Ac.F302: Corporate Finance

Week 15 – Debt financing

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Lecture Outline

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1. Corporate Debt
2. Bond Covenants
3. Repayment Provisions: Callable & Convertible Bonds

1. Corporate Debt

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Overview of Different Classifications of Corporate Debt

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- Public
- Unsecured
- Senior
- Domestic
- Short-term
- Fixed rate
- Coupon-paying
- Callable
- Straight

VS.

- Private
- Secured
- Junior
- Foreign
- Long-term
- Floating rate
- Zero-Coupon
- Non-callable
- Convertible

Corporate Debt: Public vs. Private

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- Companies can raise debt using different sources. Typical types of corporate debt include:
  - Public debt: which trades in a public market
  - Private debt: which is negotiated directly with a bank or a small group of investors.
- The securities that **companies** issue when raising debt are called corporate bonds.

Warning! Not to be confused with “Sovereign” debt, which is issued by governments, e.g.: treasury bills, municipal bonds, etc.

Public Debt

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- **The Prospectus**
  - A public bond issue is similar to a stock issue.
  - A prospectus or offering memorandum must be produced that describes the details of the offering.
  - **Indenture**
    - Must be included in the prospectus
    - It is a formal contract between a bond issuer and a trust company.
      - The trust company makes sure that the terms of the indenture are enforced.
      - In the case of default, the trust company represents the interests of the bond holders.

Public Debt

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- Corporate bonds almost always pay coupons semiannually, although a few corporations have issued zero-coupon bonds in the past.
- Most corporate bonds have maturities of 30 years or less.
- The face value or principal amount of a bond is denominated in standard increments, most often $1000.
  - The face value does not always correspond to the actual money raised because of underwriting fees and/or if the bond is issued at a discount.

Public Debt

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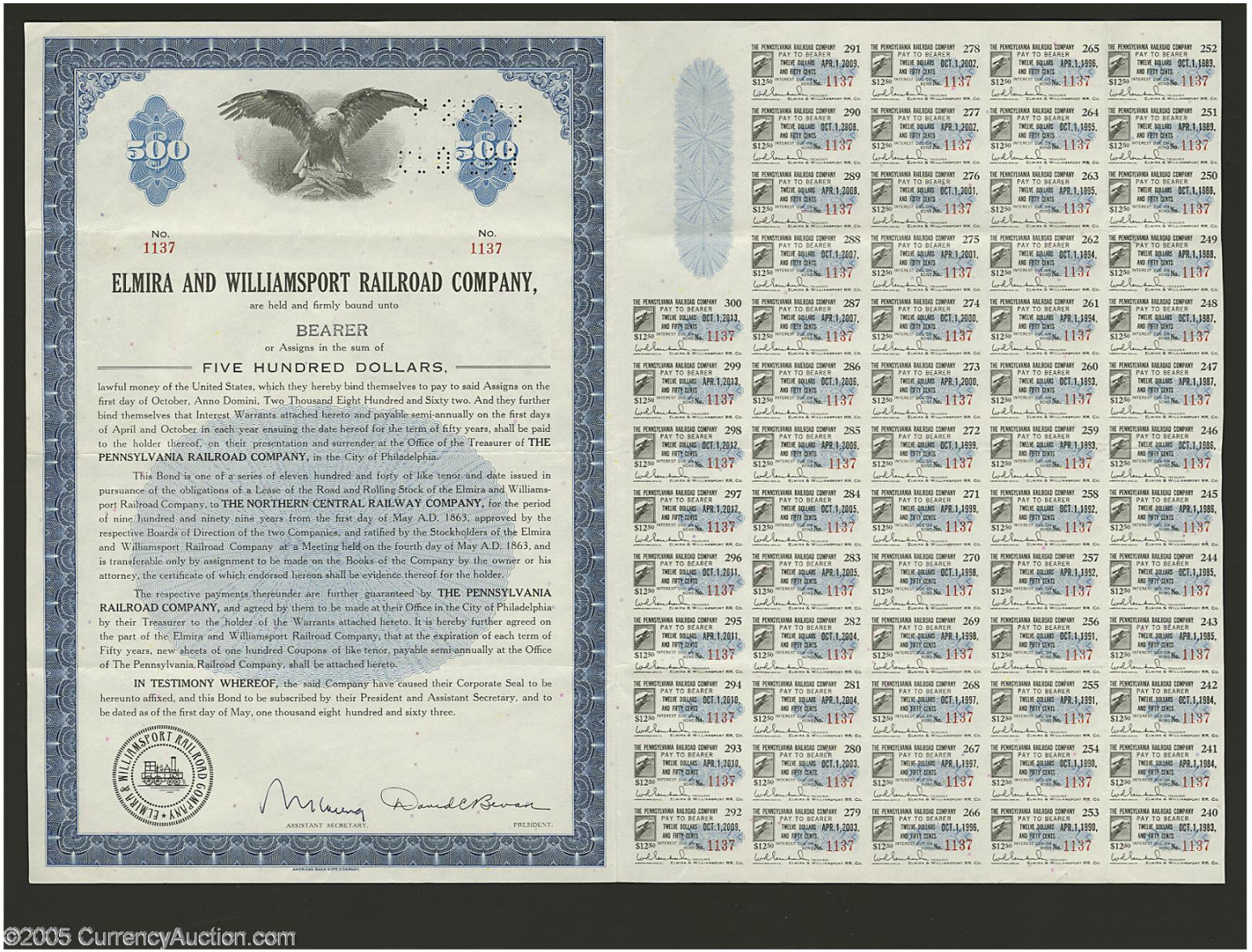
- **How do bondholders receive their coupon payments?**
  - **Bearer bonds:**
    - Whoever physically holds **the bond certificate** owns the bond.
    - To receive a coupon payment, the holder must provide explicit proof of ownership by literally clipping a coupon off the bond certificate and remitting it to the paying agent.
  - **Registered Bonds:**
    - The issuer of this type of bond maintains a list of all holders of its bonds.
    - Coupon and principal payments are made only to people on this list.
      - Almost all bonds today are registered bonds.

