


Finance

Hussain Al Awami, B.Sc. Pharm., M.Sc., MBA

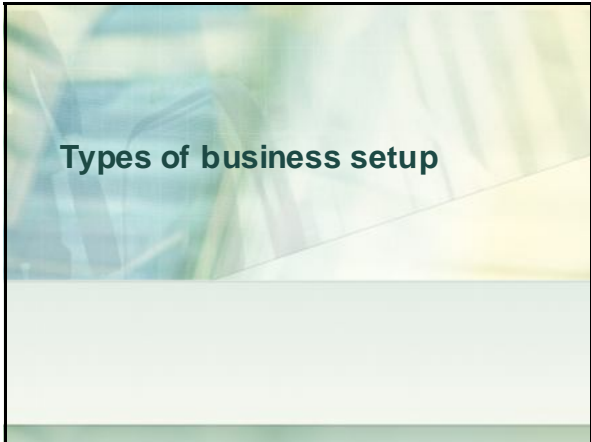


An Overview of Financial Management and the Financial Environment



Core issues

- Types of business setup
- Corporate objective
- Financial markets
- Cost of money & interest rate levels








Sole trader, advantages


- Ease of formation
- Subject to few regulations
- No corporate income taxes

Sole trader, disadvantages

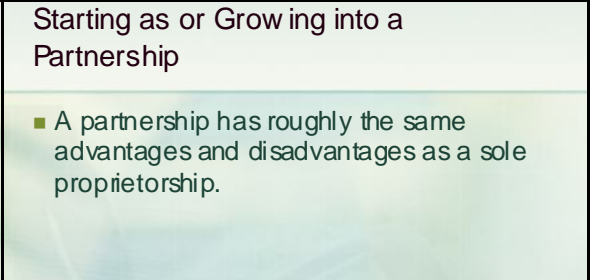
Limited life



Unlimited liability



Difficult to raise capital to support growth



Starting as or Growing into a Partnership

- A partnership has roughly the same advantages and disadvantages as a sole proprietorship.

Becoming a Corporation

- A corporation is a legal entity separate from its owners and managers.

Advantages of a Corporation

- Unlimited life
- Easy transfer of ownership
- Limited liability
- Ease of raising capital

Disadvantages of a Corporation

- Double taxation
- Cost of set-up and report filing

Agency problem

- Managers may act in their own interests and not on behalf of owners (stockholders)

Group exercise

- How managers could do things based on their interest?
- How do companies limit or control agency problem?

Charter

1. Name of the proposed corporation
2. Types of activities it will pursue
3. Amount of capital stock
4. Number of directors
5. Name and addresses of directors

