

NPTEL ONLINE CERTIFICATION COURSES

Management of Fixed Income Securities

Prof. Jitendra Mahakud
Department of Humanities and Social Sciences
Indian Institute of Technology Kharagpur

Lecture 31: Issuance and Trading Mechanism of Corporate Securities

CONCEPTS COVERED

- Primary Markets for corporate securities in India and USA
- Trading mechanism of corporate securities in secondary markets

NPTEL

KEYWORDS

- Public issue
- Private placement
- Merchant banker
- Right issue
- Underwriting

NPTEL

Issuance of Corporate Securities in Primary Market in India

- In India, corporate bonds are sold through public offer and private placement basis
- Public issue means an invitation by the company to public to subscribe to its debt securities through a prospectus
- Private placement refers to an offer of sale of debt securities by an issuer to a select group of people or institutions

NPTEL

Public Issuance Process

- All public issues of debt to be listed in stock exchanges
- The offer document should be approved by the stock exchange, where it is to be listed
- The process starts with the appointment of Merchant Banker
- Merchant banker evaluates the objectives of fund raising and structure of the instrument on the basis of issuer's profitability and cash flow analysis
- The structure of instruments include type of redemption pattern, options of interest payment, class of investors, timing of the issue etc.

NPTEL

Public Issuance Process Cont…

- The issuer has to obtain the credit rating for the issue from credit rating agency and disclose the same in offer document
- The issuer has to appoint one or more debenture trustees in accordance with the companies act
- Once the approval is obtained from stock exchange, it is marketed to the investors
- The time line for listing of debt securities is six days for all public issues of debt securities
- Right issue refers to an offer of new debt securities to the existing holders of issuer's debt securities

NPTEL

Private Placement Process

- Debt securities are offered to select group of investors
- All information about the issue to be given in the Private Placement Memorandum
- All the issuance to be made through electronic book mechanism for transparency and better price discovery
- All the stock exchanges can act as electronic book provider (EBP) and can provide platform for placing bids ensuring safety, secrecy, integrity and retrievability of the data
- The issuer has to obtain the credit rating from the credit rating agency and file a self disclosure document with the exchange

NPTEL

Private Placement Process Cont…

- All participants are required to enroll with EBPs prior to entering into the bidding process
- Exchanges provide unique codes to each participants which can be used to participate in EBP platform
- The minimum bid lot is Rs. 10 lakh and in multiples of Rs. 10 lakh thereafter
- In case of NBFC and Housing Finance Companies the minimum bid lot is Rs. 1 crore and multiples of Rs. 10 lakh thereafter

NPTEL

Private Placement Process Cont…

- In case of a reissuance, the issuer has to specify the International Securities Identification Number (ISIN) of the existing security and the accrued interest as on the day of pay-in for reissued securities
- For reissuances, the bidding is done on clean price basis
- The information memorandum has to disclose the mode of bidding (open/close), manner of allotment (uniform/multiple yield), manner of settlement and settlement cycle

NPTEL

Private Placement Process Cont…

- In case of open bidding the bid information such as bid value, bid rate/price except bidder's name is available to the market during bidding window
- In case of closed bidding the same information is disclosed post bidding
- Only the cumulative bidding amount is displayed to the eligible participants during the bidding period
- The issuer has to disclose the estimated cut-off yield to the EBP at least one hour before the opening of the bidding of the issue

NPTEL

Private Placement Process Cont…

- Successful bids are determined by the EBP on yield-time priority basis
- It notifies the successful bidders about the total amount, details of pay-in account, pay in date and cut-off time
- Once the bidding window closes, the EBP gives out the aggregate volume data that includes yield/coupon/price, amount with oversubscription, total bids received, ratings, category of investor

NPTEL

Primary Market for Corporate Bond in USA

- In the primary market in USA, bonds are sold either (i) Open Market (ii) Private Placement
- Open market sales are handled through investment bankers who will either:
    - Underwrite the issue: Investment banker agrees to buy at a set price and then hopefully sell at a higher one.
    - Form an underwriting syndicate
    - Use best effort to sell the bond at the best price
    - Provide a standby underwriting agreement
- The way company chooses to offer an issue to the public depends (i) the size of the issue (ii) the risk of a price decrease during the time the issue is being sold

NPTEL

Underwriting Issues

- Investment bank underwrites the issue, buying the issue at an agreed-upon price and selling it in the market at higher price, this agreement is referred to as *firm commitment*
- Difference in price is known as the price spread or floatation cost (approximately 1%)
- *Underwriting risk*: Rates increase (bond prices decrease) in the market between the time the investment banker buys the bonds and sells them

NPTEL

Procedures for Issuing Bonds

- Preparing indenture
- Registration with the Securities and Exchange Commission
- Issuing a preliminary prospectus called a *red herring*
- Forming selling group: Investment banker (wholesaler and other dealers)
- Selling issue through selling group

NPTEL

SEC Rule 415: Shelf-Registration Rule

- ***Rule 415***, known as the `***shelf registration rule***', allows a firm to register an inventory of securities of a particular type for up to two years.

- The firm can then sell the securities whenever it wishes during that time – the securities remain on the shelf.

- To minimize costs, a company planning to finance a number of projects over a period of time could register a large issue and then sell parts of the issue at different times.

NPTEL

Private Placement Process in USA

- In USA also an alternative to selling securities to the public is to sell them directly to institutional investors through a ***private placement***.
- Because they are sold through direct negotiation with the buyer, privately placed bonds usually have *fewer restrictive covenants* than publicly issued ones, and they are *more tailor-made* to both the buyer's and seller's particular needs.
- One of the disadvantages of privately placed bonds was their lack of marketability due to the absence of an active secondary market
- Under the SEC Act of 1933, firms could only offer securities privately (which did not require SEC registration) to investors deemed sophisticated – insurance companies, pension funds, banks, and endowments.

