Advanced International Capital Movements

Nov 13, 2025

Contents

I. Global Fixed Income (Bond) Markets
II. Types of Fixed Income Securities
III. Bond Investment
IV. Nov 27: Presentation of Students' Research Works

I. Global Fixed Income (Bond) Markets

(1) Domestic Bond Market

Issued and traded within the issuer's own country, denominated in local currency.

> *Example:* Korean Treasury Bonds (KTBs) traded in the Korea Exchange (KRX).

(2) Foreign Bond Market

Issued by foreign entities in a domestic market and denominated in the domestic currency.

> *Example:* A Japanese firm issuing USD-denominated bonds in the U.S. market (Yankee Bond).

(3) Eurobond Market

Issued in a currency that differs from the country of issue; traded internationally.

> *Example:* A Korean company issuing USD bonds in London—called a **Eurodollar bond**.

The Anatomy of a Bond

Imagine a bond as a formal IOU. An investor gives money to an issuer (like a company or government), and in return, the issuer promises to make regular interest payments and then return the original amount at a specific future date.

Here are the three core components:

Component	Example Figure	Description
Face Value	**$1,000**	Also known as Par Value, this is the amount the investor will be paid back when the bond "matures." It's the principal amount of the loan. While bonds can be bought for more or less, $1,000 is the most common face value.[1][2]
Coupon Rate	**5% per year**	This is the fixed interest rate the issuer agrees to pay the bondholder.[1] The actual cash payment, called the coupon, is calculated from this rate (5% of $1,000 = $50 per year).
Maturity Date	**10 Years**	This is the date when the bond's term ends. On this day, the issuer must pay the bondholder the full Face Value ($1,000), and the bond is retired.[1]

- **Stocks:** Only corporations issue stocks.[15]
- **Bonds:** Bonds are issued by both corporations and governments at various levels (national, state, municipal).[7][12]

Here is a summary table for a quick comparison:

Feature	Stocks (Equities)	Bonds (Debt)
What It Is	A share of ownership in a company.[3]	A loan made to a company or government.[8]
Investor's Role	Shareholder (Owner)[15]	Bondholder (Lender)[7]
Source of Return	Capital gains and/or dividends.[3]	Fixed interest (coupon) payments.[3][9]
Risk Profile	Higher risk, higher potential for price fluctuation.[13]	Lower risk, generally more stable.[1]
Return Potential	Higher, but not guaranteed.[13]	Lower, but more predictable.[3]
Voting Rights	Usually have voting rights.[3]	No voting rights.[3]
In Case of Bankruptcy	Paid last, after all creditors.[7]	Paid before shareholders.[7]
Issuers	Corporations.[11]	Corporations and governments.[12]

II. Types of Fixed Income Securities

Major Categories of Bonds

Category	Description	Example
Sovereign Bonds	Issued by national governments to finance public spending or refinance debt.	U.S. Treasury Bonds, Japanese Government Bonds (JGBs)
Corporate Bonds	Issued by private or public corporations to raise capital for investment.	Apple Inc. 10-year bond (USD-denominated)
Municipal Bonds	Issued by local governments or agencies, often tax-exempt in domestic markets.	New York City Municipal Bonds
Supranational Bonds	Issued by institutions like the World Bank or Asian Development Bank.	World Bank USD Sustainable Development Bond
Emerging Market Bonds	Issued by developing countries or their corporations, usually with higher yields.	Brazil 2033 USD Bond, Korea Electric Power Corp. (KEPCO) Bond

Hybrid Bonds

1. Convertible Bonds

Convertible bonds are one of the most prevalent types of hybrid securities.[4] They function like a standard bond, providing regular interest (coupon) payments to the investor. However, they also include an embedded option that gives the bondholder the right to convert the bond into a predetermined number of shares of the issuing company's common stock.[5][6]

- **Key Features**:
  - **Conversion Ratio**: This specifies how many shares of stock the bond can be converted into.[5][7] For example, a 10:1 ratio means one bond can be exchanged for 10 shares.
  - **Conversion Price**: This is the effective price the investor pays for the stock upon conversion. It's calculated by dividing the bond's face value by the conversion ratio.[5][6]
  - **Lower Coupon Rate**: Convertible bonds typically offer a lower interest rate than non-convertible bonds from the same issuer because the conversion option has value.[8]
- **Example**:

  Imagine a tech company issues a 5-year convertible bond with a face value of $1,000 and an annual coupon rate of 3%. The bond can be converted into 20 shares of the company's stock. The conversion price would be $50 per share (1,000 / 20 shares). If the company's stock price rises above $50, the investor could profit by converting the bond into stock and selling the shares at the higher market price. [8] If the stock price remains below $50, the investor can hold the bond and continue to receive the 3% interest payments until maturity.

