CPIM

Center For Public Investment Management

A PROGRAM BROUGHT TO YOU BY:

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Treasurer of Ohio

# FIN 106: FUN-damentals of Public Finance

# Your Presenters

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# Topics To Be Discussed

- Debt & Debt Limits
- General Obligations
- Revenue (Special) Obligations
- Components of a Bond
- State Law Issues
- Federal Securities Law Issues
- Federal Tax Law Issues

# Debt

Q: What is debt?

- *Webster's Dictionary*: "something owed … obligation"
- A duty or obligation to pay money, deliver goods or render service under an express or implied agreement
  - Example:  obligation to make annual payments, plus interest for the cost associated with the reconstruction of a City street
- Repayment terms evidenced by a Note

Q: How does an Ohio political subdivision borrow money?

Q: Can I go to the local bank and get a loan?

# Debt

***The Ohio Constitution (Article XII, Section 11) says:***

"No bonded indebtedness of the state, or any political subdivisions thereof, shall be incurred or renewed unless, in the legislation under which such indebtedness is incurred or renewed, provision is made for levying and collecting annually by taxation an amount sufficient to pay the interest on said bonds, and to provide a sinking fund for their final redemption at maturity."

**State law dictates the rules for most issuers:**

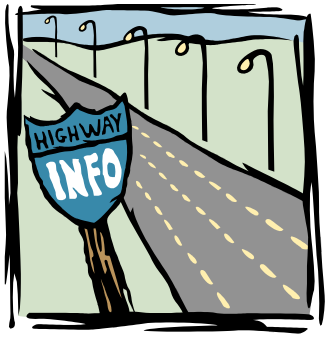
- Limits amount of debt that can be issued
- Places fiscal responsibility on its officials
- Protects taxpayers from unlimited debt burden
- Legislation required to authorize borrowing
- Legislation must authorize security, source of repayment and other terms

# Question

- What are three examples of governmental assets that are commonly financed with Bonds in Ohio?

# State Law – Purpose

Subdivisions may issue bonds to finance projects of all types. Many projects such as airports, roads, sewers, and schools are secured by payments from tax collections or project revenues.



# Eligible projects

- Water and sanitary sewer improvements
- Park land, greenspace, land for road construction
- Administration buildings, maintenance buildings
- Fire and police stations
- Community, recreation and convention centers
- Road and street improvements, extensions
- Fire equipment, fire trucks, road equipment, trucks
- Landscaping, furniture, office equipment
- Energy conservation, 911 systems

# Questions

- Who can name two common security structures that are used when issuing bonds?
- What other financing structures are available to issuers other than the issuance of bonds?

# Types of Debt

- Notes and Bonds
  - General Obligation
  - Revenue Obligation
- Lease obligations
  - Capital lease obligations
  - Operating lease obligations
  - Lease purchase (appropriation) agreements
- Loans

# What Are General Obligations?

- Ohio Revised Code Chapter 133
- Permanent Improvements
- Security and Sources of Payment
  - Ad Valorem Property Taxes
- Debt Limitations
  - Voted
  - Unvoted

# Security & Sources of Payment

- General Obligations are secured by property taxes (and all other resources of issuer)
- Source of repayment may come from other sources such as
  - Municipal Income Tax
  - Special Assessments for the Project Financed
  - Other Nontax Revenues (Enterprise Funds)
- Limited obligations provide for a specific pledge
  - Taxes Limited to Particular Purpose
  - Pledged Utility Revenues
  - Special assessments for specific projects

# Question

- What are two types of general obligation debt limitations?

