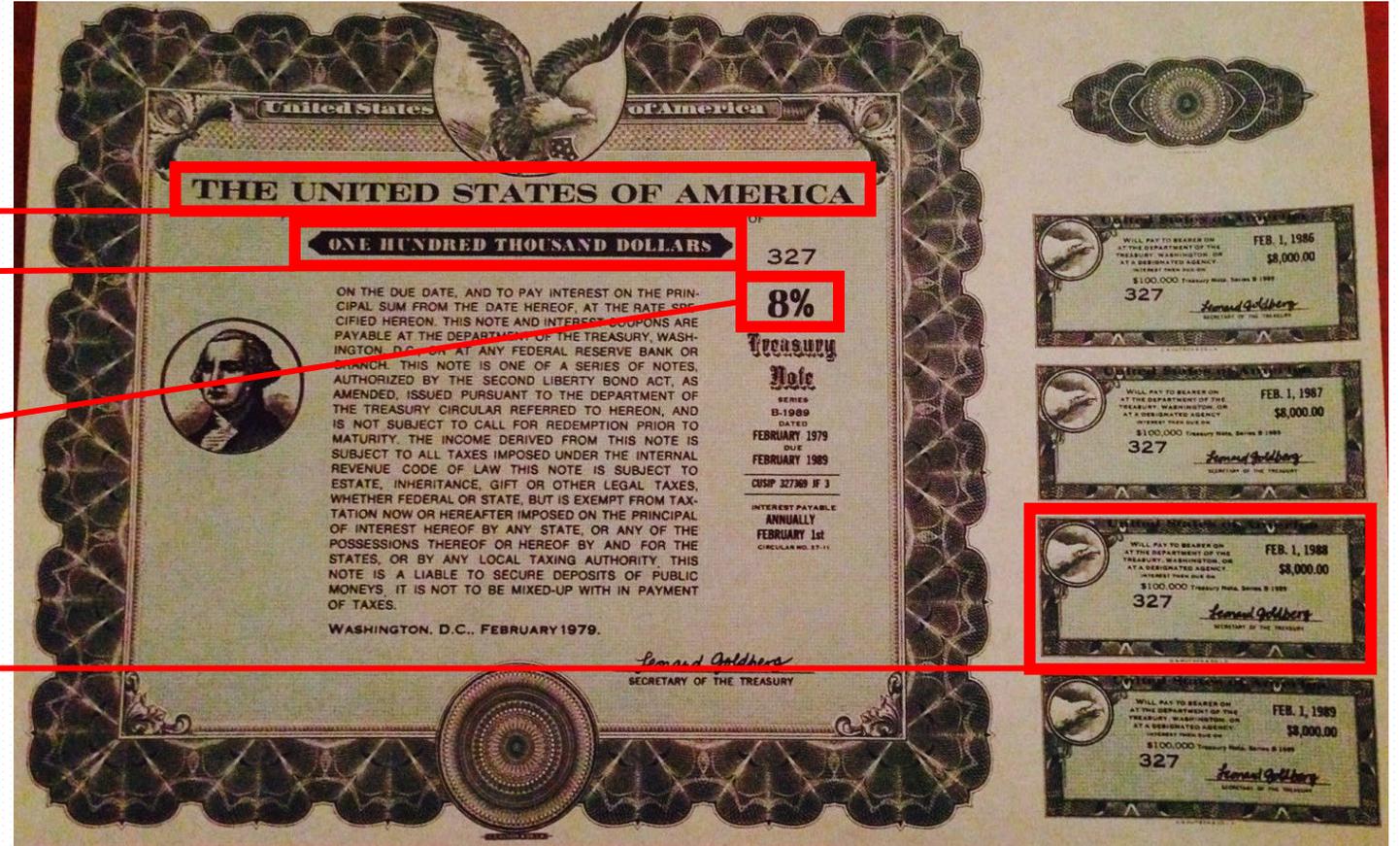
Issuer

Face Value

Interest Rate

Coupon

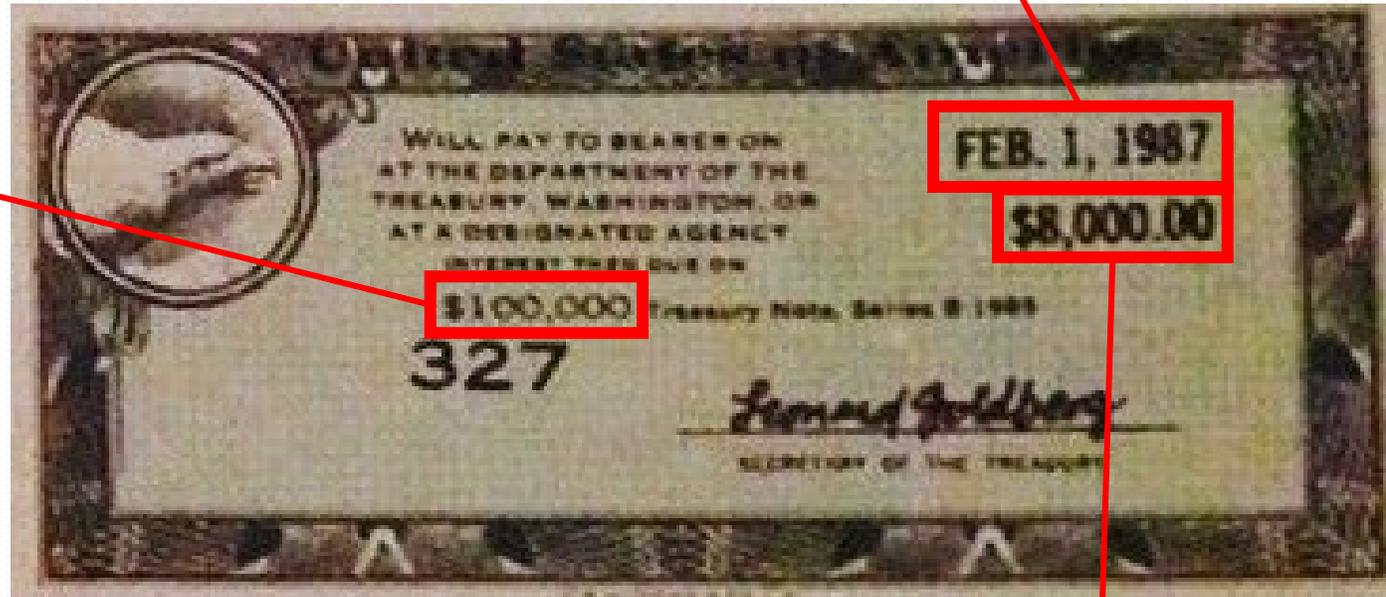
“Clipping the Coupon”



# Elements Of A Bond

Face Value

Maturity



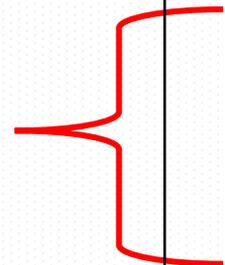
Interest  
Paid

# Maturity Schedule

Issuer/Deal Par Tax Status/Rating Par Call Date	Gotham City 2024 Revenue Bonds \$32,750,000  Tax-Exempt, AAA December 1, 2032		
Maturity	PAR AMOUNT	COUPON RATE	YIELD
2023	\$1,750,000	5.00%	2.85%
2024	\$2,000,000	5.00%	2.95%
2025	\$2,500,000	5.00%	3.10%
2026	\$3,000,000	5.00%	3.20%
2027	\$3,500,000	5.00%	3.40%
2028			
2029			
2030			
2031			
2032	\$20,000,000	4.25%	4.50%

Serial  
Bonds

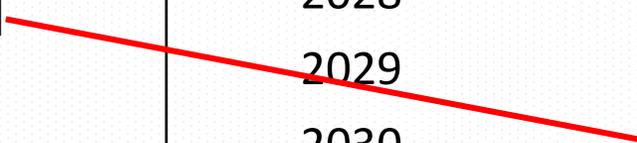
Term  
Bond

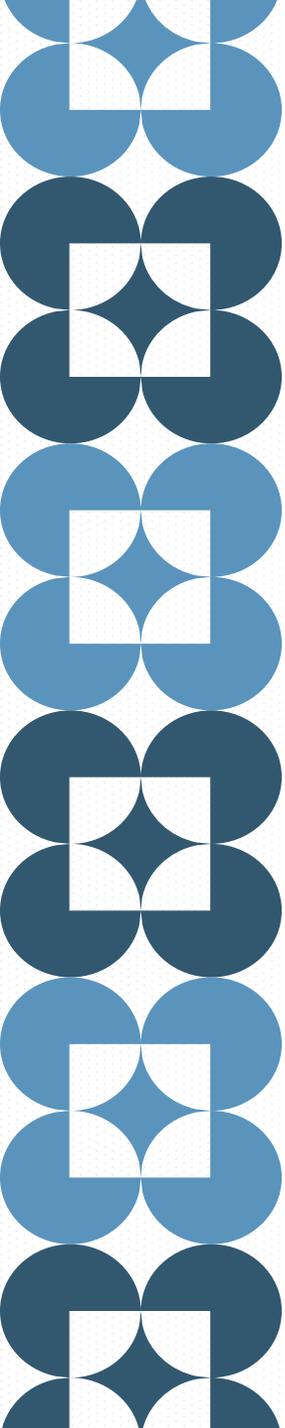


# Maturity Schedule

Issuer/Deal	Gotham City 2024 Revenue Bonds		
Par	\$32,750,000		
Tax Status/Rating	Tax-Exempt, AAA		
Par Call Date	December 1, 2032		
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2025	\$2,500,000	5.00%	3.10%
2026	\$3,000,000	5.00%	3.20%
2027	\$3,500,000	5.00%	3.40%
2028	\$3,750,000		
2029	\$4,000,000		
2030	\$5,000,000		
2031	\$5,750,000		
2032	\$6,500,000	4.25%	4.50%

Sinking Fund





# Sources and Uses

## Sources Of Funds

---

Par Amount of Bonds	\$5,000,000
---------------------	-------------

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<b>Total Sources</b>	<b>\$5,000,000</b>
----------------------	--------------------

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## Uses Of Funds

---

Costs of Issuance	\$200,000
-------------------	-----------

Project Fund	\$4,800,000
--------------	-------------

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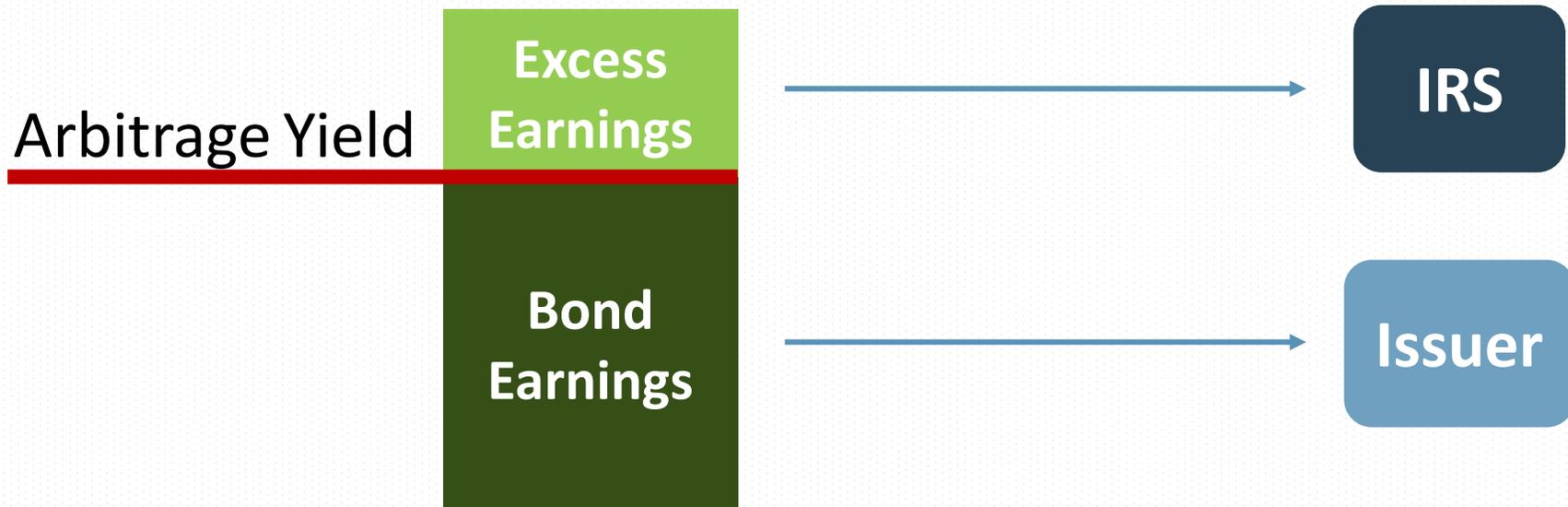
<b>Total Uses</b>	<b>\$5,000,000</b>
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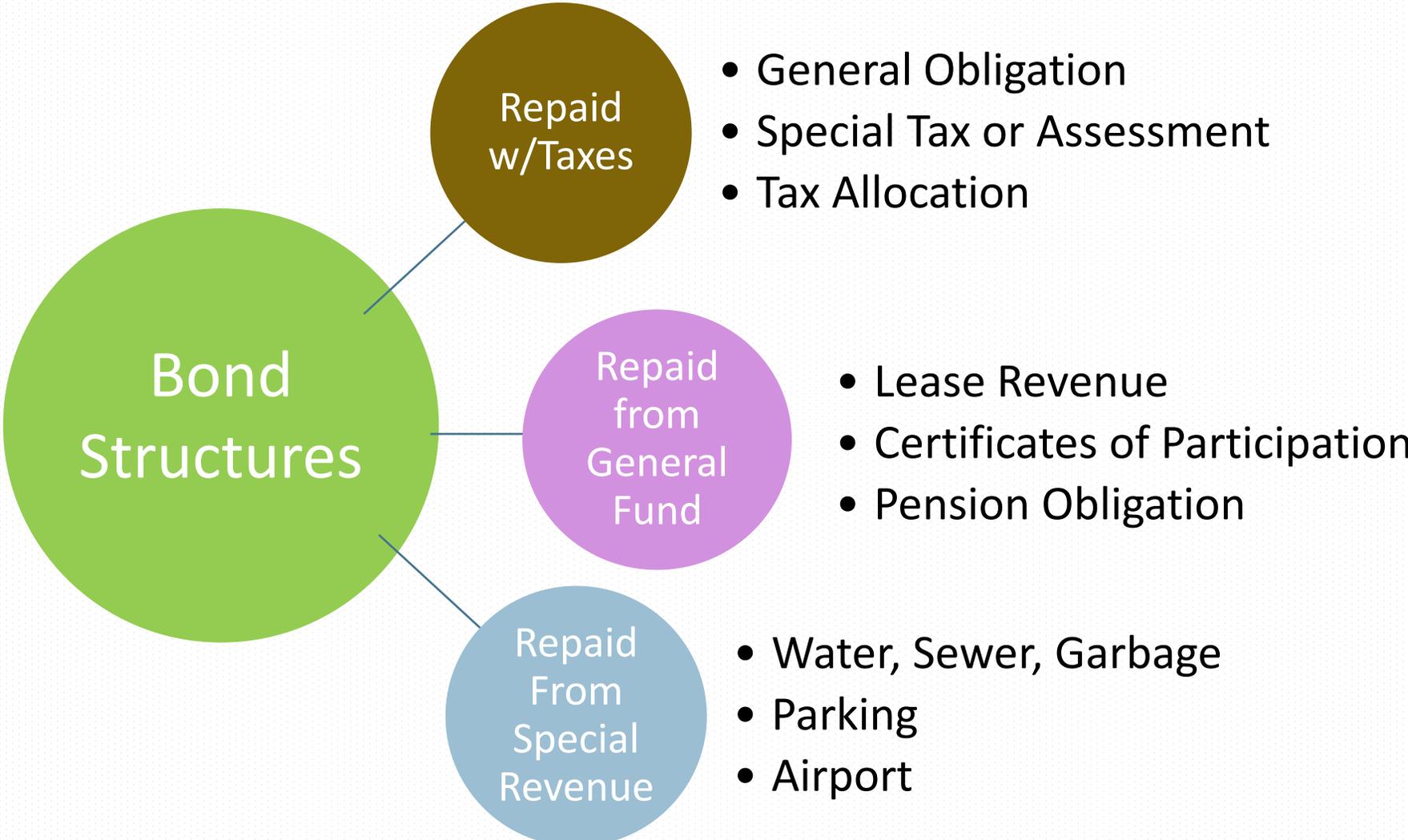
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# Tax-Exempt Nature of Municipal Bonds

- Majority of Municipal Bonds are issued for public use projects and so are Tax-Exempt
- Bonds issued for “private purposes” are not tax-exempt
- Issuers are not allowed to earn more on the bond proceeds than the calculated bond yield (“arbitrage yield”)