NPTEL

Private Placement Process in USA

- In 1991, the SEC adopted Rule 144A under SEC Act 1933. Under this rule, issuer could sell unregistered securities to one or more investment bankers who could resell the securities to 'qualified investment buyers' (QIBs). QIBs could then sell freely with each other in securities that had not been registered.

- The adoption of ***SEC Rule 144A*** eliminated some of the restrictions on the secondary trading of privately placed bonds by institutional investors. SEC Rule 144A created a secondary market for privately placed bonds.

- Privately placed bond are exempt from SEC registration because they do not involve a pubic offering.

NPTEL

Private Placement Process in USA

- The adoption of SEC Rule 144A in 1990 allows secondary trading of privately placed bonds amongst qualified institutional investors. The liquidity of the private placement market has improved with 144A.

- Not all private placements are Rule 144A placements. Some Rule 144A private placement issues are underwritten just like publically issued bonds (bigger firms).

- Many privately placed issues are for smaller, less well-known companies (medium-size companies). This market competes with corporate bank loan market.

NPTEL

Secondary Corporate Bond Market Mechanism in India

- Generally done through OTC through brokers and reported on exchange reporting platforms
- The lot size for trading in bonds is Rs. 1 lakh
- All OTC trades in corporate bonds have to be reported within 15 minutes of deal closure on the reporting platform of stock exchanges which is then consolidated and disseminated on the FIMMDA website
- The corporate bond trades are settled on a Delivery Versus Payment (DVP-I) basis at participant level through Clearing Corporation of stock exchanges

NPTEL

Secondary Corporate Bond Market Mechanism in USA

- The principal secondary market for corporate bond is the OTC market.
- The OTC market has been conducted by dealers who take positions in bonds to fulfill buy and sell orders.
- Today the market is more transparent due to Trading Reporting and Compliance Engine *(*TRACE).
- There has also been a transition from traditional trading toward electronic trading.
- Many corporate bonds are held by institutional investors who tend to hold bonds to maturity. As a result, the secondary market for some bonds can be relatively thin

NPTEL

Secondary Corporate Bond Market Mechanism in USA

- Corporate bond trading primarily takes place in the OTC market via dealers, but there is a transition to electronic trading
- ***Multi-Dealer Systems*** allow customers to execute trades from multiple quotes. The system displays the best bid or offer prices of those posted by all dealers. The participating dealers usually act as the principal in the transaction.
- ***Single-Dealer Systems*** allow investors to execute transaction directly with the specific dealers desired.
- ***Cross-Matching System*** brings dealers and institutional investors in an electronic trading network that provides real-time period cross matching.
- ***Auction System*** allows market participants to conduct electronic auction of securities in early stages.

NPTEL

CONCLUSIONS

- In India, corporate bonds are sold through public offer and private placement basis. In USA also bonds are sold either (i) Open Market (ii) Private Placement
- Open market sales are handled through investment bankers
- The principal secondary market for corporate bond is the OTC market.

NPTEL

REFERENCES

- Bhole, L.M and Mahakud, J (2017), Financial Institutions and Markets, Sixth Edition, McGraw Hill Education (India) Private Limited, Chennai, India
- Johnson, S. R (2010): Bond Evaluation, Selection and Management, John Wiley & Sons, 2nd Edition.
- Fabozzi, J. Frank and Mann, V. Steven (2005): The Hand Book of Fixed Income Securities, Tata McGraw-Hill, 7th Edition.

NPTEL



NPTEL ONLINE CERTIFICATION COURSES

Management of Fixed Income Securities

Prof. Jitendra Mahakud
Department of Humanities and Social Sciences
Indian Institute of Technology Kharagpur

Lecture 32: Municipal Bonds-I

CONCEPTS COVERED

- Municipal Anticipation Notes
- General Obligation Bonds
- Revenue Bonds

NPTEL

KEYWORDS

- Equivalent taxable yield
- Tax-Anticipation Notes
- Revenue Anticipation Notes
- Bond Anticipation Notes
- Unlimited tax general obligation bonds
- Limited tax general obligation bonds
- Double-barreled bond

NPTEL

Municipal Bonds

- Like corporations, municipal, and other local governments sell bills, notes, and bonds to finance their long-term projects and short-term deficits resulting from current operations.
- State and local governments undertake many long-term capital projects such as the construction of school buildings, highways, water treatment facilities, airports, hospitals, inner-city housing, and infrastructures that facilitate economic growth and job creation.
- To finance these long-term capital investments, they sell two types of notes and bonds: ***general obligation bonds*** and ***revenue bonds***.
- State and local governments also have short-term cash flow needs created from differences in their expenditure and revenue patterns and time gaps between when projects begin and when the permanent financing supporting the projects is received.
- To finance their short-term cash needs, they sell short-term ***anticipation notes***.

NPTEL

Features of Municipal Bonds

- The common feature of municipal securities is their *tax-exempt status*.
- Interest (but not the capital gain) is exempt from federal income taxes (personal and corporate).
- States also exempt their own securities from state income taxes.
- The tax-exempt feature of municipals makes them very attractive to individuals and corporations in the higher income tax brackets and investment funds whose clients are in the higher brackets.

