

# FINANCIAL MANAGEMENT AND MANAGEMENT ACCOUNTING

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## **Section – I: FINANCIAL MANAGEMENT**

### **INTRODUCTION TO FINANCIAL MANAGEMENT**

# What is Financial Management?

Financial Management is broadly concerned with the acquisition and use of funds by a business firm. Its scope may be defined in terms of the following questions.

- ❖ How large should the firm be & how fast should it grow?
- ❖ Composition of firm's assets?
- ❖ Mix of the firm's financing ?
- ❖ Analyzing, planning & controlling its financial affairs?

# Goals of Financial Management

- Profit Maximization (profit after tax)
- Maximizing Earnings per share(EPS)
- Shareholder's Wealth Maximization

## THE FUNDAMENTAL PRINCIPLE OF FINANCE

- A business proposal—regardless of whether it is a new investment or acquisition of another company or a restructuring initiative—raises the value of the firm only if the present value of the future stream of net cash benefits expected from the proposal is greater than the initial cash outlay required to implement the proposal.

# Decisions under Financial Management

- Investing Decision
- Financing Decision
- Dividend Decision

# Investing Decision

- Investment in Short Term & Long Term Projects
- Short Term Projects
  - Decisions relating to **Working Capital Mgt.**
  - Inventory Management,
  - Receivables Management, etc.

# Long Term Decision

- ▶ Relates to Capital Budgeting Decisions
- ▶ Techniques:
  - (i) Traditional- Payback Period, Accounting Rate of Return
  - (ii) Modern- Net Present value Method, Internal Rate of Return, Profitability Index, etc.



# Financing Decision

- Decision relation to Funding of the Projects
- **Sources**
  - Short Term** (trade credit, bank overdraft, etc.)
  - Long Term**
    - (i) **Owners Funds** ( Equity/Preference Share Capital, Retained Earnings)
    - (ii) **External Funds**( Debentures, Long Term Loans, etc.)

# Dividend Decision

This decision relates to How much of the Earnings to be

**DISTRIBUTED AS DIVIDENDS?**

**AND**

**HOW MUCH TO BE KEPT**

**AS RETAINED EARNINGS?**

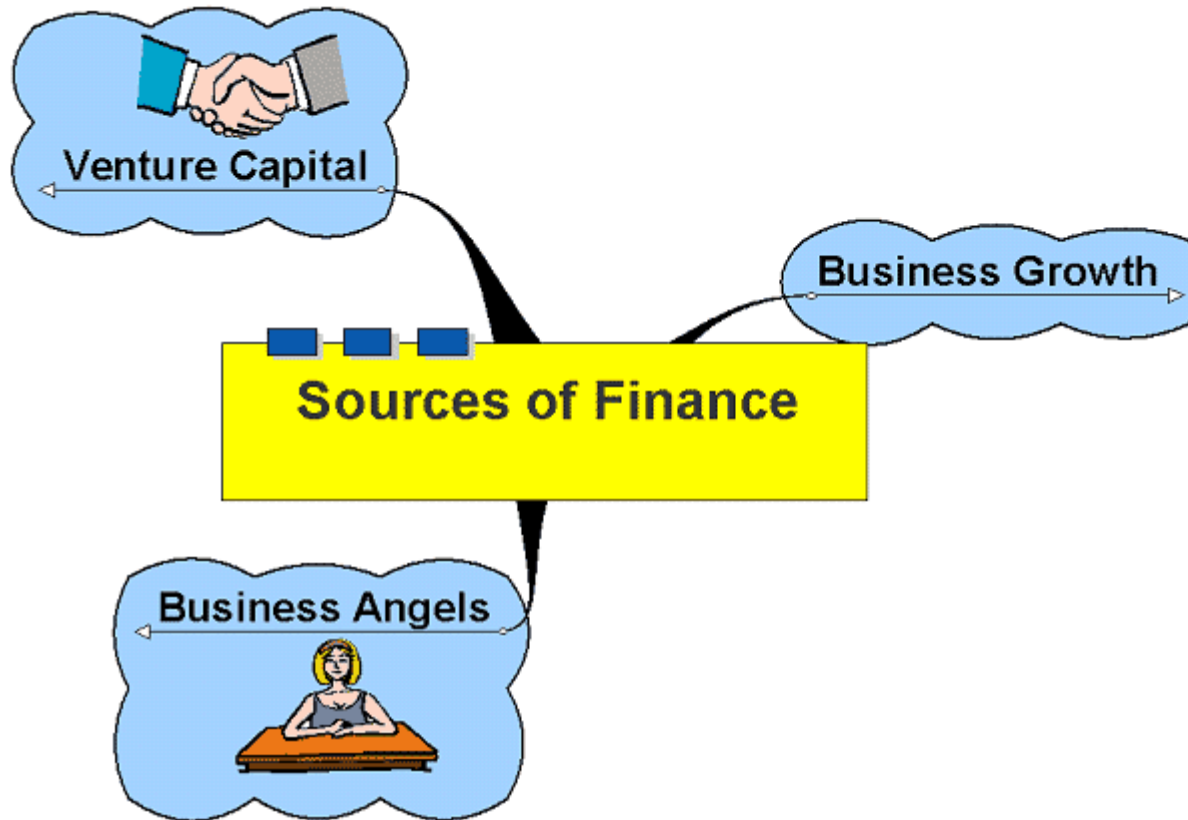
# RELATIONSHIP OF FINANCE TO ACCOUNTING

- Accounting is concerned with score keeping, whereas
- finance is aimed at value maximising.
- • The accountant prepares the accounting reports based
- on the accrual method. The focus of the financial
- manager is on cash flows.
- • Accounting deals primarily with the past. Finance is
- concerned mainly with the future.

# **SOURCES OF FINANCE**

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# Sources of Finance



# Internal Sources of Finance and Growth

- **‘Organic growth’** – growth generated through the development and expansion of the business itself. Can be achieved through:
  - **Generating increasing sales** – increasing revenue to impact on overall profit levels
  - **Use of retained profit** – used to reinvest in the business
  - **Sale of assets** – can be a double edged sword – reduces capacity?

# Business Growth External

- Long Term
  - Shares
    - Ordinary Shares
    - Preference Shares
    - New share issues
    - Rights Issue
    - Bonus or Scrip Issue
  - Loans
    - Debentures
    - Bank loans (mortgage)
    - Merchant or Investment Banks
    - Government/EU
      - Grants
- Short Term
  - Bank loans
  - Overdraft facilities
  - Trade credit
  - Factoring
  - Invoice discounting
  - Leasing

## Business Growth External Short Term

- Factoring is a financial transaction whereby a business sells its accounts receivable (i.e., invoices) to a third party (called a factor) at a discount in exchange for immediate money
- Factoring allows company to raise finance based on the value of your outstanding invoices.
- Factoring also gives company the opportunity to outsource your sales ledger operations and to use more sophisticated credit rating systems.
- Offers 80 – 85% of the total invoice value
- Company pays factoring fees



# Business Growth External Short Term (Contd.)

- LEASING
- is a contract between the leasing company, the lessor, and the customer (the lessee). The leasing company buys and owns the asset that the lessee requires. The customer hires the asset from the leasing company and pays rental over a pre-determined period for the use of the asset. There are two types of leases:
  - **1: Finance Leases**  
An agreement where the lessor receives lease payments to cover its ownership costs. The lessee is responsible for maintenance, insurance, and taxes. Some finance leases are conditional sales or hire purchase agreements.
  - **2: Operating Leases**  
The lease will not run for the full life of the asset and the lessee will not be liable for its full value. The lessor or the original manufacturer or supplier will assume the residual risk. This type of lease is normally only used when the asset has a probable resale value, for instance, aircraft or vehicles.

