ICE-BREAKING

MANAGING FUND FOR BUSINESS SUSTAINABILITY

MODULE 3

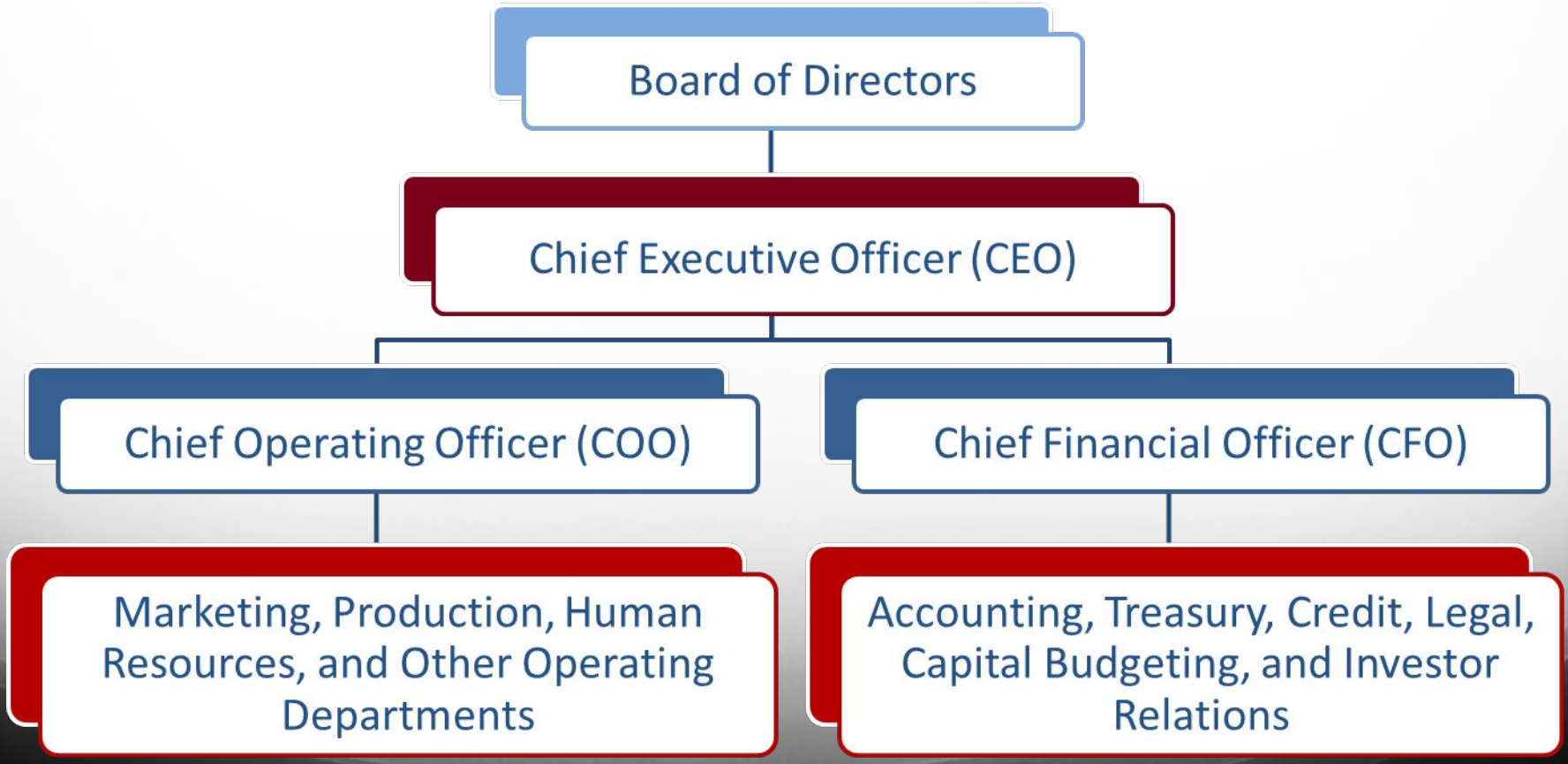
Assoc. Prof. Dr Fauziah Mahat

OBJECTIVE

The objective is to help students to identify the sources of finance available in the financial markets and institutions and the managing the working capital

OVERVIEW OF FINANCIAL MANAGEMENT

FINANCE WITHIN THE ORGANIZATION



FORMS OF BUSINESS ORGANIZATION

- **PROPRIETORSHIP** – a sole trader. It is a type of enterprise that is owned and run by one natural person . There is no legal distinction between the owner and the business entity.

- **PARTNERSHIP** – two or more individuals share the profits and liabilities of the business venture. Share the profit and loss equally. Partners have limited liability.

- **CORPORATION** – a company or group of people authorized to act as a single entity.