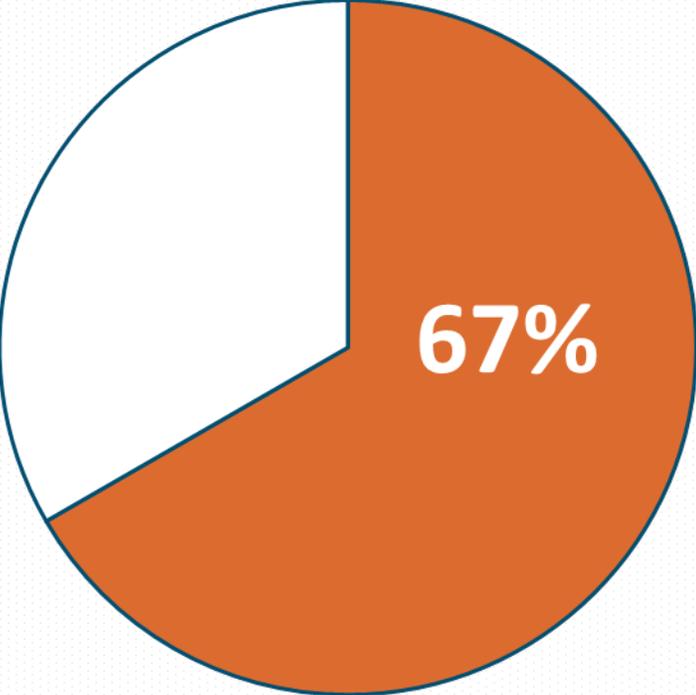


# Bond Structures

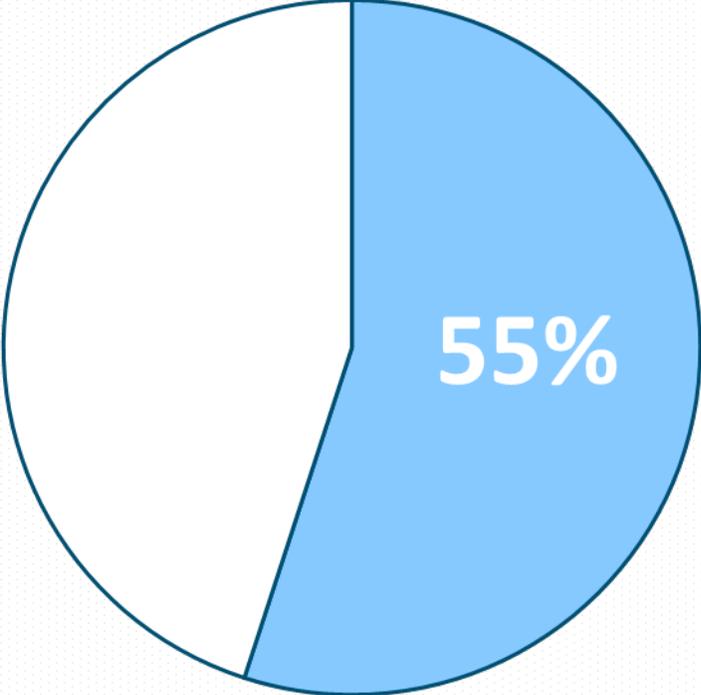


# Voter Approval

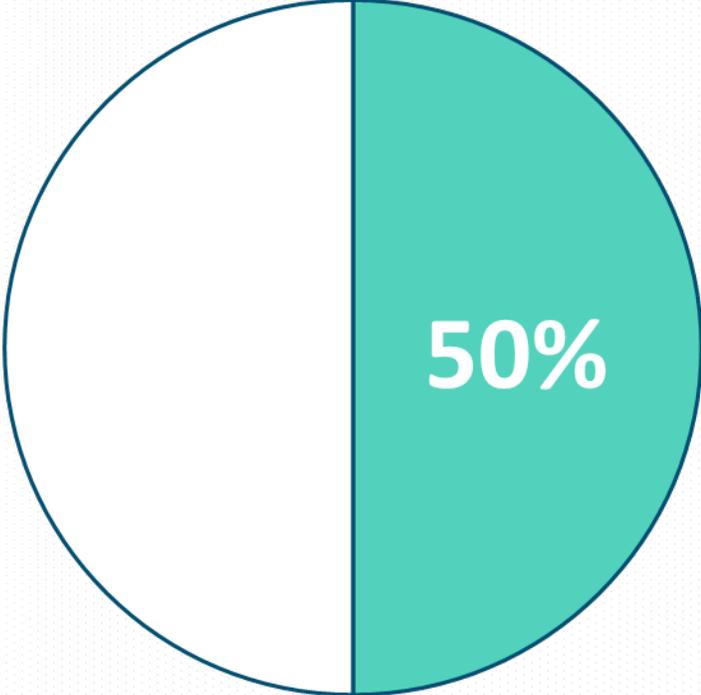
Local Agencies



School District Bonds



State Bonds



# Voter Approval Exceptions

General Fund  
Lease Obligations

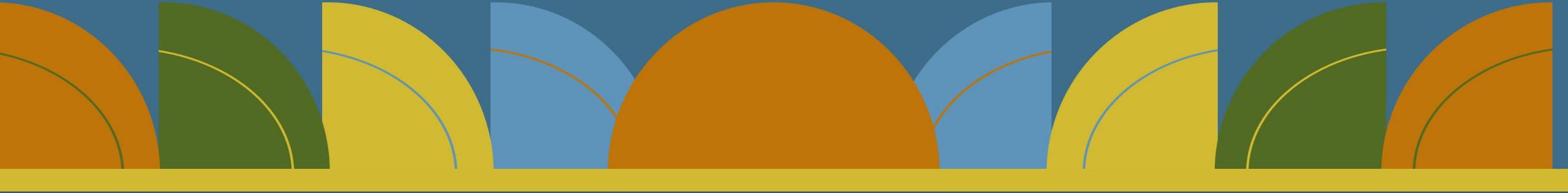


Utility  
Revenue  
Bonds



Obligations  
Imposed by Law





# **PROCESS OF ISSUING BONDS**



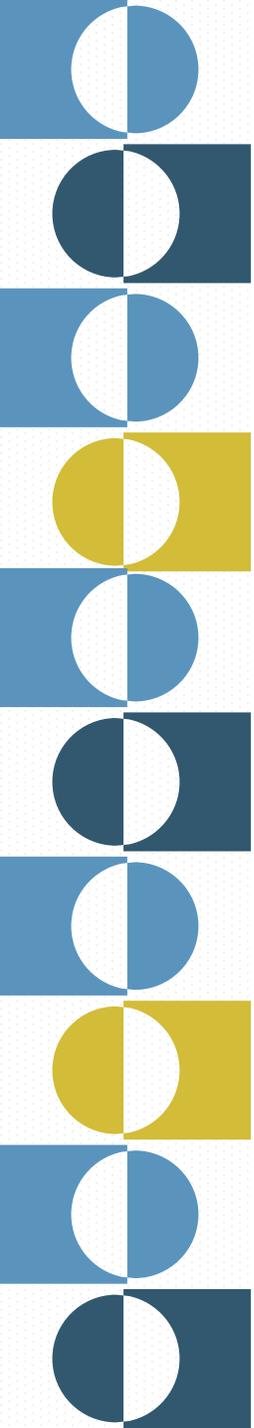
# Developing the Financing Plan

Identify Project Costs

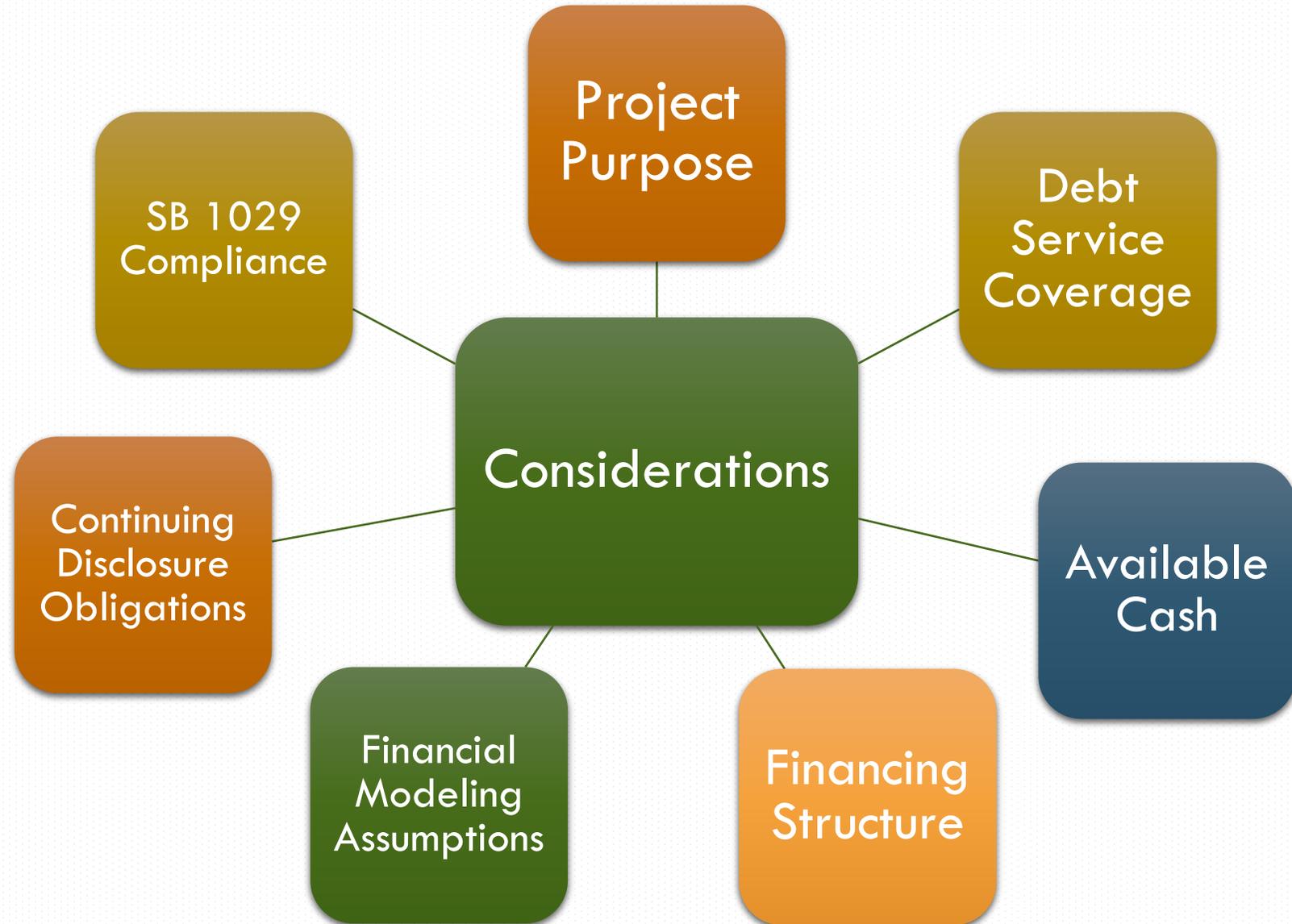
Quantify Available Cash

Identify Repayment Sources

Develop Financial Model



# Debt Policy Considerations



# Assembling the Financing Team (Public Offering)

Issuer/Borrower



Municipal Advisor



Bond/Disclosure  
Counsel



Underwriter



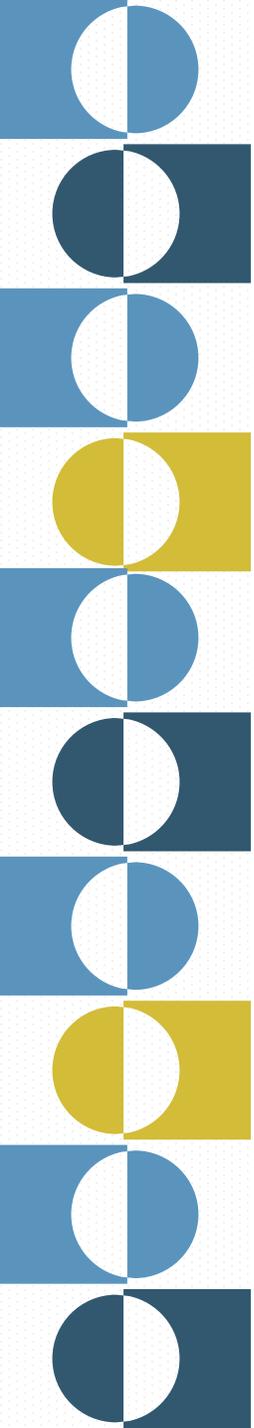
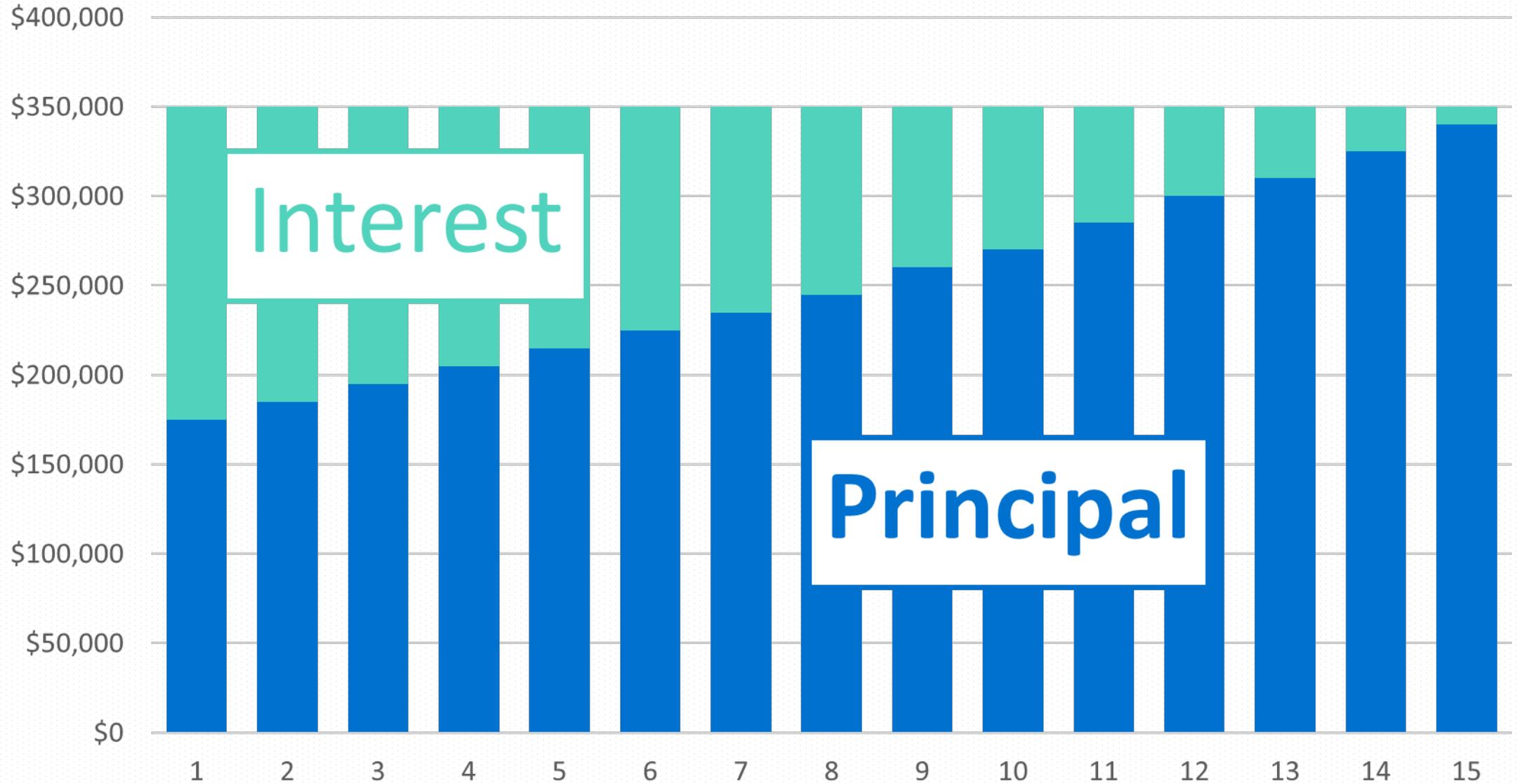
Trustee/Paying Agent