Bearer Bond



No. 1137

No. 1137

ELMIRA AND WILLIAMSPORT RAILROAD COMPANY,

are held and firmly bound unto

BEARER

or Assigns in the sum of

FIVE HUNDRED DOLLARS,

lawful money of the United States, which they hereby bind themselves to pay to said Assigns on the first day of October, Anno Domini, Two Thousand Eight Hundred and Sixty two. And they further bind themselves that Interest Warrants attached hereto and payable semi-annually on the first days of April and October in each year ensuing the date hereof for the term of fifty years, shall be paid to the holder thereof, on their presentation and surrender at the Office of the Treasurer of **THE PENNSYLVANIA RAILROAD COMPANY**, in the City of Philadelphia.

This Bond is one of a series of eleven hundred and forty of like tenor and date issued in pursuance of the obligations of a Lease of the Road and Rolling Stock of the Elmira and Williamsport Railroad Company, to **THE NORTHERN CENTRAL RAILWAY COMPANY**, for the period of nine hundred and ninety nine years from the first day of May A.D. 1863, approved by the respective Boards of Direction of the two Companies, and ratified by the Stockholders of the Elmira and Williamsport Railroad Company at a Meeting held on the fourth day of May A.D. 1863, and is transferable only by assignment to be made on the Books of the Company by the owner or his attorney, the certificate of which endorsed hereon shall be evidence thereof for the holder.

The respective payments thereunder are further guaranteed by **THE PENNSYLVANIA RAILROAD COMPANY**, and agreed by them to be made at their Office in the City of Philadelphia by their Treasurer to the holder of the Warrants attached hereto. It is hereby further agreed on the part of the Elmira and Williamsport Railroad Company, that at the expiration of each term of Fifty years, new sheets of one hundred Coupons of like tenor, payable semi-annually at the Office of The Pennsylvania Railroad Company, shall be attached hereto.