NPTEL

Features of Municipal Bonds

- An investor in the 35% tax bracket would be indifferent, with all other factors equal, to a fully taxed bond yielding 10% and a tax-exempt bond yielding 6.5%.
- Alternatively stated, if the yield on a tax-exempt bond is 6.5%, the investor's ***equivalent taxable yield*** on a fully taxable bond is 10%:

$$Equivalent\ Taxable\ Yield = \frac{Tax-Exempt\ Yield}{(1-tax\ rate)}$$

$$Equivalent\ Taxable\ Yield = \frac{0.065}{1-0.35} = 0.10$$

NPTEL

Features of Municipal Bonds

- If the Federal tax rate increases (decreases), then the tax-exempt feature of municipal securities becomes more (less) valuable.
- Thus, a tax increase (decrease), or its expectation, would cause the demand and price of municipals to increase (decrease) and their yields to fall (decline).
- The possibility of changes in the tax rates, in turn, exposes municipal investors to additional risk – ***tax risk***.

NPTEL

Features of Municipal Bonds

- There are ***taxable municipal bonds***, also in which the interest is subject to federal income taxes.
- Taxable municipals sell at a lower price and higher yield than comparable tax-exempt municipals.
- The types of taxable municipals include those used to finances projects (e.g., sports facilities or private investors' housing initiatives) in which there are Federal restrictions that limit or prohibit financing with tax-exempt municipal bonds.

NPTEL

Types of Municipal Bonds

- Municipal Anticipation Notes
- General Obligation Bonds
- Revenue Bonds

NPTEL

Municipal Anticipation Notes

- These are short-term and intermediate term notes issued to finance operations or projects in which future revenue is anticipated.

Types:

1. Tax-Anticipation Notes (TANs)
2. Revenue Anticipation Notes (RANs)
3. Bond Anticipation Notes (BANs)
4. Grant-Anticipation Notes (GANs)
5. Tax-Exempt CP
6. Tax-Exempt Floating Rate Obligations

NPTEL

Municipal Anticipation Notes

- TANs and RANs are used to cover regular recurring government expenses before taxes and other anticipated revenues are received.

- BANs are used as temporary financing or construction financing for long-term projects (e.g., roads, correction facilities, university buildings, and libraries), with the principal paid from the proceeds from the sale of a long-term municipal bond.

- Tax-exempt CP has a maturity ranging from 30 days to 270 days and is often secured with a bank letter of credit, line of credit, or a purchase agreement in which the bank agrees to buy the bond if the issuer fails.

NPTEL

General Obligation Bonds

- ***General Obligation Bonds (GOs)*** are long-term and intermediate-term bonds that are secured by the issuing government's general taxing power.

- The GOs issued by states and large municipal governments that have a number of tax revenue sources and unlimited tax power are referred to as ***unlimited tax GO***s. They are considered backed by the ***full faith and credit of the issuer.***

- The GOs issued by smaller municipalities or authorities whose revenues are limited to only one or two sources (e.g., property tax), or who have statutory limits on the tax rate that the issuer may levy to finance the debt are known as ***limited-tax GO bonds***.

NPTEL

General Obligation Bonds

- The bond indenture is usually accompanied with an ***Official Statement and legal opinion***
- ***Official Statement***: It is a document, similar to the prospectus for a stock or corporate bond. It provides details of the return, risk, and other characteristics of the issue and provides information on the issuer. The information in official statement include (i) Amount of the Issue, (ii) Credit Rating, (iii) Information on Issuer, (iv) The Names of the Underwriters , (v) Selling Group , (vi) Sources of Payments, (vii) Sources and Uses of Fund Statement (viii) Financial Statements, (ix) Debt Service Required, (x) Notice of any Pending Legislation (xi) Bond Insurance

NPTEL

General Obligation Bonds

- ***Legal Opinion:*** The legal opinion is a document that interprets legal issues related to the bond's collateral, priority of claims, and the like
- In evaluating the creditworthiness of a GO bond, investors need to review the legal opinion to determine:
  - The extent of the state or local government's unlimited taxing authority
  - Possible statutory or constitutional limitations on the jurisdiction's taxing power
  - The priority of claims on general funds
  - Bondholders' redress in the case of a default
  - Any statutory or constitutional questions that could be problematic

NPTEL

Revenue Bonds

- ***Revenue bonds*** are municipal securities paid by the revenues generated from public or quasi-public projects, proceeds from a specific tax, or by special assessment on an existing tax.
- Some revenue bonds are backed by a specific revenue source, as well as general revenues – ***double-barreled bond***.
- ***Dedicated tax-backed revenue bonds*** are bonds that are paid from dedicated revenues such as a tobacco settlement, lottery, or special fee.
- Some revenue bonds are secured by and paid from more than one revenue source.

NPTEL

Revenue Bonds

- ***Important provisions*** delineated in the indenture and legal opinion include:
  - Whether the issuer can increase the tax or users' fee underlying the revenue source.
  - Whether the issuer can incur additional debt secured by the revenue of the project (*minimum revenue clauses*) or under what conditions new debt can be incurred.
  - How the revenues of the project are to be directed: *Net revenue structured revenue bond* in which bondholders are paid after operating expenses but before other expenses; *Gross revenue structured bond* in which the bondholders are paid first.
  - Whether there is any additional collateral or guarantees.