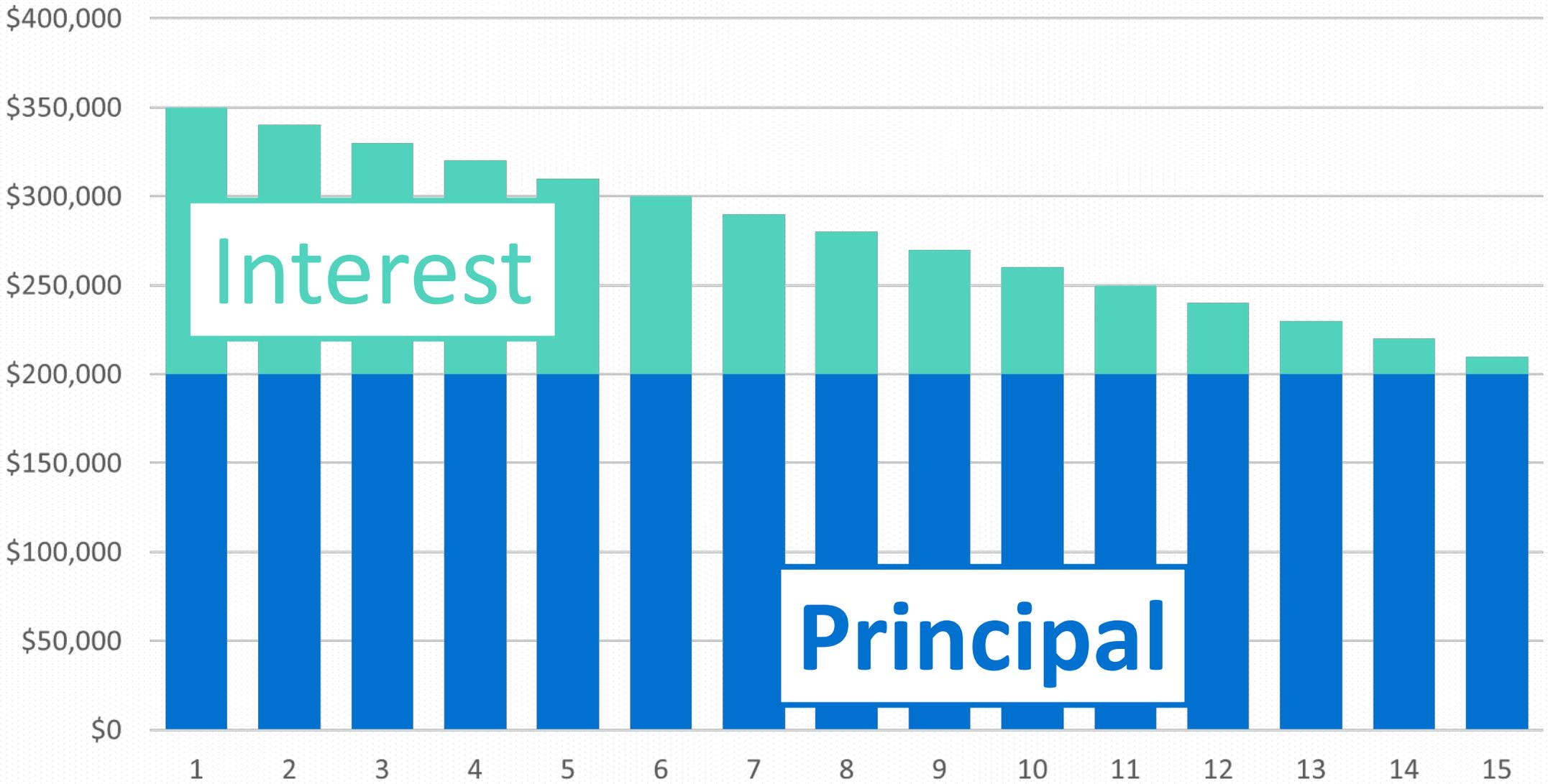
Rating Agency

**A+**

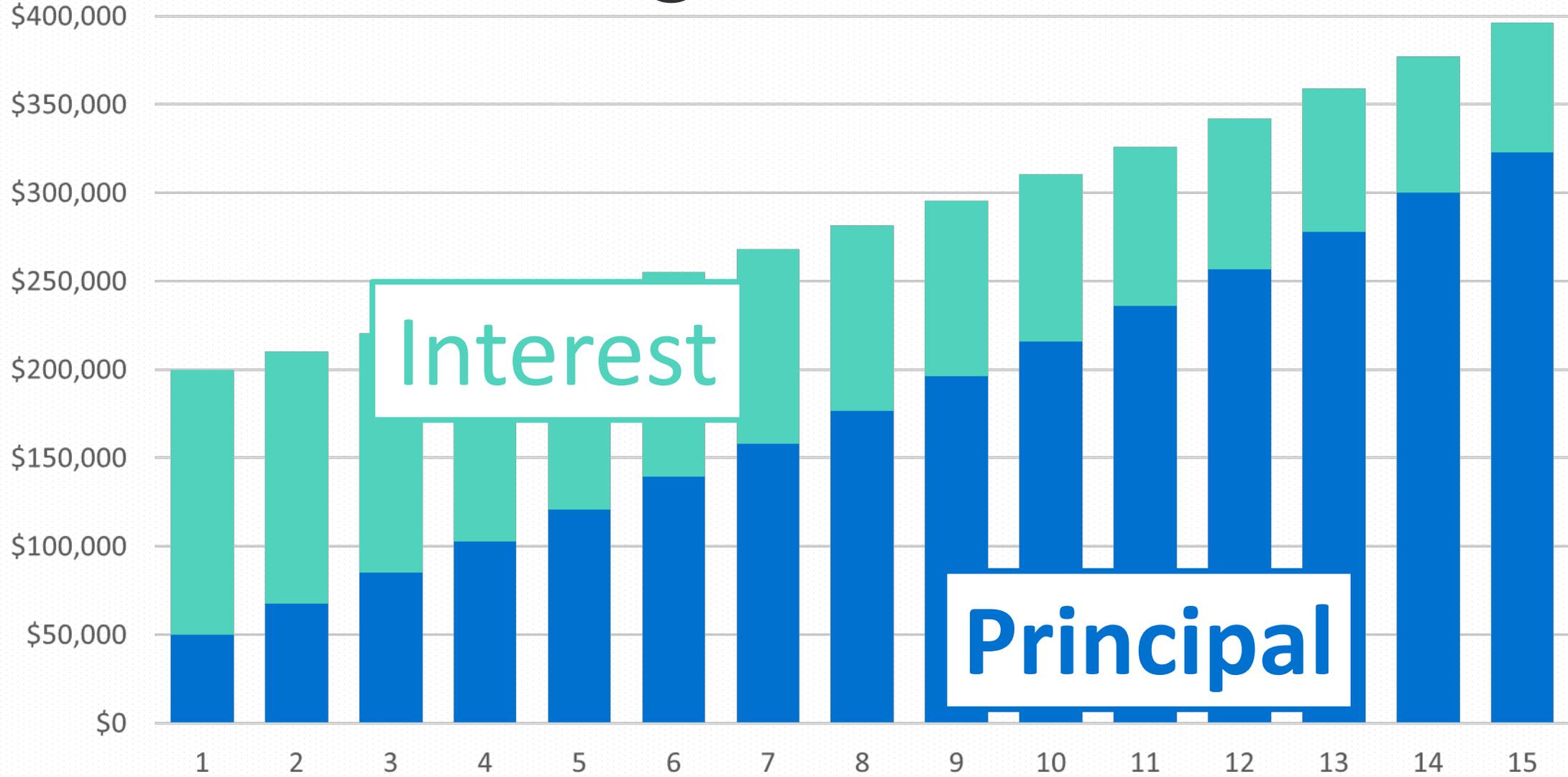
# Level Debt Service



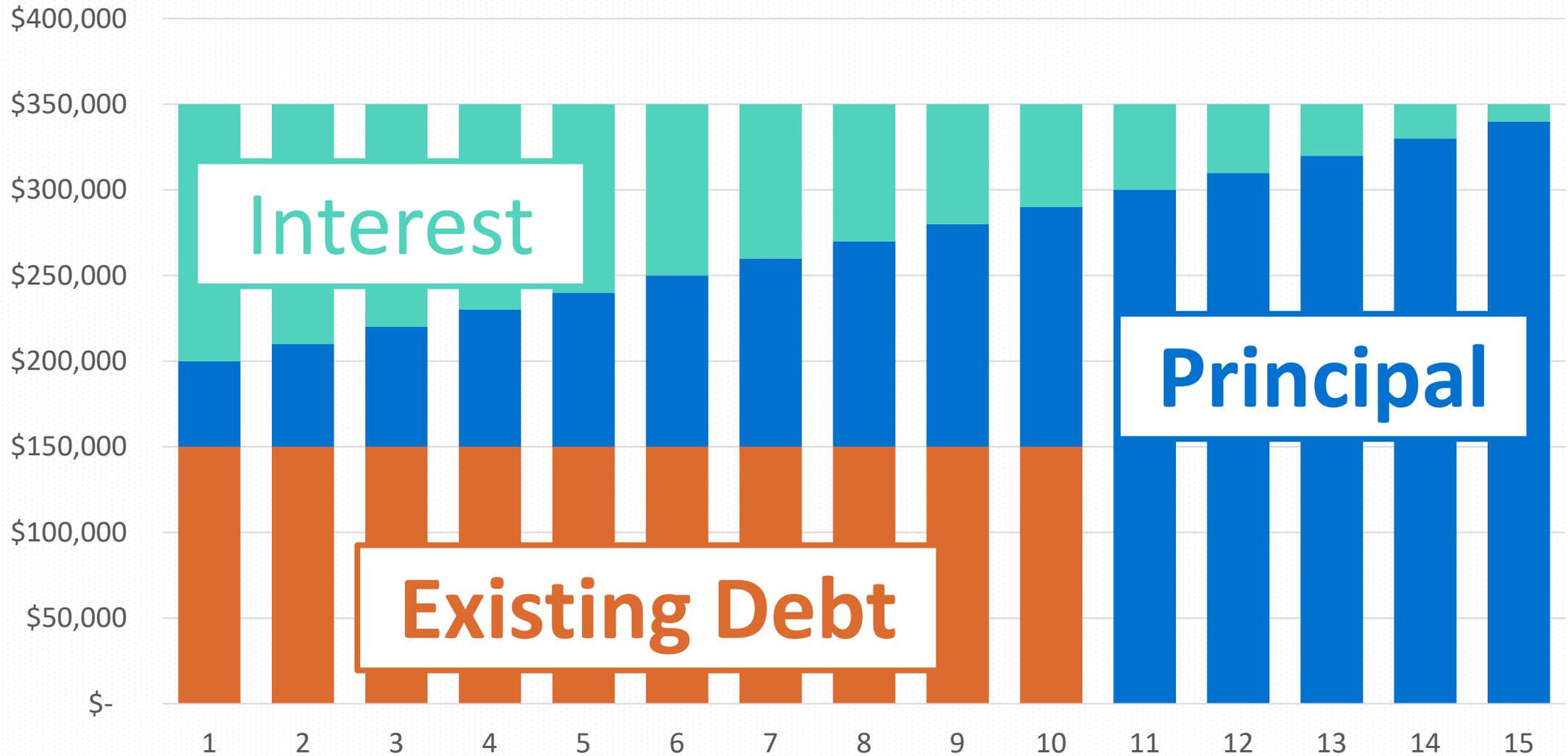
# Level Principal Payments



# Ascending Debt Service

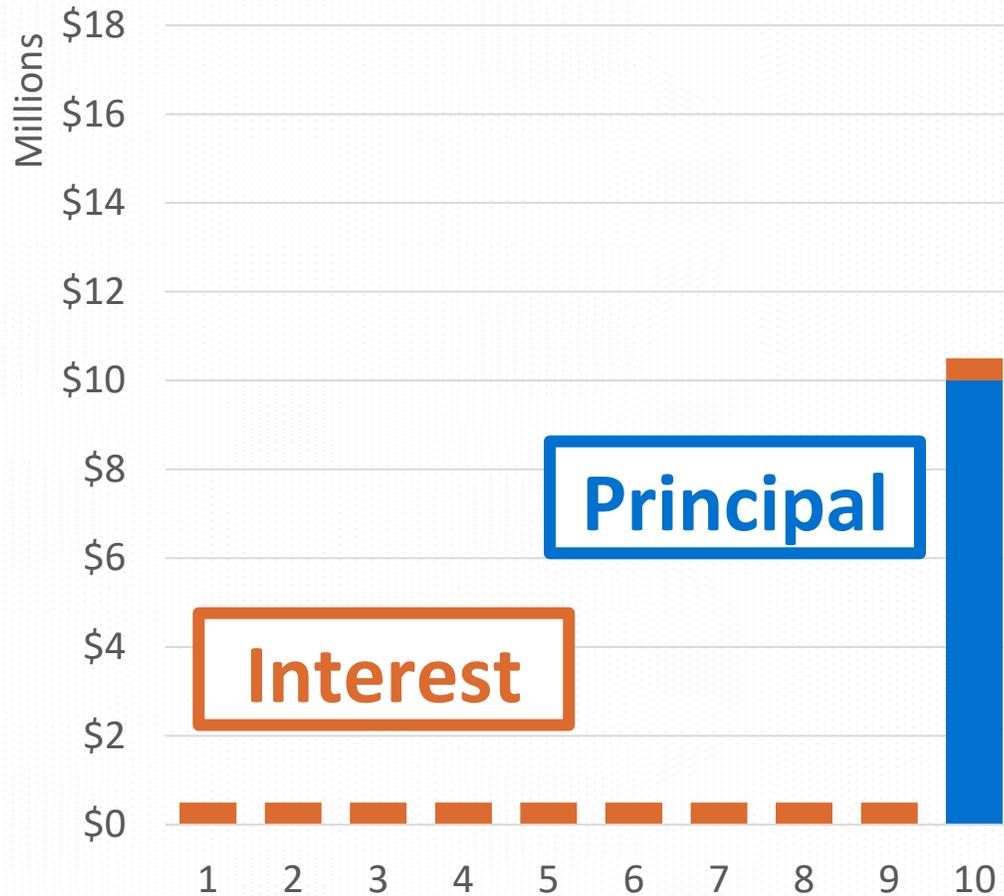


# Wrap Around Debt Service

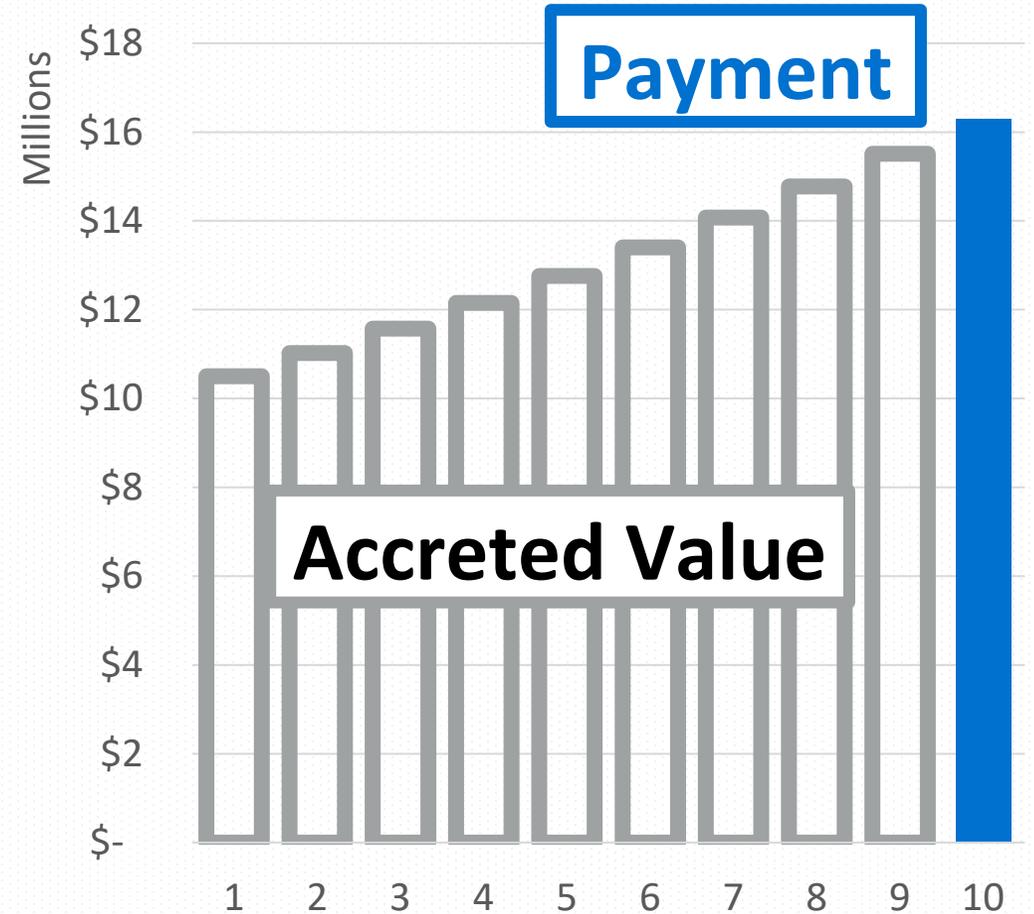


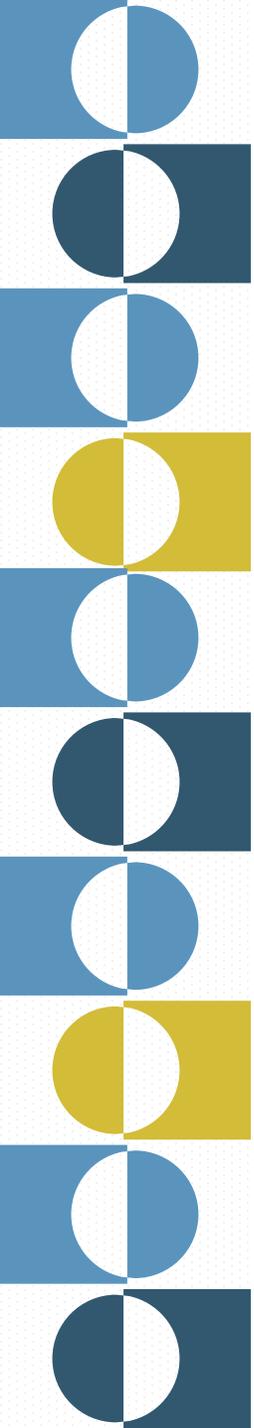
# Bond Types

## Current Interest Bond



## Capital Appreciation Bond





# Bond Sale Strategies

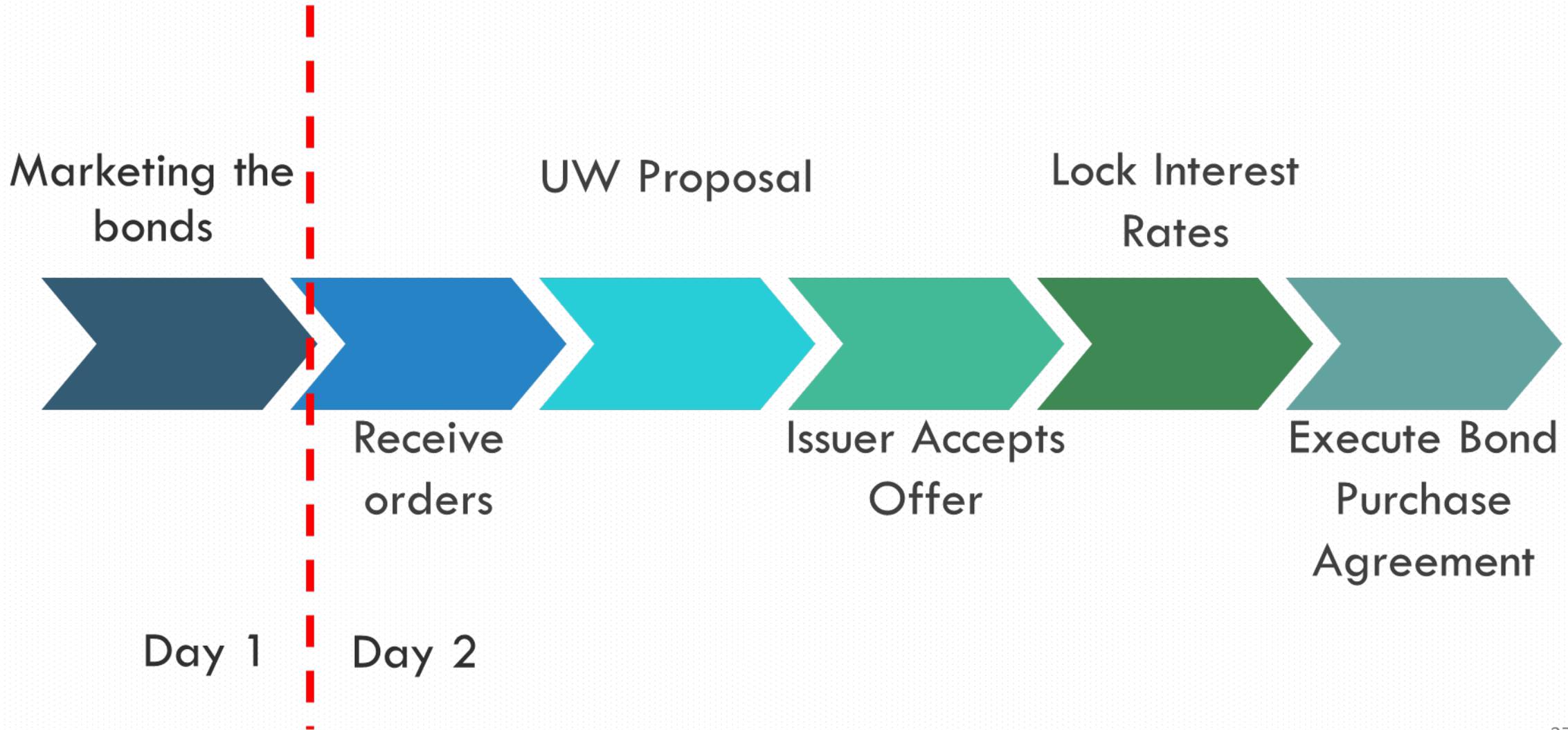
## Competitive Sale

- Structured Prior to Bond Sale
- Underwriter Bids to Purchase All Bonds
- Best Strategy for Highly Rated or Frequent Issuers

## Negotiated Sale

- Underwriter assists in Bond Structure
- Underwriter Pre-Markets Bonds Before Setting Interest Rate

# Negotiated Sale Process



# Preliminary Official Statement

PRELIMINARY OFFICIAL STATEMENT DATED           , 2022

## NEW ISSUE - FULL BOOK-ENTRY

RATING: S&P: "\_\_\_"  
See "RATING".