2. Perpetual Bonds (Perps)

Perpetual bonds, also known as "perps" or "consols," are bonds with no maturity date.[9][10] In theory, the issuer makes coupon payments forever without ever having to repay the principal amount.[11] This makes them similar to dividend-paying stocks.[11][12]

- **Key Features**:
  - **No Maturity Date**: The issuer is not obligated to repay the principal.[9]
  - **Call Provision**: Most modern perpetual bonds include a call option, allowing the issuer to redeem the bond after a specific period, typically 5 to 10 years from issuance.[12][13]
  - **Higher Yields**: To compensate for the lack of principal repayment, perpetual bonds generally offer higher coupon rates than traditional bonds.[10]
- **Example**:
  A bank might issue a perpetual bond with a face value of $1,000 and a fixed coupon rate of 6%. The investor would receive $60 in interest payments each year for as long as they hold the bond. While the bank is not required to repay the $1,000 principal, it may have the option to call the bond back after five years if, for instance, interest rates have fallen and it can refinance the debt at a lower cost.

3. Contingent Convertible Bonds (CoCos)

Contingent convertible bonds, often called CoCos or Additional Tier 1 (AT1) bonds, are primarily issued by financial institutions like banks.[14] These bonds are designed to automatically convert into equity or have their principal written down when the issuer's capital falls below a certain trigger level.[15][16]

- **Key Features**:
  - **Trigger Event**: The conversion or write-down is activated by a pre-specified event, such as the bank's Common Equity Tier 1 (CET1) ratio falling below a regulatory threshold (e.g., 5.125%).[15][17]
  - **Loss Absorption**: They act as a buffer to absorb losses in times of financial distress, helping to recapitalize the bank without requiring a taxpayer-funded bailout.[14][15]
  - **High Yields**: Due to their risky nature, CoCos offer significantly higher yields than other types of bonds.
- **Example**:
  A European bank issues a CoCo bond with a face value of $1,000 and a 7.5% coupon. The bond's terms state that if the bank's CET1 ratio drops below 7%, the bond will be automatically converted into common stock of the bank. This feature helps the bank meet its regulatory capital requirements under frameworks like Basel III.[14][18] A real-world instance involved Credit Suisse's AT1 bonds, which were written down to zero during its acquisition by UBS in 2023, as stipulated by the Swiss regulator.[16]

III. Bond Investment

Risks in Global Bond Investing

1. **Interest Rate Risk** – Prices fall when rates rise.
2. **Credit Risk** – Default probability.
3. **Currency Risk** – FX movements affect foreign returns.
4. **Liquidity Risk** – Some emerging market bonds are thinly traded.
5. **Political and Regulatory Risk** – Policy changes, sanctions, or capital controls.

Key Participants

1. **Issuers** – Governments, corporations, financial institutions.
2. **Investors** – Pension funds, insurance companies, mutual funds, and sovereign wealth funds.
3. **Intermediaries** – Investment banks, underwriters, and brokers (e.g., Goldman Sachs, JP Morgan).
4. **Rating Agencies** – Moody's, S&P, Fitch assess default risk.
5. **Regulators** – SEC (U.S.), FSA (UK), FSS (Korea) oversee transparency and market stability.

Concept Overview

The **inverse relationship** between **bond prices** and **market yields** (interest rates) arises because:

> Bonds pay *fixed* coupon payments, but market interest rates fluctuate.

When market yields rise, new bonds are issued with **higher coupon rates**.

Existing bonds with **lower coupons** become **less attractive**, so their market prices must fall to offer equivalent returns.

Conversely, when market yields fall, older bonds with **higher coupons** become **more valuable**, so their prices rise.