PROPRIETORSHIPS AND PARTNERSHIPS

- **Advantages**
  - Ease of formation
  - Subject to few regulations
  - No corporate income taxes
- **Disadvantages**
  - Difficult to raise capital
  - Unlimited liability
  - Limited life

CORPORATION

- **Advantages**
  - Unlimited life
  - Easy transfer of ownership
  - Limited liability
  - Ease of raising capital
- **Disadvantages**
  - Double taxation
  - Cost of setup and report filing

FINANCIAL MARKET AND INSTITUTIONS

TYPES OF FINANCIAL INSTITUTIONS

- Commercial banks
- Investment banks

TYPES OF NON FINANCIAL INSTITUTIONS

5 groups of institutions:-

- Development Financial Intermediaries
- Saving Institutions
- Employees Provident and Pension Funds
- Insurance Companies (including Takaful)
- Other Financial Intermediaries: -
  - Factoring Co, Leasing Co, Unit trusts, Cagamas,

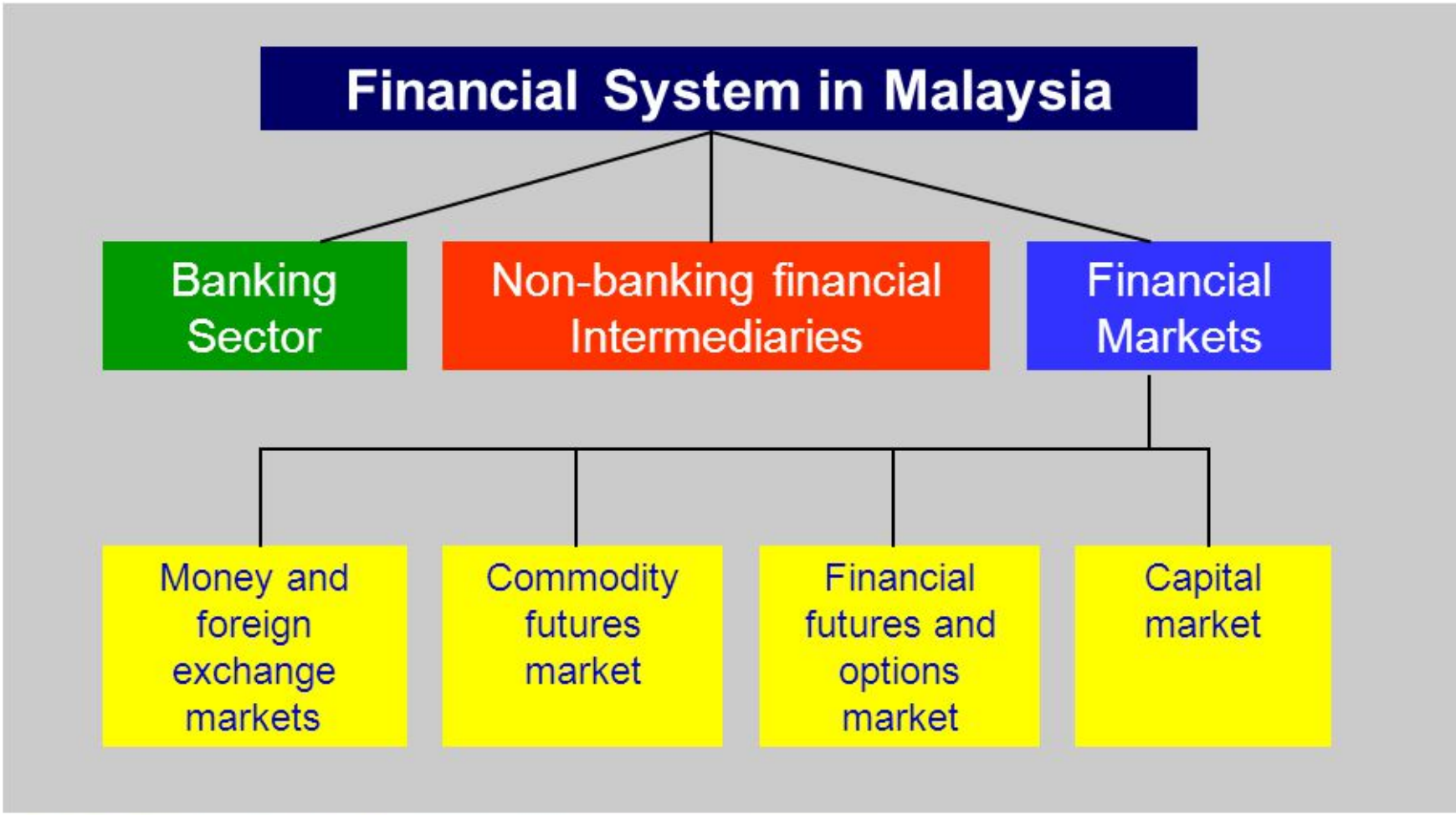
THE CAPITAL ALLOCATION PROCESS

- In a well-functioning economy, capital flows efficiently from those who supply capital to those who demand it.
- Suppliers of capital: individuals and institutions with "excess funds." These groups are saving money and looking for a rate of return on their investment.
- Demanders or users of capital: individuals and institutions who need to raise funds to finance their investment opportunities. These groups are willing to pay a rate of return on the capital they borrow.

