Lecture 1

Introduction to Corporate Finance: An Overview

Introduction to Corporate Finance

What is Corporate Finance?

Corporate Securities as Contingent Claims on Total Firm Value

The Corporate Firm

Goals of the Corporate Firm

Financial Markets

What is Corporate Finance?

Corporate Finance addresses the following three questions:

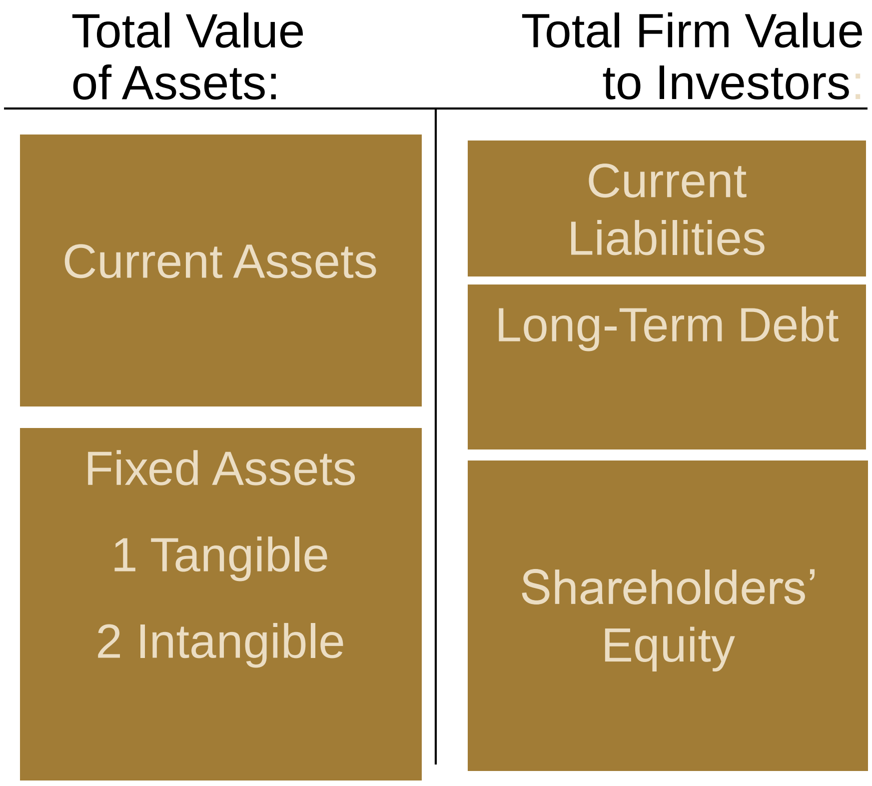
1. What long-term investments should the firm engage in?
2. How can the firm raise the money for the required investments?
3. How much short-term cash flow does a company need to pay its bills?

Asset and Cash Flows

- Asset
  - Asset is a stream of cash flows
  - Firm can be considered as a composite asset
  - Real assets vs financial assets
    - Inventory, plants and equipments, buildings, land
    - Stocks, bonds, debts
- Valuation of asset
  - Value of an asset can be considered as *PV (Present value)* of cash flows generated by the asset.

The Balance-Sheet (B/S) Model of the Firm

- Unlike accounting B/S, assets, liabilities and equity represent market values, not book values.



The Balance-Sheet Model of the Firm

The Capital Budgeting Decision

Current Assets

Fixed Assets

1 Tangible

2 Intangible

What long-term investments should the firm engage in?

Current Liabilities

Long-Term Debt

Shareholders' Equity

The Balance-Sheet Model of the Firm

The Capital Structure Decision

Current Assets

Fixed Assets

1 Tangible

2 Intangible

How can the firm raise the money for the required investments?