Prices
Interest rates
Interest rates
Prices

Mathematical Relationship

For a bond with price P, annual coupon C, yield (market interest rate) y, and maturity n:

$$P = \sum_{t=1}^{n} \frac{C}{(1+y)^t} + \frac{FV}{(1+y)^n}$$

where FV = face value (usually 100 or 1,000).

- As $y \uparrow \rightarrow$ denominators increase $\rightarrow P \downarrow$
- As $y \downarrow \rightarrow$ denominators decrease $\rightarrow P \uparrow$

That's the mathematical reason for the inverse relationship.

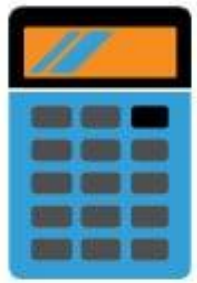
Numerical Example

Example 1: 3-Year Bond, 5% Coupon, Face Value = $1,000

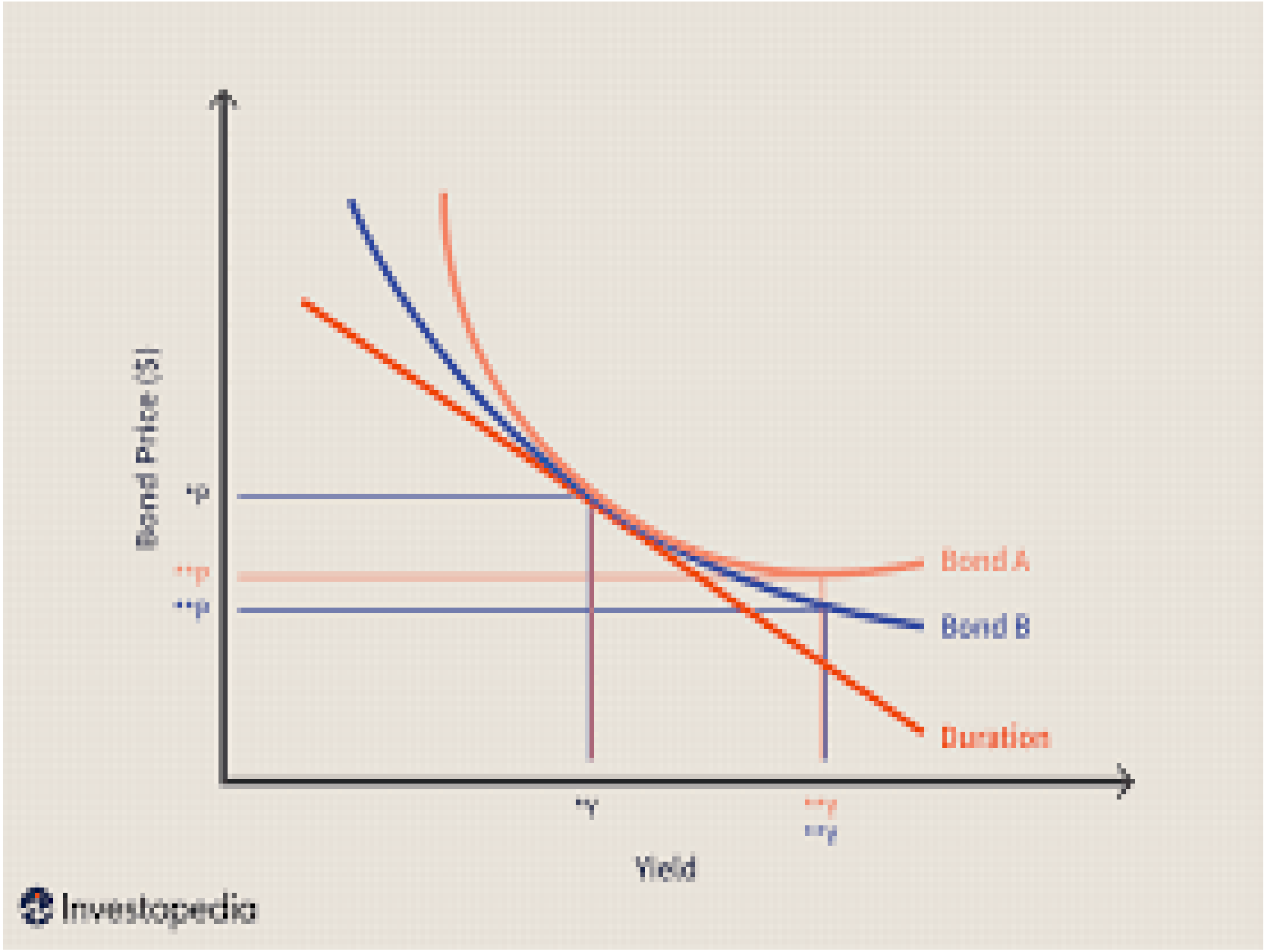
Scenario	Market Yield (YTM)	Price (Present Value of Cash Flows)
A	5%	$1,000.00
B	6%	$973.00
C	4%	$1,027.00