# External Sources of Finance

- Long Term – may be paid back after many years or not at all!
- Short Term – used to cover fluctuations in cash flow
- ‘Inorganic Growth’ – growth generated by acquisition

# Long term

- Loans (Represent creditors to the company – not owners)
  - **Bank loans and mortgages** – suitable for small to medium sized firms where property or some other asset acts as security for the loan
    - *A mortgage loan* is a loan secured by real property
  - **Merchant or Investment Banks** – act on behalf of clients to organise and underwrite raising finance
  - **Government/EU** – may offer loans in certain circumstances
    - Grants
- Shares (Shareholders are part owners of a company only in PLC's)
  - **New Share Issues** – arranged by investment banks.

# Short Term

- **Bank loans** – necessity of paying interest on the payment, repayment periods from 1 year upwards but generally no longer than 5 or 10 years at most
- **Overdraft facilities** – the right to be able to withdraw funds you do not currently have
  - Provides flexibility for a firm
  - Interest only paid on the amount overdrawn
  - Overdraft limit – the maximum amount allowed to be drawn - the firm does not have to use all of this limit
- **Trade credit** – Careful management of trade credit can help ease cash flow – usually between 28 and 90 days to pay
- **Factoring** – the sale of debt to a specialist firm who secures payment and charges a commission for the service.
- **Leasing** – provides the opportunity to secure the use of capital without ownership – effectively a hire agreement

# Venture Capital

- Pooling of capital in the form of limited companies – Venture Capital Companies
- Looking for investment opportunities in fast growing businesses or businesses with highly rated prospects
- May also buy out firms in administration who are going concerns
- May also provide advice, contacts and experience
- In the UK, venture capitalists have invested £50 billion since 1983

# **WORKING CAPITAL MANAGEMENT**

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# What is Working capital?

- Liquidity available to a business
- Gross working capital refers to the current assets
- Net working capital = current assets – current liabilities
- Working capital – component of the operating capital of the business along with plant and machinery.

# Components of Working Capital

- Current assets
  - Cash
  - Accounts receivables
  - Inventory
  - Marketable securities
- Current liabilities
  - Accounts payable
  - Accrued expenses.



# Cash Conversion Cycle

- Cash Conversion Cycle
  - = Inventory conversion period + Receivables collection period – payables deferral period
- It indicates the gap between when the firm has spend the money to purchase the production materials and when the firm is able to get that money back.

# Cash Management Techniques

- Cash flow synchronization
  - Timing the receipts of bills – in time for the payments-maintain cash balances to the minimum.
- Using float
  - Float is the difference between a firm's book balance and the balance indicated in the banks books
- Float can be of two types
  - Disbursement float  
The firm pays and thus it is deducted from the firm's books but not from the banks books.
  - Collection float  
When the customer writes the cheque it is recorded as received in the firms books but it is still unavailable for use unless the bank clears the cheque.

# Managing the Float

- Lock boxes
  - Mailed to the lock boxes
- Concentration Banking
  - Payments made at the local sales offices, cleared in the local banks and net amount is transferred to the main bank
- Wire transfers
  - This is direct transfer of funds from the account of one entity to another entity.

# **INVENTORY MANAGEMENT**

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# What is Inventory?

## ➤ MEANING

- held for SALE
- Consumed in the PRODUCTION of goods/services

## ➤ Forms of Inventory for Manufacturing Comp.

Raw materials, Work in process,  
Finished goods and stores & spares

# Objectives of Inventory Management

- Minimize investments in inventory
- Meet the demand for products by efficiently organizing the production & sales operations

# COSTS OF HOLDING INVENTORIES

- Ordering costs
- Inventory Carrying costs
- Opportunity costs of funds blocked
- Shortage

# TOOLS & TECHNIQUES OF INVENTORY MANAGEMENT/ CONTROL

- ABC Analysis
- Economic Ordering Quantity (EOQ)
- Order Point Problem
- Two Bin Technique
- VED Classification
- HML Classification
- SDE Classification
- FSN Classification
- Order Cycling System
- Just In Time (JIT)



# Economic Order Quantity (EOQ)

- Level of Inventory at which
- **Total Cost\*** of Inventory is **MINIMUM**  
\*(Ordering and Carrying Cost)

# Order Point Problem

- The **re-order point** is that level of inventory when a fresh order should be placed with suppliers. It is that inventory level which is equal to the consumption during the lead time or procurement time.
- **Re-order level** = (Daily usage × Lead time) + Safety stock.
- **Minimum level** = Re-order level – (Normal usage × Average delivery time).
- **Maximum level** = Reorder level – (Minimum usage × Maximum delivery time) + Re-order quantity.
- **Average stock level** = Minimum level + (Re-order quantity)/2.
- **Danger level** = (Average consumption per day × Lead time in days for emergency purchases).

# VED Classification

- Specifically used for Classification of **SPARE PARTS**
- **V**- part is VITAL( high stock level)
- **E**- part is ESSENTIAL (moderate stock level )
- **D**- part is DESIRABLE (minimum stock level )

# FSN Classification

- Inventory is classified based on the MOVEMENT OF INVENTORIES from stores
- Inventory technique used to **AVOID OBSOLESCENCE**
  - **F**- Fast moving
  - **S**- Slow moving
  - **N**- Non moving

# JUST-IN-TIME (JIT) INVENTORY CONTROL

- The JIT control system implies that the firm should maintain a minimal level of inventory and rely on suppliers to provide parts and components 'just-in-time' to meet its assembly requirements.
- JIT also known as Zero Inventory Production Systems(**ZIPS**), Zero Inventories(**ZIN**), Materials as Needed(**MAN**), or Neck of Time(**NOT**)

# **CASH MANAGEMENT**

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# What is Cash Management?

It implies that all the business generated revenues are effectively controlled and utilized in the best possible manner to result in gains for the organization.