NPTEL

Revenue Bonds

- Revenue bonds are an important source of funding for a number of public projects. They are used to finance major capital projects and programs, such as:
  - Roads
  - Bridges
  - Tunnels
  - Airports
  - Hospitals
  - Power-generating facilities
  - Water treatment plants
  - Municipal Buildings
  - University Buildings
  - Educational programs
  - Inner-City Housing development
  - Student loan programs

NPTEL

Revenue Bonds

- The revenues used to pay the interest and principal payments on these bonds are usually project specific and include:
    - Tolls
    - Rents
    - User charges
    - Earmarked revenues from fees
    - Specific taxes

NPTEL

CONCLUSIONS

- Municipal, and other local governments sell bills, notes, and bonds to finance their long-term projects and short-term deficits
- Broadly, there are three types of municipal bonds (i) Municipal Anticipation Notes, (ii) General Obligation Bonds and (iii) Revenue Bonds
- The common feature of municipal securities is their tax-exempt status.
- The characteristics and purpose of issuance of municipal bonds vary across the types of bonds
- The revenues used to pay the interest and principal payments on these bonds are usually project specific

NPTEL

REFERENCES

- Johnson, S. R (2010): Bond Evaluation, Selection and Management, John Wiley & Sons, 2nd Edition.
- Fabozzi, J. Frank and Mann, V. Steven (2005): The Hand Book of Fixed Income Securities, Tata McGraw-Hill, 7th Edition.

NPTEL



NPTEL ONLINE CERTIFICATION COURSES

Management of Fixed Income Securities

Prof. Jitendra Mahakud
Department of Humanities and Social Sciences
Indian Institute of Technology Kharagpur

Lecture 33: Municipal Bonds-II

CONCEPTS COVERED

- Types of revenue bonds
- Special municipal bonds
- Municipal bonds market

NPTEL

KEYWORDS

- Highway Revenue Bonds
- Water and Sewer Revenue Bonds
- Airport Revenue Bonds
- Industrial Development Bonds
- Serialization
- Municipal Floaters

NPTEL

Types of Revenue Bonds

- **Highway Revenue Bonds:** These revenue bonds are used to finance highway systems and their related infrastructures (bridges, tunnels, etc.) These are paid by toll charges, license fees, auto registration fees etc.
- **Water and Sewer Revenue Bonds:** These bonds are issued to finance the building of water treatment plants, pumping stations, and sewers. Local governments or special bond authorities usually issue them. The bonds are usually paid by user charges
- **Lease Rental Bonds:** These bonds are used to finance the construction of public office buildings, stadiums, university facilities, and the like, and for the purchase of computers and other types of capital equipment. The bonds are paid for by the rents generated from the users: rents, tuitions, earmarked revenues, annual appropriation of a general fund, or stadium receipts.

NPTEL

Types of Revenue Bonds

- **Hospital Revenue Bonds:** These bonds are used to build or expand hospitals, to purchase medical equipment, and so on. Medical fees are major source of revenue.
- **Airport Revenue Bonds:** Airport revenue bonds are used to finance the construction, expansion, or improvements of municipal airports. The bonds are usually secured by leases with the major airlines for the use of the terminals or by the revenues obtained from landing fees or fueling fees paid by the airlines and by the concession fees paid by terminal store users.
- **Industrial Development Bonds:** State and local governments or authorities sell industrial development or revenue bonds (IDB) to finance the expansion of an area's industrial base or to attract new industries. IDBs have been used to financed industrial parks, electric-generating plants, and other projects.

NPTEL

Types of Revenue Bonds

- **Lottery Bonds:** These are secured by expected future lottery revenue. They are often used to finance the construction of new school facilities.
- **Pollution Control Bonds:** These bonds are used to help corporations purchase pollution control equipment. Often a municipal government will buy the equipment through the sale of the bonds and then lease the equipment to the corporation.
- **Resource Recovery Revenue Bonds:** These bonds finance resource recovery operations that convert solid waste into commercially recoverable products and landfill residue. Revenue from these operations comes from fees for delivering garbage or sales form the products generated.

NPTEL

Types of Revenue Bonds

- **Public Power Revenue Bonds:** These bonds are used to finance construction of electricity-generating power plants and distribution systems. The bonds may be issued to finance the construction of one or several power plants with two or more utility companies. In this case, the issue is referred to as joint-power financing.
- **Sports Complex and Convention Center bonds:** These bonds are issued as permanent financing of sports stadiums and arenas and convention centers. The bonds may be lease-rental bonds paid for by rental income from the facility or they be paid from revenue generated from outside revenue sources such as local hotel taxes or city or county taxes.
- **Life-Care Revenue Bonds:** These bonds are issued by state and local development agencies to finance the construction of long-term residential care facilities for the elderly managed by nonprofit agencies or religious groups. Revenues supporting the bonds are generated from lease rentals or lump-sum payment made by the residents.

NPTEL

Types of Revenue Bonds

- **Multi-Family Mortgage Revenue Bonds:** These bonds are used to finance multi-family structures for low-income families and senior citizens.

- **Single-Family Mortgage Revenue Bonds:** These bonds are used to secure mortgages on single-family homes insured by Federal Housing Administration (FHA), Veteran Affairs (VA) or private mortgage insurance.

- **Section 8 Bonds:** These are municipal bonds issued to finance low-and middle-income rental housing.

NPTEL

Types of Revenue Bonds

- **College and University Revenue Bonds:** These bonds are used as permanent financing of college buildings (libraries, classroom buildings, dormitories, and the like) and other university capital projects (computers and networks). Bondholders' interest and principal is paid from tuition, dormitory rental fees, and special fees. They also fall under the category of lease-rental bonds.

- **Student-Loan Revenue Bonds:** These are bonds issued by state government agencies with the proceeds used to support loans to college students. The proceeds from these bonds are often used for purchasing federally guaranteed student loans made by local banks.

- **Tax Allocation Bonds:** These bonds are issued to finance office and property development in blighted or low-income areas. Bondholders are paid from property taxes that are expected to increase from improved real estate values.