*In the opinion of Jones Hall, A Professional Law Corporation, San Francisco, California, Bond Counsel, subject, however, to certain qualifications described herein, under existing law, the interest on the Bonds is excluded from gross income for federal income tax purposes and such interest is not an item of tax preference for purposes of the federal alternative minimum tax. In the further opinion of Bond Counsel, such interest is exempt from California personal income taxes. Bond Counsel expresses no opinion regarding any other tax consequences caused by the ownership or disposition of, or the accrual or receipt of interest on, the Bonds. See "LEGAL MATTERS – Tax Exemption."*

**\$30,000,000\***

## ELECTION OF 2018 GENERAL OBLIGATION BONDS, SERIES 2022

**Dated: Date of Delivery**

**Due: September 1, as shown on inside cover**

**Cover Page.** This cover page contains information for quick reference only. It is not a summary of all the provisions of the Bonds. Investors must read the entire official statement to obtain information essential to making an informed investment decision.

**Authority and Purpose.** The captioned Election of 2018 General Obligation Bonds, Series 2022 (the "Bonds"), are being issued by the City of Campbell (the "City") pursuant to certain provisions of the California Government Code and resolutions of the City Council of the City adopted on May 17, 2022. The Bonds were authorized at an election of the registered voters of the City held on November 6, 2018, which authorized the issuance of general obligation bonds for the purpose of financing the acquisition and improvement of a police emergency operations center and a public library. The initial series of bonds under the 2018 authorization was issued in 2020. See "THE BONDS – Authority for Issuance" and "THE FINANCING PLAN" herein.

**Security.** The Bonds are general obligations of the City, payable solely from ad valorem property taxes levied by the City and collected by Santa Clara County (the "County"). The City Council is empowered and is obligated to annually levy ad valorem taxes for the payment of interest on, and principal of, the Bonds upon all property subject to taxation by the City, without limitation of rate or amount (except certain personal property that is taxable at limited rates). See "SECURITY FOR THE BONDS."

**Payments.** Interest on the Bonds accrues from the date of delivery and is payable semiannually on March 1 and September 1 of each year, commencing September 1, 2022, by check, draft or wire mailed to the person in whose name the Bond is registered. Payments of principal and interest on the Bonds will be paid by The Bank of New York Mellon Trust Company, N.A., as paying agent for the Bonds (the "Paying Agent"), to DTC for subsequent disbursement to DTC Participants who will remit such payments to the beneficial owners of the Bonds. See "THE BONDS – Description of the Bonds."

**Redemption.** The Bonds are subject to optional redemption and mandatory sinking fund redemption prior to maturity as described herein. See discussion of redemption under the heading "THE BONDS."

**Book-Entry Only.** The Bonds will be issued in book-entry form only, and will be initially issued and registered in the name of Cede & Co. as nominee of The Depository Trust Company ("DTC"). Purchasers will not receive physical certificates representing their interests in the Bonds. See APPENDIX E for additional information about the book-entry only system.

The following firm, serving as municipal advisor to the City, has structured this issue.

**NHA | ADVISORS**  
Financial & Policy Strategies.  
Delivered.

**Maturity Schedules**  
(See inside cover)

*The Bonds are offered when, as and if issued and received by the Underwriter and subject to the approval as to their legality by Jones Hall, A Professional Law Corporation, San Francisco, California, Bond Counsel. Certain legal matters will also be passed upon for the City by Jones Hall, A Professional Law Corporation, San Francisco, California, as Disclosure Counsel and for the Underwriter by Stradling Yocca Carlson & Rauth, A Professional Corporation, San Francisco, California. It is anticipated that the Bonds in definitive form will be available for delivery to Cede & Co., as nominee of The Depository Trust Company, on or about June 22, 2022.*

**STIFFEL**

The date of this Official Statement May \_\_, 2022.

*This Preliminary Official Statement and the information contained herein are subject to completion or amendment. These securities may not be sold nor may offers to buy be accepted prior to the time this Official Statement is delivered in final form. Under no circumstances shall this Preliminary Official Statement constitute an offer to sell or a solicitation of an offer to buy nor shall there be any sale of these securities in any jurisdiction in which such offer solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such jurisdiction.*

# Official Statement

NEW ISSUE - FULL BOOK-ENTRY

RATING: S&P: "AAA"  
See "RATING".

*In the opinion of Jones Hall, A Professional Law Corporation, San Francisco, California, Bond Counsel, subject, however to certain qualifications described herein, under existing law, the interest on the Bonds is excluded from gross income for federal income tax purposes and such interest is not an item of tax preference for purposes of the federal alternative minimum tax. In the further opinion of Bond Counsel, such interest is exempt from California personal income taxes. Bond Counsel expresses no opinion regarding any other tax consequences caused by the ownership or disposition of, or the accrual or receipt of interest on, the Bonds. See "LEGAL MATTERS – Tax Exemption."*

**\$30,000,000**  
**CITY OF CAMPBELL**  
**ELECTION OF 2018 GENERAL OBLIGATION BONDS,**  
**SERIES 2022**

**Dated: Date of Delivery**

**Due: September 1, as shown on inside cover**

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**Maturity Schedules**  
(See inside cover)

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**STIFEL**

The date of this Official Statement is May 24, 2022.

## MATURITY SCHEDULE\*

\$30,000,000\*  
CITY OF CAMPBELL  
ELECTION OF 2018 GENERAL OBLIGATION BONDS,  
SERIES 2022  
(Base CUSIP†: 134105)

Maturity Date (September 1)	Principal Amount	Interest Rate	Yield	Price	CUSIP† No.
2022	\$2,000,000	5.000%	1.600%	100.644	JF3
2023	1,710,000	5.000	1.900	103.632	JG1
2024	1,010,000	5.000	2.150	106.066	JH9
2025	495,000	5.000	2.310	108.227	JJ5
2026	520,000	5.000	2.380	110.389	JK2
2027	545,000	5.000	2.470	112.253	JL0
2028	575,000	5.000	2.580	113.762	JM8
2029	605,000	5.000	2.710	114.868	JN6
2030	635,000	5.000	2.780	116.159	JP1
2031	665,000	5.000	2.860	115.525 <sup>C</sup>	JQ9
2032	700,000	5.000	2.910	115.131 <sup>C</sup>	JR7
2033	730,000	5.000	3.020	114.269 <sup>C</sup>	JS5
2034	770,000	5.000	3.090	113.725 <sup>C</sup>	JT3
2035	805,000	5.000	3.180	113.030 <sup>C</sup>	JU0
2036	850,000	5.000	3.250	112.492 <sup>C</sup>	JV8
2037	890,000	5.000	3.300	112.110 <sup>C</sup>	JW6
2038	935,000	5.000	3.350	111.730 <sup>C</sup>	JX4
2039	980,000	5.000	3.400	111.351 <sup>C</sup>	JY2
2040	1,030,000	5.000	3.460	110.898 <sup>C</sup>	JZ9
2041	1,080,000	5.000	3.500	110.597 <sup>C</sup>	KA2
2042	1,135,000	5.000	3.520	110.448 <sup>C</sup>	KB0

\*Preliminary; subject to change.

† CUSIP® is a registered trademark of the American Bankers Association. CUSIP data herein are provided by CUSIP Global Services ("CGS"), managed on behalf of the American Bankers Association by FactSet Research Systems Inc. © 2022 CUSIP Global Services. All rights reserved. CUSIP® data herein is provided by CUSIP Global Services. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP® numbers are provided for convenience only. Neither of the City nor the Underwriter takes any responsibility for the accuracy of such numbers.

## MATURITY SCHEDULE

\$30,000,000  
CITY OF CAMPBELL  
ELECTION OF 2018 GENERAL OBLIGATION BONDS,  
SERIES 2022  
(Base CUSIP†: 134105)

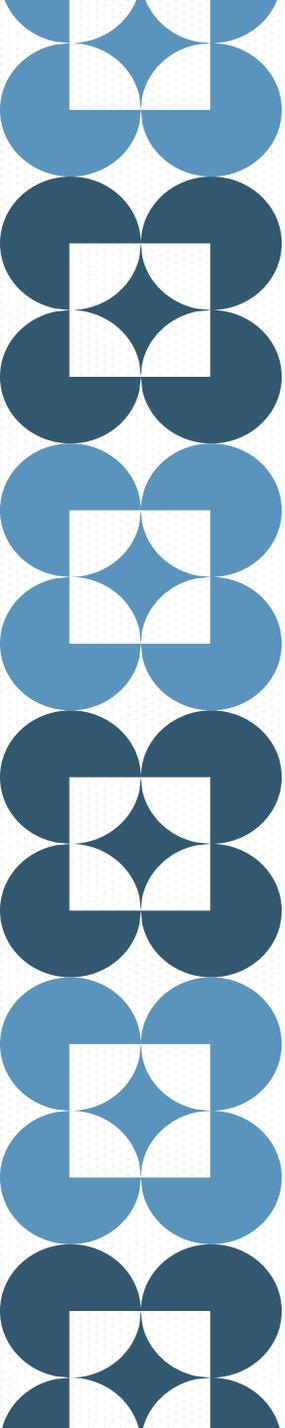
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2032	700,000	5.000	2.910	115.131 <sup>C</sup>	JR7
2033	730,000	5.000	3.020	114.269 <sup>C</sup>	JS5
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2035	805,000	5.000	3.180	113.030 <sup>C</sup>	JU0
2036	850,000	5.000	3.250	112.492 <sup>C</sup>	JV8
2037	890,000	5.000	3.300	112.110 <sup>C</sup>	JW6
2038	935,000	5.000	3.350	111.730 <sup>C</sup>	JX4
2039	980,000	5.000	3.400	111.351 <sup>C</sup>	JY2
2040	1,030,000	5.000	3.460	110.898 <sup>C</sup>	JZ9
2041	1,080,000	5.000	3.500	110.597 <sup>C</sup>	KA2
2042	1,135,000	5.000	3.520	110.448 <sup>C</sup>	KB0

**\$6,585,000 – 5.000% Term Bonds maturing September 1, 2047; Yield: 3.550%; Price: 110.223<sup>C</sup>; CUSIP†: KC8**

**\$4,750,000 – 4.000% Term Bonds maturing September 1, 2050; Yield: 4.050%; Price: 99.159; CUSIP†: KD6**

<sup>C</sup> Priced to the first optional redemption date of September 1, 2030.

† CUSIP® is a registered trademark of the American Bankers Association. CUSIP data herein are provided by CUSIP Global Services ("CGS"), managed on behalf of the American Bankers Association by FactSet Research Systems Inc. © 2022 CUSIP Global Services. All rights reserved. CUSIP® data herein is provided by CUSIP Global Services. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP® numbers are provided for convenience only. Neither of the City nor the Underwriter takes any responsibility for the accuracy of such numbers.



# Continuing Disclosure

- SEC Rule 15c2-12 requires annual reporting of financial information
- Disclosures are submitted through the Electronic Municipal Market Access (EMMA) website
- Continuing disclosure exemptions:
  - Bond issued before July 1995
  - Issues less than \$1 million
  - Short-term debt (18 months or less)
  - Private placements
  - Sold with minimum denominations of \$100,000
  - 35 or fewer sophisticated investors