Current Liabilities

Long-Term Debt

Shareholders' Equity

The Balance-Sheet Model of the Firm

The Net Working Capital Investment Decision

Current Assets

Current Liabilities

Net Working Capital

Long-Term Debt

Fixed Assets

1 Tangible

2 Intangible

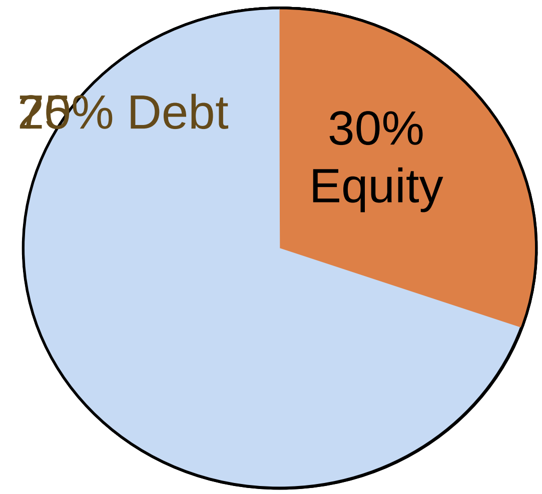
How much short-term cash flow does a company need to pay its bills?

Shareholders' Equity

Capital Structure

The value of the firm can be thought of as a pie.

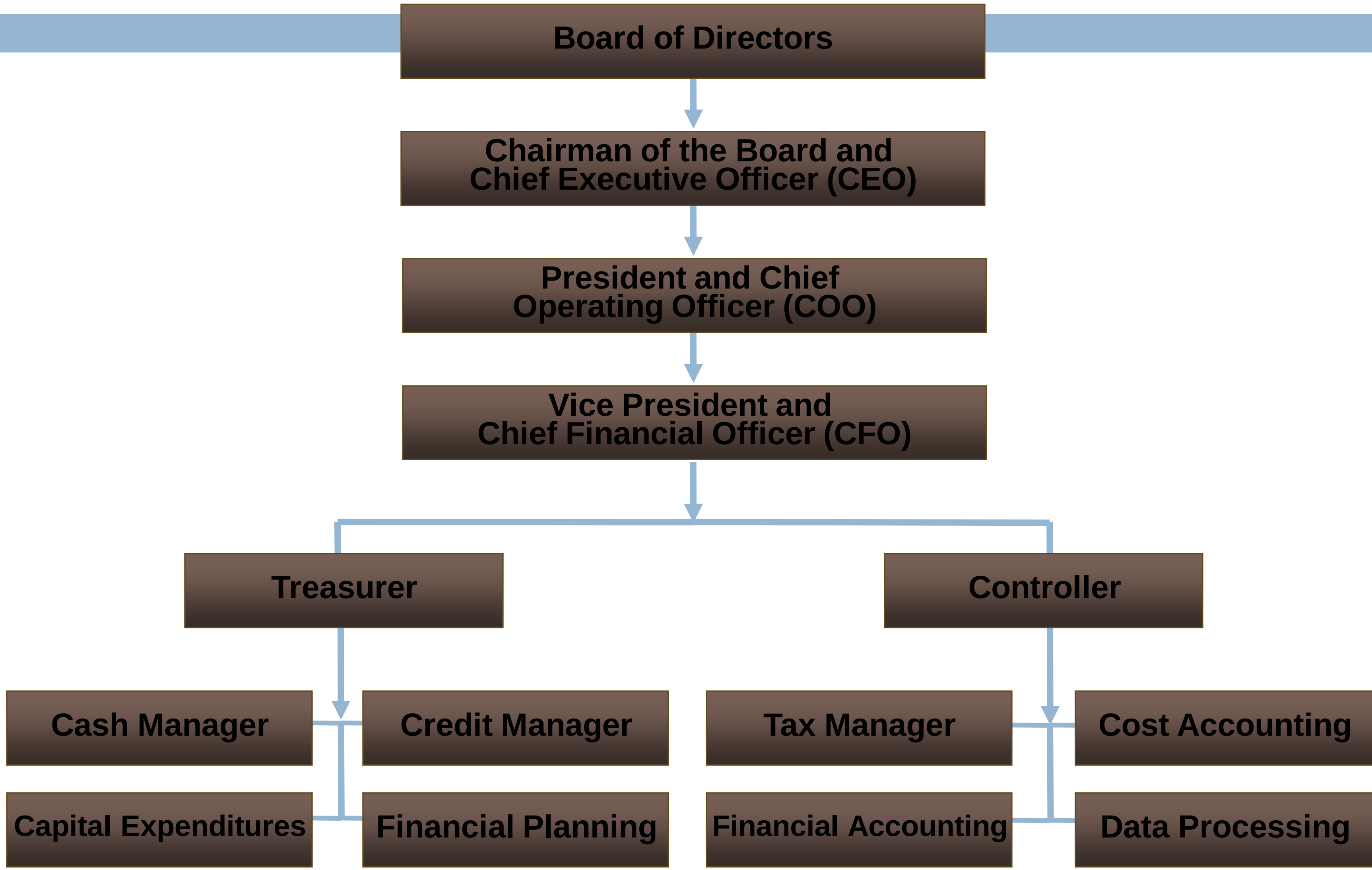
The goal of the manager is to increase the size of the pie.