To ensure availability of  
cash as per payment schedule

And To minimize the amount of idle cash

# CLASSIFICATION OF CASH FLOWS

- Operational cash flows
- Priority cash flows
- Discretionary cash flows
- Financial cash flows



# MOTIVES FOR HOLDING CASH BALANCES

- Transaction motive
- Precautionary motive
- Speculative motive
- Future requirements
- Compensating balances

# Liquidity

LIQUIDITY is defined as the ability of the organization to realize value in money, the most liquid of assets. It refers ability to pay in cash, the obligations that are due. it has 2 concepts quantitative as well as qualitative, quantitative includes the quantum, structure and utilization of liquid assets where as qualitative concept is the ability to meet all the present and potential demands on cash in manner that minimizes cost and maximizes the value of the firm.

# REASONS FOR CASH SURPLUS

- Profitability from operations
- Low capital expenditure
- Absence of profitable avenues of investment
- Sale of a part of a business
- Raising of funds from issue of stock and bonds for long term capital projects, temporary funds is not used
- Conservative dividend distribution policy
- Continuous operation losses
- Higher inflation rate
- Non recurring expenditures
- Higher seasonal or cyclical sales
- Over trading
- Continuous growth of business
- Inefficient working capital management

# Cost-Benefit Analysis of Cash Management

Since the basic purpose of any cash management system is to reduce the cost. Cost involved in cash management system like any other system can be broadly divided in to fixed cost and variable costs. Fixed costs of maintaining any system may be like depreciation on hardware used, fixed employee cost etc.the variable cost of cash management system normally depends on the volume of funds handled by the company

# Miller-Orr cash management model

The **Miller and Orr model of cash management** is one of the various cash management models in operation. It is an important cash management model as well. It helps the present day companies to manage their cash while taking into consideration the fluctuations in daily cash flow. As per the Miller and Orr model of cash management the companies let their cash balance move within two limits - the upper limit and the lower limit. The companies buy or sell the marketable securities only if the cash balance is equal to any one of these when the cash balances of a company touches the upper limit it purchases a certain number of salable securities that helps them to come back to the desired level. If the cash balance of the company reaches the lower level then the company trades its salable securities and gathers enough cash to fix the problem. It is normally assumed in such cases that the average value of the distribution of net cash flows is zero. It is also understood that the distribution of net cash flows has a standard deviation. The Miller and Orr model of cash management also assumes that distribution of cash flow is normal.

# Application of Miller and Orr Model of Cash Management

The Miller and Orr model of cash management is widely used by most business entities. However, in order for it applied properly the financial manages need to make sure that the following procedures are followed:

- Finding out the approximate prices at which the salable securities could be sold or bought
- Deciding the minimum possible levels of desired cash balance
- Checking the rate of interest
- Calculating the SD (Standard Deviation) of regular.

# **COST OF CAPITAL**

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# Calculating the Weighted Average Cost of Capital

$$WACC = w_d k_d (1-T) + w_p k_p + w_c k_s$$

- The  $w$ 's refer to the firm's capital structure weights.
- The  $k$ 's refer to the cost of each component.



# How are the weights determined?

$$WACC = w_d k_d (1-T) + w_p k_p + w_c k_s$$

- Use accounting numbers or market value (book vs. market weights)?
- Use actual numbers or target capital structure?

# Component Cost of Debt

$$WACC = w_d k_d (1-T) + w_p k_p + w_c k_s$$

- $k_d$  is the marginal cost of debt capital.
- The yield to maturity on outstanding L-T debt is often used as a measure of  $k_d$ .
- Why tax-adjust, i.e. why  $k_d(1-T)$ ?

# Component cost of preferred stock

$$WACC = w_d k_d (1-T) + w_p k_p + w_c k_s$$

- $k_p$  is the marginal cost of preferred stock.
- The rate of return investors require on the firm's preferred stock.

# Is preferred stock more or less risky to investors than debt?

- More risky; company not required to pay preferred dividend.
- However, firms try to pay preferred dividend. Otherwise, (1) cannot pay common dividend, (2) difficult to raise additional funds, (3) preferred stockholders may gain control of firm.

# Component cost of equity

$$WACC = w_d k_d (1-T) + w_p k_p + w_c k_s$$

- $k_s$  is the marginal cost of common equity using retained earnings.
- The rate of return investors require on the firm's common equity using new equity is  $k_e$ .

# Why is there a cost for retained earnings?

- Earnings can be reinvested or paid out as dividends.
- Investors could buy other securities, earn a return.
- If earnings are retained, there is an opportunity cost (the return that stockholders could earn on alternative investments of equal risk).
  - Investors could buy similar stocks and earn  $k_s$ .
  - Firm could repurchase its own stock and earn  $k_s$ .
  - Therefore,  $k_s$  is the cost of retained earnings.

# Three ways to determine the cost of common equity, $k_s$

- CAPM:  $k_s = k_{RF} + (k_M - k_{RF}) \beta$
- DCF:  $k_s = D_1 / P_0 + g$
- Own-Bond-Yield-Plus-Risk Premium:  
 $k_s = k_d + RP$

Why is the cost of retained earnings cheaper than the cost of issuing new common stock?

- When a company issues new common stock they also have to pay flotation costs to the underwriter.
- Issuing new common stock may send a negative signal to the capital markets, which may depress the stock price.



# Flotation Costs

- Flotation costs depend on the risk of the firm and the type of capital being raised.
- The flotation costs are highest for common equity. However, since most firms issue equity infrequently, the per-project cost is fairly small.
- We will frequently ignore flotation costs when calculating the WACC.

# Factors influence a company's composite WACC

- Market conditions.
- The firm's capital structure and dividend policy.
- The firm's investment policy. Firms with riskier projects generally have a higher WACC.

# Problem areas in cost of capital

- Depreciation-generated funds
- Privately owned firms
- Measurement problems
- Adjusting costs of capital for different risk
- Capital structure weights

# **CAPITAL STRUCTURE**

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# WHAT IS CAPITAL STRUCTURE?

Capital structure of a company refers to the composition or make-up of its capitalisation and it includes all long-term capital resources viz : loans, reserves, shares and books.

The capital structure is made up of debt and equity securities and refers to permanent financing of a firm. It is composed of long-term debt, preference share capital and shareholder's funds.

# IMPORTANCE OF CAPITAL STRUCTURE

The term capital structure refers to the relationship between the various long-term forms of financing such as debentures, preference share capital & equity share capital. The use of long-term fixed interest bearing debt & preference share capital along with equity shares is called **financial leverage or trading on equity**. This debt is employed by a firm to earn more from the use of these sources than their cost so as to increase the return on owners equity.

# FINANCIAL BREAK-EVEN POINT

Financial break even point may be defined as that level of EBIT which is just equal to pay the total financial charges, i.e. interest and preference dividend. At this point EBIT = 0. If EBIT < financial break even point, the EPS shall be -ve. If EBIT exceeds the financial break even point, more of such fixed cost funds may be inducted in the capital structure. The financial break even point can be calculated as:

**(a) When the capital structure consists of equity share capital and debt only no preference share capital is employed:**

Financial Break Even Point = Fixed Interest Charges

**(b) When capital structure consists of equity share capital, preference share capital and debt:**

Financial Break Even Point =  $I + \frac{D_p}{1-t}$

Where, I= Fixed Interest Charges

D<sub>p</sub>= Preference Dividend

t= Tax Rate

# POINT OF INDIFFERENCE

Point of indifference refers to that EBIT level at which earnings per share (EPS) remains the same irrespective of different alternatives of debt-equity mix. However, sinking fund appropriations for redemption of debt decrease the amount of earnings available for equity shareholders.