IN TESTIMONY WHEREOF, the said Company have caused their Corporate Seal to be hereunto affixed, and this Bond to be subscribed by their President and Assistant Secretary, and to be dated as of the first day of May, one thousand eight hundred and sixty three.

ELMIRA & WILLIAMSPORT RAIL ROAD COMPANY

ASSISTANT SECRETARY.

PRESIDENT.

AMERICAN BANK NOTE COMPANY.

Bearer Bond

COMPAGNIE UNIVERSELLE
DU
Canal Interocéanique de Panama
Société Anonyme
CAPITAL SOCIAL: 300.000.000 DE FRANCS.
ÉMISSION DE 387,387 OBLIGATIONS
Autorisée par l'Assemblée Générale du 29 Juin 1882.
Obligation de Cinq Cents Francs 4 %
AU PORTEUR
Remboursable au pair en 75 Années.
N° 0,332,191
PARIS, le 1er Octobre 1884.
Par délégation.
Le Président Directeur
Le Vice-Administrateur
AGENTS DE LA RÉPARTITION
L'AMÉRIQUE DU NORD
L'AMÉRIQUE DU SUD
L'OCÉANIE
GRAN, Graveur PARIS

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Types of Public Corporate Debt: secured vs. unsercured

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- Four types of public corporate debt are typically issued: notes, debentures, mortgage bonds, and asset-backed bonds.
- **Notes and debentures** are types of **unsecured debt:**
  - In the event of bankruptcy, unsecured debt gives bondholders a claim to only the assets of the firm that are not already pledged as collateral on other debt.
- **Notes** typically are coupon bonds with maturities shorter than 10 years.
- **Debentures** typically have longer maturities than notes.

Types of Public Corporate Debt: secured vs. unsecured

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- **Mortgage and asset-backed bonds** are types of **secured debt:**
  - In the event of bankruptcy, secured debt gives bondholders a claim to the specific assets that are pledged as collateral.
- For **mortgage bonds,** real property is pledged as collateral.
- **Asset-backed bonds** can be secured by any kind of asset that the issuing company owns.

Secured	Unsecured
Mortgage bonds(secured with property)	Notes (original maturity less than 10 years)
Asset-backed bonds(secured with any asset)	Debentures

Types of Public Corporate Debt: secured vs. unsercured

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- **Unsecured Debt and Seniority:**
  - Because more than one debenture/note might be outstanding, the bondholder's priority in claiming assets in the event of default (i.e., their seniority) is important.
  - Most debenture issues contain clauses restricting the company from issuing new debt with equal or higher priority than existing debt.
  - Subordinated (junior) debentures: In the event of a default, have a lower priority claim to the firm's assets than other outstanding debt.

Public Debt: domestic vs. foreign

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- **Bond Markets:**
  - **Domestic Bonds**
    - Bonds issued by a local entity and traded in a local market (can be purchased by foreigners).
    - They are denominated in the local currency.
    - Example: A U.S. firm issuing a dollar-denominated bond in the U.S.
  - **Foreign Bonds**
    - Bonds issued by a foreign company in a local market and intended for local investors.
    - They are denominated in the local currency.
    - Example: A British firm issuing a dollar-denominated bond in the U.S.
    - Yankee (U.S.), Bulldog (UK), Samurai (Japan).

Public Debt: domestic vs. foreign

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- **Bond Markets:**
  - **Eurobonds**
    - Bonds issued outside the home country of the issuer through an international syndicate and sold to investors residing in various countries.
    - Are usually denominated in a currency other than that of the country where it is issued.
    - Example: A US company issuing a dollar-denominated bond in European and/or Asian countries (Eurodollar bond).
  - **Global Bonds**
    - Similar to Eurobonds but can also be traded and issued simultaneously in the country whose currency is used to value the bond.
    - Example: A British or US company issuing a dollar-denominated bond both in France and the U.S.