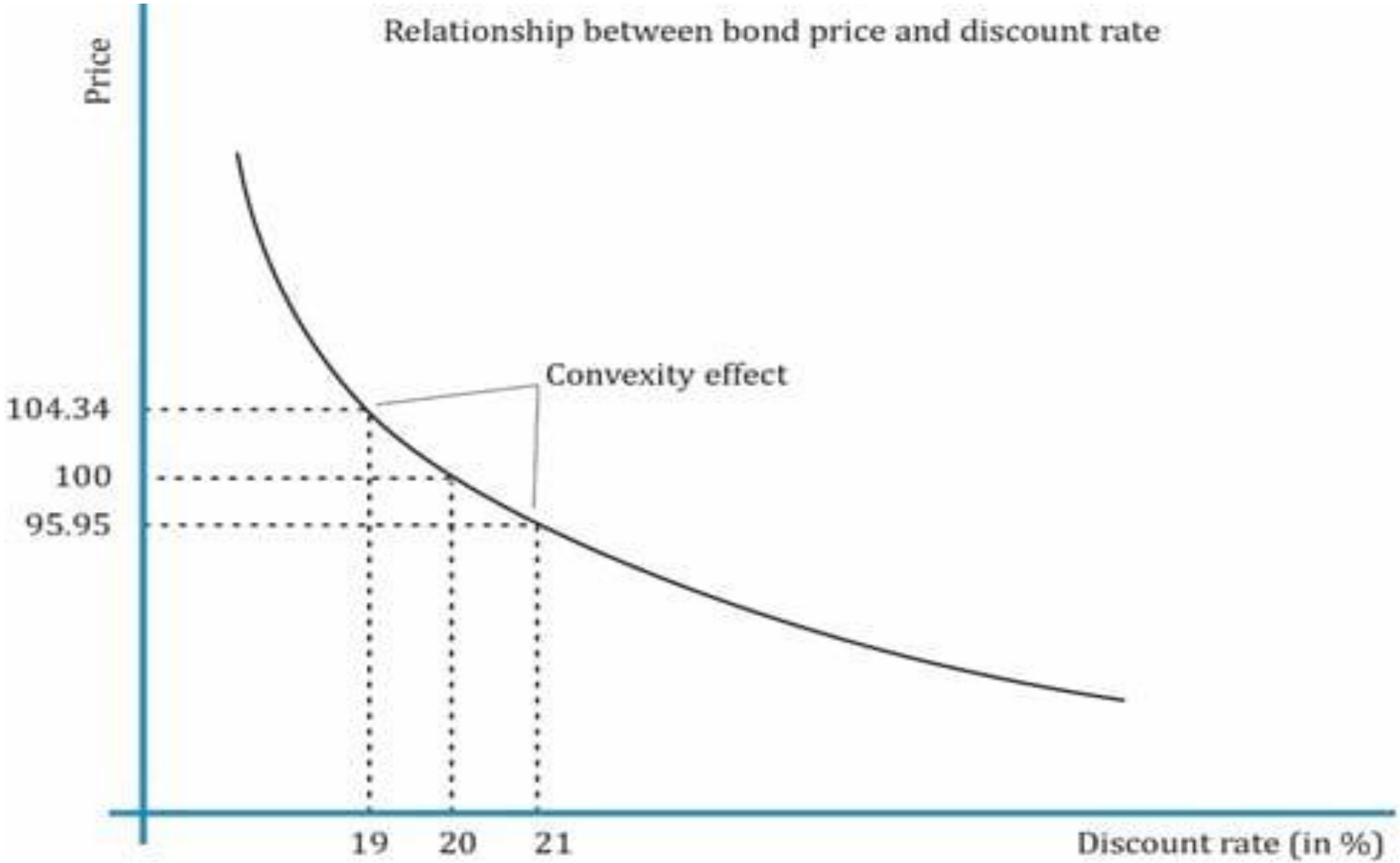
👉 As yields **rise from 4% → 6%**, the price **drops** from **$1,027 → $973**.

