# Fixed Income

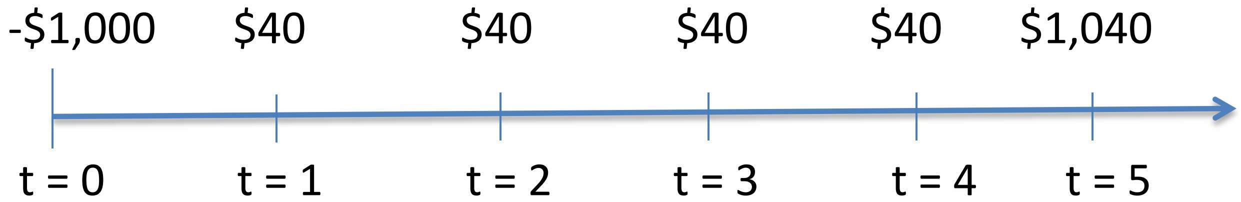
- **Fixed-Income Securities: Defining Elements**
- Fixed-Income Markets: Issuance, Trading, and Funding
- Introduction to Fixed-Income Valuation
- Introduction to Asset-Backed Securities
- Understanding Fixed-Income Risk and Return
- Fundamentals of Credit Analysis

# LOS Describe basic features of a fixed-income security;

**What is a fixed income security?**

- An investment that provides a return in the form of **fixed periodic payments** and the eventual return of **principal** at maturity.
- Payments of a fixed-income security are known in advance (unlike those of a variable-income security, such as dividends from common stock.
- Example: a $1000 bond which pays a 4% annual coupon with five years to maturity.

**Fixed periodic income**



## LOS Describe basic features of a fixed-income security;

**Features of a fixed income security**

**(I) Issuer**

- Issuers float bonds and receive funds from investors
- Issuers can be supranational organizations, sovereign governments, corporates, or some other legally recognized entities

**(II) Maturity**

- Refers to the date when the issuer is obligated to redeem the bond by paying the outstanding principal amount.
- Maturities typically range from overnight to 30 years or longer.

**(III) Par value**

- Amount that will be repaid at maturity

## LOS Describe basic features of a fixed-income security;

**Features of a fixed income security**

**(IV) Coupon**

- Interest rate that the bondholder will receive, usually at six-month or yearly intervals.

**(V) Currency denomination**

- Bonds can be issued in any currency, but most are denominated in Euros or dollars
- **Dual-currency bonds** make coupon payments in one currency and pay the par value at maturity in another currency.

**(VI) Yield to maturity**

- The internal rate of return (IRR) that equates the present value (PV) of a bond's expected cash flows with its price

# LOS Describe content of a bond indenture

**What's a bond indenture?**

- A **legal document** that outlines all the parameters of the bond issue, such as the par amount, issuer, coupon rate, security pledge, and the rights of bondholders.
- It is the legal document that is ultimately referred to when there is a conflict between issuers and bondholders.
- It describes the security ranking of the bond, and whether it's secured or unsecured.
- Security pledges and the order of seniority constitute **credit enhancements** that improve the quality of the bond.

# LOS Describe content of a bond indenture

Sample of an indenture

# LOS Compare affirmative and negative covenants and identify examples of each

**What are covenants?**

- Legally enforceable rules parties (borrowers and lenders) agree on.
- Purpose: to protect bondholders.

## (I) Affirmative (or Positive) Covenant

- Require a party to do something, are administrative in nature, do not result in additional costs, nor limit operations of business
  - ➢ Example: what to do with proceeds from the bond issue, adequate levels of insurance, audited financial statements, etc.

## (II) Negative Covenants

- Outlines forbidden actions
  - ➢ Example: debt ratio beyond which the company should **not** issue more bonds, the company **cannot** dispose of certain assets, the firm **cannot** be involved in any mergers & acquisitions, etc.

## LOS Describe how legal, regulatory, and tax considerations affect the issuance and trading of fixed-income securities

Fixed income securities are dependent on laws and regulations of the place of issuance, the place where bonds are traded, and on the holders of bonds.