How is capital transferred between savers and borrowers?

- Direct transfers
- Investment banks
- Financial intermediaries

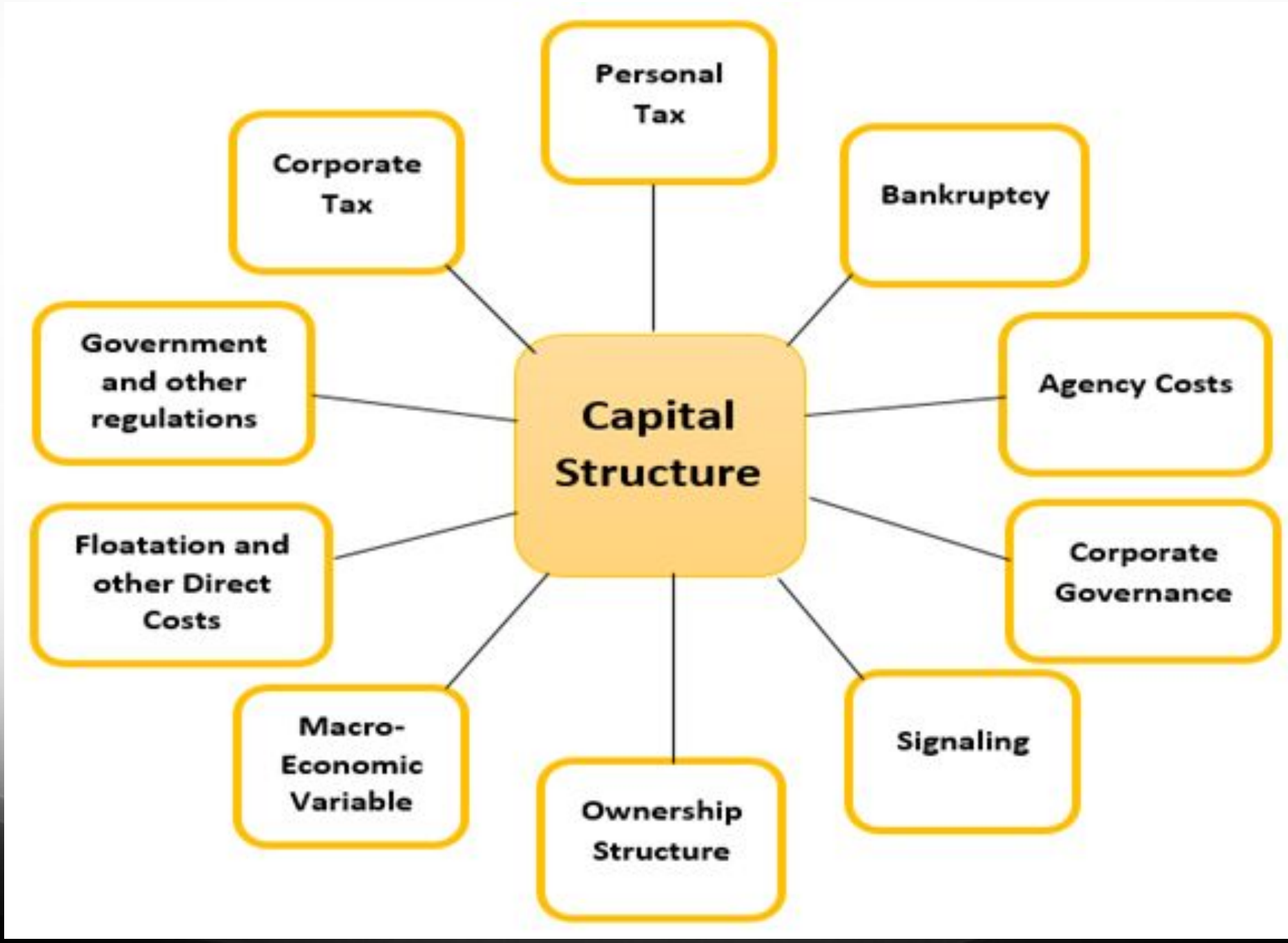
Financial System in Malaysia



CAPITAL STRUCTURE

- The **capital structure** is how a firm finances its overall operations and growth by using different sources of funds.

- Debt comes in the form of bond issues or long-term notes payable, while equity is classified as common stock, preferred stock or retained earnings.


Personal Tax
Corporate Tax
Bankruptcy
Government and other regulations
Capital Structure
Agency Costs
Floatation and other Direct Costs
Corporate Governance
Macro-Economic Variable
Ownership Structure
Signaling

FINANCIAL STATEMENT AND CASH FLOW AND TAXES

THE ANNUAL REPORT

- Balance sheet – provides a snapshot of a firm's financial position at one point in time.
- Income statement – summarizes a firm's revenues and expenses over a given period of time.
- Statement of cash flows – reports the impact of a firm's activities on cash flows over a given period of time.
- Statement of stockholders' equity – shows how much of the firm's earnings were retained, rather than paid out as dividends.