That's an inverse relationship in action.

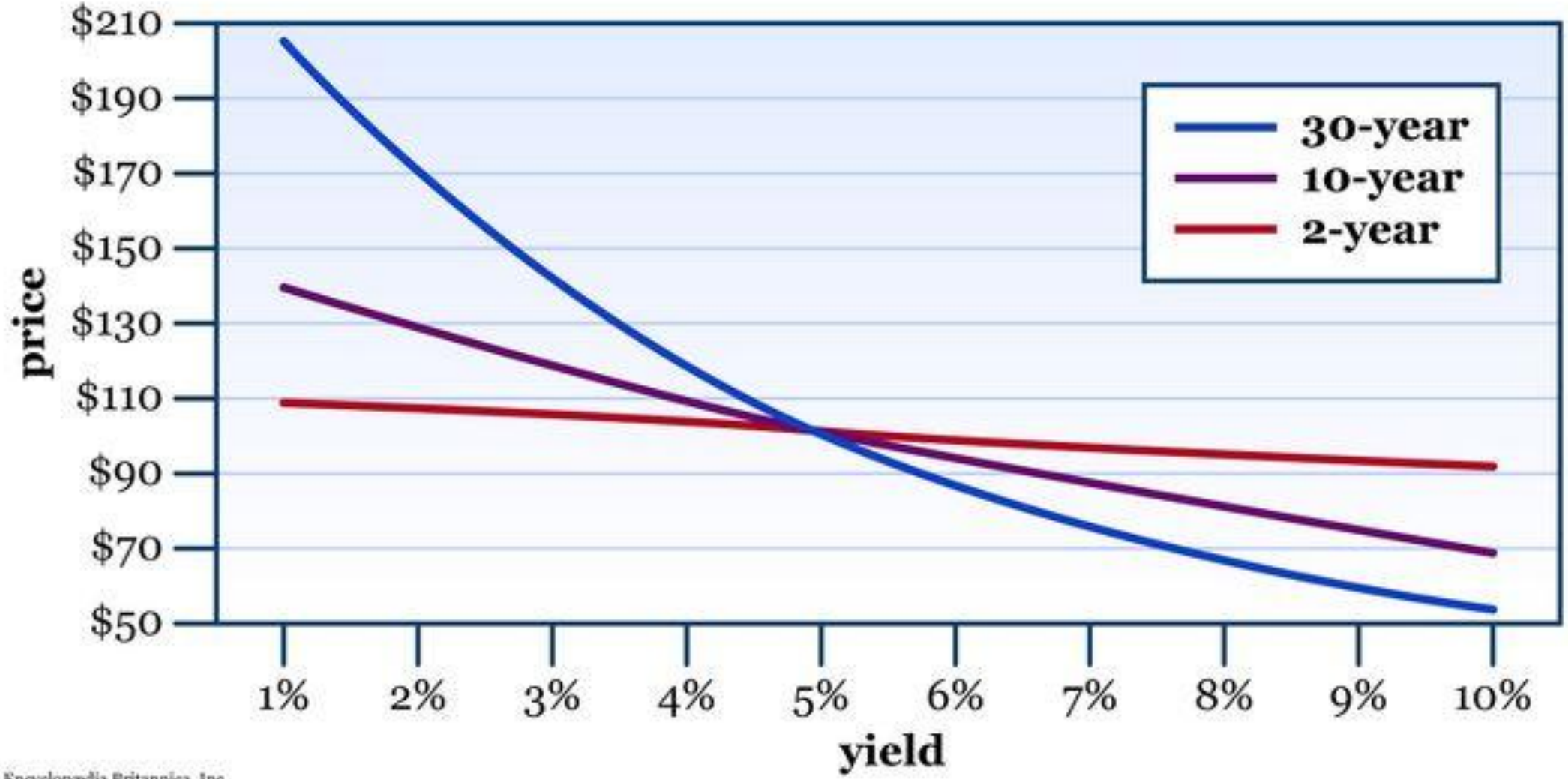


$$\text{Bond Price Formula} = \sum \frac{C_n}{(1+YTM)^n} + \frac{P}{(1+i)^n}$$


Bond Price ($)
Bond A
Bond B
Duration
Yield
Investopedia


Relationship between bond price and discount rate
Price
Convexity effect
104.34
100
95.95
19
20
21
Discount rate (in %)

Duration: The sensitivity of a bond's price to changes in yield



Some examples of calculating the bond price

Example 1: A Standard Coupon Bond Trading at a Discount

In this scenario, the bond's coupon rate is lower than the current market interest rate. This makes the bond less attractive, so it will trade at a price below its face value (a discount).

Bond Details:

- **Face Value (F):** $1,000
- **Annual Coupon Rate:** 3%
- **Market Interest Rate (r):** 5% per year
- **Time to Maturity:** 5 years
- **Coupon Payments:** Annual

Calculation Steps:

1. **Calculate the Annual Coupon Payment (C):**
   C = 3% of $1,000 = $30
2. **Determine the Number of Periods (n):**
   n = 5 years
3. **Calculate the Present Value of Each Coupon Payment:**
   - Year 1: $30 / $(1 + 0.05)^1$ = $28.57
   - Year 2: $30 / $(1 + 0.05)^2$ = $27.21
   - Year 3: $30 / $(1 + 0.05)^3$ = $25.92
   - Year 4: $30 / $(1 + 0.05)^4$ = $24.68
   - Year 5: $30 / $(1 + 0.05)^5$ = $23.51
4. **Calculate the Present Value of the Face Value:**
   Present Value of F = $1,000 / $(1 + 0.05)^5$ = $783.53
5. **Sum the Present Values:**

   Bond Price = $28.57 + $27.21 + $25.92 + $24.68 + $23.51 + $783.53 = **913.42**

The price of this bond is $913.42, which is less than its $1,000 face value.

Example 2: A Bond Trading at a Premium with Semi-Annual Coupons