The Capital Structure decision can be viewed as how best to slice up a the pie.

If how you slice the pie affects the size of the pie, then the capital structure decision matters.

Hypothetical Organization Chart

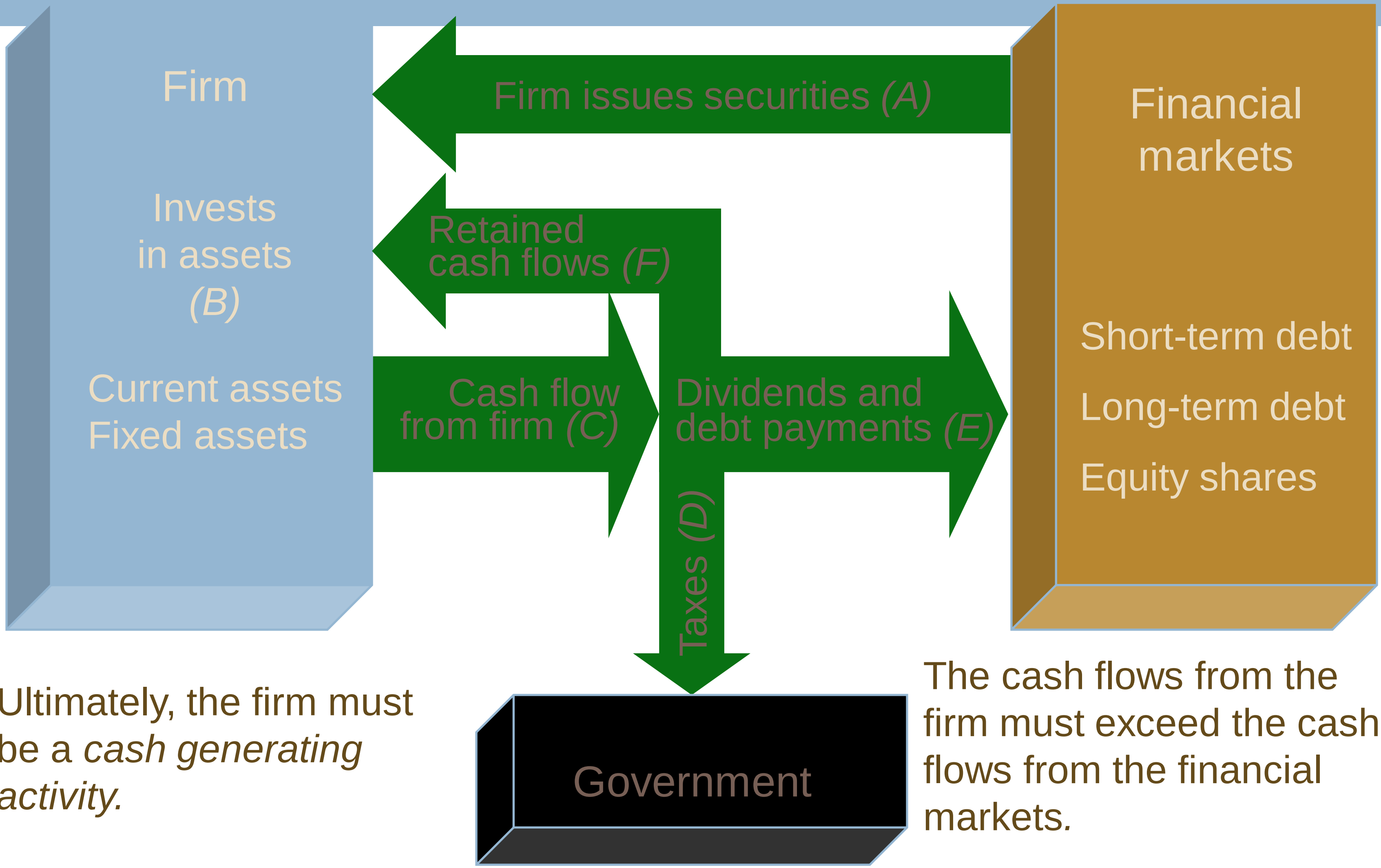


The Financial Manager

To create value, the financial manager should:

1. Try to make smart investment decisions.
2. Try to make smart financing decisions.

The Firm and the Financial Markets



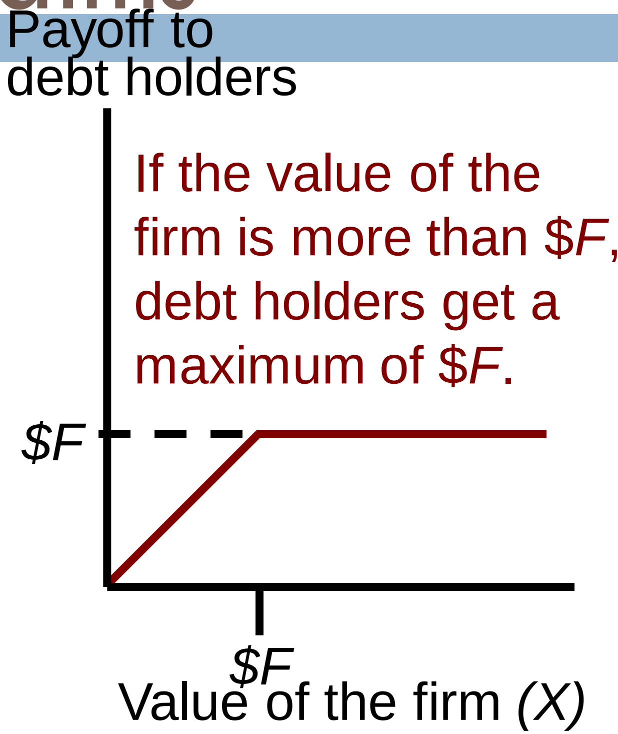
Ultimately, the firm must be a *cash generating activity.*

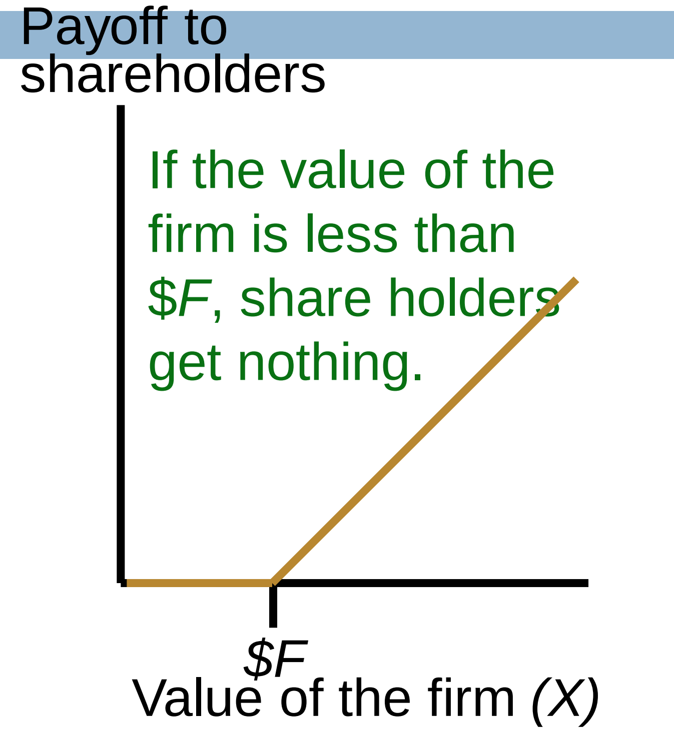
The cash flows from the firm must exceed the cash flows from the financial markets.

Corporate Securities as Contingent Claims on Total Firm Value

- The basic feature of a debt is that it is a promise by the borrowing firm to repay a fixed dollar amount of by a certain date.
- The shareholder’s claim on firm value is the residual amount that remains after the debtholders are paid.
- If the value of the firm is less than the amount promised to the debtholders, the shareholders get nothing.

Debt and Equity as Contingent Claims





Debt holders are promised $F.