NPTEL

Municipal Bonds with Special Features

- Serialization
- Insured Bonds
- Secured Bonds
- Zero-Coupon Bonds
- Legally Binding Bonds
- Municipal Floaters
- Municipal Put Bonds
- Municipals with Warrants
- Mini-bonds
- Stripped Municipals

NPTEL

Municipal Bonds with Special Features

- **Serialization** refers to the breaking up of a bond issue into different maturities. For example, to finance a $40 million convention center, a county might sell a serial issue with four types of securities, each with a face value of $10 million, but with one maturing in year 5, one in year 10, one in year 15, and one in year 20.
- **Zero Coupon Bond**: A number of municipal bonds are also sold with the principal paid at maturity.
- Municipal governments and authorities also sell a variation of a zero-coupon bond known as a ***municipal multiplier***, ***accretion,*** or ***compound interest bond***. This bond pays coupon interest, which is not distributed, but rather is reinvested to the bond's maturity, making the bond similar to a zero coupon bond.

NPTEL

Municipal Bonds with Special Features

- **Insured municipal bonds**: The insurers write insurance policies in which they agree to pay interest and principal to bondholders in the event the issuer fails to do so. The municipal issuer and not the bond investor usually pay the insurance premium.

- **Letter-of-credit-backed municipal bonds:** These are secured by a letter of credit from a commercial bank.

- **Refunded bonds:** These bonds are secured by an escrow fund consisting of high quality securities such as Treasury bonds and federal agency bonds. There are also refunded municipals backed by an escrow fund consisting of a mix of Treasury bonds and non-treasury bonds such as municipal bonds
- **Legally binding bonds**: Such bonds often take the form of an obligation to withhold and/or provide government aid to pay any defaulted debt issue.

NPTEL

Municipal Bonds with Special Features

- ***Municipal Floaters***: Municipal bonds with floating rate tied to a reference rates such as T-bill rates, London Interbank Offer Rate, or municipal bond index.
- **Municipal Put Bonds:** Bonds that can be cashed in at a specific value before maturity.
- **Municipals with Warrants:** Bonds that allow the holder to buy additional bonds at set prices.
- **Minibonds** are low denomination issues ($100, $500, and $1000 par) that are sold directly to the public without an investment banker.
- **Stripped Municipals** are interest-only and principal-only stripped municipals

NPTEL

Municipal Bonds Market

- In the ***primary market***, the sale of GOs and some revenue bonds is handled by investment bankers or a syndicate of commercial banks and dealers who underwrite the issue and then resell them in the open market.
- Traditionally, the selection of an underwriter or syndicate was done on a competitive bid basis, with many states requiring GOs to be marketed with competing bids.
- Because of the complexities with municipal bonds, more underwriters are being selected through negotiation.
- Information on upcoming municipal bond sales can be found in the *Bond Buyer*. The *Bond Buyer* is the trade publication of the municipal bond industry. The book or on-line subscription to its Web site provides information on futures bond sales and the results from recent sales.

NPTEL

Municipal Bonds Market

- In the ***secondary market***, municipal bonds are primarily traded in the OTC market through municipal bond dealers specializing in particular issues.
- Local banks and regional brokerage firms often handle the issues of smaller municipalities (referred to as ***local credits***), while larger investment companies and the municipal bond departments of larger banks handle the issues of larger governments (referred to as ***general names***).
- Many dealers in the secondary market make bid and ask quotes in terms of the yield to maturity or yield to call.
- Information on trading and prices can be obtained the Securities Industry and Financial Markets Association (SIFMA) via their Web site

NPTEL

CONCLUSIONS

- The revenue bonds are classified on the basis of their uses and the sources of payments of these bonds also vary across the types of revenue bonds
- The sale of GOs and some revenue bonds is handled by investment bankers in the primary market
- In the secondary market, municipal bonds are primarily traded in the OTC market

NPTEL

REFERENCES

- Johnson, S. R (2010): Bond Evaluation, Selection and Management, John Wiley & Sons, 2nd Edition.
- Fabozzi, J. Frank and Mann, V. Steven (2005): The Hand Book of Fixed Income Securities, Tata McGraw-Hill, 7th Edition.

NPTEL



NPTEL ONLINE CERTIFICATION COURSES

Management of Fixed Income Securities

Prof. Jitendra Mahakud
Department of Humanities and Social Sciences
Indian Institute of Technology Kharagpur

Lecture 34: Debt Securities of Commercial Banks

CONCEPTS COVERED

- Certificate of deposits
- Bank notes
- Banker’s Acceptances

NPTEL

KEYWORDS

- Nonnegotiable CDs
- Negotiable CDs
- Prime CDs
- Nonprime CDs
- Jumbo CDs
- Floating-Rate CD
- Bull and Bear CDs
- Leveraged loans

NPTEL

Debt Securities Issued by Banks

- Certificate of deposits
- Bank notes
- Banker’s Acceptances
- Bank loans

NPTEL

Certificate of Deposit

- A certificate of deposit (CD) is a certificate issued by a financial institution certifying that a specified sum of funds has been deposited at the issuing depository's institution.
- Banks and thrift institutions offer CDs to finance their loans and investments.
- The CD has a specified maturity date and interest rate and can be either nonnegotiable or negotiable.
- Nonnegotiable CDs are deposits that cannot be transferable and typically must be held to maturity, with often a penalty applied for early withdrawal. They can be issued in any denomination.
- Negotiable CDs are higher denomination certificates typically issued to institutions. Unlike nonnegotiable CDs, negotiable CDs can be sold to other investors in the secondary CD market.