# OPTIMAL CAPITAL STRUCTURE

The capital structure is said to be an optimal capital structure when a company selects such a mix of debt and equity which:

- (a) Minimises the overall cost of capital;
- (b) Maximises the earning per share(EPS);
- (c) Maximises the value of company;
- (d) Maximises the market value of the company's equity shares;
- (e) Maximises the wealth of the shareholders.

# RISK- RETURN TRADE OFF

The financial or capital structure decision of a firm to use a certain proportion of debt or otherwise in the capital mix involves two types of risk:

(a) Financial Risk:

(b) Non-Employment of Debt Capital (NEDC) Risk:

**1. Financial Risk:** The financial risk arises on account of the use of debt or fixed interest bearing securities in its capital. A company with no debt financing has no financial risk. The extent of financial risk depends on the leverage of the firms capital structure.

**2. Non-employment of Debt Capital(NEDC) Risk:** The NEDC risk has an inverse relationship with the ratio of debt in its total capital. Higher the debt-equity ratio or the leverage, lower is the NEDC risk and vice versa.

# THEORIES OF CAPITAL STRUCTURE

The main contributors to the theories are Durand, Ezra, Solomon, Modigliani and Miller.

The important theories are:

1. Net Income Approach.
2. Net Operating Income Approach.
3. The Traditional Approach.
4. Modigliani and Miller Approach.

# Net Income Approach

## 1. Net Income Approach:

This approach has been developed by Durand. The main findings are:

- **Capital structure decisions are relevant to the valuation of the firm:**  
According to Net Income Approach, if a firm makes any change in its capital structure, it will cause a corresponding change in the overall cost of capital as well as the total value of the firm. Thus, the capital structure decisions are relevant to the valuation of the firm.

**Increased use of debt will increase the shareholders' earning:** According to this approach a firm can increase its total value ( $V$ ) and lower the overall cost of capital ( $K_o$ ) by increasing the proportion of debt in its capital structure. In other words, the increased use of debt will cause increase in the value of the firm as well as in the earnings of the shareholders. As a result, the market value of equity shares of the company will also increase.

# Assumptions of Net Income Approach

- (a) Capital structure consists of debt and equity.
- (b) Cost of debt is less than cost of equity  
(i.e.  $K_d < K_e$ ).
- (c) Cost of debt remains constant for all levels of debt to equity.
- (d) The use of debt content does not change the risk perception of investors.

# CALCULATION OF THE VALUE OF THE FIRM (Net Income Approach)

According to Net Income Approach the value of the firm can be ascertained as follows:

$$V = S + D$$

where, V= Value of the firm

S= Market value of equity= Earnings available for equity shareholders/ Equity capitalisation rate.

D= Market value of debt.

## CALCULATION OF OVERALL COST OF CAPITAL (Net Income Approach)

According to Net Income Approach the overall cost of capital can be calculated as follows:

$$(K_o) = \frac{EBIT}{V} \times 100$$

v

where, (Ko)= Overall cost of capital

EBIT= Earnings before interest and tax

V= Value of firm

## NET OPERATING INCOME (NOI) APPROACH

**Capital structure decisions are irrelevant to the valuation of the firm:** According to Net Operating Income approach, the capital structure decisions are irrelevant to the valuation of the firm. Thus, if a firm makes any change in its capital structure, it will not affect the total value of firm.

**Increased use of debt will increase the financial risk of the shareholders:** The increased use of debt in the capital structure would lead to an increase in the financial risk of the equity shareholders. To compensate for the increased risk, the shareholders would expect a higher rate of return and hence the cost of equity will increase. Thus the advantage of use of debt is offset exactly by the increase in the cost of equity.



# Assumptions of Net Operating Income Approach

- (a) The market capitalises the value of firm as a whole.
- (b) Cost of debt ( $K_d$ ) is constant.
- (c) Increases use of debt increases the financial risk of equity shareholders which, in turn, raises the cost of equity ( $K_e$ ).
- (d) Overall cost of capital ( $K_o$ ) remains constant for all levels of debt equity mix.
- (e) There is no corporate income tax.

# THE TRADITIONAL APPROACH

Traditional approach also known as intermediate approach is a mix of both the net income approach and the net operating income approach. According to this approach, the prudent use of debt equity mix can lower the firm's overall cost of capital and thereby increase its market value.

This approach states that initially a firm can increase its value or reduce the overall cost of capital by using more debt. However, the increase in the value of firm or reduction in the overall cost of capital is possible only up to a particular level of debt equity mix. Beyond that level, the value of firm starts declining and the cost of capital starts increasing.

# THE TRADITIONAL APPROACH (Contd.)

## **Stage 1: Increase in the value of firm and decrease in the cost of capital**

In the first stage, both the cost of debt and cost of equity remain constant. As a result, the increased use of debt in the capital structure will cause increase in the value of firm and decrease in the overall cost of capital. This is based on the assumption that cost of debt is less than cost of equity (i.e.  $K_d < K_e$ ).

## **Stage 2: Optimal debt equity mix**

In the second stage, the firm reaches at an optimal level. Optimal level means the ideal debt equity mix, which minimises the cost of capital and maximises the value of the firm.

## **Stage 3: Decrease in the value of firm and increase in the cost of capital**

In the third stage the value of firm start declining and the cost of capital start increasing. This happens because use of debt beyond optimal level will increase the risk of investors, so both  $K_d$  and  $K_e$  will rise sharply.

# MODIGLIANI AND MILLER (MM) APPROACH

## **Part I: If there are no corporate taxes:**

Modigliani and Miller argue that in the absence of corporate taxes, the capital value of the firm ( $V$ ) and the overall cost of capital ( $K_0$ ) is not affected but changes in capital structure. In other words, debt equity mix is irrelevant in the determination of the total value of the firm. The reason argued is that the increased use of debt in the capital structure would lead to an increase in the financial risk of equity shareholders. To compensate for the increased risk, the shareholders would expect a higher rate of return and hence the cost of equity will increase. Thus the advantage of use of cheaper source of finance (i.e. debt) is offset exactly by the increase in the cost of equity.

**Assumptions:** MM approach is based upon the following assumptions:

- There is a perfect capital market.
- Companies distributes all earnings to the shareholders.
- Business risk is same among all firms.
- Investors are rational and choose a combination of risk and return that is most beneficial to them

## MODIGLIANI AND MILLER (MM) APPROACH (Contd.)

### Part II: If there are corporate taxes:

According to MM Approach, if there are corporate taxes, the total value of the firm (V) and the overall cost of capital (K<sub>o</sub>) will be affected by changes in capital structure. According to this approach a firm can increase its total value (V) and lower the overall cost of capital (K<sub>o</sub>) by increasing the proportion of debt in its capital structure.