**National and Foreign Bonds**

- National bonds are issued and traded in a country. Domestic bonds are issued by local entities. Entities from other countries issue foreign bonds.
  - Example: when General Motors issues bonds in the United States, these are domestic, whereas if Toyota issues bonds in the United States in US dollars, these are foreign bonds.

LOS **Describe how legal, regulatory, and tax considerations affect the issuance and trading of fixed-income securities**

**Eurobonds**

- An international bond denominated in a currency **not native** to the country where it is issued.

- Denomination: any currency, **not only the Euro**.

- Are usually less regulated, unsecured, and underwritten by an international syndicate.

- Most Eurobonds are bearer bonds, which means the trustee does not keep record of owners; only the clearing system can have owner information.

LOS **Describe how legal, regulatory, and tax considerations affect the issuance and trading of fixed-income securities**

**Taxation of bonds**

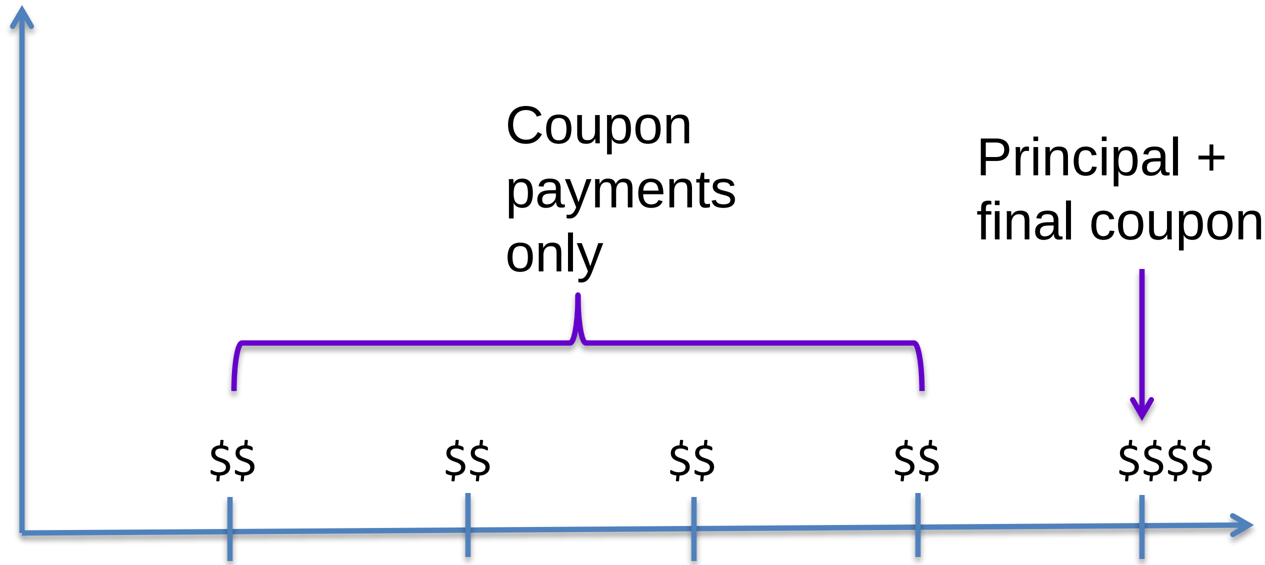
- The income portion of bond investments is taxed at the income tax rate like any other income.
- In the US, for example, all **U.S. Treasury securities** are exempt from **taxation** at the state and local level but are fully **taxable** at the **federal** level.
- However, there may be tax-exempt securities such as US municipality bonds.
- If a bond generates a capital gain, **capital gain tax** may apply.
- Different tax rates may apply for long-term and short-term capital gains.