# Debt Limitations

- Direct Debt Limitations, Based on Assessed Valuation
  - Apply to “Net Indebtedness” (with some exceptions)
  - Direct Debt Limitations vary by type of subdivision
- Exemptions
  - “Self-Supporting”
  - Municipal – Income Tax Covenant
  - Utility Revenue and Other Non-General Obligation Debt
  - County – County Jails
  - Township – Fire Protection

# Debt Limitations - Direct

- Direct Debt Limitations example
  - City of Grandview Heights
  - Assessed value $268,847,170
  - Voted and unvoted debt limit of 10.5% - $28,228,952
  - Unvoted debt limit of 5.5% - $14,786,594

# Direct Debt Limitation

**GENERAL FINANCIAL STATEMENT**
**City, Ohio**
**$ 5,435,000 Various Purpose Improvement Bonds, Series 2016**

I, the fiscal officer of the City of Trotwood, Ohio, certify that the following statements are true and correct:

| | | | | |
|---|---|---|---|---|
| 1. | The tax valuation of the City (as shown by the tax lists and duplicates for the year 2015, which are the latest at this date) | | | $ 239,263,280 |
| 2. | (a) Total principal amount of all outstanding bonds and notes of the City, **including the captioned issue(s)** and excluding any bonds or notes to be retired by the captioned issue(s)(*) | | | $ 18,620,000 |
| | (b) Of that total, the total of voted and unvoted general obligation bonds and notes | | | $ 18,620,000 |
| 3. | Principal amount of exempt securities included in item 2(a): | | | |
| | (a) Bonds and notes issued in anticipation of the levy or collection of special assessments (excluding the City's portion) | $ | -0- | |
| | (b) General obligation bonds and notes that are "self-supporting securities" as defined in R.C. 133.01 (L.): | | | |
| | **Category** | | | |
| | Water | $ | 503,707 | |
| | | $ | | |
| | | $ | | |
| | Total | $ | 503,707 | |
| | (c) Securities issued to pay final judgments and settlements | $ | -0- | |
| | (d) Revenue, mortgage revenue and excess condemnation bonds issued under §§ 3, 10 or 12 of Article XVIII of the Constitution (R.C. 133.05(B)(4)) | $ | -0- | |
| | (e) Notes issued in anticipation of the collection of current revenues under R.C. 133.10 | $ | -0- | |
| | (f) Notes issued in anticipation of voted tax levy proceeds under R.C. Chapter 5705 | $ | -0- | |
| | (g) Securities to extent authorizing legislation contains covenants to appropriate, levy and collect municipal income taxes (R.C. 133.05(B)(7)) | $ | 9,576,293 | |
| | (h) Urban renewal tax increment bonds issued under R.C. Chapter 725 | $ | -0- | |
| | (i) Voted bonds and notes issued for urban redevelopment that do not exceed 2% of tax valuation (R.C. 133.05(B)(6)) | $ | -0- | |
| | (j) Securities evidencing loans from State Capital Improvements Fund (R.C. Chapter 164) | $ | -0- | |
| | (k) Federal aid securities (R.C. Chapter 139) | $ | -0- | |
| | (l) Voting machine or vote tabulating equipment notes (R.C. 3506.03, 3506.02) | $ | -0- | |
| | (m) Tax Increment Financing | $ | -0- | |
| | (n) Non-tax revenue securities issued under R.C. Chapter 165 | $ | -0- | |
| 4. | Total of item(s) 3 (a) to (n) | | | $ 10,080,000 |
| 5. | 10-1/2% of tax valuation | | | $ 25,122,644 |
| 6. | Total principal amount of voted and unvoted bonds and notes subject to 10-1/2% overall debt limitation [2(a) minus 4] | | | $ 8,540,000 |
| 7. | Debt leeway (**) within 10-1/2% limitation [5 minus 6] | | | $ 16,582,644 |
| 8. | 5-1/2% of tax valuation | | | $ 13,159,480 |
| 9. | Total principal amount of unvoted bonds and notes subject to 5-1/2% unvoted debt limitation | | | $ 8,540,000 |
| 10. | Debt leeway (**) within 5-1/2% unvoted debt limitation [8 minus 9] | | | $ 4,619,480 |

(*) Including the amount of bonds and notes apportioned to the City and excluding the amount of bonds and notes apportioned to another municipal corporation, as a result of the acquisition or loss of territory. Also excluding any hospital revenue bonds or industrial development bonds issued under R.C. Chapter 140 or 165, respectively.