Bylaws

1. How directors are elected
2. The rights of stockholders
3. Procedures for changing Bylaws

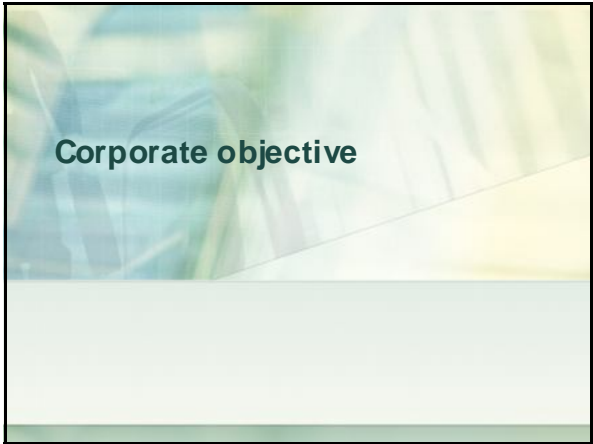
Business setup life cycle

- Sole trader
- Partnership
- Corporation

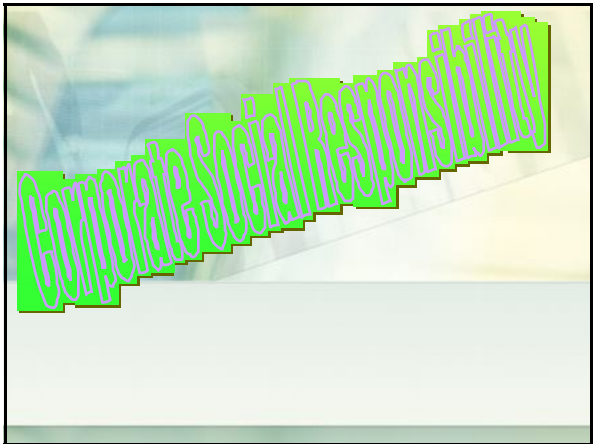


Core issues

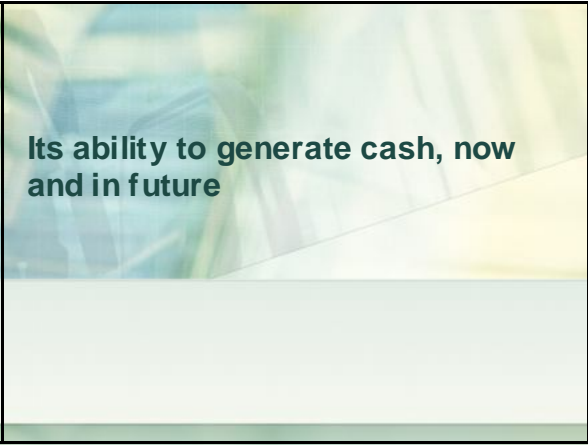
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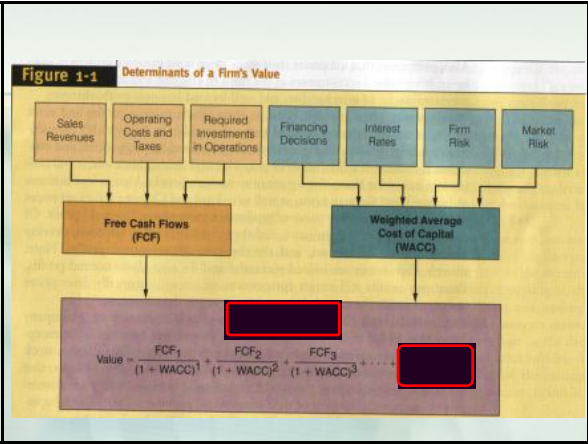


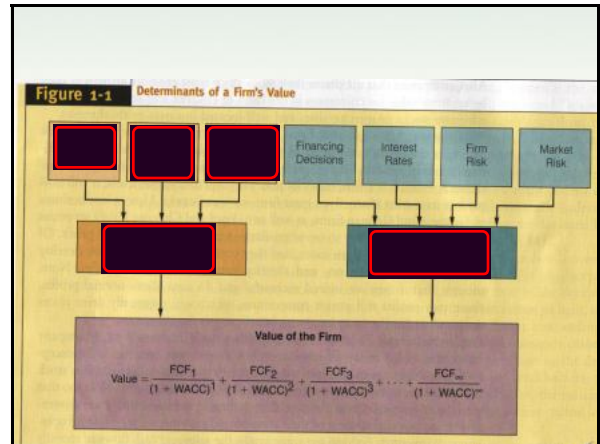












Sales revenues

- Current level of unit sales
- Price per unit
- Expected future growth

Current level of unit sales

- Marketing
- Push Vs pull strategy

Price per unit

- Marketing
- Innovation

Expected future growth

- NPD (new product developments)
- New markets

Operating costs and taxes

Operating costs & taxes

- Operation management
 - Reducing labor cost
 - Reducing material cost
- Cost might not be direct labor, but the productivity (i.e., higher skillful staff with higher wages).