LOS

# Describe how cash flows of fixed-income securities are structured

## Plain Vanilla or Bullet Bonds

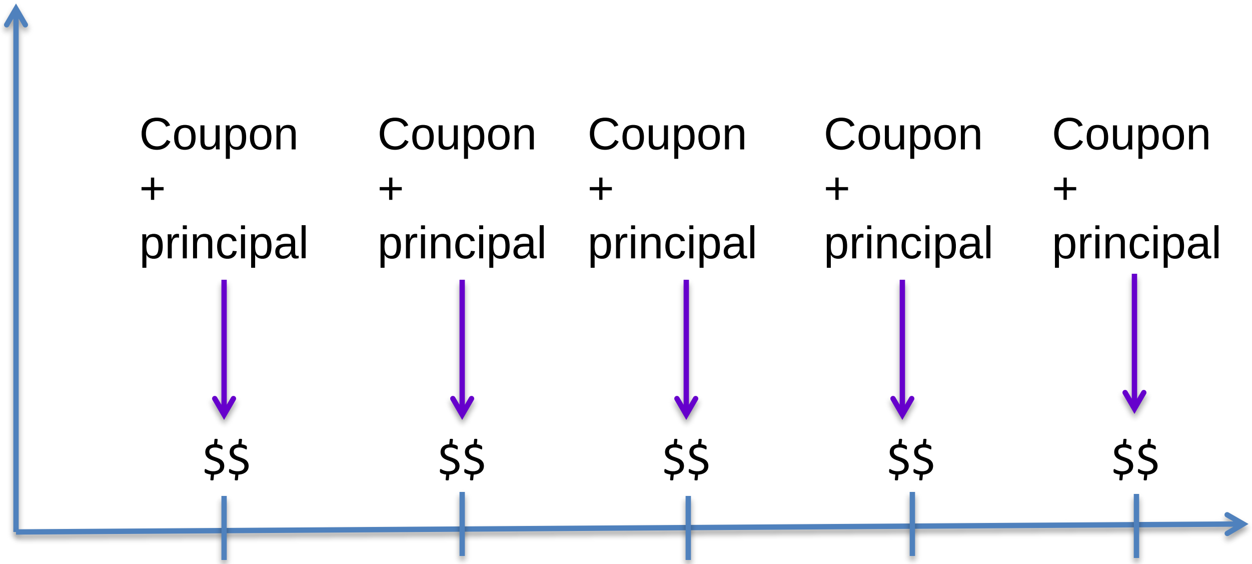
- Have periodic, fixed coupon payments and a lump-sum payment of **principal at maturity**



LOS **Describe how cash flows of fixed-income securities are structured**

**Amortized bonds**

- Have fixed periodic payments that reduce the outstanding principal amount to zero till the maturity.
- Each payment goes towards settlement of **both** interest and the principal
  - ➢ Similar to a mortgage



## LOS Describe contingency provisions affecting the timing and/or nature of cash flows of fixed-income securities and identify whether such provisions benefit the borrower or the lender

**What are contingency provisions?**

- Contingency provisions allow for some **conditional action**.
- These rights are called **options**.
  - ➢ Bonds with embedded options can be callable, putable, and convertible.

**Callable bonds** (good for the issuer)

- Give the issuer the right to redeem the bond before maturity, providing protection against a decline in interest rates.
- Issuer has the right to replace an old, expensive bond with new cheaper one if the interest rates decline.

➢ From the investor's perspective, there is a higher level of reinvestment risk.

## LOS Describe contingency provisions affecting the timing and/or nature of cash flows of fixed-income securities and identify whether such provisions benefit the borrower or the lender

**Putable bond** (good for the investor)

- Gives the bondholders the right to sell the bond back to the issuer at a pre-determined price on specified dates.
- If interest rates rise, the bondholders can put the bond back and get cash to reinvest in higher yield bonds.

➢ Can be a good option for **bullish** investors.

**Convertible Bonds**

- Gives the holder the right to exchange the bond for a specified number of common shares.
- The price of a convertible bond is usually higher. A warrant is not an embedded option but rather an "attached" option. Warrants are frequently attached to bonds as a "sweetener."

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