(**) Debt leeway determined without considering money in the Bond Retirement Fund.

Dated: January , 2016

Auditor/Director of Finance
City, Ohio

# Debt Limitations - Indirect

- Indirect Debt Limitation – aka “10-Mill Limitation”
  - Applies to Unvoted General Obligation debt
  - Constitution and Revised Code
  - All Overlapping Subdivisions
- Grandview Heights – overlapping subdivisions
  - Franklin County
  - Columbus City School District
  - Grandview Heights City School District
  - Grandview Heights Library District

# Indirect Debt Limitation

**TEN MILL CERTIFICATE**

RELATING TO THE ISSUANCE OF UNVOTED GENERAL OBLIGATION BONDS AND NOTES

The undersigned, County Auditor of Franklin County, Ohio, hereby certifies in connection with a proposed issue of Bonds/Notes of the City of Grandview Heights, Franklin County, in the principal amount of $0.00, dated March 8, 2016, that the tax rates required to produce the highest annual debt charges for the proposed issue together with all other issues of said subdivision and the subdivisions overlapping it, which are payable from taxes subject to the 10 mill limitation of Article XII, Section 2, Ohio Constitution, based upon the facts hereinafter set forth and ASSUMING THAT ALL LEVIES WERE TO BE MADE therefore on the general tax duplicate, are as follows:

| Overlapping Subdivisions | | Assessed Valuation | | Bonds and Notes Outstanding | Present Principal Amount | Debt Charges for Fiscal Year in Which They Will Total the Highest, to wit, **2017** | | Required Tax Rate For Two Previous Columns |
|---|---|---|---|---|---|---|---|---|
| | | | | | | For Principal | For Interest | |
| Franklin | County | $ 26,642,445,640 | (a) | Special Assessment Bonds and Notes in original or refunded form: | $ 0 | 0 | 0 | 0.0000 MILLS |
| | | | (b) | All other Bonds and Notes payable from taxes inside 10 mill limitation: | $ 269,561,959 | 15,767,655 | 11,217,851 | 1.0129 MILLS |
| Grandview | City | $ 266,530,900 | (a) | Special Assessment Bonds and Notes in original or refunded form: | $ 0 | 0 | 0 | 0.0000 MILLS |
| | | | (b) | All other Bonds and Notes payable from taxes inside 10 mill limitation: | $ 4,205,000 | 215,000 | 148,675 | 1.3645 MILLS |
| Columbus | School | $ 8,897,475,930 | (a) | Bonds and Notes payable from taxes inside 10 mill limitation: | 27,076,675 | 3,027,665 | 928,797 | 0.4447 MILLS |
| N/A | Township | $ 0 | (a) | Bonds and Notes payable from taxes inside 10 mill limitation: | $ 0 | 0 | 0 | 0.0000 MILLS |
| N/A | JVS | $ 0 | (a) | Bonds and Notes payable from taxes inside 10 mill limitation: | $ 0 | 0 | 0 | 0.0000 MILLS |
| Solid Waste Authority of Central Ohio | Other | $ 27,907,630,030 | (a) | Bonds and Notes payable from taxes inside 10 mill limitation: | $ 98,165,000 | 7,240,000 | 4,263,324 | 0.4122 MILLS |
| | | | | | | 0 | 0 | 0.0000 MILLS |
| | | | | | | | TOTAL | 3.2342 MILLS |

Signed: _____

# Question

- Who can name three types of revenues that are typically used to finance infrastructure or utility projects?