Balance Sheet: Assets

	2016	2015
Cash	7,282	57,600
A/R	632,160	351,200
Inventories	1,287,360	715,200
Total CA	1,926,802	1,124,000
Gross FA	1,202,950	491,000
Less: Dep.	263,160	146,200
Net FA	939,790	344,800
Total Assets	2,866,592	1,468,800

Balance Sheet: Liabilities and Equity

	2016	2015
Accts payable	524,160	145,600
Notes payable	636,808	200,000
Accruals	489,600	136,000
Total CL	1,650,568	481,600
Long-term debt	723,432	323,432
Common stock	460,000	460,000
Retained earnings	32,592	203,768
Total Equity	492,592	663,768
Total L & E	2,866,592	1,468,800

Income Statement

	201 6	201 5
Sales	$6,634,000	$3,432,000
COGS	5,528,000	2,864,000
Other expenses	519,988	358,672
Total op. costs excl. dep. & amort.	$6,047,988	$3,222,672
EBITDA	($1,360,948)	$18,990,428
Depreciation and amortization	($1,360,948)	$18,990,428
EBIT	($2,721,896)	$37,980,856
Interest Expense	(136,960)	$43,826,600
EBT	($2,858,856)	($5,845,744)
Taxes	(1,067,847)	$8,680,960
Net income	($1,790,996)	$14,526,704

Other Data

	2016	2015
No. of shares	100,000	100,000
EPS	-$1.602	$0.88
DPS	$0.11	$0.22
Stock price	$2.25	$8.50
Lease pmts	$40,000	$40,000

CASH

- **CASH INFLOW**
  - Money received by an organization as a result of its operating activities, investment activities and financing activities.
- **CASH OUTFLOW**
  - The total outgoing funds from a co in a given period of time. **Cash outflows** include expenses such as salaries, supplies, and maintenance as well as paying dividends or servicing any debt held by the company. A company may be required to seek additional financing if **cash outflows** exceed **cash inflows**

ACCOUNT RECEIVABLES

- **Account Receivables**
  - The money owed to that company by entities outside of the company. (It is classified as current asset due within 1 year)
- **How do you manage accounts receivable?**
  - Establish a DSO
  - Establish a Credit Policy
  - Track Payments carefully
  - Charge interest on overdue payments
  - Cut off Credit to overdue clients.

CURRENT & FIXED ASSETS

- **Current Asset**
  - Cash & cash equivalents, accounts receivable, inventory, marketable securities, prepaid expenses and other liquid assets that can be readily converted to cash.
- **Fixed Assets**
  - Assets that are purchased for long-term use and are not likely to be converted quickly into cash, such as land, buildings, and equipment.

ACCOUNT PAYABLE

- Account payable ia money owned by a business to its suppliers shown as liability on a company's balance sheet.

- Represents an entity's obligation to pay off a short-term debt to its creditors. On many balance sheets – it appears under current liabilities.

NOTES PAYABLE

- Notes payable are debts created by formal legal instrument documents.
- It is a general ledger account in which a company records the face amounts of the promissory notes that is has issued.

ACCRUALS

- Short-term liabilities (such as interest, taxes, utility charges, wages) which continually occur during an accounting period but are not supported by an invoice or a written demand for payment.

LONG TERM DEBT

- Amount owed for a period exceeding 12 months from the date of the balance sheet. It could be in the form of a bank loan, mortgage bonds, debenture, or other obligations not due for one year.

COMMON STOCK

- Shares entitling their holder to dividends that vary in amount and may even be missed, depending on the fortunes of the company

- Preferred stock is a class of ownership in a corporation that has a higher claim on its assets and earnings than common stock.

RETAINED EARNINGS

- Retained earnings refer to the percentage of net earnings not paid out as dividends, but retained by the company to be reinvested in its core business, or to pay debt. It is recorded under shareholders' equity on the balance sheet.

- RE are often reinvested in the company for research and development purposes, investment in the physical plant, purchase of additional or better equipment or for retiring debt.

ACTIVITIES

CASH INFLOWS & OUTFLOWS

ITEMS	CASH INFLOWS	CASH OUTFLOWS

ACCOUNT RECEIVABLES

ACCOUNT RECEIVABLES	ITEMS	CASH OUTFLOWS

INVENTORIES

INVENTORIES	ITEMS	CASH OUTFLOWS

FIXED ASSETS

FIXED ASSETS	ITEMS	CASH OUTFLOWS

OTHERS EXPENSES

ITEMS	CASH OUTFLOWS

TIME VALUE OF MONEY

TIME VALUE OF MONEY

- The time value of money (TVM) is the idea that money available at the present time is worth more than the same amount in the future due to its potential earning capacity. This core principle of finance holds that, provided money can earn interest, any amount of money is worth more the sooner it is received.