### Calculation of Value of Firm (V):

When taxes are applicable to corporate income, the value of firm is determined by the following formulas suggested by MM.

$$\text{Value of Unlevered Firm (V}_u\text{)} = \text{EBIT}(1-t) \div K_e$$

$$\text{Value of Levered Firm (V}_L\text{)} = V_u + (D \times T)$$

[where, D= Debt. t = Tax rate]

# ESSENTIAL FEATURES OF A SOUND / OPTIMAL CAPITAL MIX

- Maximum possible use of leverage.
- The capital structure should be flexible so that it can be easily altered.
- To avoid undue financial/business risk with the increase of debt.
- The use of debt should be within the capacity of a firm. The firm should be in a position to meet its obligations in paying the loan and interest charges as and when due.
- It should involve minimum possible risk of loss of control.
- It must avoid undue restrictions in agreement of debt.
- It should be easy to understand and simple to operate to the extent possible.
- It should minimise the cost of financing and maximise earnings per share.

# CAPITAL GEARING

A company can raise finance by issuing three types of securities- (i) Equity Shares, (ii) preference Shares, (iii) Debentures. Equity shares are considered as variable return securities because the dividend on equity shares is not fixed and may vary from year to year. On the other hand, preference shares and debentures are considered as fixed return securities because the dividend/interest on preferences shares/debentures is always fixed. The use of preference share capital and debentures along with the equity share capital in the capital structure with a view to increase earnings available to equity shareholders is known as “capital gearing” or “trading on equity”. Thus, the term capital gearing refers to the proportion between equity shareholders funds and fixed interest bearing securities.

# **ANALYSIS OF LEVERAGE**

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# What is Leverage?

The dictionary meaning of the firm leverages refers to “an increase means of accomplishing purpose”. In machines , leverages means the instrument that helps us in lifting heavy objects, which may not be other wise possible. This concept of leverage is valid in business too. In financial management , it is used to describe the firms ability to use fixed assets costs funds to satisfy to magnify the returns of its owners.

# Types of Leverage

- There are three types of leverages-
- 1 . Financial leverage
- 2 . Operating leverage
- 3 . Composite leverage

# Financial Leverage

- A firm needs funds to run and manage its activities. The funds are first needed to set up an enterprise and then to implement expansion, diversification and other plans. A decision has to be made regarding the composition of funds. The funds may be raised through two sources, owners, called owners equity, and outsiders, called creditors equity.
- “financial leverage exists whenever a firm has debts and other sources of funds that carry fixed charges.”

# Computation of Financial Leverage

- Computation of financial leverage Where capital structure consists of equity shares and debts-
- **Degree of financial leverage :**
- Degree of financial leverage DFL- %change in EPS / % change in OP or EBIT

# Operating Leverage

- Operating leverage This leverage is associated with the employment of fixed cost assets. It is calculated to know income of the company on different levels of sales. It is measure of effect on operating profit of the concern on change in sales.
- “operating leverage is the tendency of the operating profit to vary disproportionately with sales.”

# Computation of Operating Leverage

- Contribution= Sales-Variable cost operating profit=contribution-fixed cost
- **Degree of operating leverage :**
- Degree of operating leverage  $DOL = \frac{\% \text{ change in OP or EBIT}}{\% \text{ change in Sales}}$

# Composite Leverage

- Composite leverage is calculated to determine the combined effect of operating and financial leverages.
- $CL = \text{Financial leverage} \times \text{operating Leverage}$

# **DIVIDEND POLICY**

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# What is Dividend?

- Dividend refers to that part of profits of a company which is distributed among its shareholders.
- Dividend is the right as well as reward of the shareholders.
- Investors → maximum returns
- Company → long term growth
  - if a company provide more dividend to its shareholders then it has to meet its future requirement through issue of shares or debt.
- Dividend policy thus affects both the long term financing and wealth of shareholders.
- The firm decision to pay dividends should be in such a manner so as to equitably apportion the distributed profits and retained earnings.

# DIVIDEND DECISION AND VALUATION OF FIRMS

- Value of the firm can be maximized if shareholders wealth is maximized.
- According to 1 school of thought dividend decision does not affect the shareholders wealth and hence the valuation of the firm.
- According to other school of thought dividend decision materially affect the share holders wealth and also the valuation of the firm.
- The views of two school of thought are discussed under two groups –
  1. The irrelevance concept of dividend or theory of irrelevance.
  2. The relevance concept of dividend or theory of relevance.

## RESIDUAL THEORY (THE THEORY OF IRRELEVANCE)

According to this theory, dividend decision has no effect on the wealth of the shareholders or prices of the shares and hence it is irrelevant so far as the valuation of the firm is concerned. This theory regards dividend decision merely as a part of financing decision because the earnings available may be retained in the business for re-investment. But if the funds are not required in the business they may be distributed as dividend. Thus, the decision to pay dividends or retain the earnings may be taken as residual decision.

# MODIGLIANI AND MILLER APPROACH (MM MODEL)

According to this approach, Dividend policy has no effect on the market price of the share and the value of the firm is determined by the earning capacity of the firm or its investment policy.

- **ASSUMPTIONS OF MM HYPOTHESIS –**

1. There are perfect capital markets.
2. Investors behave rationally.
3. Information about the company is available to all without any cost.
4. There are no floatation cost or transaction cost.
5. No investor is large enough to effect the market price of the share.
6. There are either no taxes or there are no differences in the tax rates applicable to dividends and capital gains.
7. The firm has a rigid investment policy.
8. There is no risk or uncertainty. (MM dropped this assumption later)

- **THE ARGUMENT OF MM –**

- MM argued that whatever increase in the value of the firm results from the payment of dividend, will be exactly offset by the decline in the market price of shares because of external financing and there will be no change in the total wealth of the shareholders.

# THE THEORY OF RELEVANCE

- The other school of thought on dividend decisions considerably affect the value of the firm.
- The advocates of this school of thought include Myron Gordon, Jone Linter, James Walter and Richardson.
- According to them dividends communicate information to the investors about the firms profitability and hence dividend decisions becomes relevant.
- Those firms which pay higher dividends, will have greater value as compared to those which do not pay dividends or have a lower dividend pay out ratio.
- We have examined below two theories representing this notion:
  - (1) Walter's approach, and
  - (2) Gordon's approach.

# WALTER'S APPROACH

Prof. Walter's approach supports the doctrine that dividend decisions are relevant and affect the value of the firm. The relationship between the internal rate of return ( $r$ ) earned by the firm and its cost of capital ( $k$ ) is very significant in determining the dividend policy to sub serve the ultimate goal of maximising the wealth of the shareholders.