# Revenue (Special) Obligations

- Revenue obligations pledge a specific revenue
  - Utilities
  - Income Tax
  - Sales Tax
- Projects and Systems Have Identifiable Users
- Sold Without Voter Approval
- Debt Service Reserve Fund (DSRF)

# Revenue (Special) Obligations

- Coverage Covenants
- Additional Bonds Test
- Debt Limitations
- Market limitations

# Lease Appropriation Financing

- Annually Renewable Lease
- Subject to Annual Appropriation
- Not “Debt” for state law purposes
  - Can help borrowers stay within debt limits
- Appropriation measure is less secure than a general obligation or revenue pledge
- Used for essential assets of issuer

# Types of Securities

***Bond Anticipation Notes***

- Issued in anticipation of specified revenues or permanent financing.
- Usually mature within 13 months.
- Can be marketed quickly and inexpensively.
- Low interest rates.
- Deferment of permanent financing.

# Types of Securities

***Bonds***

- Permanent financing
- Usually mature over longer period (20 years)
- Marketing that takes longer and more expensive
- Higher interest rates

# Components of a Bond

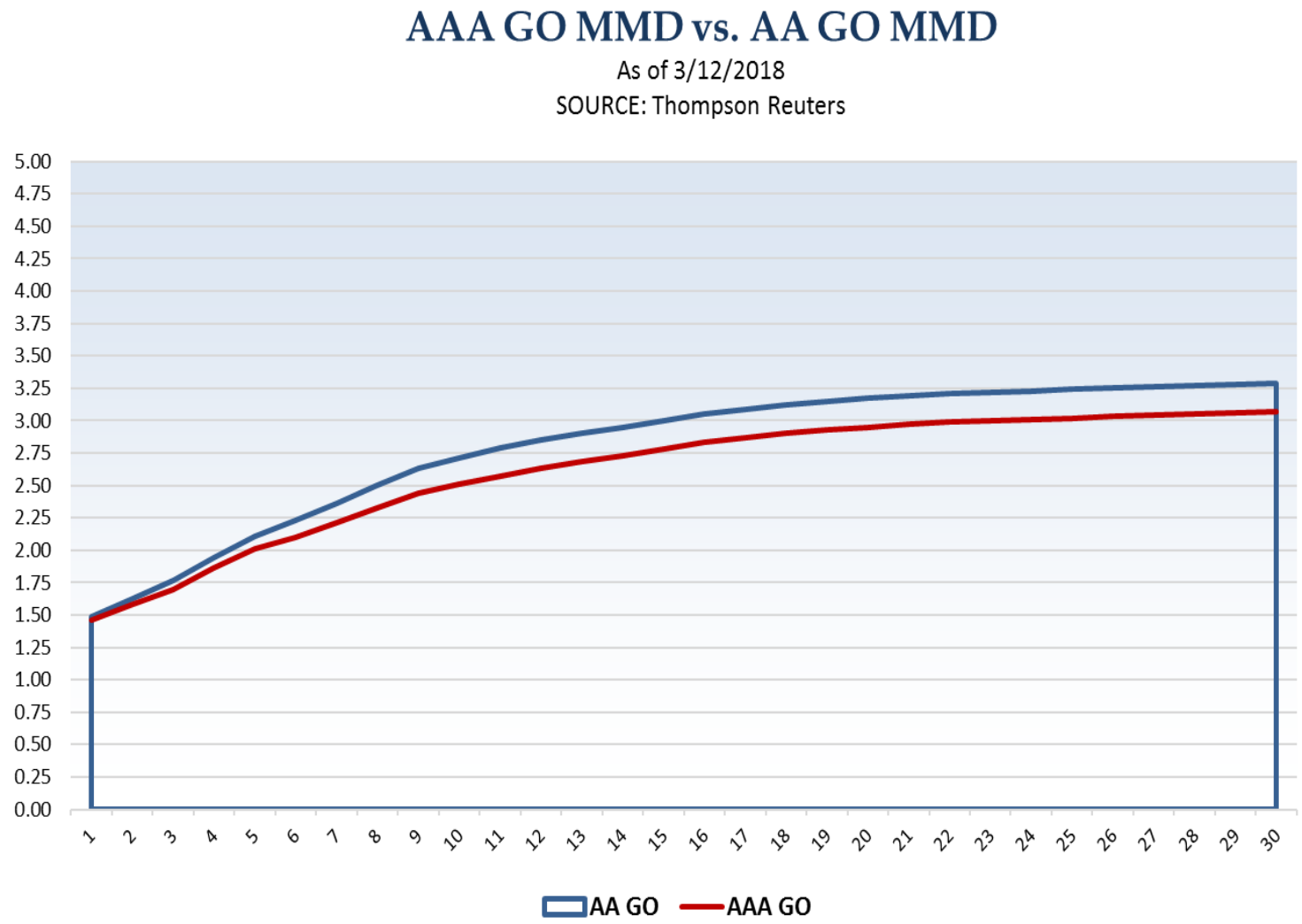
- Principal/Par Amount
- Maturity Date
- Interest Rate
- Call provisions
  - Par Call
  - Premium Call
  - Make Whole Call