Required investment in operation

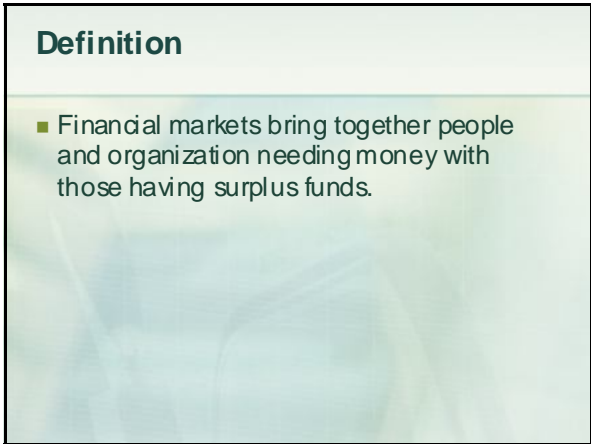
- e.g., factories, equipment, computer system, or inventory.
- You need cash to create cash!
- Any dollar tied up in operation is NOT available for distribution to investors.
- Wal-mart Vs Kmart

Core issues

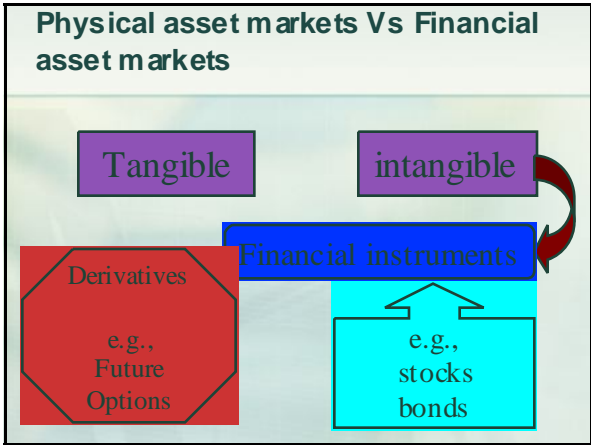
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Money markets Vs Capital markets

- Short term Vs intermediate or long term

Mortgage markets Vs Consumer credit markets

- The difference is in the type of loan.

World, national, regional, and local markets

- Geographical locations of financial market

Primary markets

- Where capital is raised.

IPO

- Go public
- Raising capital

Secondary markets

- Trading shares, bonds, mortgages, and other financial assets.
- Not for raising capital.

Private markets Vs Public markets

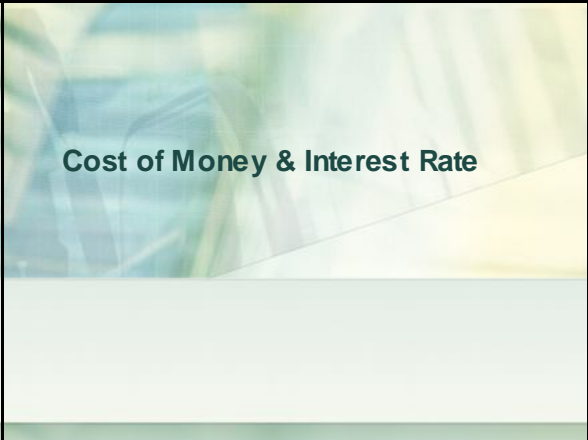
- Tailored Vs standard contract
- Less liquid Vs highly liquid

Group exercise

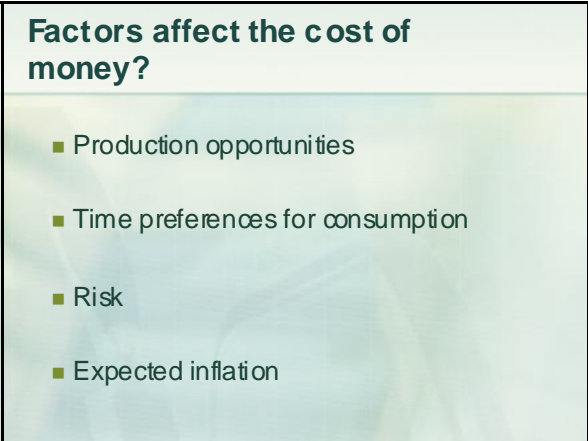
- Do Saudis have the understanding of financial market?
- Do that impact their financial decisions?
- Do you see companies optimize their long term value? Explain with examples.