- If  $r > k$ , the firm is earning higher rate of return , the firm should retain the earnings. Such firms are termed as growth firms and the optimum pay out would be zero.
- If  $r < k$ , the optimum payout would be 100% and the firm should distribute the entire earning as dividend.
- If  $r = k$ , the dividend policy will not affect the market value of shares as the shareholders will get the same returns from the firm as expected by them

# Assumptions of walter's model

1. The investment of the firm are financed through retained earnings only and the firm does not use external source of fund.
2. The internal rate of return(  $r$  ) and the cost of capital(  $k$  ) of the firm are constant.
3. Earnings and dividends do not changed while determining the value.
4. The firm has a very long life.

# Criticism of Walter's model

1. The firms do raise funds by external financing.
2. The internal rate of return also does not remain constant.
3. the assumption that cost of capital will remain constant also does not hold good. As a firms risk pattern does not remain constant it is not proper to assume that  $k$  will always remain constant.



# GORDEN'S APPROACH

- Myron Gordon has also developed a model on the lines of prof. Walter. His basic valuation model is based on the following assumptions;
- The firm is an all equity firm.
- No external financing is available or used. Retained earnings represent the only source of financing investment programs.
- The rate of return on the firms investment is constant.
- The retention ratio,  $b$  , once decided upon is constant thus the growth rate of the firm  $g = br$ , is also constant.
- The cost of capital of the firm remains constant and it is greater than the growth rate,  $K > br$ .
- Corporate taxes do not exist.

# Gordon's revised model

The basic assumption in Gordon's basic valuation model that cost of capital ( $k$ ) remains constant for a firm is not true in practice . Thus, Gordon revised this basic model to consider his risk and uncertainty. In the revised model he suggested that even when  $r = k$ , dividend policy affects the value of shares on account of uncertainty of future , shareholders discount future dividends at higher rate than they discount near dividends.

# FACTORS DETERMINING DIVIDEND POLICY

- Legal, contractual and internal constraints and restrictions
- Magnitude and trend of earnings
- Type of shareholders
- Nature of industry
- Age of the company
- Owner's considerations
- Future financial requirements
- Capital market considerations
- Dividend pay-out ratio
- Government's economic policy
- Inflation
- Taxation policy
- Stability of dividends
- Requirements of institutional investors
- Control objectives

# Dividend Policy in Practice

## Why we determine our dividend policy ?

### Normally our Objective →

- maximisation of shareholders wealth
- Firm should retain earnings only if it has profitable investment opportunities & return is higher than cost of retain earnings

### In Actual Practice →

- Stable dividend policy → maximise market value of shares
- Image improves → approach market for raising additional funds → for future expansion & growth

**AIM → STABLE DIVIDENDS + GROWTH**

# Forms of Dividend

- Profit Dividends
- Liquidation Dividends
- Interim Dividends
- Final Dividends

# BONUS ISSUE Vs. STOCK SPLIT

- Accumulation of the earnings in reserve funds instead of paying it to share-holders in form of dividend and conversion into share-capital by allotment to share-holders in proportion to their existing holding is **bonus issue**.
- So, Share-capital of the company increases with a decrease in its Reserve profits.
- Share-holders get bonus shares in compensation of dividend.
- On the other hand stock split means reducing the par value of the shares by increasing the number of shares.
- It does not effect the accumulated profits.
- **Example :-** a share of Rs.100 may be split into 10 shares of Rs.10 each.

# **CAPITAL BUDGETING (i.e., INVESTMENT DECISIONS)**

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# What is Capital Budgeting?

- Capital Budgeting is the process of determining which real investment projects should be accepted and given an allocation of funds from the firm.
- To evaluate capital budgeting processes, their consistency with the goal of shareholder wealth maximization is of utmost importance.



# Discounted Cash Flow (DCF) Techniques

- The main DCF techniques for capital budgeting include: Net Present Value (NPV), Internal Rate of Return (IRR), and Profitability Index (PI)
  - Each requires estimates of expected cash flows (and their timing) for the project.
    - Including cash outflows (costs) and inflows (revenues or savings) – normally tax effects are also considered.
  - Each requires an estimate of the project's risk so that an appropriate discount rate (opportunity cost of capital) can be determined.
    - The discussion of risk will be deferred until later. For now, we will assume we know the relevant opportunity cost of capital or discount rate.
- Sometimes the above data is difficult to obtain – this is the main weakness of all DCF techniques.

# Net Present Value (NPV)

- Method:  $NPV = PV_{\text{inflows}} - PV_{\text{outflows}}$
- If  $NPV \geq 0$ , then accept the project; otherwise reject the project.
- Strengths
  - Resulting number is easy to interpret: shows how wealth will change if the project is accepted.
  - Acceptance criteria is consistent with shareholder wealth maximization.
  - Relatively straightforward to calculate
- Weaknesses
  - Requires knowledge of finance to use.
  - An improper NPV analysis may lead to the wrong choices of projects when the firm has capital rationing – this will be discussed later.

# Internal Rate of Return (IRR)

- IRR is the rate of return that a project generates. Algebraically, IRR can be determined by setting up an NPV equation and solving for a discount rate that makes the NPV = 0.
- Equivalently, IRR is solved by determining the rate that equates the PV of cash inflows to the PV of cash outflows.
- Method: Use your financial calculator or a spreadsheet; IRR usually cannot be solved manually.
- If  $IRR \geq$  opportunity cost of capital (or hurdle rate), then accept the project; otherwise reject it.
- **Strengths**
  - IRR number is easy to interpret: shows the return the project generates.
  - Acceptance criteria is generally consistent with shareholder wealth maximization.
- **Weaknesses**
  - Requires knowledge of finance to use.
  - Difficult to calculate – need financial calculator.
  - It is possible that there exists no IRR or multiple IRRs for a project and there are several special cases when the IRR analysis needs to be adjusted in order to make a correct decision (these problems will be addressed later).

# Profitability Index(PI)

- **Method:**  $PI = \text{PV of Cash Flows after the Initial Investment} \div \text{Initial Investment}$ 
  - Note: PI should always be expressed as a positive number.
- If  $PI \geq 1$ , then accept the real investment project; otherwise, reject it.
- **Strengths**
  - PI number is easy to interpret: shows how many \$ (in PV terms) you get back per \$ invested.
  - Acceptance criteria is generally consistent with shareholder wealth maximization.
  - Relatively straightforward to calculate.
  - Useful when there is capital rationing (to be discussed later).
- **Weaknesses**
  - Requires knowledge of finance to use.
  - It is possible that PI cannot be used if the initial cash flow is an inflow.
  - Method needs to be adjusted when there are mutually exclusive projects

**Section – II: MANAGEMENT ACCOUNTING**  
**RATIO ANALYSIS**

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# What is Ratio Analysis?

- Ratio-analysis means the process of computing, determining and presenting the relationship of related items and groups of items of the financial statements. They provide in a summarized and concise form of fairly good idea about the financial position of a unit. They are important tools for financial analysis.