# Debt Service Schedule

- Details how much principal and interest will be paid each year and at maturity.

- At the time of issuance, the public funds manager or finance director can decide how many bonds to pay off each year.

# Interest Rates & Yield Curves




| Years | AAA GO | AA GO |
|---|---|---|
| 1 | 1.46 | 1.49 |
| 2 | 1.58 | 1.63 |
| 3 | 1.7 | 1.77 |
| 4 | 1.86 | 1.94 |
| 5 | 2.01 | 2.11 |
| 6 | 2.1 | 2.23 |
| 7 | 2.21 | 2.36 |
| 8 | 2.33 | 2.5 |
| 9 | 2.44 | 2.63 |
| 10 | 2.51 | 2.71 |
| 11 | 2.57 | 2.79 |
| 12 | 2.63 | 2.85 |
| 13 | 2.68 | 2.9 |
| 14 | 2.73 | 2.95 |
| 15 | 2.78 | 3 |
| 16 | 2.83 | 3.05 |
| 17 | 2.87 | 3.09 |
| 18 | 2.9 | 3.12 |
| 19 | 2.93 | 3.15 |
| 20 | 2.95 | 3.17 |
| 21 | 2.97 | 3.19 |
| 22 | 2.99 | 3.21 |
| 23 | 3 | 3.22 |
| 24 | 3.01 | 3.23 |
| 25 | 3.02 | 3.24 |
| 26 | 3.03 | 3.25 |
| 27 | 3.04 | 3.26 |
| 28 | 3.05 | 3.27 |
| 29 | 3.06 | 3.28 |
| 30 | 3.07 | 3.29 |

# Marketing the Bonds

- How does an issuer sell its bonds?
  - 2 types of sales: negotiated and competitive
- Who assists the issuer with this process?
- A ***Preliminary Official Statement*** (POS) is sent to prospective investors (via hardcopy and/or electronic distribution).
- Retail Investors
- Institutional Investors