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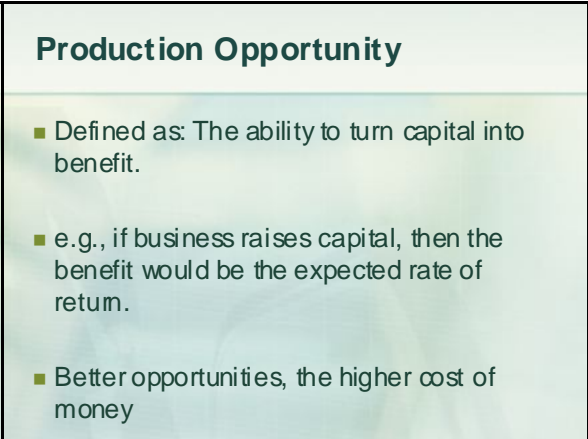


Cost of Money & Interest Rate



Factors affect the cost of money?

- Production opportunities
- Time preferences for consumption
- Risk
- Expected inflation



Production Opportunity

- Defined as: The ability to turn capital into benefit.
- e.g., if business raises capital, then the benefit would be the expected rate of return.
- Better opportunities, the higher cost of money

Time preferences for consumption

- Trading current benefit of consumption with expected better future rewards.
- Affected by desire:
 - Varies with different individuals
 - Varies with different age groups
 - Varies with different cultures

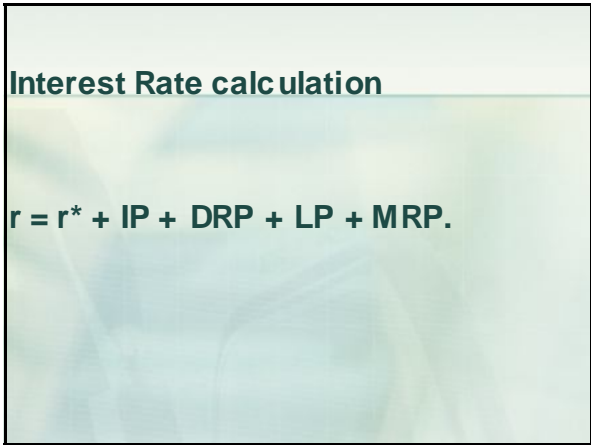
Risk

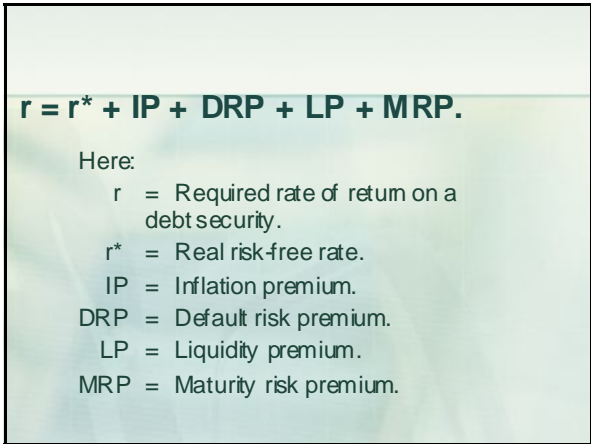
- Investors are risk averse
- In risky businesses, the investors require higher profits

Inflation

- Goods purchased with higher prices OR the same amount of money will buy fewer units.
- Investors need to be compensated for inflation.







Real risk free rate, r^*

- Defined as interest rate when:
 - Risk-less security
 - No inflation
- Affected mainly by:
 - Production opportunities
 - Time preference for consumption
- Best measure is short term US treasury bonds; could fit all industries

Inflation Premium, IP

- Inflation erodes the purchasing power of money.
- Inflation rate is based on EXPECTATION not past records.
- Most people calculate past inflation, and might add premium.