- http://www.zenwealth.com/businessfinanceonline/TVM/TVMCalculator.html

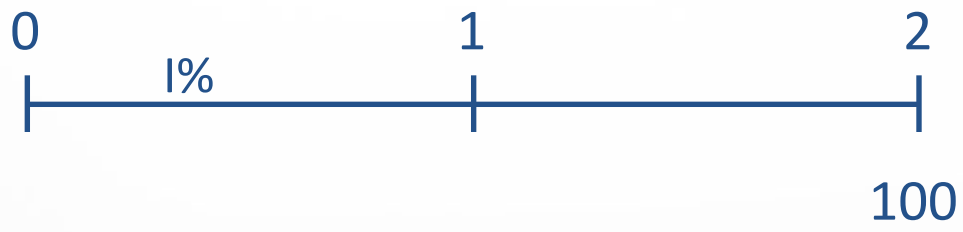
- Time Value of Money Calculator

Time Lines

- Show the timing of cash flows.
- Tick marks occur at the end of periods, so Time 0 is today; Time 1 is the end of the first period (year, month, etc.) or the beginning of the second period.

Drawing Time Lines

$100 lump sum due in 2 years



3-year $100 ordinary annuity

Drawing Time Lines

Uneven cash flow stream

What is the future value (FV) of an initial $100 after 3 years, if I/YR = 10%?

- Finding the FV of a cash flow or series of cash flows is called compounding.
- FV can be solved by using the step-by-step, financial calculator, and spreadsheet methods.

Solving for FV:
The Step-by-Step and Formula Methods

- After 1 year:

FV1 = PV(1 + I) = $100(1.10) = $110.00

- After 2 years:

FV2 = PV(1 + I)2 = $100(1.10)2 = $121.00

- After 3 years:

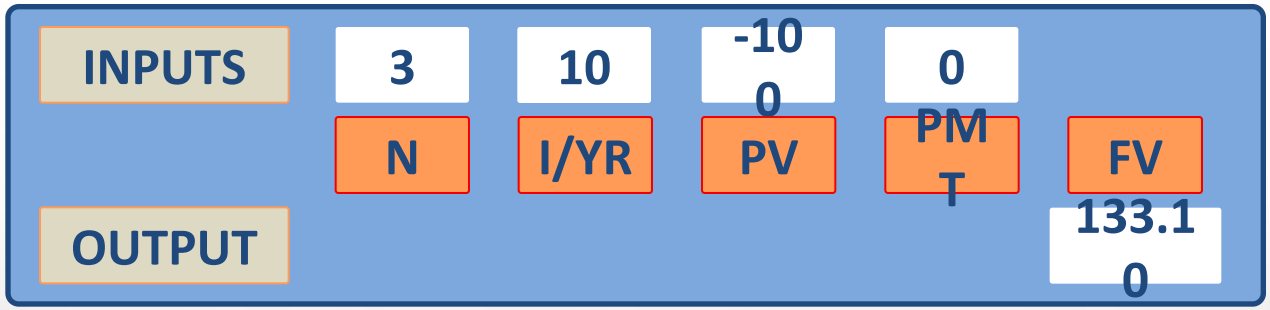
FV3 = PV(1 + I)3 = $100(1.10)3 = $133.10

- After N years (general case):

FVN = PV(1 + I)N

Solving for FV: Calculator and Excel Methods

- Solves the general FV equation.
- Requires 4 inputs into calculator, and will solve for the fifth. (Set to P/YR = 1 and END mode.)



Excel: =FV(rate,nper,pmt,pv,type)

What is the present value (PV) of $100 due in 3 years, if I/YR = 10%?

- Finding the PV of a cash flow or series of cash flows is called discounting (the reverse of compounding).
- The PV shows the value of cash flows in terms of today's purchasing power.

Solving for PV:
The Formula Method

- Solve the general FV equation for PV:

$$PV = FVN /(1 + I)N$$

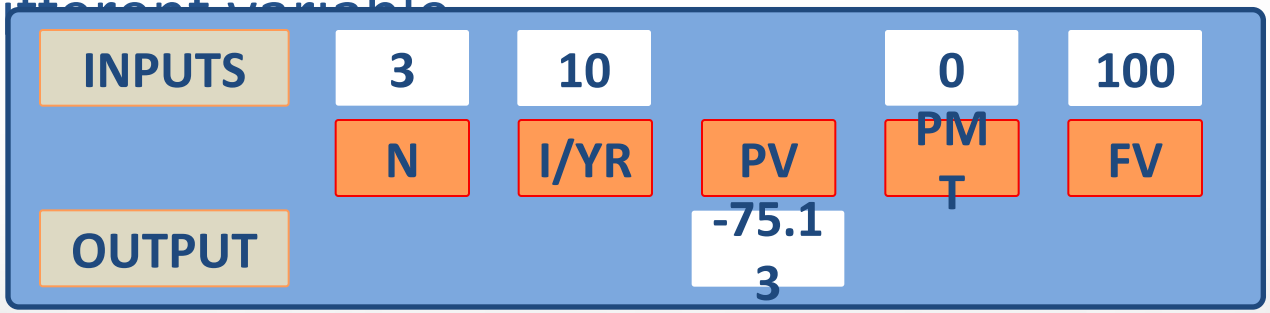
$$PV = FV3 /(1 + I)3$$

$$= \$100/(1.10)3$$

$$= \$75.13$$

Solving for PV:
Calculator and Excel Methods

- Solves the general FV equation for PV.
- Exactly like solving for FV, except we have different input information and are solving for a different variable.