# Objectives of Ratio Analysis

- Standardize financial information for comparisons
- Evaluate current operations
- Compare performance with past performance
- Compare performance against other firms or industry standards
- Study the efficiency of operations
- Study the risk of operations

# Types of Ratio

1. **Liquidity Ratio** – the ability of the firm to pay its way
2. **Investment/shareholders** Ratio – information to enable decisions to be made on the extent of the risk and the earning potential of a business investment
3. **Gearing** Ratio – information on the relationship between the exposure of the business to loans as opposed to share capital
4. **Profitability** Ratio – how effective the firm is at generating profits given sales and or its capital assets
5. **Financial** Ratio – the rate at which the company sells its stock and the efficiency with which it uses its assets



# Current Ratio

**Current Ratio** : It is the relationship between the current assets and current liabilities of a concern.

***Current Ratio = Current Assets/Current Liabilities***

If the Current Assets and Current Liabilities of a concern are Rs.4,00,000 and Rs.2,00,000 respectively, then the Current Ratio will be :  
 $\text{Rs.4,00,000/Rs.2,00,000} = 2 : 1$

**The ideal Current Ratio preferred by Banks is 1.33 : 1**

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# Net Working Capital Ratio

- 2. Net Working Capital** : This is worked out as surplus of Long Term Sources over Long Term Uses, alternatively it is the difference of Current Assets and Current Liabilities.

$$\text{NWC} = \text{Current Assets} - \text{Current Liabilities}$$

# Acid Test Ratio

- **ACID TEST or QUICK RATIO** : It is the ratio between Quick Current Assets and Current Liabilities. The should be at least equal to 1.
- **Quick Current Assets** : Cash/Bank Balances + Receivables upto 6 months + Quickly realizable securities such as Govt. Securities or quickly marketable/quoted shares and Bank Fixed Deposits
- **Acid Test or Quick Ratio = Quick Current Assets/Current Liabilities**
- **Example :**
- **Cash** 50,000
- **Debtors** 1,00,000
- **Inventories** 1,50,000 **Current Liabilities** 1,00,000
- **Total Current Assets** 3,00,000
- **Current Ratio** =>  $3,00,000/1,00,000 = 3 : 1$
- **Quick Ratio** =>  $1,50,000/1,00,000 = 1.5 : 1$

# Debt-Equity Ratio

4. **DEBT EQUITY RATIO** : It is the relationship between borrower's fund (Debt) and Owner's Capital (Equity).

- **Long Term Outside Liabilities / Tangible Net Worth**

- 

- **Liabilities of Long Term Nature**

- **Total of Capital and Reserves & Surplus Less Intangible Assets**

- 

- For instance, if the Firm is having the following :

- **Capital = Rs. 200 Lacs**

- **Free Reserves & Surplus = Rs. 300 Lacs**

- **Long Term Loans/Liabilities = Rs. 800 Lacs**

- **Debt Equity Ratio will be => 800/500 i.e. 1.6 : 1**

# PROPRIETARY RATIO

- **PROPRIETARY RATIO** : This ratio indicates the extent to which Tangible Assets are financed by Owner's Fund.
- **Proprietary Ratio = (Tangible Net Worth/Total Tangible Assets) x 100**
- The ratio will be 100% when there is no Borrowing for purchasing of Assets.

# GROSS PROFIT RATIO

- **GROSS PROFIT RATIO** : By comparing Gross Profit percentage to Net Sales we can arrive at the Gross Profit Ratio which indicates the manufacturing efficiency as well as the pricing policy of the concern.
- **Gross Profit Ratio = (Gross Profit / Net Sales ) x 100**
- **Alternatively** , since Gross Profit is equal to Sales *minus* Cost of Goods Sold, it can also be interpreted as below :
- 
- **Gross Profit Ratio = [ (Sales – Cost of goods sold)/ Net Sales] x 100**
- A higher Gross Profit Ratio indicates efficiency in production of the unit.

# OPERATING PROFIT RATIO

- **OPERATING PROFIT RATIO :**
- It is expressed as  $\Rightarrow$  (Operating Profit / Net Sales ) x 100

# NET PROFIT RATIO

## NET PROFIT RATIO :

- It is expressed as  $\Rightarrow$   $( \text{Net Profit} / \text{Net Sales} ) \times 100$
- It measures overall profitability.



# Inventory Turnover Ratio

- **STOCK/INVENTORY TURNOVER RATIO :**

- **(Average Inventory/Sales) x 365 for days**
- **(Average Inventory/Sales) x 52 for weeks**
- **(Average Inventory/Sales) x 12 for months**

- **Average Inventory or Stocks =  $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$**
- -----
- **2**

- . This ratio indicates the number of times the inventory is rotated during the relevant accounting period

# Other Ratios

- **DEBTORS TURNOVER RATIO** : This is also called Debtors Velocity or Average Collection Period or Period of Credit given .
  - **(Average Debtors/Sales ) x 365 for days**
  - **(52 for weeks & 12 for months)**
- **11. ASSET TRUNOVER RATIO** : **Net Sales/Tangible Assets**
- **12. FIXED ASSET TURNOVER RATIO** : **Net Sales /Fixed Assets**
- **13. CURRENT ASSET TURNOVER RATIO** : **Net Sales / Current Assets**
- **14. CREDITORS TURNOVER RATIO** : This is also called Creditors Velocity Ratio, which determines the creditor payment period.
  - **(Average Creditors/Purchases)x365 for days**
  - **(52 for weeks & 12 for months)**

## Other Ratios (Contd.)

- **RETRUN ON ASSETS :** **Net Profit after Taxes/Total Assets**
- **RETRUN ON CAPITAL EMPLOYED :**
- **( Net Profit before Interest & Tax / Average Capital Employed) x 100**
- Average Capital Employed is the average of the ***equity share capital*** and ***long term funds*** provided by the owners and the creditors of the firm at the beginning and end of the accounting period.

# Composite Ratio

- **RETRUN ON EQUITY CAPITAL (ROE) :**
- **Net Profit after Taxes / Tangible Net Worth**
  
- **18. EARNING PER SHARE :** EPS indicates the quantum of net profit of the year that would be ranking for dividend for each share of the company being held by the equity share holders.
- **Net profit after Taxes and Preference Dividend/ No. of Equity Shares**
  
- **19. PRICE EARNING RATIO :** PE Ratio indicates the number of times the Earning Per Share is covered by its market price.
- **Market Price Per Equity Share/Earning Per Share**

# DEBT SERVICE COVERAGE RATIO

- **DEBT SERVICE COVERAGE RATIO** : This ratio is one of the most important one which indicates the ability of an enterprise to meet its liabilities by way of payment of installments of Term Loans and Interest thereon from out of the cash accruals and forms the basis for fixation of the repayment schedule in respect of the Term Loans raised for a project. *(The Ideal DSCR Ratio is considered to be 2 )*
- **PAT + Depr. + Annual Interest on Long Term Loans & Liabilities**
- -----
- **Annual interest on Long Term Loans & Liabilities + Annual Installments payable on Long Term Loans & Liabilities**
- 
- ( Where PAT is Profit after Tax and Depr. is Depreciation)

**FUND FLOW STATEMENT  
AND  
CASH FLOW STATEMENT**

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# What is Fund Flow Statement?