Default Risk Premium, DRP

- The borrower will not pay the loan or part of it.
- Only treasury securities have no DRP.
- The higher bonds rating, the lower DRP.

Relation between r & DRP

Long-Term Bonds	Rate		DRP	
	2001	2003	2001	2003
U.S. Treasury	5.5%		—	—
AAA	6.5			
AA	6.8		1.3	0.7
A	7.3		1.8	1.3
BBB	7.9		2.4	1.9
BB+	10.5		5.0	3.5

- ### Liquidity Premium, LP
- A measure of ability to change the asset into cash
 - Rapidly
 - With fair market value
 - Difficult to accurately measure %.
 - Usually 2-5% difference best and worst with other comparable figures.

- ### Maturity Risk Premium, MRP
- $r_{it} = r^* + IP$
 - The prices of long term bonds decline sharply when interest rate increased.
 - Also called interest rate risk

Maturity Risk Premium, MRP

- Difficult to accurately measure
- Usually 1-3% on 30 years T-bonds.

International Risk Factors

Country risk

Arises from investing or doing business in a particular country. It depends on the country's economic, political, and social environment.

Exchange risk

If investment is denominated in a currency other than the dollar, the investment's value will depend on what happens to exchange rate.

Economic factors affecting interest rate levels

- Federal reserve policy
- Budget deficits or surpluses
- International trade deficits or surpluses
- Business activity

Answer explanation

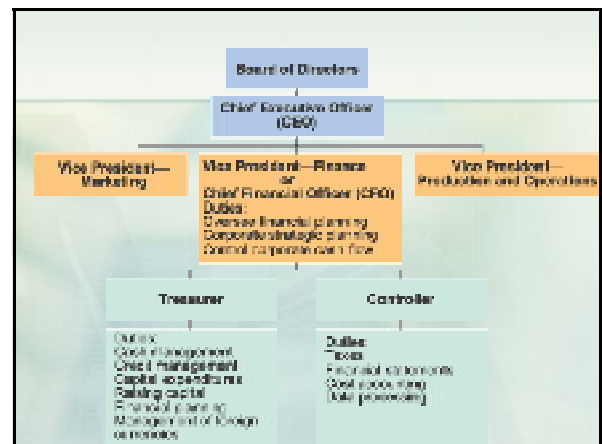
- $r^* = 3\%$; $I1 = 2\%$; $I2 = 4\%$; $I3 = 4\%$; $MRP = 0$; $rT-2 = ?$; $rT-3 = ?$
- $r = r^* + IP + DRP + LP + MRP$.
- Since these are Treasury securities, $DRP = LP = 0$.
- $rT-2 = r^* + IP2$
- $IP2 = (2\% + 4\%)/2 = 3\%$
- $rT-2 = 3\% + 3\% = 6\%$.
- $rT-3 = r^* + IP3$
- $IP3 = (2\% + 4\% + 4\%)/3 = 3.33\%$
- $rT-3 = 3\% + 3.33\% = 6.33\%$.

Answer explanation


- $r^* = 3\%$; $IP = 3\%$; $rT-2 = 6.2\%$; $MRP2 = ?$
- $rT-2 = k^* + IP + MRP = 6.2\%$
- $rT-2 = 3\% + 3\% + MRP = 6.2\%$
- $MRP = 0.2\%$.


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Group exercise





Solving problems

Problem

- The real risk-free rate of interest is 3%. Inflation is expected to be 2% this year and 4% during the next 2 years. Assume the maturity risk premium is zero. What is the yield on 2-years treasury securities? What is the yield on 3-years treasury securities?

Solution

- $r = r^* + IP + DRP + LP + MRP$

The diagram illustrates the components of the risk premium. It features three green arrows pointing upwards. The leftmost arrow is labeled $r^* = 3\%$. The middle arrow is wider and labeled IP, DRP, LP . The rightmost arrow is labeled $MRP = 0\%$.