Excel: =PV(rate,nper,pmt,fv,type)

LOAN AMORTIZATION

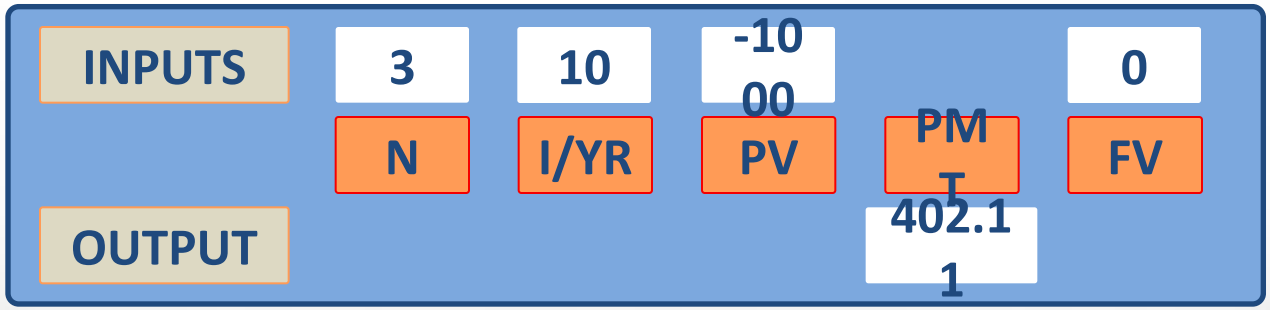
LOAN AMORTIZATION

- Amortization tables are widely used for home mortgages, auto loans, business loans, retirement plans, etc.
- Financial calculators and spreadsheets are great for setting up amortization tables.

EXAMPLE: Construct an amortization schedule for a $1,000, 10% annual rate loan with 3 equal payments.

Step 1:
Find the Required Annual Payment

- All input information is already given, just remember that the FV = 0 because the reason for amortizing the loan and making payments is to retire the loan.



Excel: =PMT(.10,3,-1000,0,0)

Step 2:
Find the Interest Paid in Year 1

- The borrower will owe interest upon the initial balance at the end of the first year. Interest to be paid in the first year can be found by multiplying the beginning balance by the interest rate.

  INTt = Beg balt(I)

  INT1 = $1,000(0.10) = $100

Step 3:
Find the Principal Repaid in Year 1

- If a payment of $402.11 was made at the end of the first year and $100 was paid toward interest, the remaining value must represent the amount of principal repaid.

PRIN = PMT – INT

= $402.11 – $100 = $302.11

Step 4:
Find the Ending Balance after Year 1

- To find the balance at the end of the period, subtract the amount paid toward principal from the beginning balance.