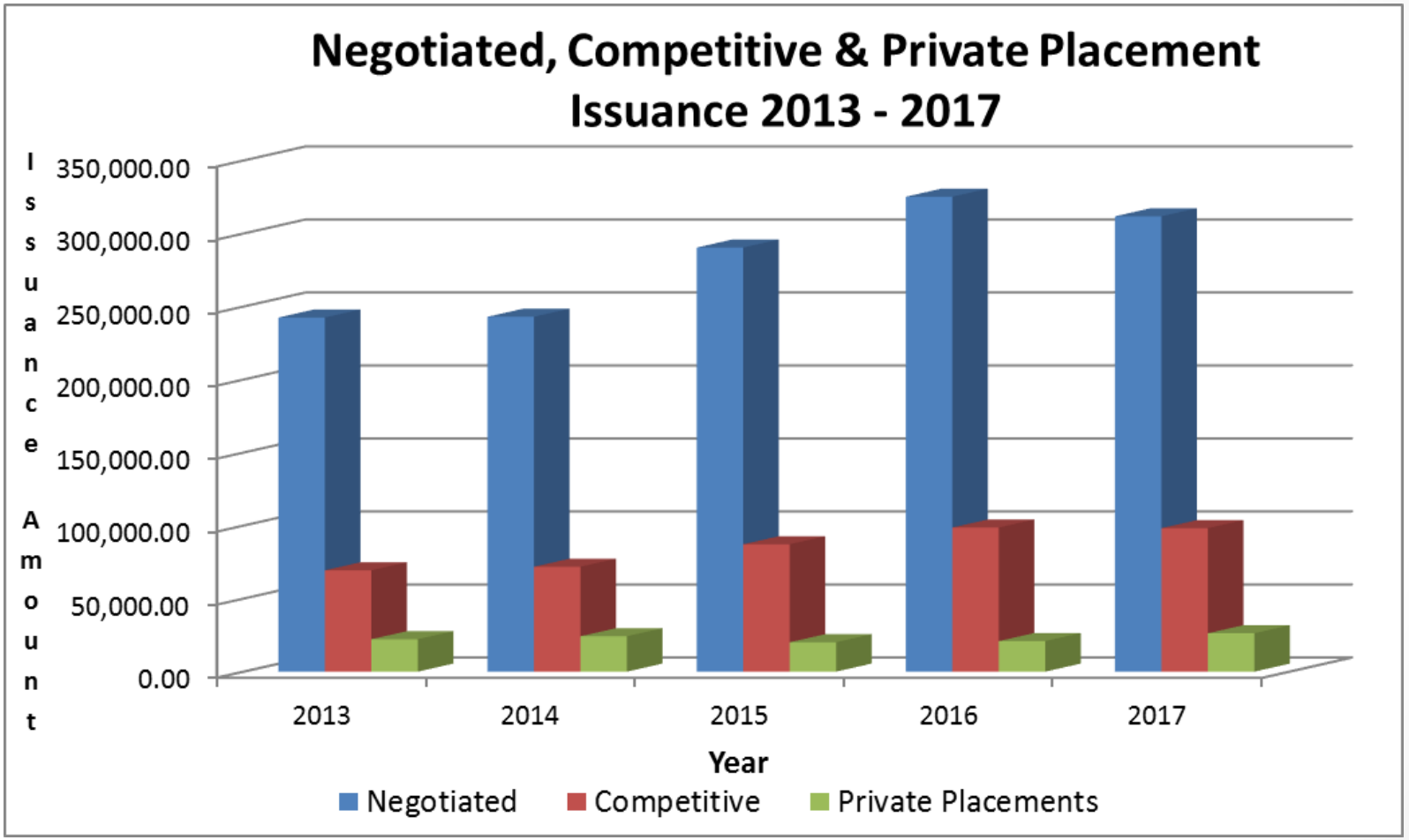
# Negotiated Sale

- Underwriting firm is selected well in advance of the proposed sale date.
- Underwriter also proposes an amount of compensation known as underwriter's discount.
- The underwriting firm takes the lead in marketing the bonds to investors.
- Underwriter proposes interest rates at which various maturities will be offered to investors.
- Upon approval by the issuer, underwriter will approach investors to determine whether bonds can be sold at the proposed rates.
- Adjustments are made to the interest rate scale until final terms are reached reflecting the supply and demand of the bonds.
- Once terms for the sale have been reached a bond purchase agreement is signed by the issuer and underwriter (purchaser) agreeing to the terms.

# Competitive Sale

- In a competitive sale, the issuer solicits bids from underwriting firms to purchase its bonds.
- Issuer determines the size and other essential characteristics of the issue prior to soliciting bids.
- A Notice of Sale containing bid parameters and terms of the issue is distributed to underwriters.
- Each bid takes into account both the interest rate paid to investors and the amount of compensation paid to the underwriting frim for selling the bonds.
- Bonds are awarded to the firm or syndicate offering the lowest interest rate (highest price) bid.
- Final terms and underwriter who will purchase the bonds are outlined in the Certificate of Award.