NPTEL

Features of Certificate of Deposits in India

- CDs can be issued by (i) scheduled commercial banks {excluding Regional Rural Banks and Local Area Banks}; and select All-India Financial Institutions (FIs)
- Banks have the freedom to issue CDs depending on their funding requirements.
- Minimum amount of a CD should be Rs.1 lakh, i.e., the minimum deposit that could be accepted from a single subscriber should not be less than Rs.1 lakh, and in multiples of Rs. 1 lakh thereafter.
- CDs can be issued to individuals, corporations, companies (including banks and PDs), trusts, funds, associations, etc. Non-Resident Indians (NRIs) may also subscribe to CDs
- The maturity period of CDs issued by banks should not be less than 7 days and not more than one year, from the date of issue.
- The FIs can issue CDs for a period not less than 1 year and not exceeding 3 years from the date of issue.
- CDs may be issued at a discount on face value.

NPTEL

Features of Certificate of Deposits in India Cont…

- All CDs were subject to cash reserve ratio (CRR) and statutory liquidity ratio (SLR) requirement , on the issue price of the CDs.
- Banks / FIs cannot grant loans against CDs and cannot buy-back their own CDs before maturity.
- CDs are freely transferable by endorsement and delivery
- RBI Guidelines for Issue of CDs with respect to The maturity period, Minimum Size of Issue and Denominations modified from time-to-time
- Mutual funds are allowed to invest in CDs with cretin limit stipulated by Securities Exchange Board of India (SEBI)

NPTEL

Features of Certificate of Deposits in USA

- The maturities on negotiable CDs generally range from three to 18 months, although most have maturities of six months or less.
- CDs issued with maturities greater than one year are called term CDs.
- CDs are interest-bearing notes, usually sold at their face value, with the principal and interest paid at maturity if the CD is less than one year and semiannually if it is a term CD.
- The yields for the CDs of larger (supposedly more secured) banks (called prime CDs) tend to be lower than those of smaller banks (called nonprime CDs)

NPTEL

Features of Certificate of Deposits in USA Cont…

- The minimum denomination on negotiable CDs is $100,000, with the average denomination being $1 million; there are also jumbo CDs with face values of $10 million or more.
- Like other bank and savings and loan deposits, the Federal Deposit Insurance Corporation (FDIC) insures CDs up to $100,000 against default.
- Most negotiable CDs, though, have denominations exceeding $100,000 and are therefore subject to default risk.
- The yields on CDs generally reflect the risk of the issuing financial institution and the maturity of the CD. CD yields tend to exceed the rates on Treasury and short-term federal agency instruments.

NPTEL

Features of Certificate of Deposits in USA Cont…

- The rates that banks pay on CDs are quoted on a 360-day basis, instead of 365 days.
- For example: an investor buying a $1 million CD, maturing in 180 days and paying a 6% interest, would receive $1,030,000 from the bank at maturity:

$$\$1,000,000[1+0.06(180/360)] = \$1,030,000$$

- Quotes of CDs trading in the secondary market, in turn, are made in terms of the bank's discount yield.
- If the CD yielding 6% were trading in the secondary market, its rate would be quoted at 5.8%

$$\text{Rate} = \frac{\$1,030,000 - \$1,000,000}{\$1,030,000}\left(\frac{360}{180}\right) = 0.058 = 5.8\%$$

NPTEL

Features of Certificate of Deposits in USA Cont…

- Money-market funds, banks, bank trust departments, state and local governments, foreign governments, central banks, and corporations are the major investors in CDs. Some smaller negotiable CDs are held by smaller investors.
- Since many of these investors hold their CDs until maturity, the secondary market for these instruments is not as active as the secondary T-bill market.
- The existence of an active secondary market meant that *if yield curve were positively sloped and did not change*, an investor could earn a rate higher than either the shorter or longer term CD by buying the longer term CD and selling it later in the secondary market at the higher price associated with the lower rate on the shorter term maturity.

NPTEL

Features of Certificate of Deposits in USA Cont…

Example:

Suppose:

6-month CDs yielded 5%: $P = 100/(1.05)^{0.5} = 97.59$

1-year CD yielded 6%: $P = 100/1.06 = 94.3396$

An investor could:

Buy the 1-year CD for 94.3396

Hold it for six months

Sell it for 97.59 (given the yield curve did not change) to realized an annualized yield of 7%:

$R = (97.59/94.3396)^{1/0.5} – 1 = .07$

This strategy is referred to as ***trading down the yield cu***rve.

NPTEL

CDs with Special Features in USA

- **Floating-Rate CD** (**FRCD**): The maturity on a FRCD ranges from 18 months to five years, with the coupon rates reset periodically to equal the rate on a comparable CD rate or the London Interbank Offer Rate

- **Bull and Bear CDs**: The rates on these CDs are tied to stock market indices

- **Rising-Rates CDs*:*** Longer-term CDs with gradually increasing rates

- **Forward CDs**: Contracts to buy CDs in the future

NPTEL

Bank Notes

- In USA bank notes are similar to medium-term notes. They are sold as a program consisting of a number of notes with different maturities, typically ranging from one to five years, and offered either continuously or intermittently
- Bank notes are usually sold to institutions in high denominations ranging from $5 million to $25 million, with the total offering ranging from $50 million to $1 billion.
- Banks also sell bank notes through international syndicates as part of the Eurocapital market

NPTEL

Bankers Acceptances

- **Bankers Acceptances** (BAs) are time drafts (post-dated check) that are drawn on a bank and are guaranteed by the bank. The guarantee improves the credit quality of the bank, making the BAs marketable.
- In the secondary market, BAs are traded as zero-coupon bonds, with the face value equal to the payment order and with the maturity between 30 and 270 days. With the bank guarantee, they are considered prime-quality instruments with relatively low yields.