END BAL = BEG BAL – PRIN

= $1,000 – $302.11

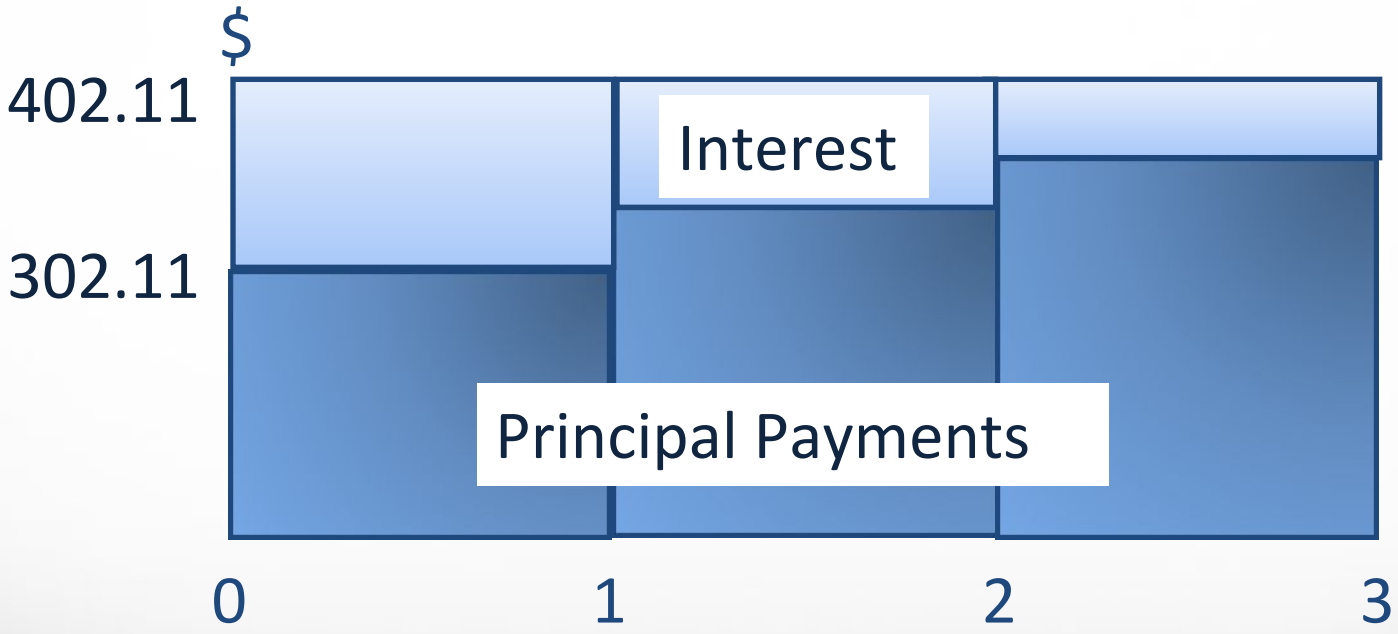
= $697.89

Constructing an Amortization Table: Repeat Steps 1-4 Until End of Loan

YEAR	BEG BAL	PMT	INT	PRIN	END BAL
1	$1,000	$ 402	$100	$ 302	$698
2	698	402	70	332	366
3	366	402	36	366	0
TOTAL	–	$1,206	$206	$1,000	–

- Interest paid declines with each payment as the balance declines. What are the tax implications of this?

Illustrating an Amortized Payment: Where does the money go?



- Constant payments
- Declining interest payments
- Declining balance

CAPITAL BUDGETING

CAPITAL BUDGETING

- Capital Budgeting, or investment appraisal, is the planning process used to determine whether an organization's long term investments such as new machinery, replacement of machinery, new plants, new products, and research development projects are worth the funding of cash through the firm's capitalization structure (debt, equity or retained earnings). It is the process of allocating resources for major capital, or investment, expenditures. One of the primary goals of capital budgeting investments is to increase the value of the firm to the shareholders.

What is capital budgeting?

- Analysis of potential additions to fixed assets.
- Long-term decisions; involve large expenditures.
- Very important to firm's future.

Steps to Capital Budgeting

1. Estimate CFs (inflows & outflows).
2. Assess riskiness of CFs.
3. Determine the appropriate cost of capital.
4. Find NPV and/or IRR.
5. Accept if NPV > 0 and/or IRR > WACC.

What is the difference between independent and mutually exclusive projects?

- Independent projects: if the cash flows of one are unaffected by the acceptance of the other.
- Mutually exclusive projects: if the cash flows of one can be adversely impacted by the acceptance of the other.

Net Present Value (NPV)

- Sum of the PVs of all cash inflows and outflows of a project:

$$NPV = \sum_{t=0}^{N} \frac{CF_t}{(1+r)^t}$$

What is Project L's NPV?

Year	CFt	PV of CFt
0	-100	-$100
1	10	9.09
2	60	49.59
3	80	60.11

NPVL = $18.79

NPVS = $19.98

What is Project S' NPV?

WACC = 10%

Year	CFt	PV of CFt
0	-100	-$100.00
1	70	63.64
2	50	41.32
3	20	15.02
	NPVS =	$ 19.98

Excel: =NPV(rate,CF1:CFn) + CF0

Here, CF0 is negative.

What is Project S' NPV?

WACC = 10%

Year	CFt	PV of CFt
0	-100	-$100.00
1	70	63.64
2	50	41.32
3	20	15.02
	NPVS =	$ 19.98

Excel: =NPV(rate,CF1:CFn) + CF0

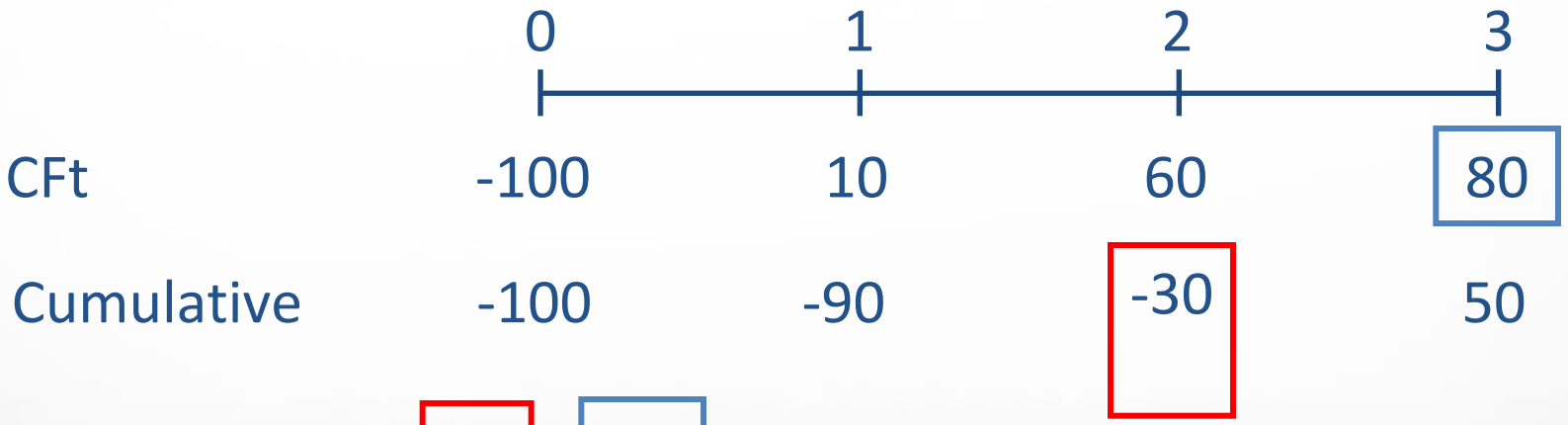
Here, CF0 is negative.

