Financial Management

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Lecture 1

Content:

- The corporation and the financial market
- Financial statements

The corporation and the financial market

In the US there are four major types of firms:

- **Sole proprietorships**: owned and run by one person who has unlimited personal liability for the debts.
- **Partnerships**: has more owners, who are fully liable, except for limited partnership, where general partners are fully liable while limited partners' liability is limited to their investment.
- **Limited liability companies (LLC)**: it is a limited partnership without a general partner.
- **<u>Corporations</u>**

The corporation and the financial market

The corporation is a legal entity separate from its owners (i.e., the latter are not liable for the obligations of the former, and vice versa).

The ownership is divided into **shares**. The set of shares owned by an investor is called “stock”, but these terms are often used interchangeably to indicate shares.

The collection of all the outstanding shares of a corporation is known as the **equity** of the corporation.

The corporation and the financial market

The owners can profit from:

- dividends payment;
- capital gain.

The direct control of the corporation is held by the board of directors and the CEO.

$\Downarrow$

Agency problem

These issues are dealt with by corporate governance.

The corporation and the financial market

Some or all the shares of a corporation can be privately held, and they are traded on private markets.

A company can go public via an **Initial Public Offering (IPO)**.

Publicly traded stocks are traded on the **stock market**.

Primary market: where new shares are first issued.

Secondary market: where existing shares are traded.

The corporation and the financial market

Liquid stocks can be easily converted into cash without affecting its market price. This allows for flexible investments and efficient pricing of the investment.

Bid-ask spread: the difference between the price at which it is possible to buy the stock (bid price) and the price at which it is possible to sell the stock (ask price).

Bid price is always higher than ask price, but this spread is small if the market is liquid.

The corporation and the financial market

Market makers are intermediaries that quote both a buy and a sell price to profit on the bid-ask spread. They increase the liquidity.

Limit order book: the collection of all limit orders (orders to buy or sell a set amount at a fixed price). They provide liquidity.

These and other issue are studied by a branch of finance called market microstructure.

The corporation and the financial market

Time value of money: the difference in value between money today and money in the future.

Interest rate: The rate at which we can exchange money today for money in the future

Risk-free interest rate (R_f): the rate at which money can be borrowed or lent without risk over a certain period.

The corporation and the financial market

Arbitrage: the practice of buying and selling equivalent goods in different markets to profit from a price difference

Security: an investment opportunity that trades in a financial market

Short selling: selling a security you do not own by borrowing it and returning it to the owner at a later date.

The corporation and the financial market

Trading securities implies facing **transaction costs**:

- the commissions paid to the broker
- the bid-ask spread

Arbitrage keeps the prices of equivalent goods and securities close to each other: prices cannot deviate more than the transaction costs of the arbitrage.

Financial statements

Financial statements record the financial activities and positions of the company. There a four of them:

- Balance sheet
- Income statement
- Statement of stockholders’ equity
- Statement of cash flows

Financial statements – Balance sheet

The balance sheet lists the firm’s assets and liabilities.

Current assets include:

- Cash and other marketable securities (i.e., investments that are very liquid and very low risk)
- Accounts receivable: amounts owed to the firm
- Inventories: raw materials and goods
- Other (e.g., rents or insurances paid in advance)

Financial statements – Balance sheet

Fixed assets (or **long-term assets)**:

- Net property, plant and equipment. They depreciate over time
- Intangible assets (e.g., patents, trademarks)
- Financial investments that do not qualify as marketable securities

On the balance sheet we find the **book value** of an asset, which can differ significantly from its **market value**.

Financial statements – Balance sheet

Current liabilities are those to be satisfied within one fiscal year. They include:

- Account payable: amounts owed by the firm
- Short-term debt (or notes payable), and current maturities of long-term debt: all repayments of debt that will occur within the next fiscal year
- Due salaries and taxes that have not yet been paid
- Deferred or unearned revenue for services paid for by customers but not yet provided

Financial statements – Balance sheet

The difference between current assets and current liabilities is the firm's **Net Working Capital (NWC)**, also called Net Current Assets.

Long-term liabilities include:

- Long-term debt: loans, mortgages, bonds, etc.
- Capital leases
- Deferred taxes

Financial statements – Balance sheet

The difference between the firm's total assets and liabilities is the **book value of equity** (or stockholders' equity).

The **market value of equity**, usually called **market capitalization**, equals the number of shares outstanding times the firm's market price per share:

Market Cap = Shares outstanding x Market price per share

The **market to book ratio** (also called the **price to book [P/B] ratio**) is:

$$\text{Market to Book Ratio} = \frac{\text{Market Value of Equity}}{\text{Book Value of Equity}}$$

Financial statements – Balance sheet

If the market-to-book ratio exceeds 1, it indicates that the value of the firm's assets when put to use exceeds their historical cost.

The **book-to-market ratio** is simply the inverse of the market-to-book ratio. The former is more commonly used by investors to evaluate stocks, while the latter is more commonly used in financial statement analysis, but they convey the same information.

Financial statements – Balance sheet

Firms with high book-to-market ratio (or low market-to-book ratio) are called **value stocks**; those with low book-to-market ratio (or high market to book ratio) are called **growth stocks**.

The **enterprise value** of a firm (also called **total enterprise value** or **TEV**) assesses the value of the underlying business assets, unencumbered by debt and separate from any cash and marketable securities. We compute it as follows:

$$\text{Enterprise Value} = \text{Market Value of Equity} + \text{Debt} - \text{Cash}$$

Financial statements – Income statement

The **income statement** lists the firm's revenues and expenses over a period of time. It includes:

- **Gross profit** = sales revenues – costs
- **Operating income** = gross profit – operating expenses (operating expenses include salaries, administrative, R&D and marketing expenses, devaluation and amortization)
- **Net income** = Operating income + non-operating income (non-operating income are not deriving from the firm's core business, e.g., income from financial investments)

Financial statements – Income statement

- **Earnings before interest and taxes (EBIT)** = Net income + Interest + Taxes
- **Pre-tax income**, or **Earning before tax (EBT)**, or **Taxable income** = EBIT – Taxes
- **Earnings per share (EPS)** = $\frac{\text{Net income}}{\text{Shares outstanding}}$
- **Diluted EPS**: the EPS in case all stock options are exercised and all convertible bonds are converted into shares (both actions increase the total number of shares)

Financial statements – Statement of stockholders' equity

The **statement of stockholders' equity** breaks down the stockholders' equity computed on the balance sheet into the amount that came from issuing shares versus retained earnings (i.e., net income not distributed to stockholders).

It is not very useful for financial statements analysis purposes.

Financial statements – Statement of cash flows

The **statement of cash flows** determines how much cash the firm has generated and how it has been allocated, starting from the income statements. It consists of three sections:

- Operating activity: takes the net income and adds back all non-cash entries related to the firm's operating activities (e.g., depreciation)
- Investment activity: deducts the capital expenditures (i.e., purchase of new property, plant or equipment, which are listed as depreciation expenses in the income statement) and the cost of other assets or financial investments
- Financing activity: subtracts the cost of raising cash, (i.e., issuing debt, paying dividends, etc.)