A summary of a firm's changes in financial position from one period to another; it is also called a *sources and uses of funds statement* or a *statement of changes in financial position*.

# Need for Fund Flow Statement

- Includes important noncash transactions while the cash flow statement does not.
- Is easy to prepare and often preferred by managers for analysis purposes over the more complex cash flow statement.
- Helps you to better understand the cash flow statement, especially if it is prepared under the “indirect method.”



# Cash Flow Statement

A summary of a firm's payments during a period of time. This statement reports cash inflows and outflows based on the firm's operating activities, investing activities, and financing activities.

# Cash Flow From Operating Activities

## Cash Inflows

From sales of goods or services

From interest and dividend income

## Cash Outflows

To pay suppliers for inventory

To pay employees for services

To pay lenders (interest)

To pay government for taxes

To pay other suppliers for other operating expenses

# Cash Flow from Investing Activities

## Cash Inflows

From sale of fixed assets (property, plant, equipment)

From sale of debt or equity securities (other than common equity) of other entities

## Cash Outflows

To acquire fixed assets (property, plant, equipment)

To purchase debt or equity securities (other than common equity) of other entities

# Cash Flow From Financing Activities

## Cash Inflows

From borrowing

From the sale of the firm's own equity securities

## Cash Outflows

To repay amounts borrowed

To repurchase the firm's own equity securities

To pay shareholders dividends

# Cash Flow Forecasting

A Cash Budget is a forecast of a firm's future cash flows arising from collections and disbursements, usually on a monthly basis.

The financial manager is better able to:

- Determine the future cash needs of the firm
- Plan for the financing of these needs
- Exercise control over cash and liquidity of the firm.

# Range of Cash-Flow Estimates

Examine factors that may influence **cash receipts** such as changes in the state of the economy that influence consumer buying decisions and pricing strategies.

Examine factors that may influence **cash disbursements** such as changes in the state of the economy that impact operations, capital expenditures, and dividend payments.

# **BUDGETARY CONTROL**

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# Developing the Budget

1. Budgets are prepared for
  - a. Departments.
  - b. Divisions.
  - c. Company as a whole.
2. The [Budget Committee](#) is responsible for approval of the budget:
  - a. Senior managers
  - b. President
  - c. CFO
  - d. Various vice-presidents
  - e. Controller.
3. Top-down approach is where goals are pushed down from top management.
4. Bottom-up approach is where lower-level managers are the primary source of information used in setting the budget.



# Budget Time Period

1. Budgets range from months to several years or more.
2. Key point is that there is an inverse relationship between”
  - a. Length of the budget period.
  - b. Detail contained within the budget.

# Zero Base Budgeting

1. [Zero Base Budgeting](#) (ZBB) is a method of budget preparation which begins each period with a clean slate.
2. Managers must start from zero and justify budgets every period.
3. Used in government budgeting.
4. Not commonly used in business.

# Master Budget

Master Budget (comprehensive) Includes:

1. Sales budget.
2. Production budget.
3. Direct materials budget.
4. Direct labor budget.
5. Manufacturing overhead budget.
6. Selling and administrative budget.

Master Budget Includes:

7. Capital acquisitions budget.
8. Cash receipts and disbursements budget.
9. Budgeted income statement.
10. Budgeted balance sheet.

# Sales Budget

1. Sales budget is the first step in the budget process.
2. It comes first because other budgets cannot be prepared without an estimate of sales.
3. Example: production estimates are based on forecast sales.
4. Companies use a variety of methods to estimate sales:
  - a. Econometric models.
  - b. Previous sales trends.
  - c. Trade journals and magazines.
  - d. Sales force estimates.

# Production Budget

**Production forecasts are based on the following relationships:**

$$\begin{aligned} & \text{Finished units to be produced} \\ & \quad = \\ & \quad \text{expected sales in units} \\ & \quad + \\ & \text{desired ending inventory of finished units} \\ & \quad - \\ & \text{beginning inventory of finished units} \end{aligned}$$

# Direct Materials Purchase Budgets

1. **Direct materials purchase budgets depend on:**
  - a. The amount needed for production
  - b. The amount need for ending inventory.

2. **Calculated as follows:**

Required purchases of direct materials

=

amount required for production

+

desired ending inventory of direct materials

–

beginning inventory of direct materials

# Direct Labour Budget

Direct labor budget calculated by  
multiplying:

Number of units to be produced

x

Labor hours per unit

x

rate per hour

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# Manufacturing Overhead Budget

1. Cost per unit of production of each variable cost item is multiplied by the quantity of units produced.
2. Fixed costs remain relatively constant.



# Selling and Administrative Expense Budget

Selling and administrative expense budgets include:

1. Salaries.
2. Advertising.
3. Office expenses.
4. Other general expenses.

# Capital Acquisitions Budget

1. Acquisitions of capital assets such as:
  - a. Property.
  - b. Plant
  - c. Equipment.
2. Must be carefully planned because they consume substantial cash reserves.

# Cash Receipts and Disbursements Budget

1. Managers plan for the
  - a. Amount of cash flows and the
  - b. Timing of cash flows.
2. VERY important budget because...
3. The timing of cash inflows and outflows may diverge substantially from the income statement.

# Use of Computers in The Budget Planning Process

1. Computers are very useful in the preparation of budgets.
2. Spreadsheets, like Excel or Lotus 1-2-3, are very effective in modeling budget relationships.
3. Spreadsheets allow for “what if” analysis:
  - a. What if direct labor increases to \$14.45
  - b. What if fixed factory overhead decreases by 3.5%...

# Budgetary Control

1. In addition to:
  - a. Planning
  - b. Communicating goals
  - c. Coordinating activities
2. Budgets also facilitate control of operations.

# Budgets as A Standard For Evaluation

1. Budgets facilitate control by providing a standard for evaluation.
2. The standard is the budgeted amount against which actual results are compared.
3. Differences between budgeted and actual amounts are called budget variances.
4. Material differences between actual and budgeted should investigated.

# Static and Flexible Budgets

1. Make sure that the level of activity used in the budget is equal to the actual level of activity.
2. Production budgets are a function of planned sales.
3. If sales suddenly, production must increase to meet demand , thus total variable production costs will rise.
4. A [static budget](#) is not adjusted for the actual level of production and is not suited for performance measurement.
5. A [flexible budget](#) is a set of budget relationships that can be adjusted to various activity levels. It is suited for performance measurement.

# Investigating Budget Variances

1. Variances may have three causes:
  - a. May be ill conceived
  - b. Conditions have changed
  - c. Job performance
2. Variances should be investigated.
3. Management by exception is an approach that is economical and often used.
4. Only exceptional variances are investigated.



# Conflict in Planning and Control Uses of Budgets

1. Conflict is inherent in the planning and control uses of budgets.
2. Result is that managers:
  - a. Pad their budgets.
  - b. Shift income between accounting periods to increase their compensation.