What is the **payback period?**

- The number of years required to recover a project's cost, or "How long does it take to get our money back?"
- Calculated by adding project's cash inflows to its cost until the cumulative cash flow for the project turns positive.

Calculating Payback

Project L's Payback Calculation



PaybackL = 2 + 30 / 80

= 2.375 years

PaybackS = 1.600 years

Strengths and Weaknesses of Payback

- Strengths
  - Provides an indication of a project's risk and liquidity.
  - Easy to calculate and understand.
- Weaknesses
  - Ignores the time value of money.
  - Ignores CFs occurring after the payback period.

WORKING CAPITAL MANAGEMENT

Working Capital Terminology

- Working capital: current assets.
- Net working capital: current assets minus current liabilities.
- Net operating working capital: current assets minus (current liabilities less notes payable).
- Current assets investment policy: deciding the level of each type of current asset to hold, and how to finance current assets.
- Working capital management: controlling cash, inventories, and A/R, plus short-term liability management.

Working Capital Financing Policies

- Moderate: Match the maturity of the assets with the maturity of the financing.
- Aggressive: Use short-term financing to finance permanent assets.
- Conservative: Use permanent capital for permanent assets and temporary assets.

Cash Conversion Cycle

- The cash conversion cycle focuses on the length of time between when a company makes payments to its creditors and when a company receives payments from its customers.

$$\text{CCC} = \underset{\text{period}}{\text{Inventory conversion}} + \underset{\text{period}}{\text{Average collection}} - \underset{\text{period}}{\text{Payables deferral}}$$

Cash Conversion Cycle

$$\text{CCC} = \begin{matrix}\text{Inventory}\\ \text{conversion}\\ \text{period}\end{matrix} + \begin{matrix}\text{Average}\\ \text{collection}\\ \text{period}\end{matrix} - \begin{matrix}\text{Payables}\\ \text{deferral}\\ \text{period}\end{matrix}$$

$$\text{CCC} = \frac{\text{Days per year}}{\text{Inventory turnover}} + \begin{matrix}\text{Days sales}\\ \text{outstanding}\end{matrix} - \begin{matrix}\text{Payables}\\ \text{deferral}\\ \text{period}\end{matrix}$$

$$\text{CCC} = \frac{365}{4.82} + 46 - 30$$

$$\text{CCC} = 76 + 46 - 30 = 92 \text{ days}$$

Minimizing Cash Holdings

- Use a lockbox
- Insist on wire transfers and debit/credit cards from customers
- Synchronize inflows and outflows
- Reduce need for “safety stock” of cash
  - Increase forecast accuracy
  - Hold marketable securities
  - Negotiate a line of credit

Cash Budget

- Forecasts cash inflows, outflows, and ending cash balances.
- Used to plan loans needed or funds available to invest.
- Can be daily, weekly, or monthly, forecasts.
  - Monthly for annual planning and daily for actual cash management.

Why you might want to maintain a relatively high amount of cash?

- If sales turn out to be considerably less than expected, you could face a cash shortfall.
- A company may choose to hold large amounts of cash if it does not have much faith in its sales forecast, or if it is very conservative.
- The cash may be used, in part, to fund future investments.

Inventory Costs

- Types of inventory costs
  - Carrying costs: storage and handling costs, insurance, property taxes, depreciation, and obsolescence.
  - Ordering costs: cost of placing orders, shipping, and handling costs.
  - Costs of running short: loss of sales or customer goodwill, and the disruption of production schedules.
- Reducing inventory levels generally reduces carrying costs, increases ordering costs, and may increase the costs of running short.

Elements of Credit Policy

1. Credit Period: How long to pay? Shorter period reduces DSO and average A/R, but it may discourage sales.
2. Cash Discounts: Lowers price. Attracts new customers and reduces DSO.
3. Credit Standards: Restrictive standards tend to reduce sales, but reduce bad debt expense. Fewer bad debts reduce DSO.
4. Collection Policy: How tough? Restrictive policy will reduce DSO but may damage customer relationships.


Thank You!