## Four basic areas of finance

- **Corporate finance**: Basic theories and ideas of finance such as sources of funding being debt and equity
- **Investments**: Financial assets such as shares and bonds
- **Financial institutions**: Firms dealing in financial matters
- **International finance**: covers an area above in a global context

## Goals of Financial Management

- Maximise shareholder wealth by maximising share price
- Investment decisions- what assets to buy
- Capital structure decisions
- Working capital decisions

## Factors in any financial decision

- Dollar amount: the actual cash flow received or paid out
- Time: When the cash flow is received or paid out (Time value of money)
- Risk: Amount of uncertainty

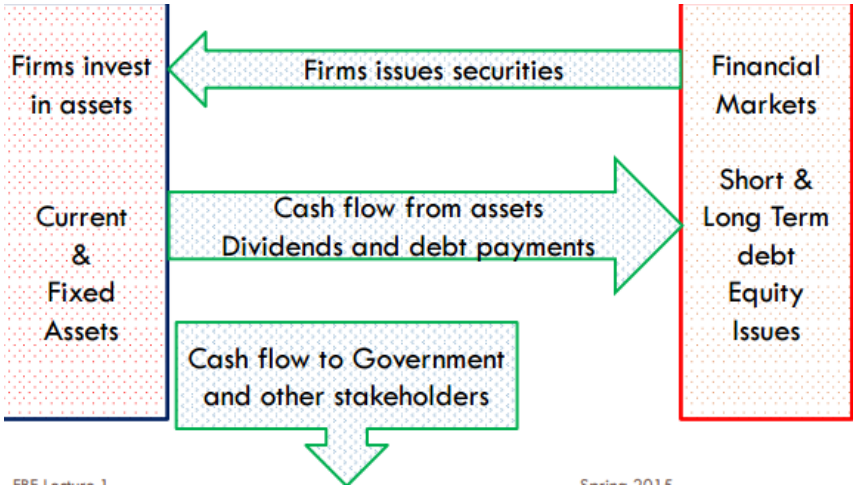
## The Working Capital Decision

- Managing short-term assets and liabilities which forms part of the investment decision
- Inventory management: what is the optimal level of inventory
- Receivables management: should credit sales be allowed
- Accounts Payable management: How long should suppliers have to wait before being paid
- Cash: how much cash should a company hold

## Principal and Agent law

- A contractual relationship between a person (the agent_ who is authorised to act on behalf of another (the principal)
- Agents can create legal relationship with a third party
- Not all employees are agents for the employer, sales people are agents for the employer as they are arranging sales and managers as well as they enter into contracts for the employer

## Interaction between firms and financial markets




## Primary Market

- Security or instrument issued to an investor for the first time directly
- Funds are raised by the firm and flow to it
- Public offering or private replacement
- Can be debt or equity funding
- Fund raising between investors and firms

## Secondary Market

- Financial securities that are already issued are bought and sold
- Way  of transferring ownership e.g. securities exchange
- No additional funds are raised by the firm

## Market values and book values

- Balance sheet is historic accounting
- Real or productive assets: produce the cash flows over time
- Financial or paper assets: claim on cash flows of productive assets

## Income statements

- Revenue- COGS= Gross profit – expenses – net income

## Time Value of Money 1 (Examples throughout lecture 2)

- The financial manager makes decisions about proposals with cash flow over long periods of time
- It is based on the fact that a dollar today is worth more than a dollar tomorrow

- PV= present value I= interest rate n=number of periods FV= future value PMT= periodic payment

## Simple interest

- Used in the valuation of short-term financial instruments traded in the money market e.g. term in under 12 months, bills of exchange
- Interest= PV x I x N
- FV= PV + INT
- FV = PV + PV × i × n υ = **PV(i × n)**
- **PV= FV/(1 + I x n)**
- What is the future value of $100,000 invested for 180 days at 10% pa simple interest?
- FV = PV(1 + i × n) ′ FV = 100,000(1 + 10%×180/365) ′ = 100,000(1 + 0.0493) ′ = 104,930

## Compound interest

- **FV = PV(1 + i)n** (to the power of n)
- **PV= FV/(1+I)n** (to the power of n)
- When compounded quarterly divide the annual interest rate by 4.
- What is the compounding rate for each time period for a 18% nominal annual interest rate with monthly compounding? **The number of compounding periods each year is 12 υ Rate per period = 18% , 12 = 1.5%**

## Effective annual rates (EAR)

- An effective rate is an interest rate that compounds annually
- EAR=( 1 + i) m – 1 (m is a power) m= number of compounding periods **per year**
- i= interest rate per period
- 12.5% annual interest rate, compounded half yearly: EAR = (1+ i) m – 1 = (1+.0625)2 -1= 12.89%

# Time Value of Money 2 examples in lecture 3

$$FV = PMT\left[\frac{(1+i)^n - 1}{i}\right]$$

- PMT is the annuity payment
- n is the number of payments
- i is the per period interest rate

## Annuity

- An annuity is a number of equal cash flows occurring at equal time intervals ( money deposited at the end of each period)
- An ordinary annuity assumes all cash flows occur at the end of each period
- In a future value calculation: **First period receives interest for two periods, second payment receives interest for only one period, third payment receives no interest**
- E.g. Rose deposits $10,000 into a bank account at the end of each year for the next three years. If the interest rate is 5% p.a. how much will Rose have accumulated at the end of the third year?

$$FV = 10000\left[\frac{(1+.05)^3 - 1}{.05}\right] = 31525$$

## Present value of an annuity

- Present value is calculated at the beginning of the period
- Assumes the first payment made is at the end of the first period, (beginning of period one = time 0, beginning of period 3= end of period 2

- To find monthly payments use Present value formula and substitute to find PMT and then divide by the Future value.
- Amortisation schedule →

| Month | Beginning Balance | Interest | Payment |
|---|---|---|---|
| 1 | 350000.00 | 1750.00 | 2953.50 |
| 2 | 348796.50 | 1743.98 | 2953.50 |
| 3 | 347586.98 | 1737.93 | 2953.50 |
| 4 | 346371.42 | 1731.86 | 2953.50 |
| 5 | 345149.78 | 1725.75 | 2953.50 |
| 60 | 267647.11 | 1338.24 | 2953.50 |
| 61 | 266031.85 | 1330.16 | 2953.50 |
| 62 | 264408.51 | 1322.04 | 2953.50 |
| 180 | 2938.80 | 14.69 | 2953.50 |

## Perpetuity

- A annuity that continues forever
- **PV= PMT/i**
- There is no future value
- E.g. A life insurance policy that pays $13,000 every year forever is being sold for $140,000, If interest rates are 11% pa would you purchase the insurance policy?
- Solution: PV= 13,000/0.11= $118,181.82 therefore you would not buy the policy

# Debt and Valuation

## Debt

- An amount of money borrowed today from a lender to be repaid in the future
- It is a contractual obligation which commits the borrower to interest and principal repayments
- Default is failure to meet the required payments when due

### Features of Debt

- Maturity: Short term or long term debt
- Security: Secured or Unsecured
- Ranking: Senior or subordinate
- Interest rate: Fixed, variable or a combination
- Repayment pattern: Interest only, principal and interest, capitalised interest
- Currency: Domestic (AUD), Foreign
- Source: Markets or financial institutions

## Bill of exchange

- Source of short-term finance, a bill must state amount payable and date payable
- Bills are discount instruments; only payment made at maturity, issued at a price less than their face value, interest is difference between security's price and face value
- Can be 'rolled over' at maturity