NPTEL

Bankers Acceptance (Example)

- Consider the case of a U.S. oil refinery that wants to import 2 million barrels of crude oil at $50 per barrel ($100 million) from an oil producer in Brazil.
- Suppose the Brazilian oil exporter wants to be paid before shipping, whereas the U.S. importer wants the crude oil before payment.
- To facilitate the transaction, suppose they agree to finance the sale with a BA in which the U.S. importer's banks will guarantee a $100 million payment 60 days from the shipment date.
- With this understanding, the U.S. oil importer would obtain a letter of credit (LOC) from his bank. Let the LOC would say that the bank would pay the exporter $4M if the U.S. importer failed to do so.
- The LOC would then be sent by the U.S. bank to the Brazilian bank of the exporter.
- Upon receipt of the LOC, the Brazilian bank would notify the oil exporter who would then ship the 2 million barrels of crude oil.
- The oil exporter would then present the shipping documents to the Brazilian bank and receive the present value of $100 million in local currency from the bank.

NPTEL

Bankers Acceptance (Example)

- The Brazilian bank would then present a time draft to the U.S. bank who would stamp ‘accepted’ on it, thus creating the BA. The U.S. importer would sign the note and receive the shipping documents. At this point, the Brazilian bank is the holder of the BA. The bank can hold the BA as an investment or sell it to the American bank at a price equal to the present value of $100 million.
- If Brazilian bank opts for the latter, then the U.S. bank holds the BA and can either retain it or sell it to an investor such as a money market fund or a BA dealer.
- If all goes well, at maturity the oil importer will present the shipping documents to the shipping company to obtain his 2 million barrels of crude oil, as well as deposit the $100 million funds in his bank; whoever is holding the BA on the due date will present it to the U.S. importer's bank to be paid.
- The use of BAs to finance transactions is known as ***acceptance financing*** and banks that create BAs are referred to as ***accepting banks***.

NPTEL

Bank Loans

- Commercial bank loans can be can be classified as investment-grade loans and leveraged loans.
- **Investment-grade loans** are loans to borrowers with investment–grade ratings. They usually take the form of a revolving line of credit, with no maturity and with the bank setting a maximum amount that the company can borrow.
- Investment-grade loans set up as a line of credit are generally held by the originating bank and not sold.
- **Leveraged loans** are loans to corporations with below investment-grade ratings.
- These loans usually have a maturity and a floating rate, and in contrast to investment-grade bonds, they are often sold to institutional investors.
- Some of these loans are packaged and securitized as a collateralized debt obligations.

NPTEL

CONCLUSIONS

- A certificate of deposit (CD) is a certificate issued by a financial institution certifying that a specified sum of funds has been deposited at the issuing depository's institution
- Banks have the freedom to issue CDs depending on their funding requirements. Individuals, corporations, companies (including banks and PDs), trusts, funds, associations, etc. Non-Resident Indians are the major investors of CDs
- Bank notes, bankers acceptances and bank loans are other major sources of debt financing

NPTEL

REFERENCES

- Bhole, L.M and Mahakud, J (2017), Financial Institutions and Markets, Sixth Edition, McGraw Hill Education (India) Private Limited, Chennai, India
- Johnson, S. R (2010): Bond Evaluation, Selection and Management, John Wiley & Sons, 2nd Edition.
- Fabozzi, J. Frank and Mann, V. Steven (2005): The Hand Book of Fixed Income Securities, Tata McGraw-Hill, 7th Edition.

NPTEL



NPTEL ONLINE CERTIFICATION COURSES

Management of Fixed Income Securities

Prof. Jitendra Mahakud
Department of Humanities and Social Sciences
Indian Institute of Technology Kharagpur

Lecture 35: International Bonds

CONCEPTS COVERED

- International bonds
- Risks in foreign exchange market

NPTEL

KEYWORDS

- Samurai bonds
- Yankee bonds
- Bulldog bonds
- European currency unit
- Cross-border risk
- Sovereign risk

NPTEL

Foreign Debt Securities

- Foreign Bond
- Eurobond
- Global Bonds
- Eurocurrency Deposits

NPTEL

Foreign Bonds

- A country's foreign bond market is that market in which the bonds of issuers not domiciled in that country are sold and traded.

- For example, the bonds of a German company issued in Japan or traded on the Japan's secondary markets would be part of the Japan foreign bond market.

NPTEL

Features of the Foreign Bonds

- Foreign bonds are sold in the currency of the local economy.
- Foreign bonds are subject to the regulations governing all securities traded in the national market and sometimes special regulations governing foreign borrowers
- Foreign bonds provide foreign companies access to funds they often use to finance their operations in the country where they sell the bonds.

NPTEL

Names of Foreign Bonds

- Foreign bonds in Japan are called ***Samurai bonds***
- Foreign bonds in the United Kingdom are called ***Bulldog bonds***
- Foreign bonds in the U.S. are called ***Yankee bonds***
- Foreign bonds in Spain are called ***Matador bonds***
- Foreign bonds in the Netherlands are called ***Rembrandt bonds***

NPTEL

Eurobonds

- A Eurobond is a bond issued outside the country in whose currency it is denominated. They are usually sold in a number of countries
- For example, to raise funds to finance its UK operations, a U.S. company might sell a bond denominated in British pounds
- Multinational corporations finance many of their global operations by selling Eurobonds.
- Eurobonds are also a source of intermediate- and long-term financing of sovereign governments and international institution like World Bank

NPTEL

Eurobond Market

- The Eurobond market is handled through an international syndicate consisting of multinational banks, brokers, and dealers.

- A corporation or government wanting to issue a Eurobond will usually contact a multinational bank who will form a syndicate of other banks, dealers, and brokers from different countries.

- The members of the syndicate usually agree to underwrite a portion of the issue, which they usually sell to other banks, brokers, and dealers.