# Bond Closing Flow of Funds

Issuer



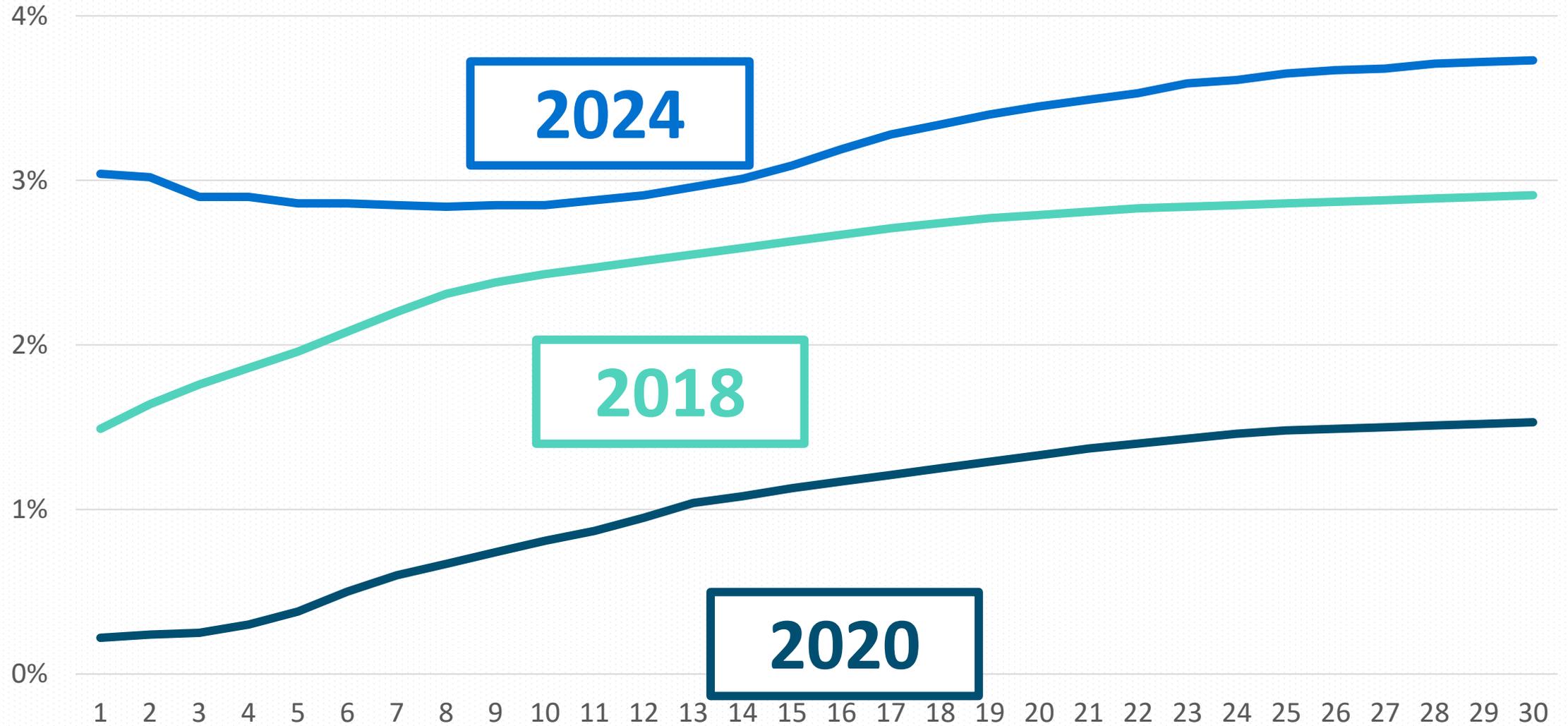
Underwriter



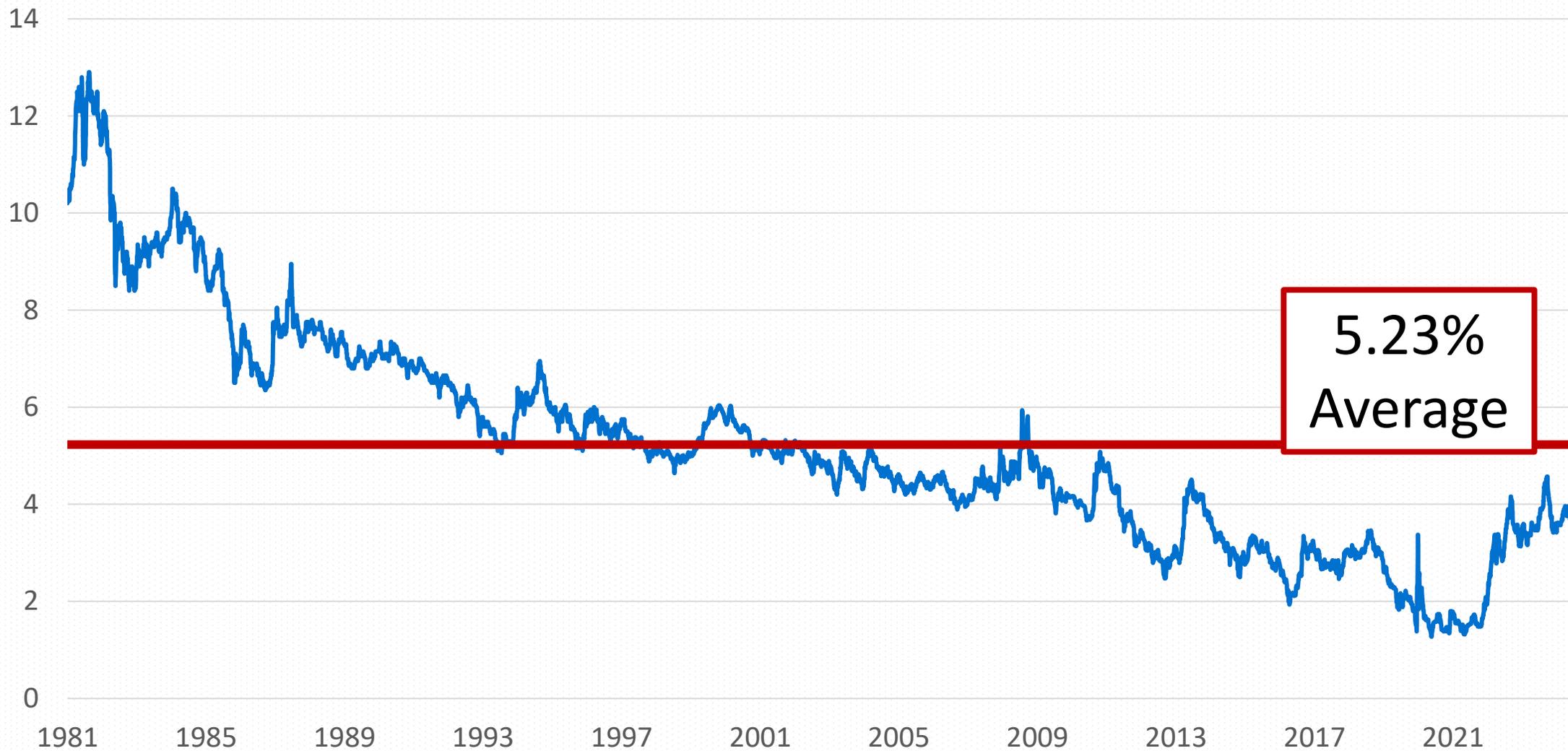
Bondholders



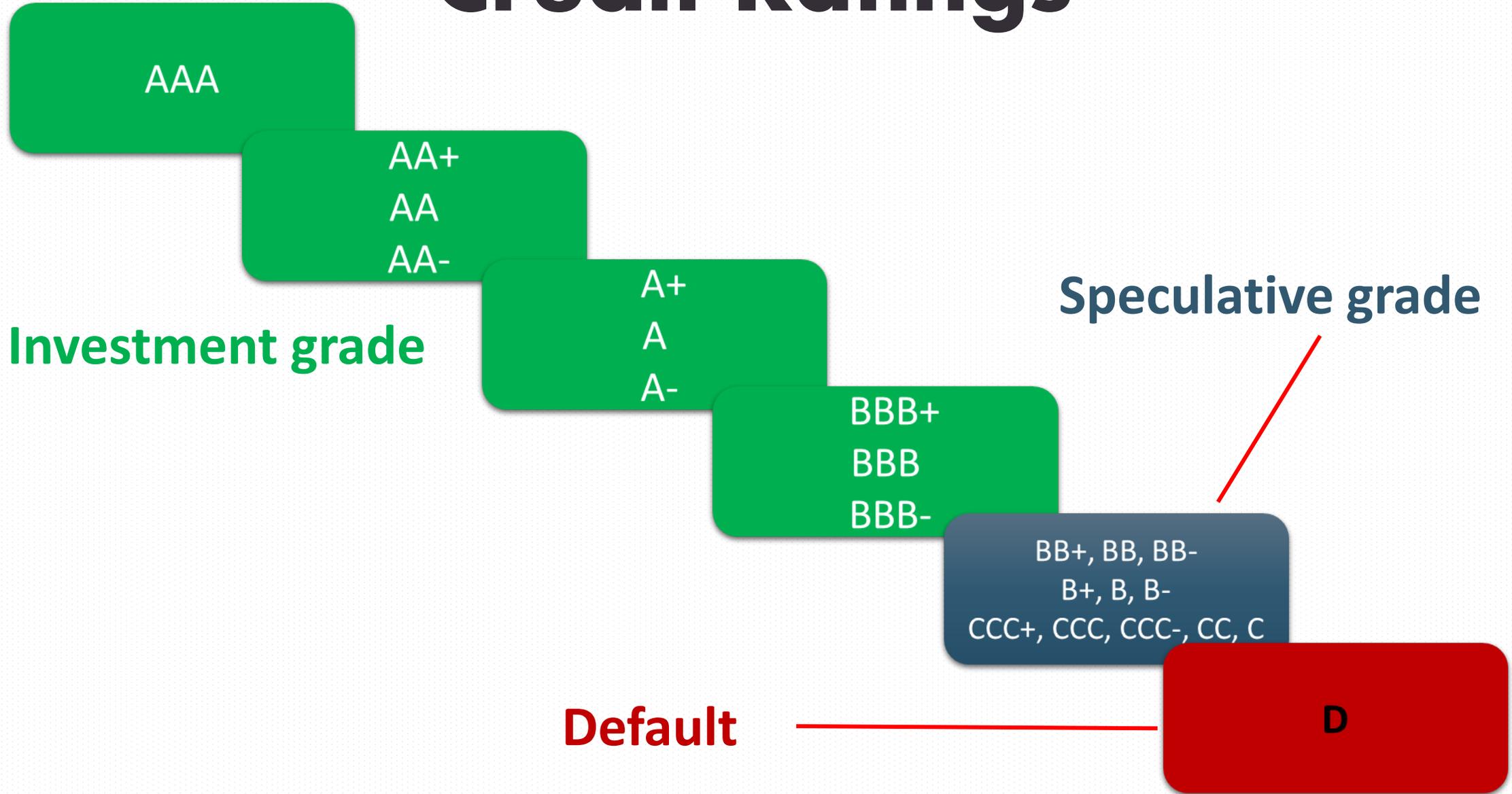
# Municipal Market Data (MMD) Yield Curve



# Historical 30-Year MMD

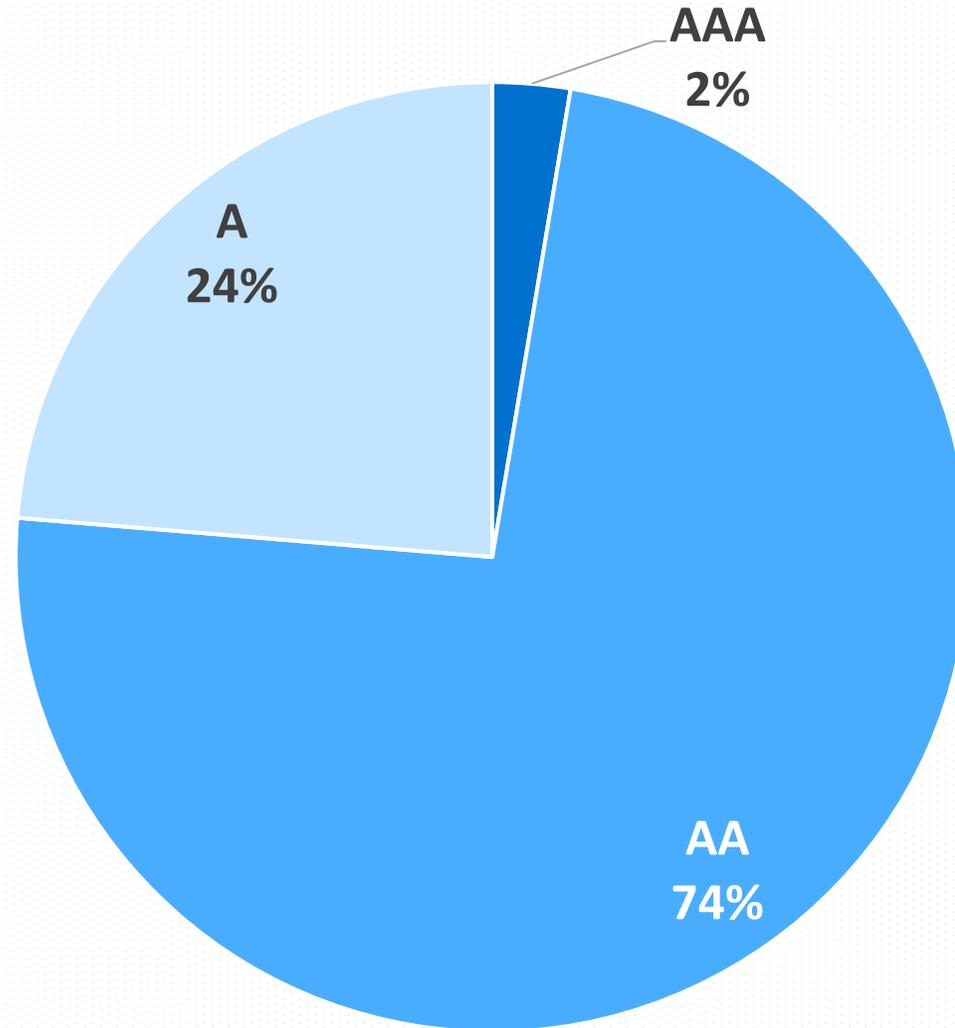


# Credit Ratings



# S&P Ratings: CA Counties

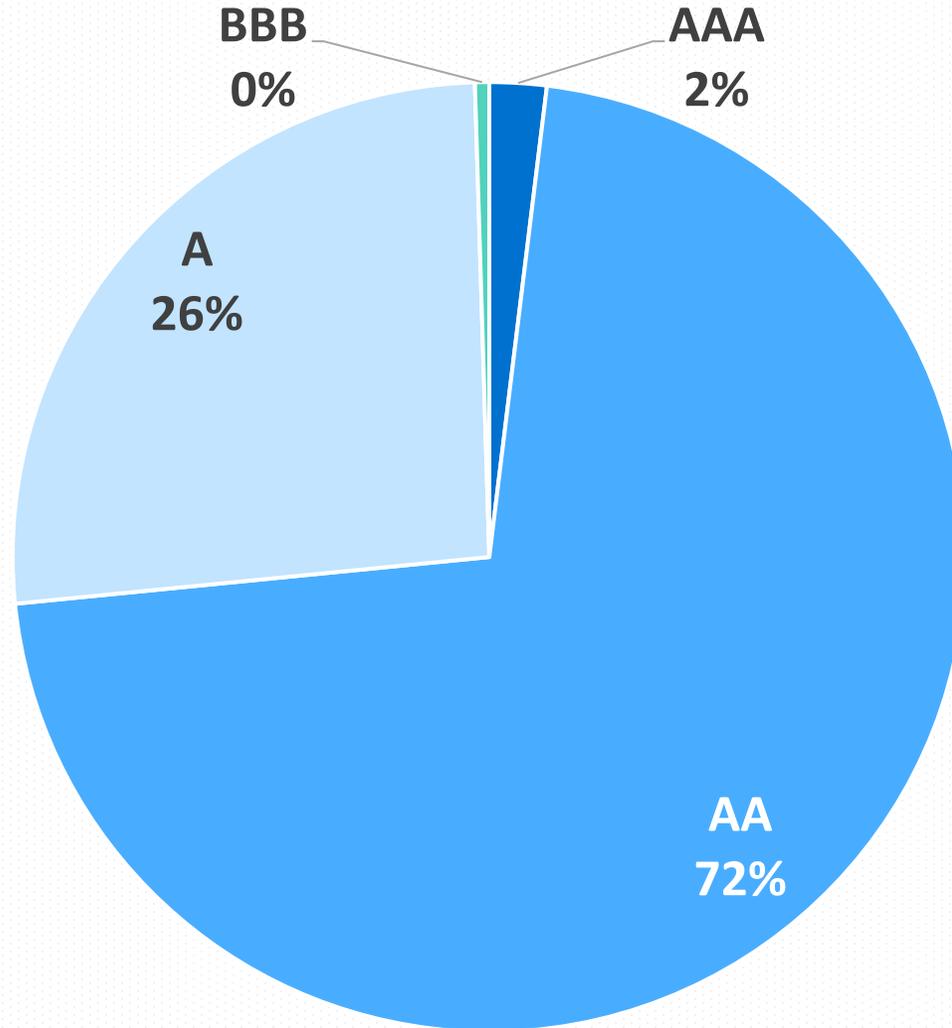
39 Ratings



*As of 10/12/2023*

# S&P Ratings: CA Municipalities

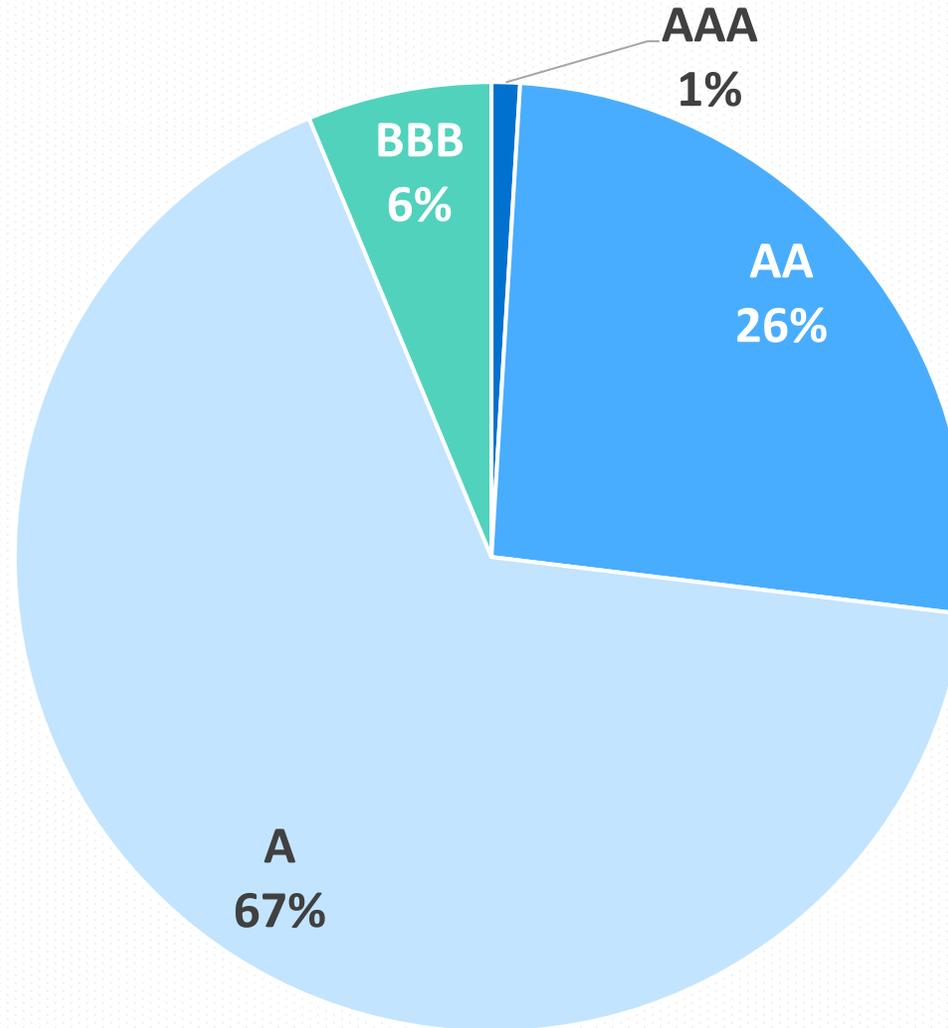
222 Ratings



As of 10/12/2023

# S&P Ratings: CA Special Assessment Districts

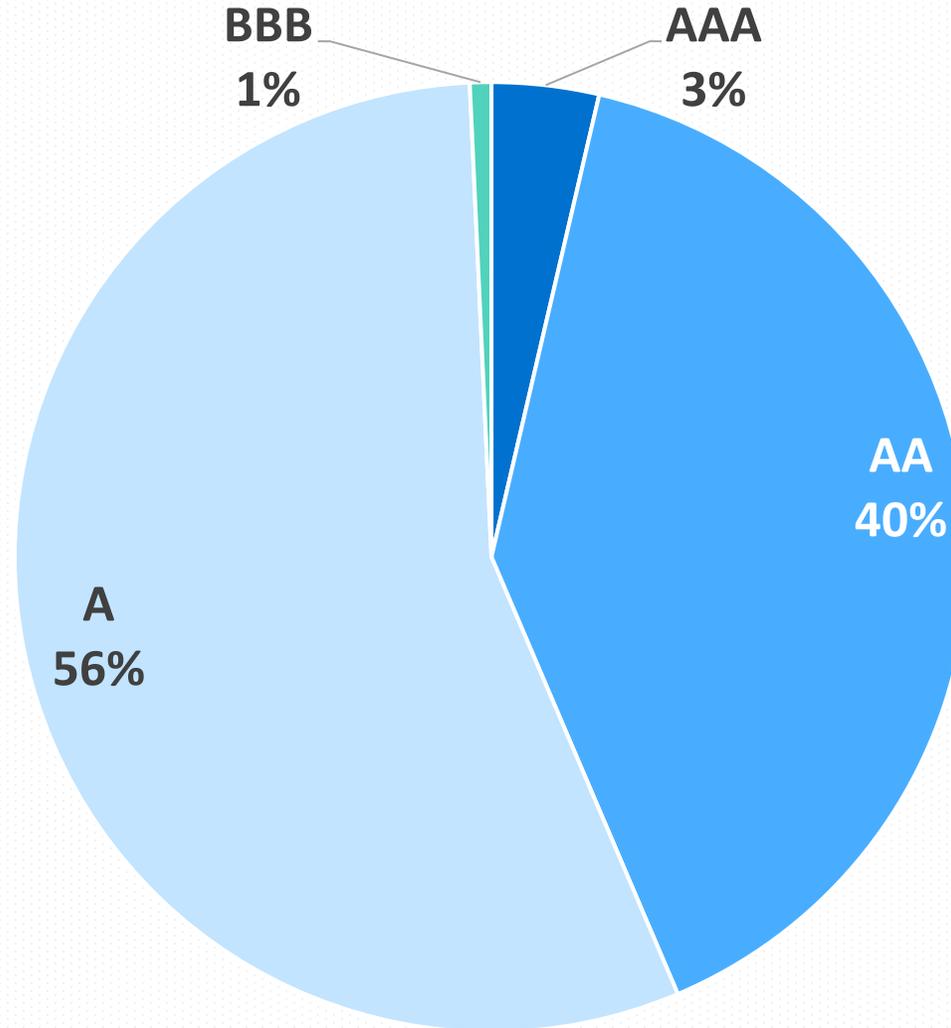
208 Ratings



As of 7/16/2024

# S&P Ratings: CA Schools

688 Ratings



*As of 8/30/2023*

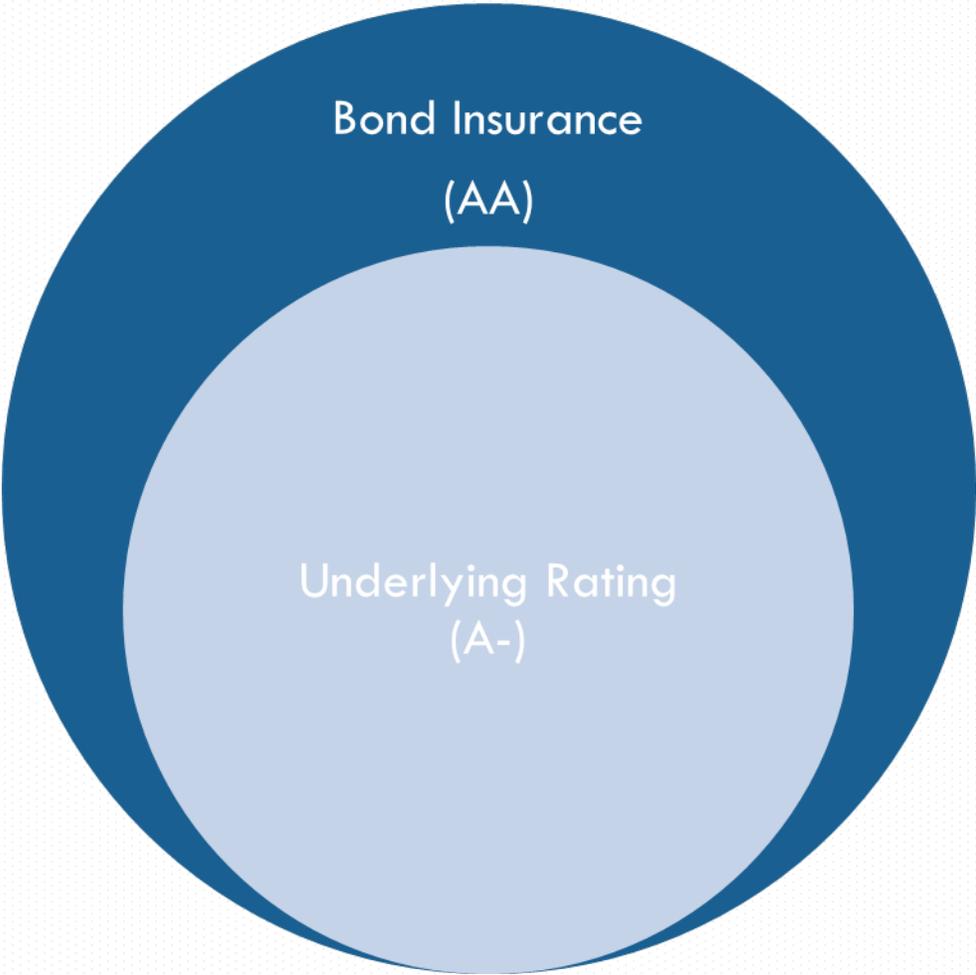
# What's the Credit Rating?