Private Debt

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- Debt that is not publicly traded.
- Has the advantage that it avoids the cost of public registration but has the disadvantage of being illiquid.
- There are two segments of the private debt market: **term loans and private placements**.

Private Debt

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- **Term Loans**
  - **Term Loan**
    - A bank loan that lasts for a specific term.
  - **Syndicated Bank Loan**
    - A single loan that is funded by a group of banks rather than just a single bank.
  - **Revolving Line of Credit**
    - A credit commitment for a specific time period, typically two to three years, which a company can use as needed.
- **Private Placements**
  - A bond issue that is sold to a small group of investors rather than the general public.
  - Because a private placement does not need to be registered, it is less costly to issue than public debt.

2.Debt Covenants

Debt Covenants

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- Restrictive clauses that lenders put in lending agreements (contracts) to limit the borrowers from taking certain actions that may reduce their ability to repay the bonds or loans.

- They are not used to place a burden on the borrower. Rather, they are used to align the interests of the principal (borrower) and agent (lender) and reduce agency costs of debt.

- By making it legally binding for the borrower to maintain a certain limit of a financial ratio or keep a certain level of cash flow, the lender protects itself from the risks associated with the loan agreement.

Debt Covenants

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- The stronger the covenants in the bond (loan) contract, the lower the interest rate required by lenders.

- For example, covenants may:
  - Restrict the ability of management to pay high **dividends**.
  - Restrict the level of **further indebtedness**.
  - Specify that the issuer must maintain a **minimum amount of working capital**.

- Specific examples:
  - The company cannot pay annual cash dividends exceeding 65% of net earnings.
  - The company cannot borrow debt that is senior to this debt.
  - The company must maintain an interest coverage ratio of 3.20 based on cash flow from operations.

Importance of Debt Covenants: Further indebtedness

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- Assume a company has equity for $4 million and no debt. The leverage ration of this company is L=D/E = 0
- Then, Lender A lends $1 million to the company. Based on the risk profile of the company, the lender lends at an annual interest rate of 7%. After this round of borrowing, the company has a leverage ratio of L=1/4=0.25
- If there are no covenants restricting further debt, the company can immediately borrow an additional $2 million from another lender (Lender B). In such case the new Leverage rate of the company would be: L = (1 + 2)/4=0.75
- If the company turns around and borrows more money from additional lenders, the original loan will be a riskier proposition for Lender A because of the higher possibility of the company defaulting on its loan repayment to Lender A due to the increased leverage of the company.
- Therefore, it is in Lender A's best interest to put a covenant in the loan contract to restrict the company from raising more debt or to limit the company to **certain debt ratio.**

Importance of Debt Covenants: Cashing out

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- Lender A lends $1 million to a company.
- In the following days, the company declares a liquidating dividend to all shareholders.
- Without covenants, the company is free to pay out all of its earnings or liquidate its assets and pay a liquidating dividend to all shareholders.
- In this scenario, the lender will lose his/her money.
- Therefore, it is in Lender A's best interest to put a covenant in the loan contract to restrict the company to a certain **dividend payout ratio.**

Violation of Debt Covenants

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- When a debt covenant is violated, depending on the severity, the lender can do several things:
  - Demand penalty payment.
  - Increase the predetermined interest rate.
  - Increase the amount of collateral.
  - Demand full immediate repayment of the loan.

3.Repayment provisions

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Repayment Provisions

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- A bond issuer typically repays its bonds by making coupon and principal payments as specified in the bond contract However, the issuer can:
  - Repurchase a fraction of the outstanding bonds in the market
  - Make a tender offer for the entire issue
  - Exercise a **call** provision
  - Convertible provision

Call Provisions

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- **Callable Bonds:** Bonds that contain a call provision that allows the issuer to **repurchase the bonds at a predetermined price**.
- A call feature allows the issuer of the bond the right (but not the obligation) to retire all outstanding bonds on (or after) a specific date (the **call date**), for the **call price**.
- The call price is generally set at or above, and expressed as a percentage of, the bond's face value.
- A firm may choose to call a bond issue if interest rates have fallen.
  - The issuer can lower its borrowing costs by exercising the call and then immediately refinancing the issue at a lower rate.