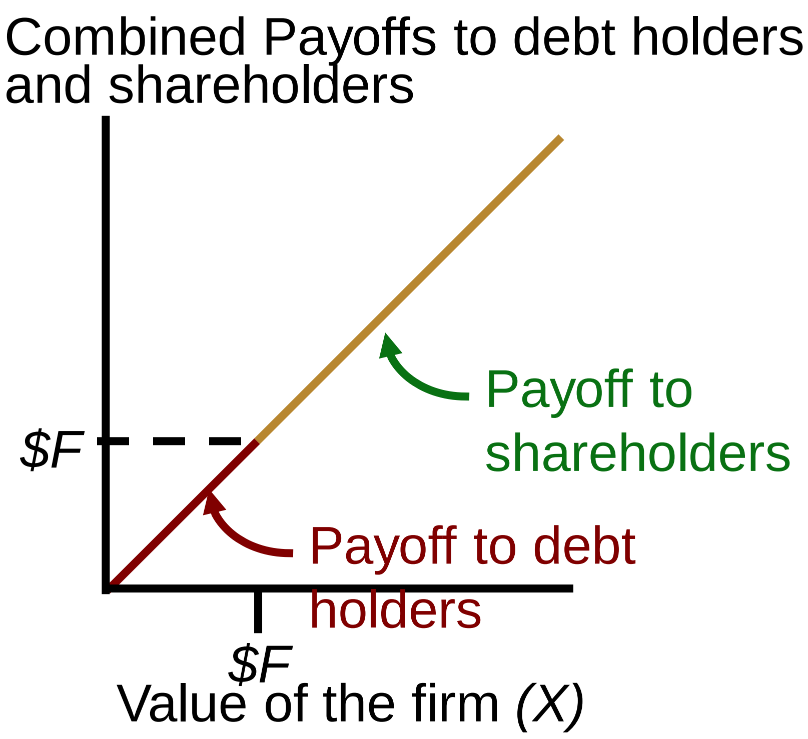
If the value of the firm is less than $F, they get the whatever the firm if worth.

If the value of the firm is more than $F, share holders get everything above $F.

Algebraically, the bondholder's claim is: Min[$F,$X]

Algebraically, the shareholder's claim is: Max[0,$X – $F]

Combined Payoffs to Debt and Equity



Debt holders are promised $\$F$.

If the value of the firm is *less* than $\$F$, the shareholder's claim is: $\text{Max}[0,\$X - \$F] = \$0$ and the debt holder's claim is $\text{Min}[\$F,\$X] = \$X$.

The sum of these is = $\$X$

If the value of the firm is *more* than $\$F$, the shareholder's claim is: $\text{Max}[0,\$X - \$F] = \$X - \$F$ and the debt holder's claim is:

$\text{Min}[\$F,\$X] = \$F$.

The sum of these is = $\$X$

1.3 The Corporate Firm

- The corporate form of business is the standard method for solving the problems encountered in raising large amounts of cash.
- However, businesses can take other forms.

Forms of Business Organization

- The Sole Proprietorship
- The Partnership
  - General Partnership
  - Limited Partnership
- The Corporation

- Advantages and Disadvantages
  - Liquidity and Marketability of Ownership
  - Control
  - Liability
  - Continuity of Existence
  - Tax Considerations

A Comparison of Partnership and Corporations

	Corporation	Partnership
Liquidity	Shares can easily be exchanged.	Subject to substantial restrictions.
Voting Rights	Usually each share gets one vote	General Partner is in charge; limited partners may have some voting rights.
Taxation	Double	Partners pay taxes on distributions.
Reinvestment and dividend payout	Broad latitude	All net cash flow is distributed to partners.
Liability	Limited liability	General partners may have unlimited liability. Limited partners enjoy limited liability.
Continuity	Perpetual life	Limited life

Goals of the Corporate Firm

- The traditional answer is that the managers of the corporation are obliged to make efforts to maximize shareholder wealth.

