

# Corporation

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## Definition

A business organized as a separate legal entity owned by stockholders.

## Type of Corporations

- Public Corporations
- Private Corporations

## Drawbacks

- Corporations face the problem of double taxation.
- Improper corporate structures may lead to "Agency Problems"

## Goals of The Corporation

- Shareholders want maximized wealth
- Maximization of shareholder wealth = growth in share value + dividend

## The Agency Problem

Separation of ownership from control.

## Manager's maximized welfare

Managers, in practice, control on a day to day basis. Maximise own welfare by:

- salaries & 'perks' within reason
- empire-building through mergers and expansion to increase social status
- reducing risk through diversification to improve own security

## Managing the agency problem

- Managers have vested interest in promoting buoyant share price, or risk being taken over.
- Incentive schemes, e.g. bonuses tied to profits, executive share options schemes.
- Stock market movements may, however, dwarf the efforts of managers!
- Now governed by Committee on Financial Aspects of Corporate Governance

# Chapter 2 Financial market and institution

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## role and function of capital market

- MOBILISATION OF SAVINGS FROM IDLE AGENTS AND TRANSFER TO PRODUCTIVE AGENTS;
- PROVISION OF FINANCE TO COMPANIES;
- ENCOURAGEMENT OF BROADER OWNERSHIP OF PRODUCTIVE ASSETS; AND
- PROVISION OF FACILITIES FOR COMPETITIVE TRANSFER (PRICING) OF CAPITAL RESOURCES.

## Financial instrument

- FOR TRANSFER OF FUNDS AMONG INDIVIDUALS AND ORGANISATIONS TO ALLOW THOSE RECEIVING THE FUNDS TO MAKE INVESTMENTS OR INCREASE CONSUMPTION
- DERIVATIVES INSTRUMENTS TYPICALLY CREATED FOR THE PURPOSE OF TRANSFERRING RISK
- MONEY

## Security

- A SECURITY IS A FINANCIAL INSTRUMENT USED BY A FIRM OR GOVERNMENT TO RAISE CAPITAL
- CAPITAL IS ANY ASSET USED IN PRODUCTION

### • 种类 in money market

- 国库券 (Treasury Bill, TB)
- 银行承兑汇票 (Banker's Acceptance, BA)
- 可转换定期存单 (Certificate of Deposits, CD)
- 商业本票 (Commercial Paper, CP)
  - 1. 第一类商业本票 (CP1), 又称“交易性商业本票”或“自偿性商业本票”
  - 2. 第二类商业本票 (CP2), 又称“融资性商业本票”
- 附买回协定 (Repurchase Agreement)

### • 种类 in capital market

- [政府债券](#) (Government Bond)
- 公司债 (Bond)
  - 抵押债券 (Mortgage Bonds)
  - [零息债券](#) (Zero-Coupon Bonds)
  - 分期还本债券 (Serial Bond)
  - 信用债券 (Debenture)
  - 附属信用债券 (Subordinated Debenture)
  - [收益债券](#) (Income Bonds)
  - [可转换债券](#) (Convertible Bonds)
  - 赎回债券 (Callable Bonds)
- [金融债券](#): 专业金融机构为筹措长期资金, 所发行的债券凭证。
- 特别股 (Preferred Stock)
- [普通股](#) (Common Stock)

**Equity-股权-股东权益**指股东对资产清偿所有负债后剩余价值的所有权

## TYPES OF FINANCIAL INVESTMENTS

- MONEY & FOREIGN EXCHANGE
  - CURRENCY AND COINS
  - DEPOSITS
- EQUITIES
  - COMMON STOCK/ORDINARY SHARES

- PREFERRED STOCK
- FIXED INCOME SECURITIES
  - DEBT OBLIGATIONS
    - BONDS
    - WARRANTS
- DERIVATIVES
  - OPTIONS, FUTURES AND SWAPS

## Government borrowing

- Failure to fund the gap by borrowing would result in inflation.
- The cost of supporting government debt is spread over the entire economy and passed to future generations. Consequently, governments are less sensitive to the cost of borrowing than companies.