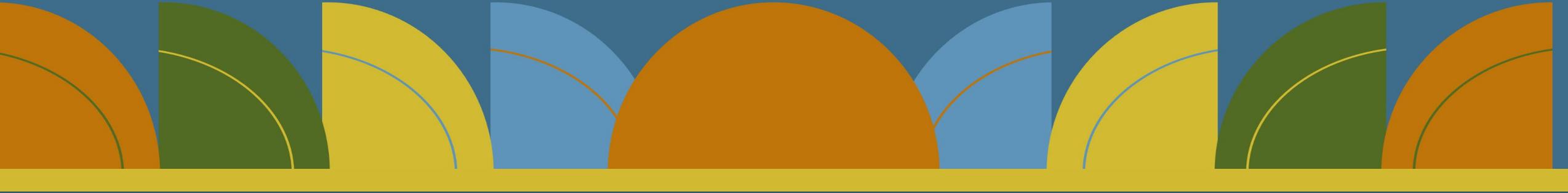


CALIFORNIA REPUBLIC



# Credit Enhancements



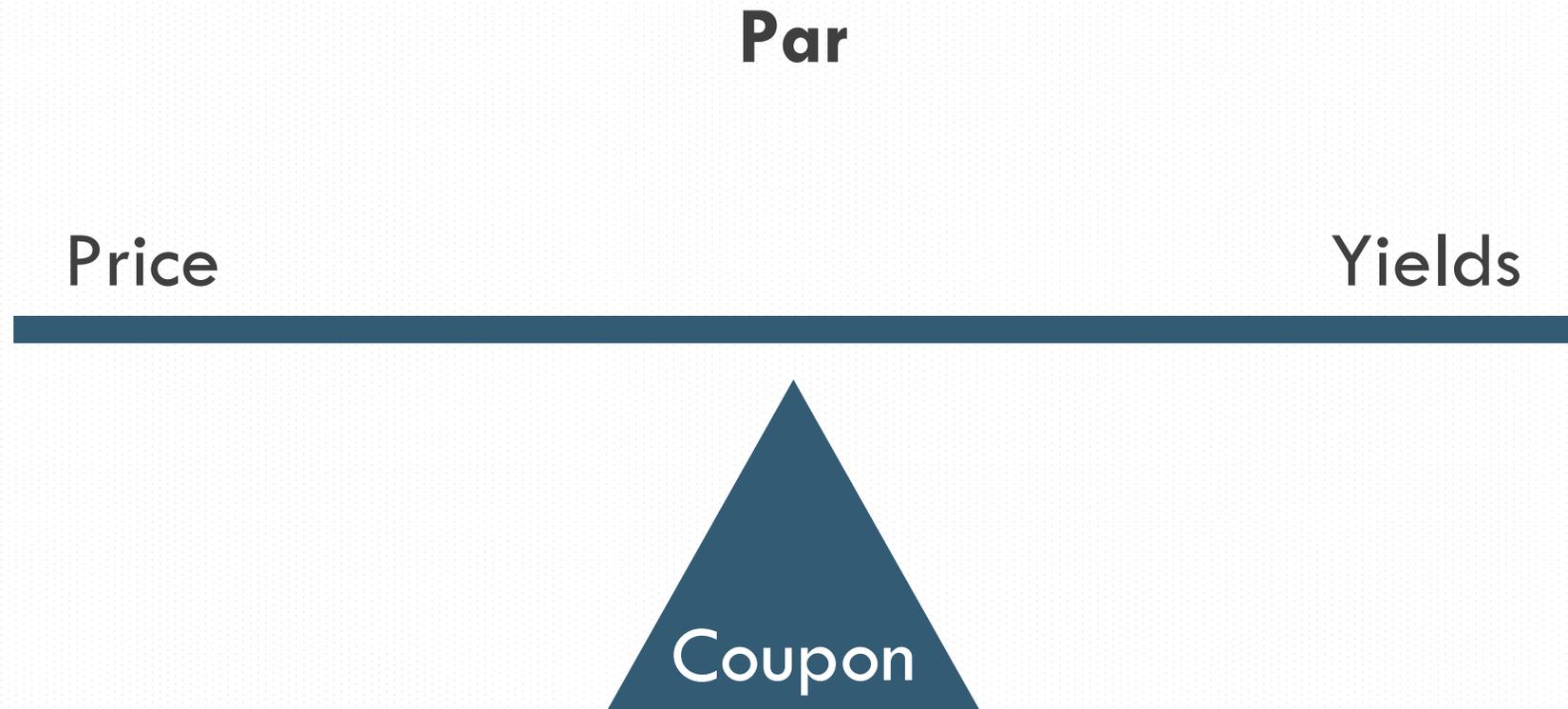


# **BASIC BOND CHARACTERISTICS**



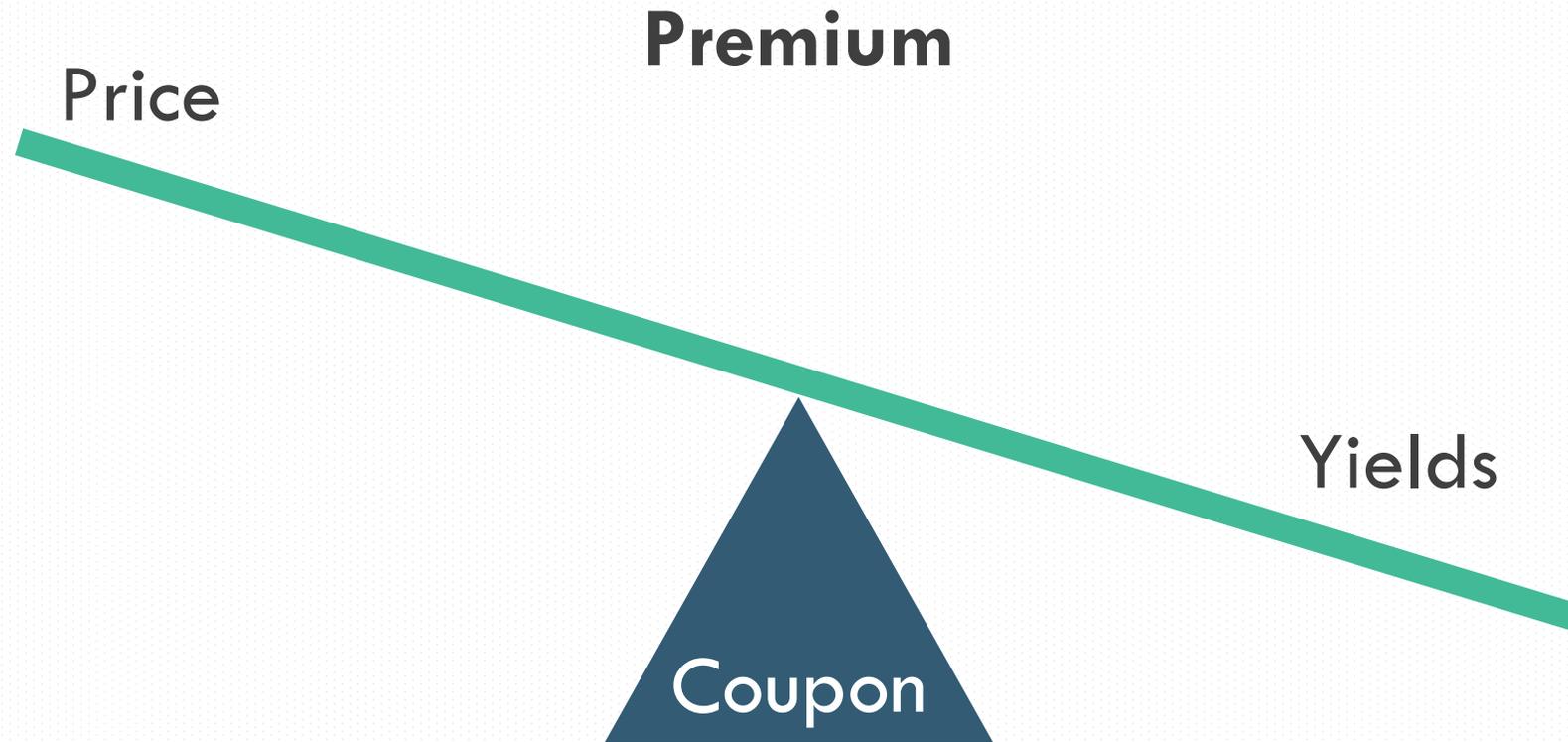
# Bond Pricing and Yield

- Prices and yields are inversely correlated



# Bond Pricing and Yield

- Prices and yields are inversely correlated



# Bond Pricing and Yield

- Prices and yields are inversely correlated



# Pricing the Bonds

	Maturity Date	Coupon	Market Yield	Price
	12/1/2023	5.00%	4.50%	102.195
Par	12/1/2024	5.00%	= 5.00%	100.000
	12/1/2025	5.00%	5.50%	97.865



# Pricing the Bonds

	Maturity Date	Coupon	Market Yield	Price
Premium	12/1/2023	5.00%	4.50%	102.195
	12/1/2024	5.00%	5.00%	100.000
	12/1/2025	5.00%	5.50%	97.865

102.195

5.00%

4.50%

Price

Coupon

Yield

# Pricing the Bonds

Maturity Date	Coupon	Market Yield	Price
12/1/2023	5.00%	4.50%	102.195
12/1/2024	5.00%	5.00%	100.000
12/1/2025	5.00%	5.50%	97.865

Discount



# Investor Preferences

Issuer	Issuer	Gotham City		
Type of Bond	Deal	2022 General Obligation Bonds		
Size of Bond	Par	\$4.120.000		
Credit Rating	Tax Status	Tax-Exempt		
	Rating	AAA		
	Par Call Date	12/1/2032		

Maturity	PAR AMOUNT	COUPON RATE	YIELD
2023	\$175,000	5.00	2.85
2024	\$185,000	5.00	2.95
2025	\$190,000	5.00	3.10
2026	\$200,000	5.00	3.20
2027	\$205,000	5.00	3.40
2028			
2029			
2030			
2031			
2032	\$2,000,000	4.25	4.50

# Investor Preferences

Issuer	Gotham City		
Deal	2022 General Obligation Bonds		
Par	\$4,120,000		
Tax Status	Tax-Exempt		
Rating	AAA		
Par Call Date	12/1/2032		
Maturity	PAR AMOUNT	COUPON RATE	YIELD
2023	\$175,000	5.00	2.85
2024	\$185,000	5.00	2.95
2025	\$190,000	5.00	3.10
2026	\$200,000	5.00	3.20
2027	\$205,000	5.00	3.40
2028			
2029			
2030			
2031			
2032	\$2,000,000	4.25	4.50

Serial vs Term

Premium

vs

Discount

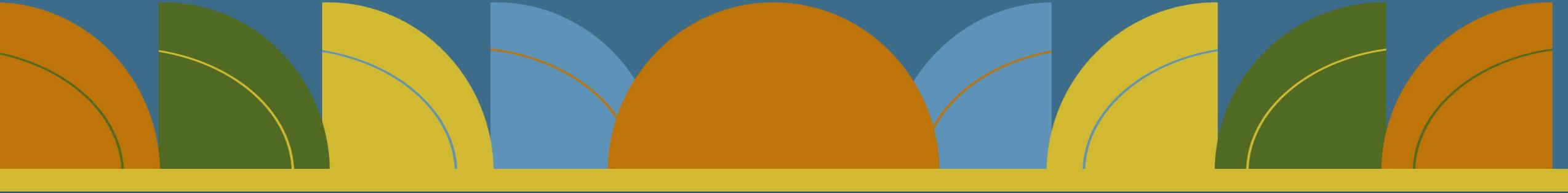
# Investor Preferences

Issuer	Gotham City			
Deal	2022 General Obligation Bonds			
Par	\$4,120,000			
Tax Status	Tax-Exempt			
Rating	AAA			
Par Call Date	12/1/2032			
	<b>Maturity</b>	<b>PAR AMOUNT</b>	<b>COUPON RATE</b>	<b>YIELD</b>
	2023	\$175,000	5.00	2.85
	2024	\$185,000	5.00	2.95
	2025	\$190,000	5.00	3.10
	2026	\$200,000	5.00	3.20
	2027	\$205,000	5.00	3.40
	2028			
	2029			
	2030			
	2031			
	2032	\$2,000,000	4.25	4.50

Retail

Professional  
Retail/SMA

Institutional



# **BASIC BOND MATH**



# Bond Price

- **Bond Price:** Price at which the bond is sold to investors

- **Equation:**

$$\text{Bond Price} = \frac{C}{(1+i)} + \frac{C}{(1+i)^2} + \dots + \frac{C}{(1+i)^n} + \frac{M}{(1+i)^n}$$

- C = Coupon payment
  - i = Interest rate (required yield)
  - M = Value at maturity
  - n = Number of payments
- **Excel 'PRICE' Function:**
    - =PRICE(delivery date, maturity date, coupon, yield, value at maturity, frequency of coupons, day count basis)

Inputs	Values
Delivery Date (settlement)	9/1/2022
Maturity Date	9/1/2032
Coupon (rate)	5.00%
Yield	4.50%
Maturity Value (redemption)	\$100
Coupon Payments/Year	2
Day Count Basis	0
<b>PRICE function</b>	<b>\$103.99</b>

# Yield to Maturity (YTM)

- **Yield to Maturity (YTM):** Total return anticipated on a bond if held until maturity

- **Equation:**

$$\text{Bond Price} = \frac{\text{Cashflow 1}}{(1 + \text{yield})^1} + \frac{\text{Cashflow 2}}{(1 + \text{yield})^2} + \dots + \frac{\text{Last Cashflow}}{(1 + \text{yield})^n}$$

- Back-solves bond price equation to determine yield, given bond price and coupon:

- **Excel 'YIELD' Function:**

=YIELD(delivery date, maturity date, coupon, price, value at maturity, coupon payments per year, day count basis)

Inputs	Values
Delivery Date (settlement)	9/1/2022
Maturity Date	9/1/2032
Coupon (rate)	5.00%
Purchase Price	\$110
Maturity Value (redemption)	\$100
Coupon Payments/Year	2
Day Count Basis	0
<b>YIELD function</b>	<b>3.79%</b>

# True Interest Cost (TIC)

- **True Interest Cost (TIC):** Rate necessary to discount the amounts payable on the bond to the purchase price received
  - Effective borrowing rate on Bond inclusive of P&I and all costs associated with Bond issuance
  - Proxied by internal rate of return (IRR)
- **Excel 'IRR' function:**  
=IRR(values, guess)
  - Values: Series of payments (first cash inflow must have negative value)
  - Guess: Gives Excel a place to start solving

Principal and Interest Payment Date	Annual Debt Service Amount
Issue Bonds	\$(5,000,000)
12/1/2024	\$1,250,000
12/1/2025	\$1,250,000
12/1/2026	\$1,250,000
12/1/2027	\$1,250,000
12/1/2028	\$1,250,000
<b>IRR Function (TIC)</b>	<b>7.93%</b>

# Debt Service (DS) Payments

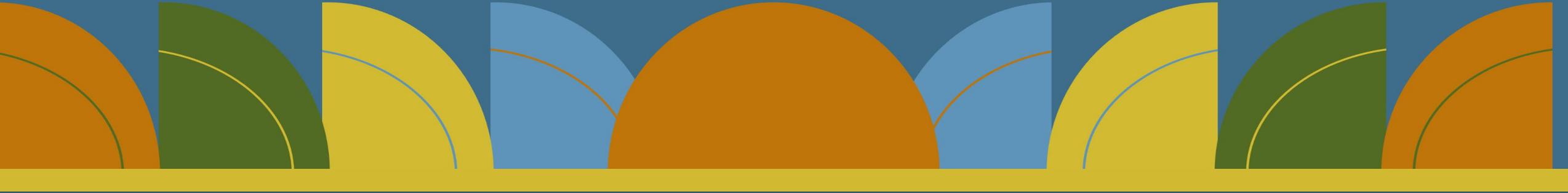
- If public agency needs to issue Bonds to pay for a police station, knowing the expected cost of the station, how can you approximate the yearly debt service?