# Negotiated vs. Competitive Sale




Source: Bond Buyer

# What Is A Rating?

- Provide an analysis (and rating) of the issuer's credit quality.
- There are three primary rating agencies:
  - Standard & Poor's (S&P)
  - Moody's
  - Fitch

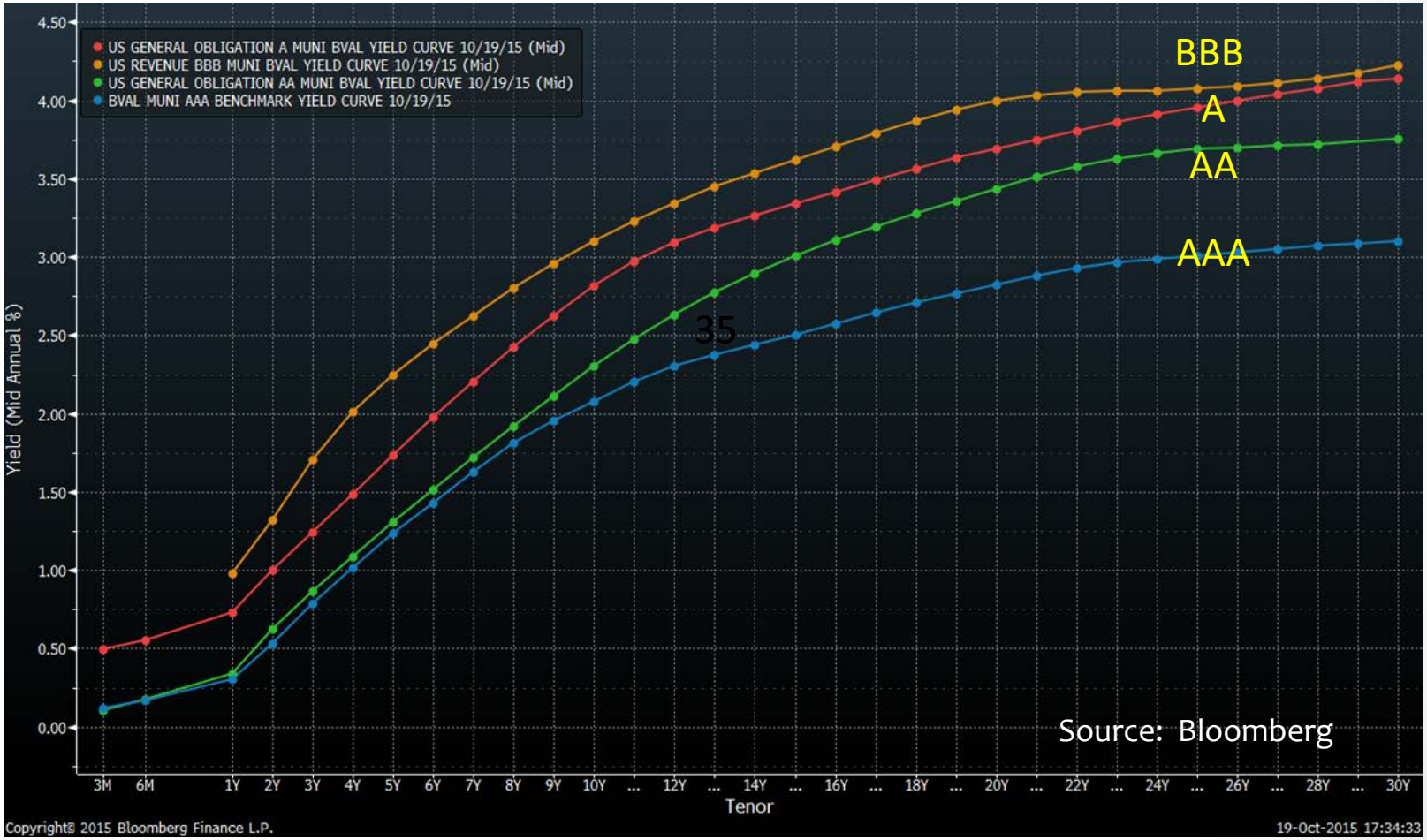
# Question

- What is the highest non-investment grade rating category from S&P, Moody's and Fitch Ratings?