NPTEL

Eurobond Market

- Market makers handle the *secondary market* for Eurobonds.
- Many of market makers are the same dealers that are part of syndicate that helped underwrite the issue, and many belong to the ***Association of International Bond Dealers*** (***AIBD***).
- An investor who wants to buy or sell an existing Eurobond can usually contact several market makers in the international OTC market to get several bid-ask quotes, before selecting the best one.
- Although most secondary trading of Eurobonds occurs in the OTC market, many Eurobonds are listed on organized exchanges in Luxembourg, London, and Zurich.
- These listings are done primarily to accommodate investors from countries that prohibit institutional investors from acquiring securities that are not listed.

NPTEL

Features of Eurobond

- The generic, plain vanilla Eurobond pays an annual fixed interest and has a long-term maturity. There are a number of different currencies in which Eurobonds are sold. The major currency denominations are the U.S. dollar, yen, and euro.
- Some Eurobonds have been valued in terms of a portfolio of currencies, such as the ***European currency unit (ECU)***.
- Many Eurobonds are unregistered, issued as ***bearer bonds***

NPTEL

Features of Eurobond

- Eurobonds have fewer protective covenants, making them an attractive financing instrument to corporations, but riskier to bond investors.
- Eurobonds differ in term of their default risk and are rated in terms of quality ratings.
- The maturities on Eurobonds vary. Many have intermediate terms (2 to 10 years), referred to as Euronotes, and long terms (10-30 years), called Eurobonds.
- There is also short-term Europaper and Euro Medium-term notes.

NPTEL

Features of Eurobond

- Dual-currency Eurobonds pay coupon interest in one currency and principal in another.

- Option currency Eurobond offers investors a choice of currency. For instance, a sterling/Canadian dollar bond gives the holder the right to receive interest and principal in either currency.

- A number of Eurobonds have special *conversion features* One type of convertible is a dual-currency bond that allows the holder to convert the bond into stock or another bond that is denominated in another currency.

NPTEL

Features of Eurobond

- A number of Eurobonds have special warrants attached to them. Some of the warrants sold with Eurobonds include those giving the holder the right to buy stock, additional bonds, currency, or gold.

- There are also floating-rate Eurobonds with the rates often tied to the LIBOR and floaters with the rate capped.

- The Eurobond market has also issued zero discount bonds

NPTEL

Global Bond

- A Global Bond is both a foreign bond and a Eurobond.
- It is issued and traded as a foreign bond (being registered in a country) and also it is sold through a Eurobond syndicate as a Eurobond.

NPTEL

Foreign Bond Risk

- ***Cross-border risk***: risk due to changes in political, social, and economic conditions in countries where the bonds are issued or where the company is incorporated
- **Sovereign risk**: The risk that the government is unable or unwilling (due to political changes) to service its debt

NPTEL

Factors to be Considered for Foreign Bond Investment

- **Size and diversification** of the country's exports. Countries that specialize in exporting only a few products may be more susceptible to recessions
- **Political stability**: Strength of the legal system, amount of unemployment, and distribution of wealth
- **History of meeting debt obligations**
- **Balance of payments ratios**: Country's total debt to export ratio.
- **Economic factors**: Inflation, growth in gross domestic product, interest rates, and unemployment
- **Susceptibility** of country's economy and exports to changes in economic conditions in industrialized countries

NPTEL

Eurocurrency Market

- The **Eurocurrency market** is the money market equivalent of the Eurobond market. It is a market in which funds are intermediated (deposited or loaned) outside the country of the currency in which the funds are denominated.
- For large investors the market offers two types of instruments: (1) Eurocurrency CDs (2) Primary Deposits
- Eurocurrency CDs are denominated in currencies outside the currency's country. The maturities on Eurocurrency CDs range from one day to several years, with the most common maturities being 1, 3, 6 and 12 months.
- The rates on the CDs are usually negotiated between the investor/depositor and the bank and they can be either fixed or floating.
- The rates frequently are quoted relative to the LIBOR. (Asian dollar CDs are quoted in terms of the Singapore Interbank Offer Rate (SIBOR)).
- Rates on Eurodollar CDs are typically higher than the rates on comparable domestic CDs.
- Primary deposits are time deposits with negotiated rates and short-term maturities.

NPTEL

Risks in International Debt

- ***Political risk*** is the uncertainty of converting international securing holdings because of an unexpected change in a country's laws or customs.

- For investors, political risk can result from a government placing restrictions on currency conversion, freezing assets, or imposing taxes.

- Political risk is greater in developing countries with unstable political regimes.

- ***Exchange-rate risk*** is the uncertainty over changes in the exchange rate.

- When an investor purchases a foreign security, she usually has to buy foreign currency, and when she receives income and principal from the security, or sells it, she usually has to convert the proceeds back to her own currency.

- When a corporation sells a security or borrows funds in a currency that must be converted to finance operations in a different country, the company is subject to exchange rate risk.

NPTEL

CONCLUSIONS

- Foreign bonds are sold in the currency of the local economy
- Foreign bonds provide foreign companies access to funds to finance their operations in the country where they sell the bonds.
- Multinational corporations finance many of their global operations by selling Eurobonds and Market makers handle the secondary market for Eurobonds
- Investors in international debt markets face various types of risks such as cross-boarder risk, sovereign risk, foreign exchange risk, political risk etc.

NPTEL

REFERENCES

- Johnson, S. R (2010): Bond Evaluation, Selection and Management, John Wiley & Sons, 2nd Edition.
- Fabozzi, J. Frank and Mann, V. Steven (2005): The Hand Book of Fixed Income Securities, Tata McGraw-Hill, 7th Edition.

NPTEL