- Excel Function

=PMT(Interest rate, Number of Periods, Present Value, Future Value, Payment Due Period)

Inputs	Values
Coupon (rate)	5.00%
Years to Maturity (nper)	30
Present Value (PV)	\$30,000,000
Face Value (FV)	\$0
Payment Due period	0
<b>PMT Function (Annual DS)</b>	<b>(\$1,951,543)</b>

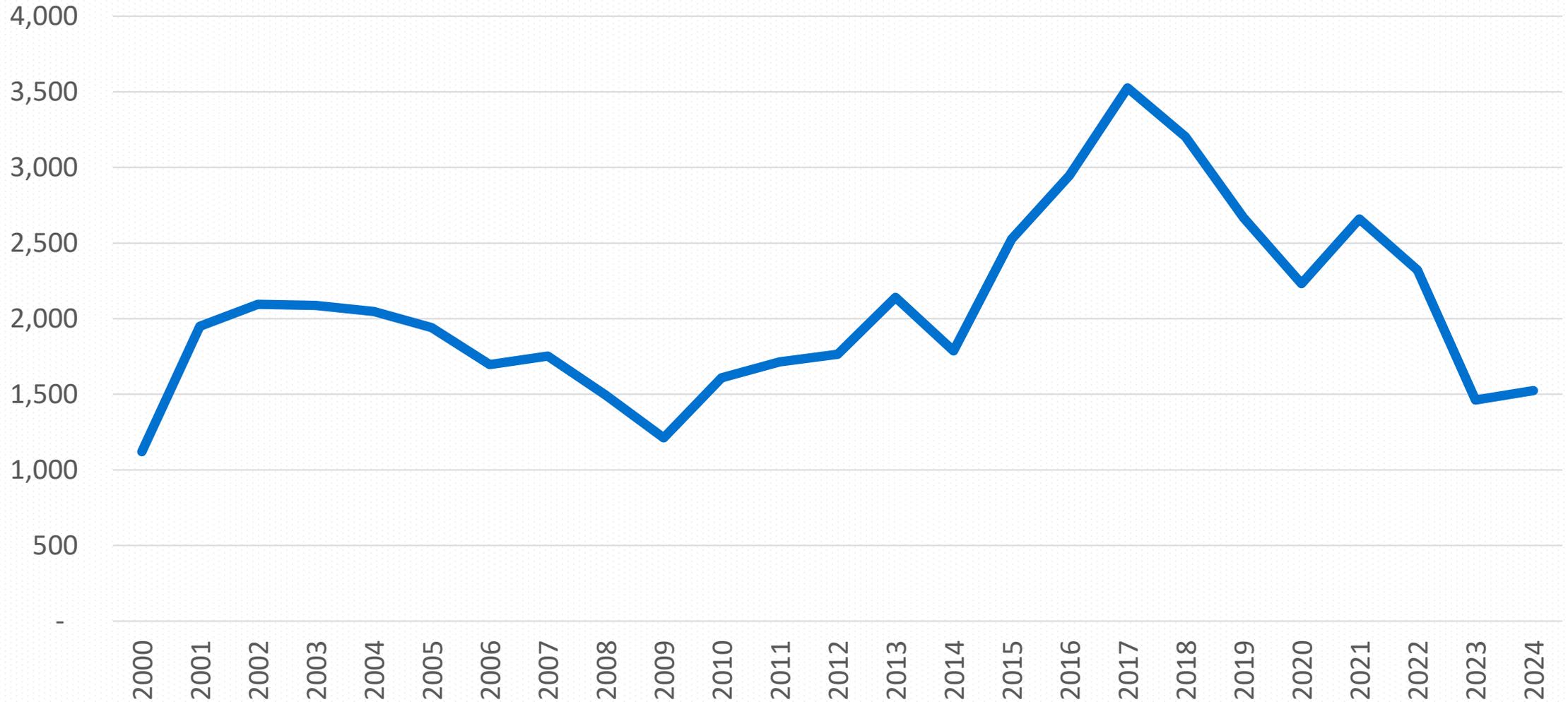
- “PMT” value returned is negative to show cash payments going out
- Includes both principal and interest component



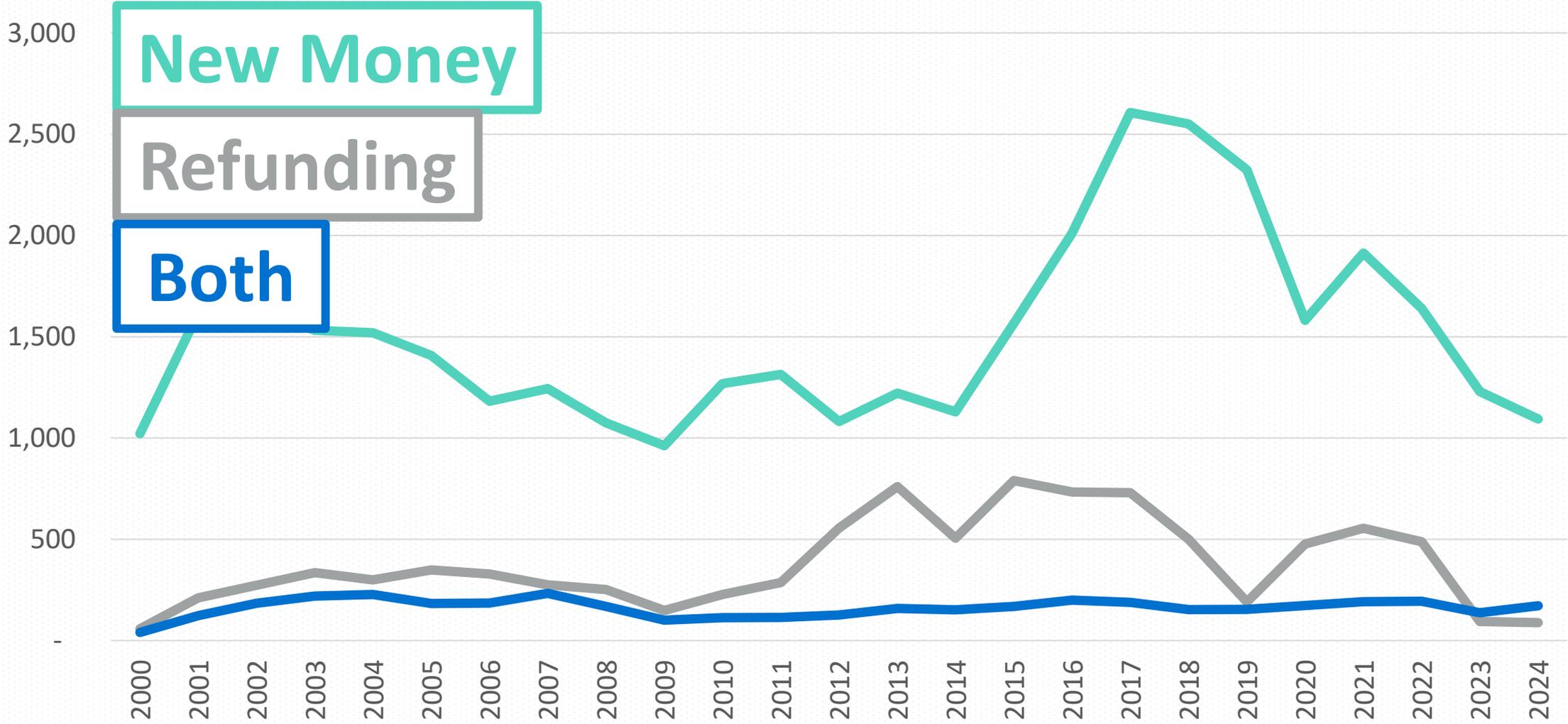
# **FUN STATS**



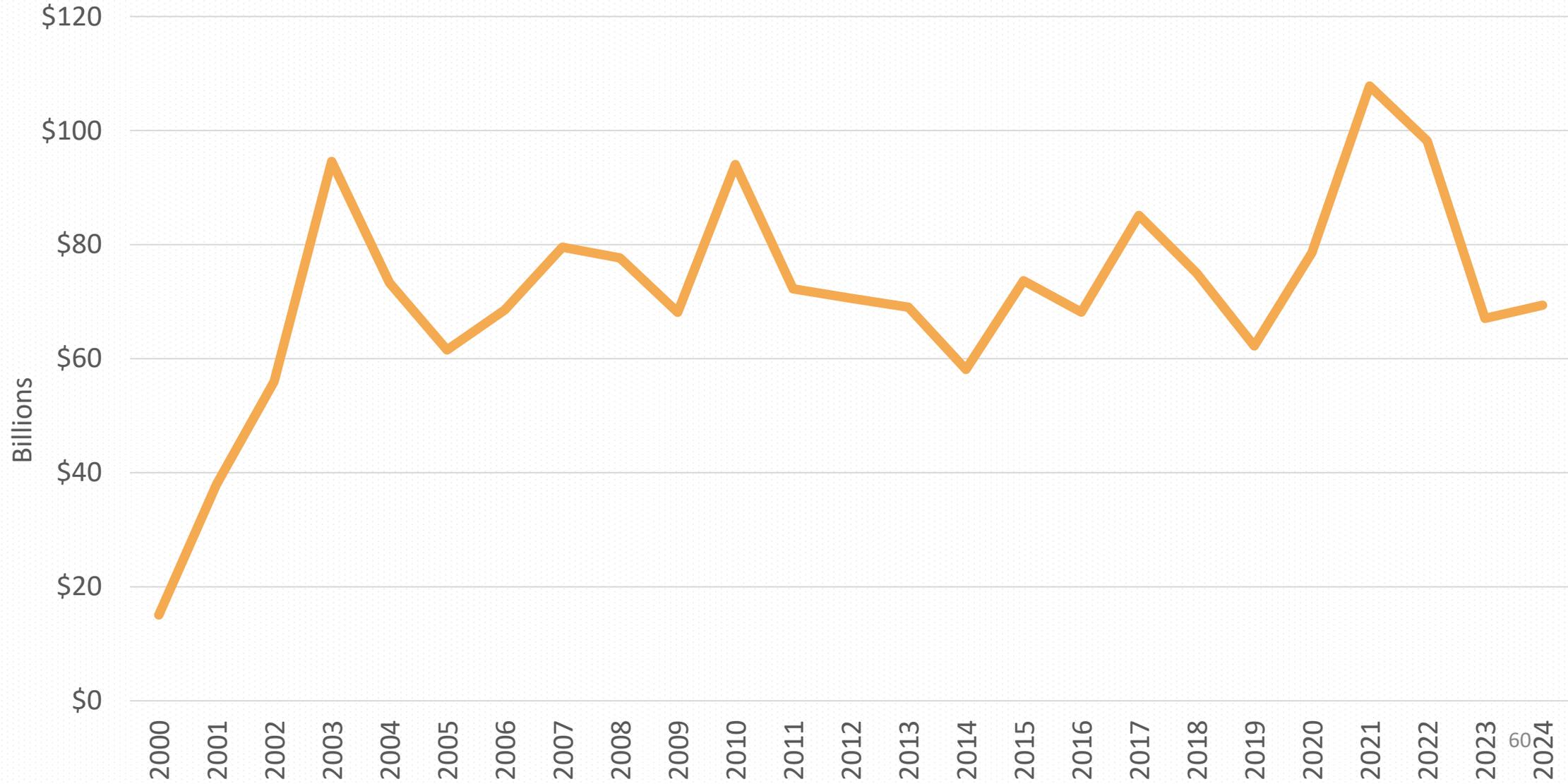
# Historical California Transactions



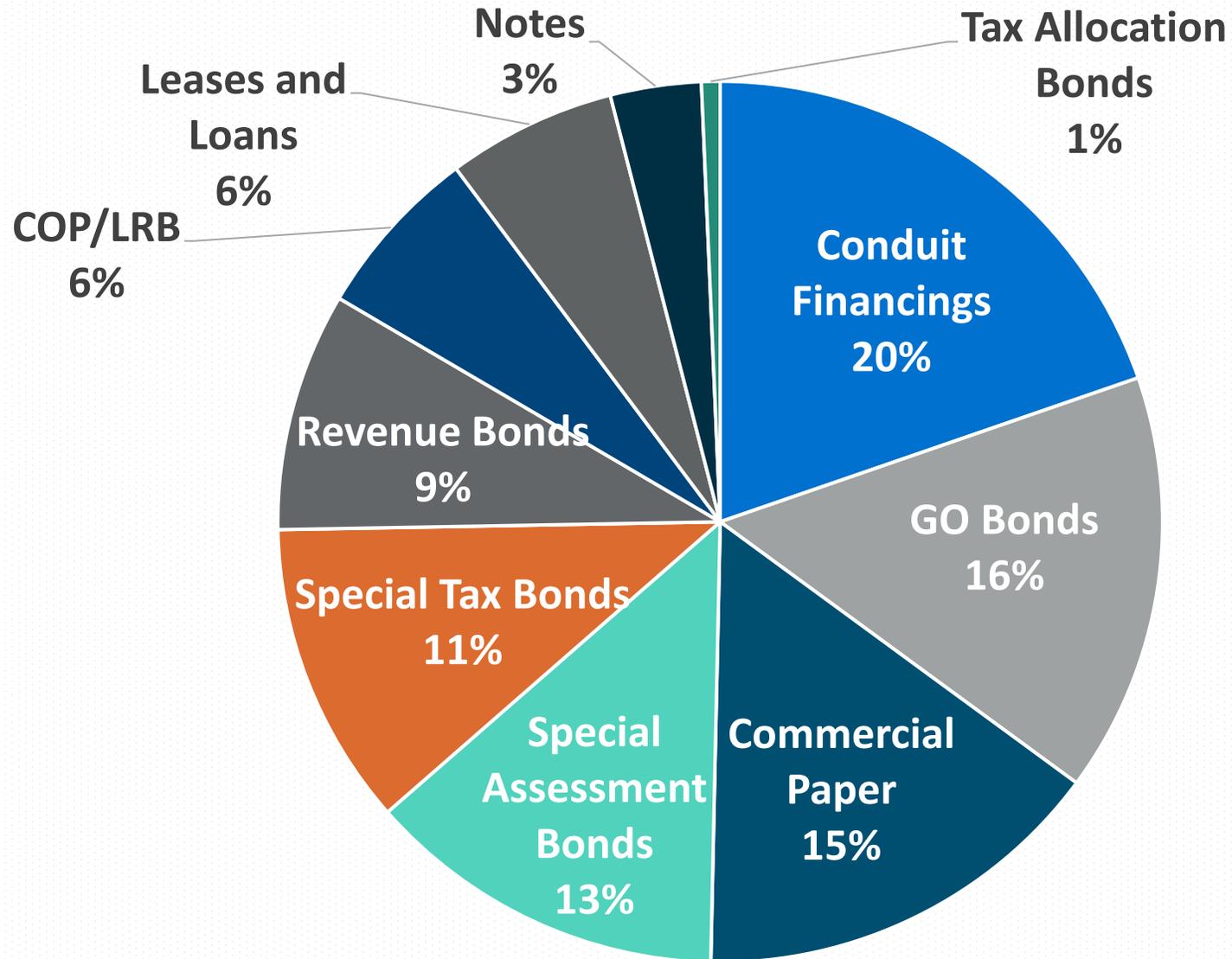
# Transaction Types



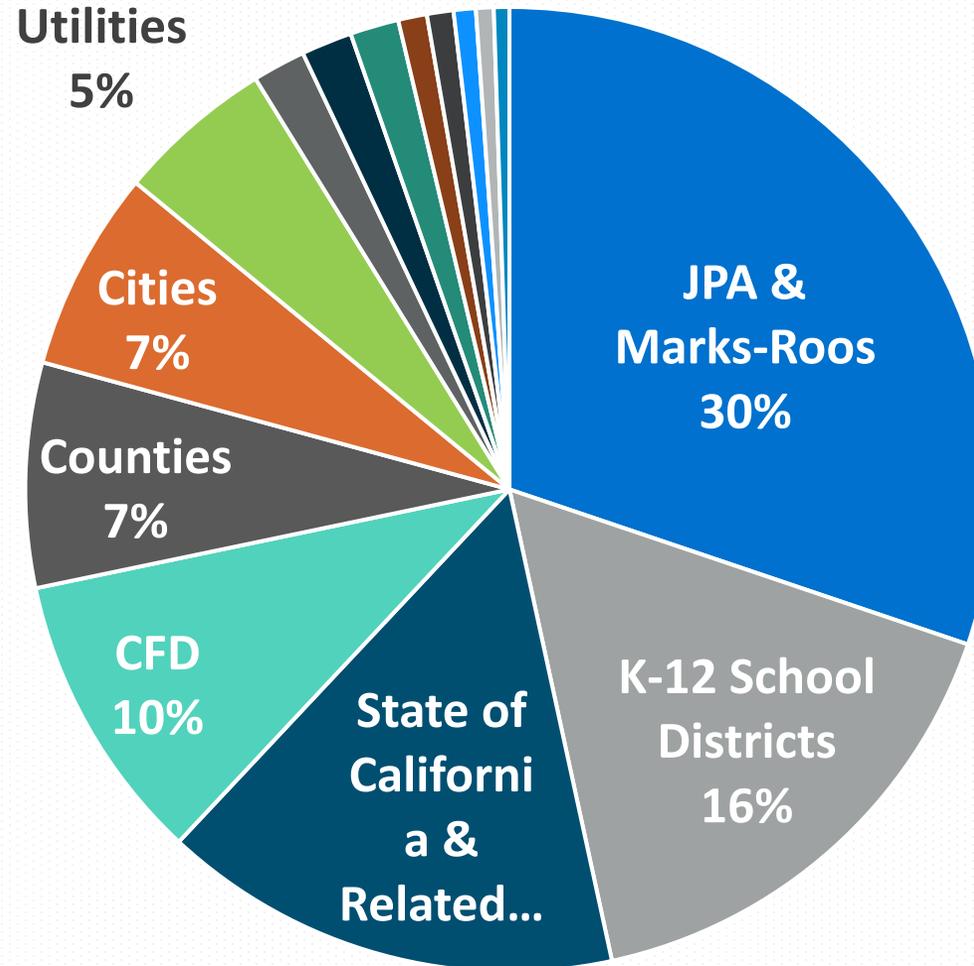
# Annual Volume (Principal)