## Feature of Government Bond

- In most advanced countries, government bonds are the oldest and largest source of bonds.
- They are designed to appeal to small as well as large investors: **having low or no credit risk, there are few restrictions on sales to small investors.**
- Large institutional investors buy bonds as a core part of their portfolio: **long maturities** are attractive to pension funds and life assurance companies.

## DERIVATIVES

- Forward contracts 远期合约
  - fixes the price today, for delivery at some time in the future
  - a futures contract is a standardised version, traded on an exchange
  - 远期合约（**forward contract**）是买卖双方所签订的在未来指定的时间按照今日商定的价格购入或卖出资产的一种非标准化合约。远期合约是一种金融衍生工具。远期价格和即期价格的差异为远期溢价或远期折价。远期溢价或折价可以视作买方的利润或亏损。远期合约可用于风险对冲（特别是汇率风险）或用于投机行为。
- Option contracts 期权
  - enable the purchaser of the option to buy or sell the underlying share at given prices, if they so choose
  - it gives the holder the right, but not the obligation to buy or sell at the stated price
  - 期权又称为选择权（英语：**Option**），有时也看作是期货和选择权的合称。选择权是一种通常可交易的衍生金融工具，根据某项资产（如股权、股票指数或期货）在未来某一段时间的价格，确定期权交易中买家的权利和卖家的义务。简单的说，期权指的是一种在一定期限内的交易选择权，也就是赋予了持有人一种按照约定价格买或卖的权利，但是持有人可以自己决定要不要行使这个权利。在期权的交易时，购买期权的一方称作买方，而出售期权的一方则叫做卖方；买方即是权利的受让人，而卖方则是必须履行买方行使权利的义务人。
  - 期权具“零和游戏”特性，而个股期权及指数期权皆可组合，进行套利交易或避险交易。
  - 期权主要可分为 **Call option** 和 **Put option**，前者也称为看涨期权或认购期权，后者也称为看空期权或认沽期权。**Call Option** 的拥有者有权利、但没有义务，在约定的期间，以约定的价格，买下标的商品。**Put Option** 的拥有者有权利、但没有义务，在约定的期间，以约定的价格，卖出标的商品。
- Swap

- a contract in which two parties agree to exchange one or more periodic payments in the future – e.g. interest rate swap

## Major capital market product differ by

- risk
- maturity
  - short term-long term-perpetual
- liquidity
  - NON-TRANSFERABLE
    - BUILDING SOCIETY DEPOSITS
  - TRANSFERABLE
    - CERTIFICATES OF DEPOSIT
      - Fixed term, fixed interest rate, higher yield
    - GILT-EDGED SECURITIES
      - Government backed
    - EQUITIES

## market player

- providers of capital / investors
  - banks
  - general insurers and life insurers;pension funds
  - venture capitalists
  - charities
  - retail investors
  - governments
- user of capital
  - governments;corporates
- intermediaries
  - investment banks
  - brokers
  - exchange;clearing houses;custodian providers

## price efficiency

- weak-form: past price
- semi-strong form: all public available information
- strong form: all information

## Three ways to value a firm:

Investors use a number of methods to determine the quality of a company's shares.

- Market Capitalization

- P/E Ratio(price earning)
- Dividend Yield(dividend / price)

#### Book Value

- Networth of the firm according to the balance sheet.

#### Liquidation Value

- Net proceeds that could be realized byselling the firm's assets and paying off its creditors.

#### Market Value

- The value of the firm as determined by investors who would be willing to purchasethe company.

### Price and Intrinsic Value

$$V_0 = \frac{DIV_1 + P_1}{1 + r}$$

$V_0$  means the **intrinsic value** of the share.

- Expected Return

$$ER = \frac{DIV_1 + P_1 - P_0}{P_0} = 0.12$$

### The Dividend Discount Model

$$P_0 = \frac{Div_1}{(1+r)^1} + \frac{Div_2}{(1+r)^2} + \dots + \frac{Div_n + P_n}{(1+r)^n}$$

### Venture Funding

The entrepreneur's willingness to take the stake signals confidence in the companies future

#### Steps to obtaining venture funding:

1. Prepare a business plan.
  - Describes your product, potential market, methods, resources, time plan
2. Receive first-stage financing
  - Part funds up front - strong incentive to work hard to reach the first check point
3. Receive subsequent staged financing.
  - Second stage financing may involve the issue of further shares – some bought by original backers also other venture capital firms

#### Types of venture investors

- Angel Investors
  - Investors who finance companies in their earliest stages of growth

- Corporate Venturers – e.g. Intel, Johnson & Johnson
  - Corporations that offer venture assistance to finance young, new promising companies.
  - Private Equity Investing(before go public buy for equity)
  - Investors who offer funds to finance firms that do not trade on public stock exchanges such as the London Stock Exchange

## **IPO Initial public offering**

- Primary Offering  
when new shares are sold to raise additional cash for the company
- Secondary Offering  
when the company's founders and venture capitalists cash in on some of their gains by selling shares.