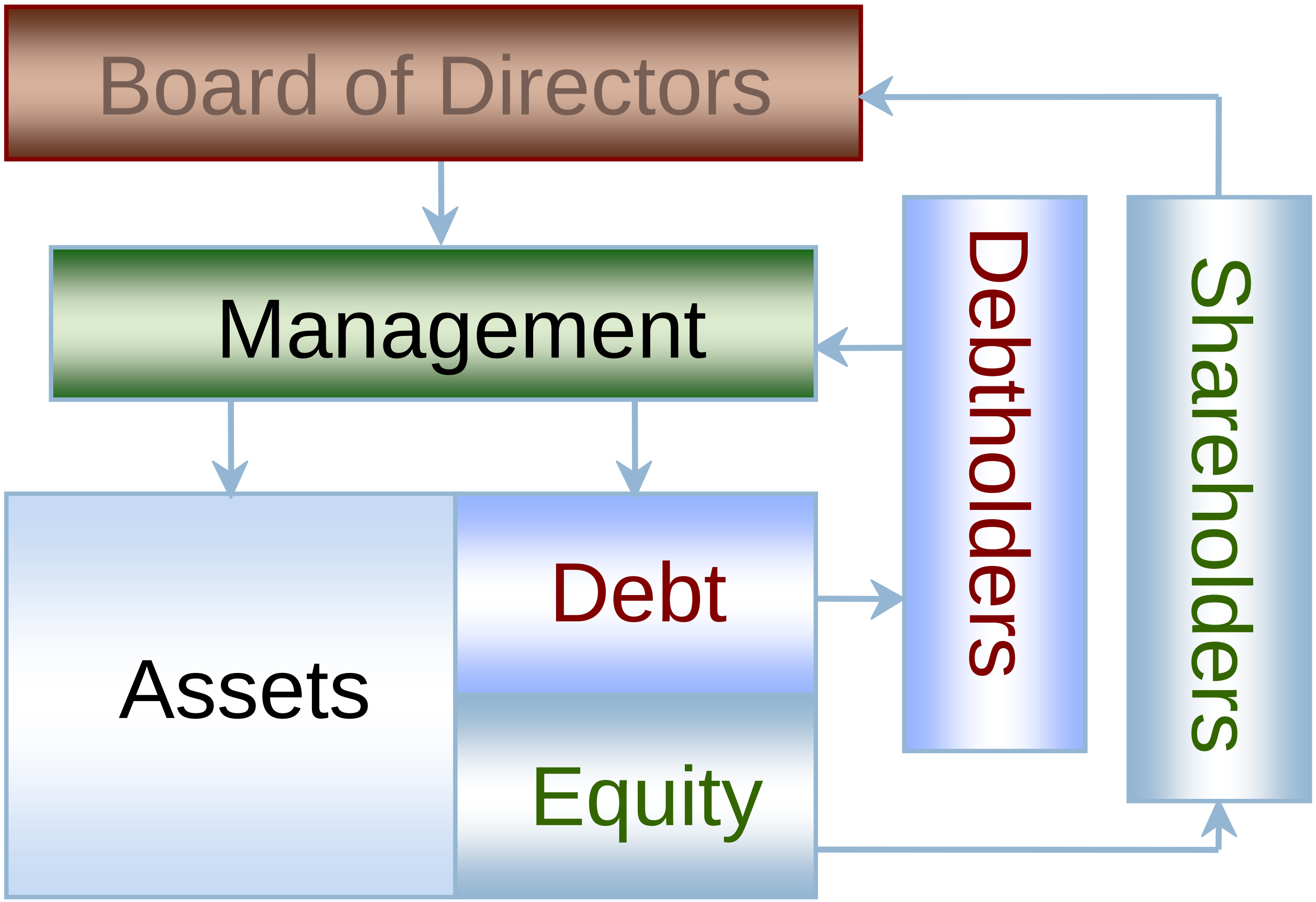
The Set-of-Contracts Perspective

- The firm can be viewed as a set of contracts.
- One of these contracts is between shareholders and managers.
- The managers will *usually* act in the shareholders' interests.
  - The shareholders can devise contracts that align the incentives of the managers with the goals of the shareholders.
  - The shareholders can monitor the managers behavior.
- This contracting and monitoring is costly.

Managerial Goals

- Managerial goals may be different from shareholder goals
  - Expensive perquisites
  - Survival
  - Independence
- Increased growth and size are not necessarily the same thing as increased shareholder wealth.

