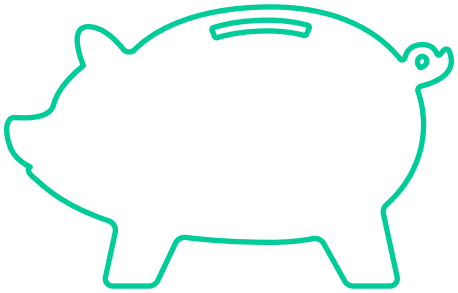
Chapter 2: Capital Markets



Outline

- Two main types of securities: **debt** and **equity**.
- What are the basic parts?
- Who are the players?
  - Investors, firms, (investment) banks.
- How does it work?
- What is the **required return**?
  - Stocks versus bonds.

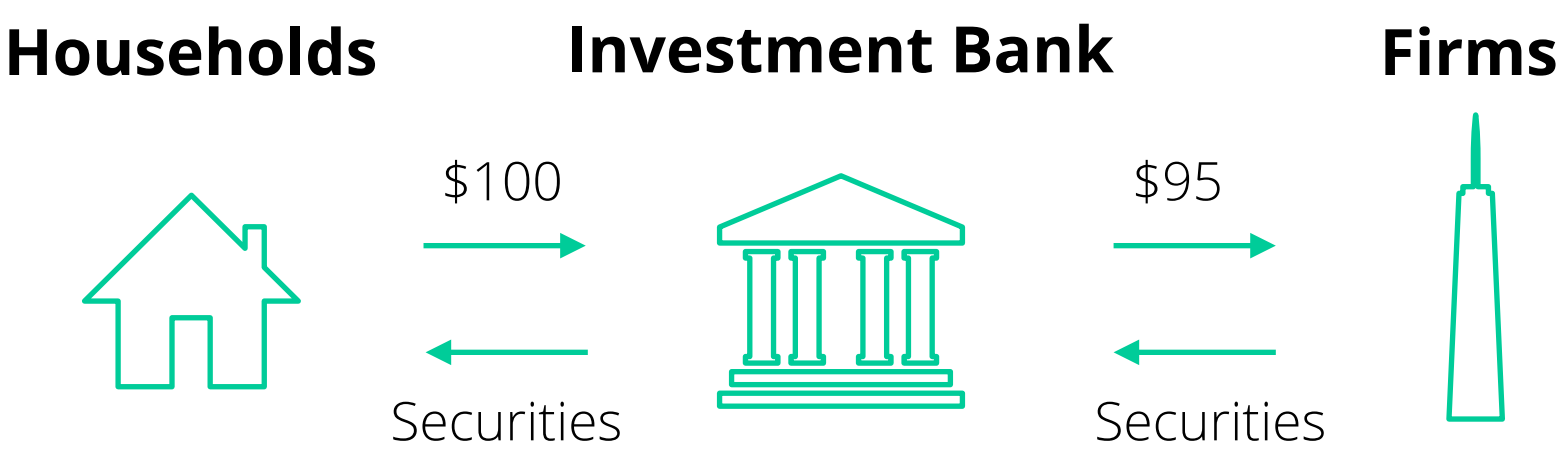
Bond Basics

- Bonds are contracts: firms that violate contract terms face consequences (**default**).
- Bondholders can force firms into bankruptcy.
- **Principal** is the amount borrowed (e.g. $1000).
- **Interest** is the additional repayment (e.g. 10%).
- Firm hands over the bond and receives cash.
- Investors buy bonds if they like the terms.
- **Investment banks** arrange the exchange.

Stock Basics

- Shares represent claims on the firm's value, *after* debt is repaid ("**residual claimants**").
- No legal consequences if a firm disappoints shareholders.
- Return comes from payouts and appreciation:
  - **Dividends**: cash payments to shareholders.
  - **Capital gains**: change in price.
- Firm hands off shares and takes cash.
- Investors buy shares if they like the *expected* returns.
- Investment bank arranges the exchange.

Primary Markets



Secondary Markets

- Stock markets such as NYSE and Nasdaq are **secondary markets**.
- Investors trade with each other in these markets.
- Why do we need these?
  - **Price discovery:** markets transform information into prices.
  - **Liquidity:** investors need to be able to sell share easily.

Required Return

- Investors are compensated for the opportunity cost of capital.
- What opportunities do investors have?
  - Production opportunities (e.g. small business).
  - Consumption opportunities (e.g. buy a car).
- What else influences opportunity cost of capital?
  - Risk: Higher risk requires higher return.
  - Inflation: Higher inflation requires higher return.

Required Return (Components)

- Two important parts:
- **Risk-free rate**: return on a (hypothetical) risk-free asset.
  - Reflects opportunity costs and inflation; not specific to the asset.
- **Risk premium**: return for holding risk.
  - Accounts for the risk of the asset and the “price of risk” in the market.

Finding the Risk-free Rate

- Treasury publishes yield curves daily.
- Websites: Yahoo! Finance, FINRA.
- E.g. 10-year bond is 2.654 (i.e. 2.654% return per year)

The Risk Premium: Debt

- **Yield** = Risk-free rate + Risk premium
- So, Risk premium = Yield - Risk-free rate
- FINRA (www.finra.org) also publishes yields.
- *Careful*: the treasury and bond maturities should match.

Default Risk

- The main risk of debt.
- Ratings agencies assess the credit risk of bonds.
- Higher ratings are safer.
- **Investment grade** bonds are BBB- and above; **speculative (junk)** bonds are BB+ and below.

Moody's	S&P	Fitch
Aaa	AAA	AAA
Aa1	AA+	AA+
Aa2	AA	AA
Aa3	AA-	AA-
A1	A+	A+
A2	A	A
A3	A-	A-
Baa1	BBB+	BBB+
Baa2	BBB	BBB
Baa3	BBB-	BBB-
Ba1	BB+	BB+
Ba2	BB	BB
Ba3	BB-	BB-
B1	B+	B+
B2	B	B
B3	B-	B-
Caa1	CCC+	CCC+
Caa2	CCC	CCC
Caa3	CCC-	CCC-
Ca	CC	CC
Ca	C	C
Default	Default	Default

The Risk Premium: Equity

- Use the same risk-free rate!
- The rest of the story is more complicated for equity—we will save the full discussion for later.
- For now, let's just consider what *should* determine the return: earnings.
- Analysts give opinions about firms' expected earnings.
  - Accounting and financials are key ingredients.
  - How valuable are these opinions?

Summary

- Firms sell stocks and bonds to raise cash.
- Investment banks facilitate the exchange.
- Investors earn interest (for bonds) or dividends and capital gains (for equity).
- Required returns depend on risk:
  - Credit ratings (for debt)
  - Earnings forecasts (for equity)