## **Benefits of Going Public**

- Ability to raise new capital / access to greater resources
- Stock price provides performance measure/yardstick
- Information more widely available – high profile/status
- Diversified sources of finance

## **Steps to new public issues**

1.Security Exchange Commission (SEC)Registration – issue a prospectus—formal summary that provides information on an issue of securities

2.Select Underwriter (investment banker)who will buy securities from firm to sell to the public after registering with Security Exchange Commission /Undertake Roadshow – talk to investors

3.Set final issue price for public –typically underpriced to tempt investors

Typically underwriters receive payment in the form of a Spread - the difference between the public offer price and the price paid by underwriter

## **Flotation Costs:**

The costs incurred when a firm issues new securities to the public.

The direct costs of the issue are the preparation of the registration statement and the prospectus – this involves legal costs, accountants fees and advisors fees

## **Seasoned Offering**

offer of additional stock of a firm already publicly traded.(**the price will fall because of the increase in supply**)

- Rights Issue

Issue of securities offer only to current stockholders as a “right to buy”

- General Cash Offer

Sale of securities open to all investors by an already-public company.

## **Private Placement:**

The sale of securities to a limited number of investors without a public offering

### Advantage of PP

- Do not have to register with SEC
  - But SEC insists the sale should be restricted to knowledgeable investors
- Private placements cost less than public issues
  - Better for smaller issues
- Can customized contracts for firms with special needs

### Disadvantage of ~

- Difficult for investors to resell security
- Lenders often require higher return to compensate for higher risk they face and for the costs of negotiation and for their research.(typically yield 5% higher than public issues)

### Some things

- Fear is that price pressure may be too large to raise the required finance for very large issues
- Investors believe managers only issue new stock when the price is over valued and mark price down accordingly

## Time value of the money

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### Future Values

#### Simple Interest and Compound Interest

- $FV_{Simple} = \text{initial investment} * (1+r \times t)$
- $FV_{Compound} = \text{initial investment} * (1 + r)^t$
- $FV_{Perpetuities} = \text{Yearly Cash Payment} = C/r$
- IRR = Internal rate of return
- payback period = time until the sum of subject cash flows equals the initial investment

$$ProfitabilityIndex = \frac{NPV}{Initial\_Investment}$$

## Valuing Bond

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### Bond

- Bond owners receive a fixed interest payment each year until the bond matures.
- This payment is called the "Coupon"
- The coupon rate is the annual coupon payment expressed as a fraction of the bonds face value

### Current Yield

$$CY = \frac{\text{coupon}}{\text{price}} = \frac{\$60}{\$1150} = 5.22\%$$

## Yield to maturity--r

The yield to maturity is the **discount rate** that makes the present value of the bonds payments equal to its price.

$$PV = \frac{\text{coupon}}{(1+r)^1} + \frac{\text{coupon}}{(1+r)^2} + \dots + \frac{\text{coupon} + \text{par}}{(1+r)^t}$$

- Generally calculated by trial and error.
- Guess at an interest rate and calculate the PV of the bonds payments

## Real interest rate of investment

$$1 + \text{realRate} = \frac{1 + \text{nominalRate}}{1 + \text{inflationRate}}$$

## Premium

Premium = Maturity Premium + Risk Premium

Interest on safe Treasury bills, plus a average risk premium for investing in a risky asset give an expected return in the market

## Risk

what's Risk? How can it be measured?

Opportunity cost of capital is the "Safe return" of investing in Treasury Bills

## Measuring Market Risk

- Market Portfolio - Portfolio of all assets in the economy.
- Beta - Sensitivity of a stock's return to the return on the market portfolio.