# Credit Rating

| | Moody's Investors Service | S&P Global | FitchRatings | Description |
|---|---|---|---|---|
| Investment Grade | Aaa | AAA | AAA | Highest Quality |
| | Aa1<br>Aa2<br>Aa3 | AA+<br>AA<br>AA- | AA+<br>AA<br>AA- | High Quality |
| | A1<br>A2<br>A3 | A+<br>A<br>A- | A+<br>A<br>A- | Good Quality |
| | Baa1<br>Baa2<br>Baa3 | BBB+<br>BBB<br>BBB- | BBB+<br>BBB<br>BBB- | Below Average |
| Below Investment Grade | Ba1, Ba2, Ba3 | BB+, BB, BB- | BB+, BB, BB- | Speculative |
| | B, Caa | B, CCC, CC | B, CCC, CC, C | Very Speculative |
| | Ca, C | D | DDD, DD, D | Default |

# Ratings & Interest Rates



# Question

- Who knows the formula for calculating bond price?

$$
\begin{aligned}
P &= \left( \frac{C}{1+i} + \frac{C}{(1+i)^2} + \ldots + \frac{C}{(1+i)^N} \right) + \frac{M}{(1+i)^N} \\
&= \left( \sum_{n=1}^{N} \frac{C}{(1+i)^n} \right) + \frac{M}{(1+i)^N} \\
&= C \left( \frac{1-(1+i)^{-N}}{i} \right) + M(1+i)^{-N}
\end{aligned}
$$

- Bond Price: Bond price is the present value of coupon payments and face value paid at maturity.

# Credit Ratings

- Rating agencies review the overall health of issuers
  - Economy
  - Finances
  - Management
  - Debt burden

# Question

- What type of tax-exempt refunding was recently done away with H.R. 1, originally known as the Tax Cuts and Jobs Act of 2017

# New Money vs. Refunding

- New Money bonds issued in order to obtain the initial funding necessary for a particular project.
- Refunding involves issuing new bonds to retire existing bonds.
- Refundings are done to reduce interest expense (savings threshold), eliminate restrictive covenants or restructure existing debt
  - Current refunding – call date of bonds being refunded is 90 days or less
  - Advance refunding – call date of bonds being refunded is more than 90 days (eliminated by Tax Cuts and Jobs Act of 2017)

# Question

- What is the name of the independent federal agency responsible for enforcing the federal securities laws, proposing securities rules, and regulating the securities industry?
- What is the name of the self-regulatory organization authorized to write investor protection rules and other rules regulating broker-dealers, municipal advisors and banks in the US municipal securities market, including tax-exempt and taxable municipal bonds, municipal notes, and other securities issued by states, cities, and counties or their agencies to help finance public projects?

# Legal Considerations: Bond Issuance

- Federal Tax Law – "Tax-Exempt"
  - Use of Tax-Exempt Financed Facility – Private Use
  - Payment of Debt Service – Private Payment
  - Bank Qualification – QTEO
  - Arbitrage /Rebate
- Federal Securities Law
  - No Omission or Misstatement of Material Facts
  - Primary Disclosure in Offering Documents
  - Rule 15c2-12 – Continuing Disclosure Obligations

# SEC Disclosure: Bond Issuance

- Some issuers send periodic credit updates to bondholders.
- Others send an annual report to bondholders.
- Continuing disclosure materials MUST be sent to rating agencies and MSRB's EMMA system.

# Working Group

- Issuer
- Financial Advisor
- Bond Counsel
- Underwriter(s)
- Underwriters' Counsel
- Rating Agencies
- Bond Insurer
- Trustee, Registrar, Paying Agent
- Verification Agent
- Escrow Agent
- Bond Printer
- Bondholders

# Questions?

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# FINANCE