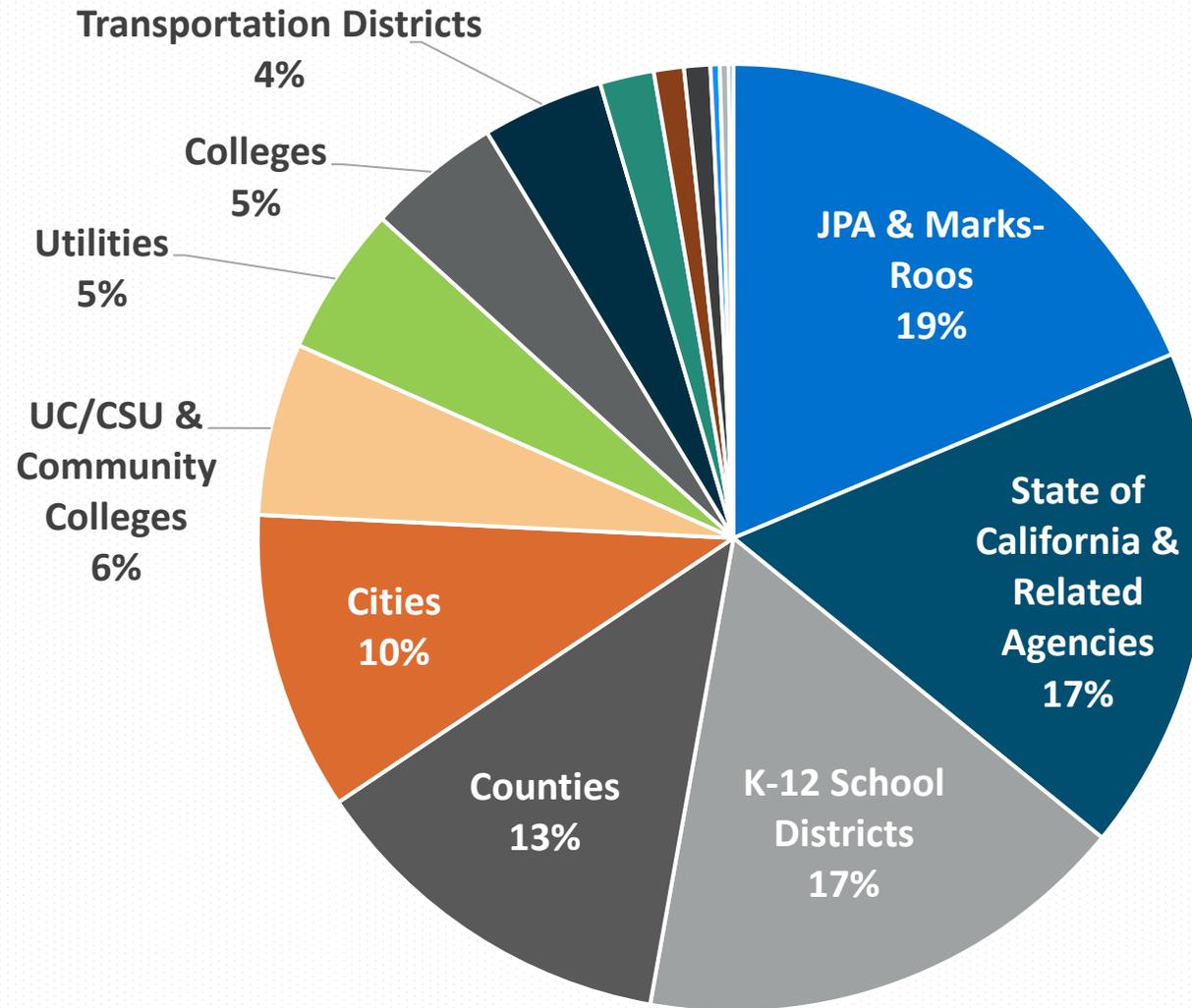
# 2023-2024 Transactions



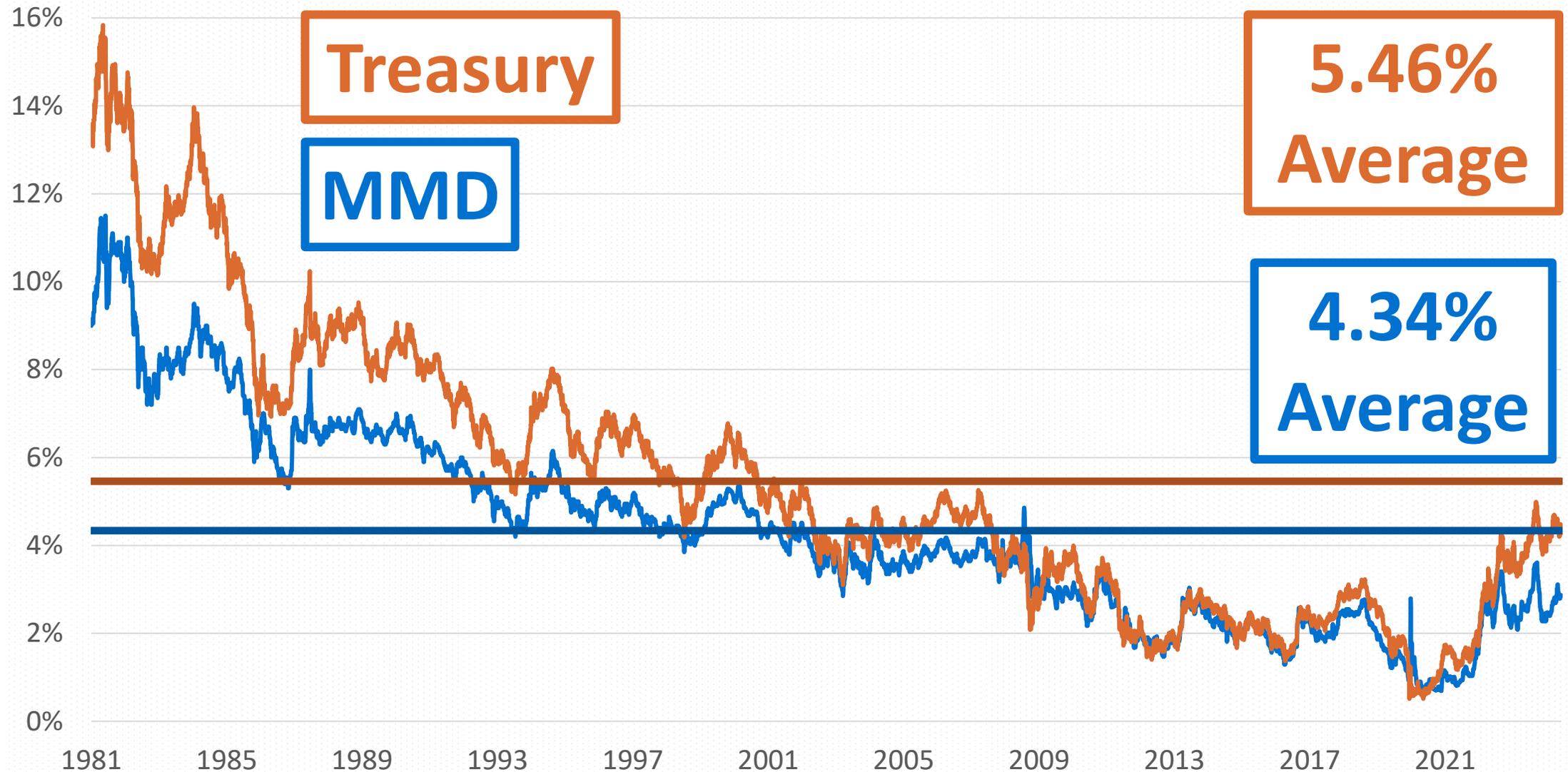
# 2023-2024 Issuer Transactions



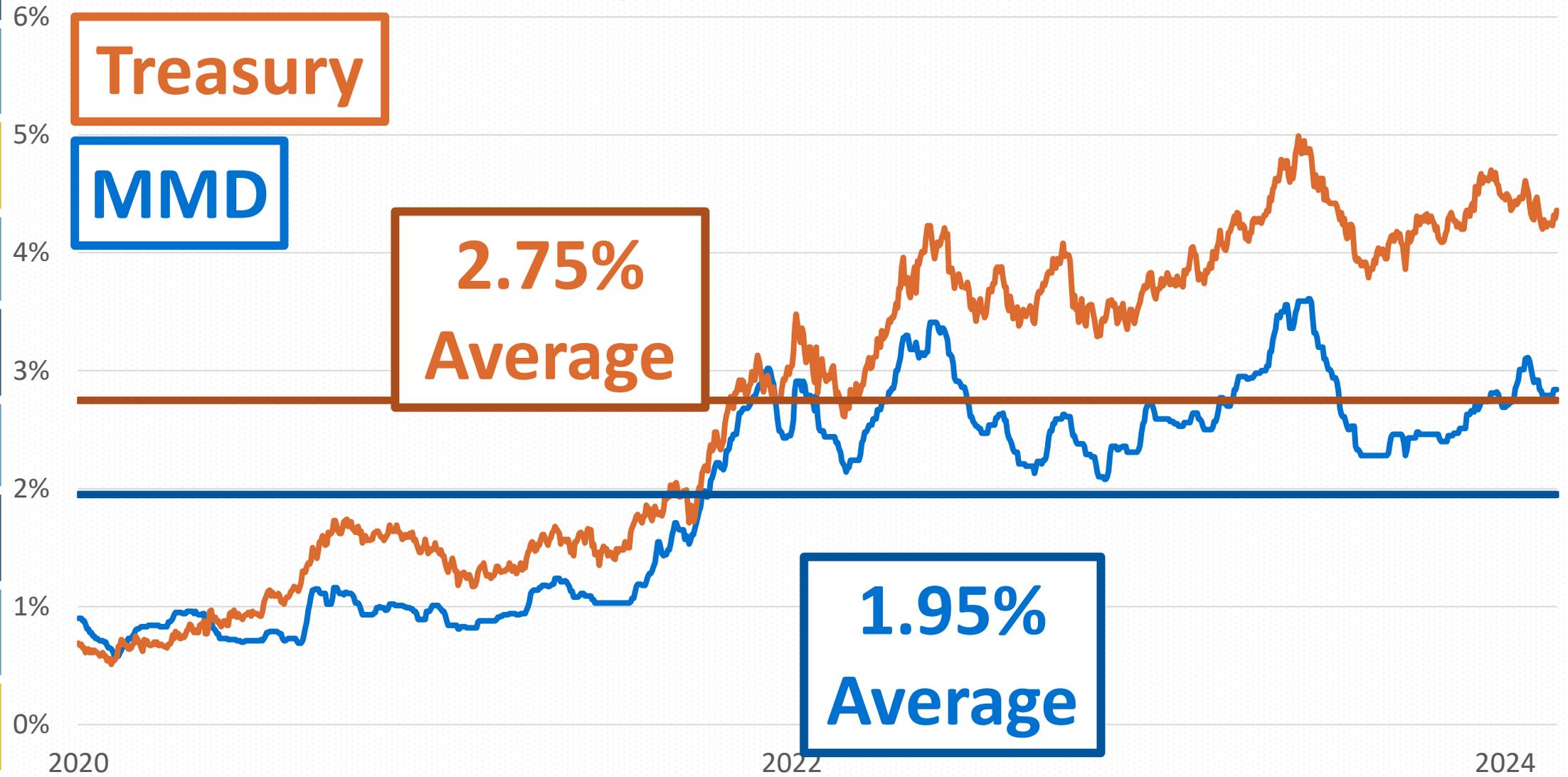
# 2023-2024 Volume (by Par)



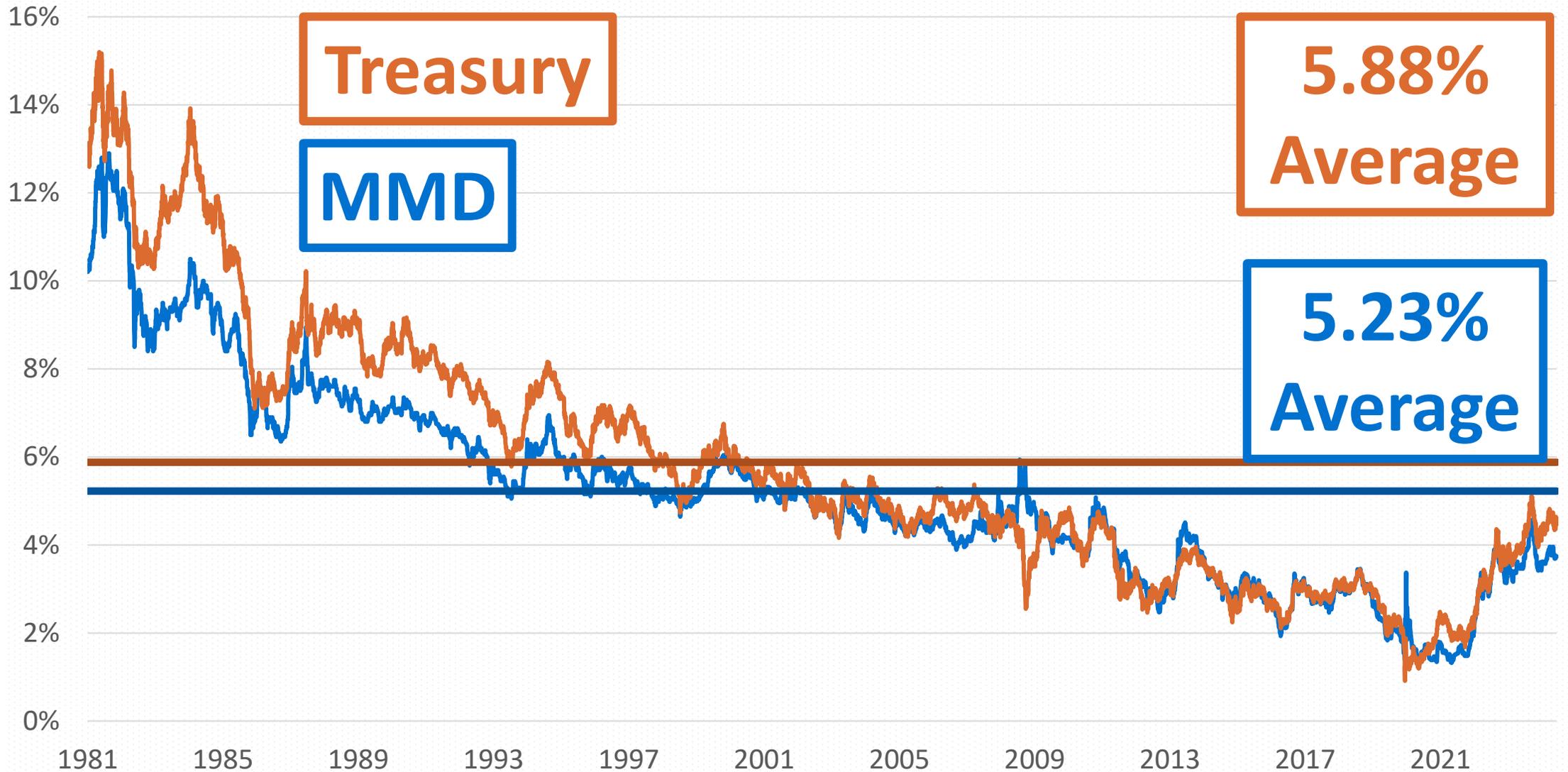
# MMD vs. Treasury (10-year)



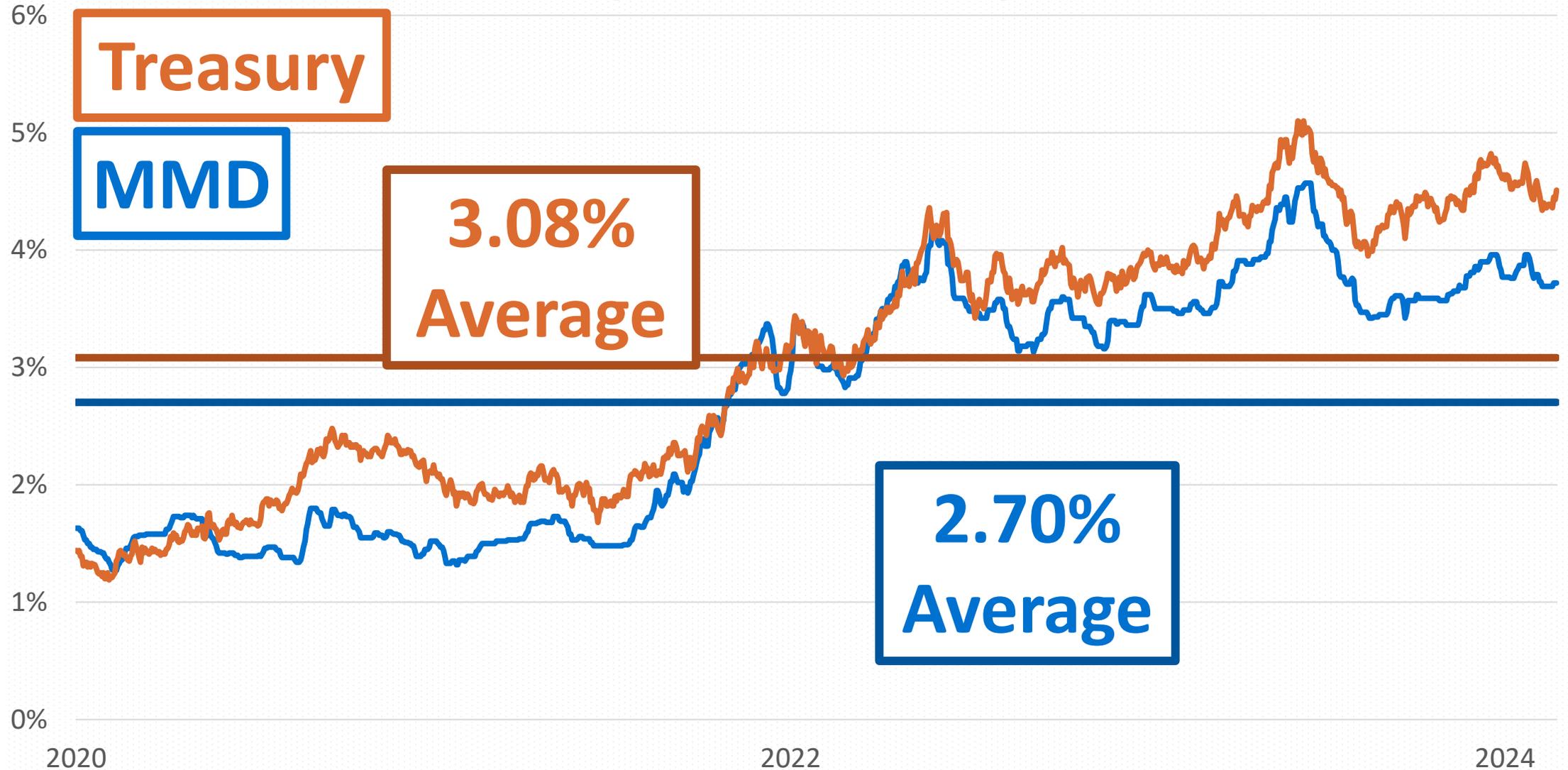
# MMD vs. Treasury (10-year) (2021-2024)



# MMD vs. Treasury (30-year)



# MMD vs. Treasury (30-year) (2021-2024)



Treasury

MMD

3.08%  
Average

2.70%  
Average

# QUESTIONS?

**CRAIG HILL**

*Managing Principal*  
NHA Advisors