When a bond's coupon rate is higher than the market interest rate, it is more desirable to investors and will trade at a price above its face value (a premium). Many bonds pay interest twice a year (semi-annually).

Bond Details:

- **Face Value (F):** $1,000
- **Annual Coupon Rate:** 6%
- **Market Interest Rate (r):** 4% per year
- **Time to Maturity:** 3 years
- **Coupon Payments:** Semi-annual

Calculation Steps:

1. **Adjust for Semi-Annual Payments:**
   - **Coupon Payment per Period (C):** (6% / 2) * $1,000 = $30
   - **Market Interest Rate per Period (r):** 4% / 2 = 2% or 0.02
   - **Number of Periods (n):** 3 years * 2 = 6 periods
2. **Calculate the Present Value of Coupon Payments and Face Value:**
   This can be simplified using the present value of an annuity formula for the coupons and the present value of a lump sum for the face value.
   - Present Value of Coupons = $30 * [1 - (1 + 0.02)$^{-6}$] / 0.02 = $167.85
   - Present Value of Face Value = $1,000 / (1 + 0.02)^{6} = $887.97
3. **Sum the Present Values:**

   Bond Price = $167.85 + 887.97 = **1,055.82**

The price of this bond is $1,055.82, which is higher than its $1,000 face value.

Example 3: A Zero-Coupon Bond

Zero-coupon bonds do not pay periodic interest. Instead, they are issued at a significant discount to their face value and the investor's return is the difference between the purchase price and the face value received at maturity.[2]

Bond Details:

- **Face Value (F):** $1,000
- **Market Interest Rate (r):** 3% per year
- **Time to Maturity:** 2 years

Calculation Steps:

Since there are no coupon payments, we only need to calculate the present value of the face value.[2]

1. **Calculate the Present Value of the Face Value:**

   Bond Price = $1,000/(1+0.03)^2 = **942.59**[2]

The price of this zero-coupon bond is $942.59.

IV. Nov 27: Presentation of Students' Research Works