Separation of Ownership and Control



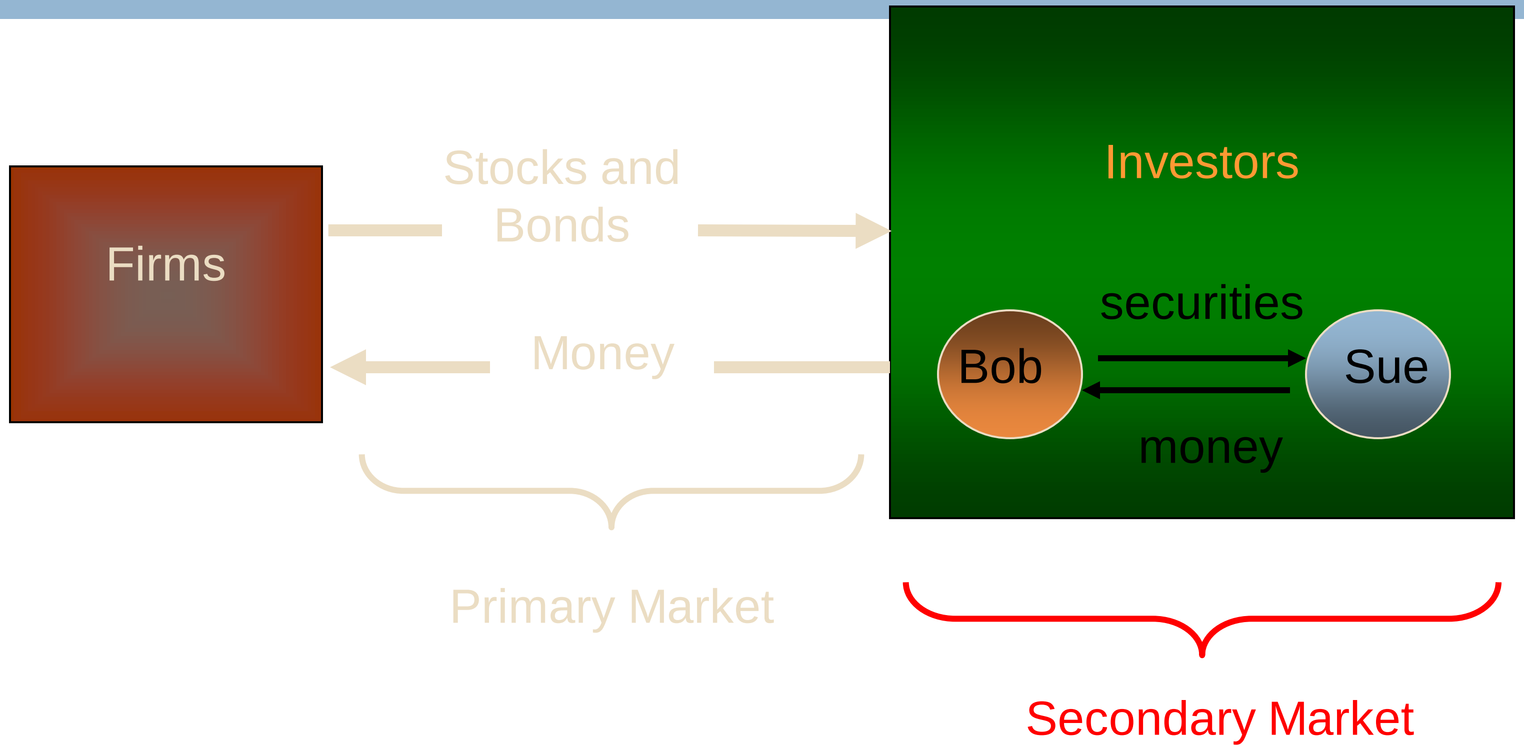
Do Shareholders Control Managerial Behavior?

- Shareholders vote for the board of directors, who in turn hire the management team.
- Contracts can be carefully constructed to be *incentive compatible*.
- There is a market for managerial talent—this may provide *market discipline* to the managers—they can be replaced.
- If the managers fail to maximize share price, they may be replaced in a hostile takeover.

Financial Markets

- Primary Market
  - When a corporation issues securities, cash flows from investors to the firm.
  - Usually an underwriter is involved
- Secondary Markets
  - Involve the sale of "used" securities from one investor to another.
  - Securities may be exchange traded or trade over-the-counter in a dealer market.

Financial Markets



Exchange Trading of Listed Stocks

- Auction markets are different from dealer markets in two ways:
  - Trading in a given auction exchange takes place at a single site on the floor of the exchange.
  - Transaction prices of shares are communicated almost immediately to the public.