Call Provisions

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- Holders of callable bonds understand that the issuer will exercise the call option only when the coupon rate of the bond exceeds the prevailing market rate.

- If a bond is called, investors must reinvest the proceeds when market rates are lower than the coupon rate they are currently receiving.
  - This makes callable bonds relatively less attractive to bondholders than identical non-callable bonds.
  - A callable bond will trade at a lower price (and therefore a higher yield) than an otherwise equivalent non-callable bond.

Call Provisions: on the call date

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- Consider what happens to a bond that is callable at par on only one specific date. On the call date:
  - If the yield of the callable bond is less than the coupon, the callable bond will be called, so its price is its par value.
  - If this yield is greater than the coupon, then the callable bond will not be called, so it has the same price as the non-callable bond.
    - Note: The callable bond price is capped at par: The price can be low when yields are high but does not rise above the par value when the yield is low.

Figure 24.2 Prices of Callable and Non-Callable Bonds on the Call Date

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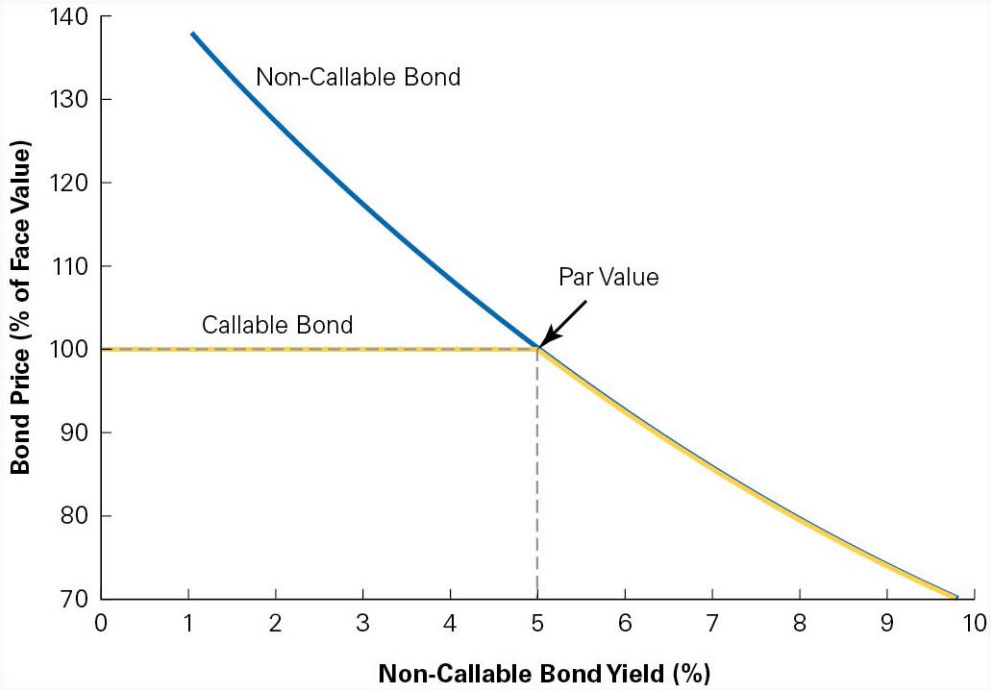

Call Provisions: prior to the call date

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- Prior to the Call Date
  - When market yields are high relative to the bond coupon, investors anticipate that the likelihood of exercising the call is low and the bond price is similar to an otherwise identical non-callable bond.
  - When market yields are low relative to the bond coupon, investors anticipate that the bond will likely be called, so its price is close to the price of a non-callable bond that matures on the call date.