Solution, continue

- $r = r^* + IP + DRP + LP + MRP$

The diagram illustrates the components of the risk premium. It features two green arrows pointing upwards. The left arrow is labeled $IP = ???$. The right arrow is wider and labeled $\text{Both equal to zero}$.


Solution, continue

- $IP_1 = 2\%$
- $IP_2 = 4\%$
- $IP_3 = 4\%$

The diagram shows calculations for IP_2 and IP_3 . Two green arrows point to the right. The top arrow is labeled $IP_2 = (2\% + 4\%) / 2 = 3\%$. The bottom arrow is labeled $IP_3 = (2\% + 4\% + 4\%) / 3 = 3.3\%$.

Solution, continue


- $r_2 = r^* + IP + DRP + LP + MRP$



$r_2 = 3\% + 3\% + 0 + 0 + 0 = 6\%$

Solution, continue

- $r_3 = r^* + IP + DRP + LP + MRP$



$r_3 = 3\% + 3.3\% + 0 + 0 + 0 = 6.3\%$

Problem

- A treasury bond that matures in 10 years has a yield of 6%. A 10 years corporate bond has a yield of 8%. Assume that the liquidity premium on the corporate bond is 0.5%. What is the default risk premium on the corporate bond?

Solution

- $r = r^* + IP + DRP + LP + MRP$
- $r_{t-10} = r^* + IP + DRP + LP + MRP = 6\%$
- $r_{C-10} = r^* + IP + DRP + LP + MRP = 8\%$

Solution, continue

- $r = r^* + IP + DRP + LP + MRP$
- $r_{t-10} = \downarrow + \downarrow + DRP + LP + MRP = 6\%$
- $r_{C-10} = \downarrow + \downarrow + DRP + LP + MRP = 8\%$

Solution, continue

- $r = r^* + IP + DRP + LP + MRP$
- $r_{t-10} = \downarrow + \downarrow + DRP + LP + MRP = 6\%$
- $r_{C-10} = \downarrow + \downarrow + DRP + LP + MRP = 8\%$

(Note: In the original image, a red circle highlights the DRP and LP terms in the r_{C-10} equation, and a red arrow points to the 2% difference between the 6% and 8% results.)

Solution, continue

- $r = r^* + IP + DRP + LP + MRP$
- $r_{t-10} = \quad + \quad + DRP + LP + MRP = 6\%$
- $r_{C-10} = \quad + \quad + DRP + LP + MRP = 8\%$

Solution, continue

- $r = r^* + IP + DRP + LP + MRP$
- $r_{t-10} = \quad + \quad + DRP + LP + MRP = 6\%$
- $r_{C-10} = \quad + \quad + DRP + LP + MRP = 8\%$

$2\% = DRP + LP$
 $2\% = DRP + 0.5\%$
 $DRP = 2\% - 0.5\%$
 $DRP = 1.5\%$

Problem

- The real risk free rate is 3%, and the inflation is expected to be 3% for the next 2 years. A 2 years treasury security yields 6.2%. What is the maturity risk premium for the 2 years security?

Solution

■ $r = r^* + IP + DRP + LP + MRP$

↑ $r = 6.2\%$ ↑ $r^* = 3\%$ ↑ $IP = 3\%$ ↑ $DRP = 0$ ↑ $LP = 0$ ↑ $MRP = 0.2\%$

$MRP = 6.2\% - (3\% + 3\%) = 6.2\% - 6\% = 0.2\%$

Solution $6.2\% = 3\% + 3\% + 0 + 0 + MRP$

■ $r = r^* + IP + DRP + LP + MRP$

↑ $r = 6.2\%$ ↑ $r^* = 3\%$ ↑ $IP = 3\%$ ↑ $DRP = 0$ ↑ $LP = 0$ ↑ $MRP = 0.2\%$