Cash Flows and Present Value: A Review

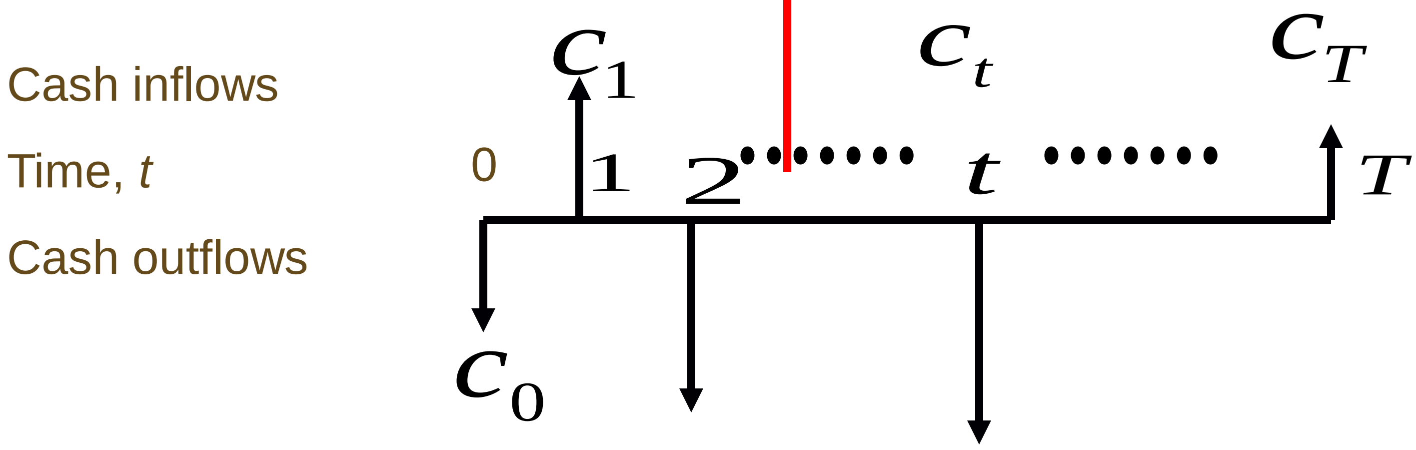
- Asset and Cash Flows
  - Present Value and Discounted Cash Flow Valuation
- Rates of Return, Cost of Capital
- Applications
  - NPV and Capital Budgeting
  - Stocks and Bonds

Cash Flows

- Cash Flows or cash flow stream 현금흐름

$$C_0, C_1, C_2, \ldots, C_t, \ldots, C_T$$

- Cash flow diagram 현금흐름표



Cash Flows, PV, and Valuation

- Valuation: what are the values of given cash flows?
  - The value of a cash flow is usually stated in its cash (or cash equivalent) value , commonly referred to as the *Present Value, denoted by PV or P*.
  - The PV of cash flow at time t, c_t , can be stated as

$$PV(c_t) = P(c_t) = d_t c_t, \ \ where \ \ PV(c_0) = c_0, \ \ d_0 = 1$$

  - Present value conversion factor d_t represents the *present value of $1 in the future,* and is closely associated with opportunity cost of $1 today not used, and therefore an interest rate.
  - Time and uncertainty (risk) must be considered in valuation.

Cash Flows, PV and FV , Valuation

- Given cash flows, what is its value?
  - Present value (or cash value) of a future cash flow is its cash equivalent value
  - *It is essentially a present (or cash) value of \$1 in the future*
  - *It is closely associated with opportunity cost of \$1 today not used, and therefore an interest rate*
  - Time and uncertainty (risk) must be considered in valuation
  - Valuation, mostly in the present value form, that is, given *F*, the value of *F* = *PV* of *F*, or *P*(*F*), *where f , d are called compounding factor ,f , and discount factor, d , resp.*
  - $F = fP$, $P = P(F) = dF$ or $F = fP$ with $f = 1/d$

$$f = (1+r)^t \;, d = \frac{1}{(1+r)} = (1+r)^{-t} = 1/\,f$$

Firm as a composite asset

- Firm can be considered as a composite asset, consisting of many different assets, such as cash, inventory, buildings, equipments, etc.
- Balance sheet (B/S) model of firm
  - LHS of B/S shows assets, what is owned by the firm
  - RHS of B/S shows liabilities and equity, who owns the firm
    - They represent claims against firms assets
    - Usually they financial assets or securities held by investors
    - If the firm is a corporation equity holders have limited liability

The Balance-Sheet (B/S) Model of the Firm

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