Figure 24.3 Prices of Callable and Non-Callable Bonds Prior to the Call Date

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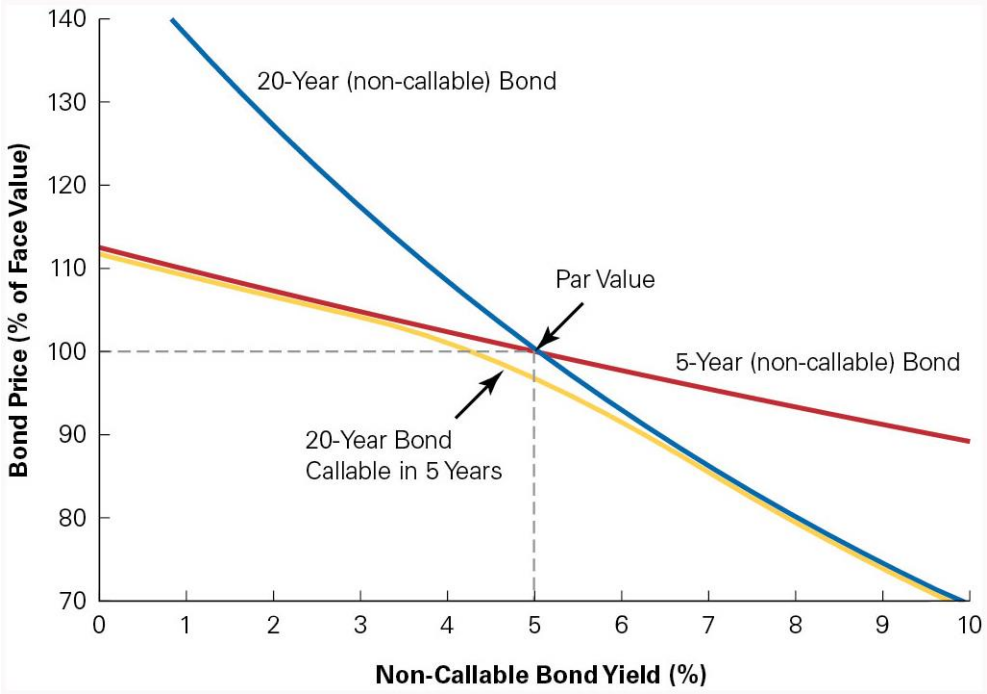

Call Provisions

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- Yield to Call (YTC)
  - The yield of a callable bond calculated under the assumption that the bond will be called on the earliest call date

Convertible Provisions

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- **Convertible Bond**
  - A corporate bond with a provision that gives the bondholder an option to convert the bond owned into a fixed number of shares of common stock at any time up to the maturity of the bond.
- Conversion Ratio
  - The number of shares into which each bond can be converted.
- Conversion Price
  - The face value of a convertible bond divided by the number of shares received if the bond is converted.

Convertible Provisions

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- A convertible bond can be thought of as a regular bond plus a special type of call option called a **warrant**.
  - Warrant: A call option written by the company itself on new stock (whereas a regular call option is written on existing stock).
- When a holder of a warrant exercises it and thereby purchases stock, the company delivers this stock by issuing new stock.
- Convertible debt carries a lower interest rate because it has an embedded warrant.

Convertible Provisions

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- Assume you have a convertible bond with a $1000 face value and a conversion ratio of 15.
  - If you convert the bond into stock, you will receive 15 shares.
  - If you do not convert, you will receive $1000 at maturity.
  - By converting you essentially “pay” $1000 for 15 shares, implying a price per share of $66.67 (the strike price of the warrant).
  - If the price of the stock in the market exceeds $66.67, you will choose to convert; otherwise, you will take the cash.

Convertible Provisions

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Prior to maturity, If the stock price is low so that the embedded warrant is deep out-of-the-money, the conversion provision is not worth much and the bond's value is close to the value of a straight bond.

When the stock price is high and the embedded warrant is deep in-the-money, then the convertible bond trades close to but higher than the value of the bond if converted (to reflect the time value of the option).