

# Pace General Business Model Outline

## Introduction

### **Economics**

#### **Enterprise Economics**

Enterprise economics includes supply and demand and the underlying factors for individual business: kinds of competition, marginal revenue, pricing policies, and long and short run cost behavior.

#### **National and International Economics**

Outlines major economic trends in the United States and their impact on business and knowledge of significant international relationships.

#### **Institutional Environment**

Outlines how business interacts with central planning as determined by government, labor, financial institutions, and consumer groups. An outline of the impact that government agencies have on business.

### **Finance**

#### **Working Capital Management**

Standard policies and procedures affecting the management of cash, marketable securities, Receivables, and inventories.

#### **Long-term Finance and Capital Structure**

Standard factors that determine the optimal capital structure for the individual company. How mix of capital sources impacts the cost of capital.

### **Organization, Accounting, and Behavior**

#### **Decision Making and Organization Theory**

Management styles and their impacts on human behavior. Group dynamics, interpersonal relationships, and the change process. Hierarchical, line and staff structures, and centralized and decentralized functions of organizations and their contributions to and effects on decision making.

#### **Behavioral Science in Accounting**

Goal congruence. Possible and desired behavioral impacts of budgets, performance standard, profit center accounting, auditing, and other accounting activities.

#### **Motivation**

Human needs and self-fulfillment. Job content, enrichment, and satisfaction. Potential dysfunctional behavior. Support relationships, reinforcement, and other motivation theories.

#### **Communication**

Formal and informal communication networks. Psychological and attitudinal impacts of communication, including effects on task accomplishment. Selective listening and communication receptivity. Information content, credibility, and overload.

### **Public Reporting Standard**

#### **Reporting Requirements**

Current standard controlling financial reporting to the public, including the importance of footnote and materiality. Broad outline of how this standard has been established. Standard controlling reporting to various government regulatory agencies. Filing requirements under SEC and stock exchange practice. Legal and ethical responsibilities in public reporting.

#### **Audit Protection**

An understanding of the protective character of auditing. How internal and external audits are organized and carried out. Operational vs. financial audits.

#### **Tax Accounting**

Principal features of corporate taxation under US. Federal law to understand tax consequences of ordinary business operations and to recognize tax situations that require specialized knowledge and expertise. Accounting for income taxes.

### **Analysis Standard**

#### **The Information Concept**

Theory of information including its value and cost. Restriction of financial data in term of historic costs, disclosures, realization of income, economic expectations, and entity segmentation. Users of financial data and each user's need.

#### **Fundamental Financial Statements**

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Principal financial statements and each statement's primary purpose. Interim and annual statements. How alternative accounting principles use impacts financial statements. Periodic reporting to lenders and directors.

## **Profit Planning and Budgets**

Strategic planning and operating projections. Setting objectives and integrating planning data. Forecasting techniques, including statistical methods and incremental cost relationships. Analysis and reporting of budgetary variances and forecast changes.

## **Manufacturing Cost Standard**

Theory of standard costs. Interrelationship of production control, industrial engineering, and cost control. Development of standard. Exception theory and variance analysis. Cost allocation to products and process. Disposition of variance and valuation changes.

## **Analysis of Accounts and Statements**

Ratio analysis and statement interpretation. Receivables administration dealing with aging analysis and bad debt control. Inventory costing and approaches to physical inventory counts and inventory control. Analysis of fixed asset, depreciation, and depletion accounts for management control.

## **Decision Analysis Standard**

### **Fundamentals of the Decision Process**

Logical steps for reaching decisions. Decision theory.

### **Decision Analysis**

Identifying and selecting relevant decision models. Identifying and selecting data for decision models. Selection of decision criteria. Includes such topics as capital budgeting models, linear programming, economic order quantity models, make-or-buy analysis, and other quantitative business analysis techniques.

### **Nature and Techniques of Model Building**

Techniques to describe systems, such as flow charts or other diagramming devices. Mathematical representation of systems including statistical techniques to estimate parameters for the mathematical representations. The use of simulation techniques.

### **Information Systems and Data Processing**

The theory of information systems. Accumulation of data for decision analysis and reporting. Nature of business data processing systems including computers and data controls.

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## Economic Standard

### Introduction

#### **Basic Assumptions of Economic Analysis**

Consumer's economic needs are unlimited;

Available resources are limited;

The objective is the most efficient allocation of scarce resources to achieve the largest amount of goods and services (GNP).

#### **Basic Economic Systems**

Traditional System

(feudal, kingdom)

Command System

(centrally planned)

Capitalistic System

(free market, private ownership, pursuit of own private interest, Adam Smith)

**Consumers express their dollar votes in the market.**

**Market economy drives system.**

**Competition forces producers to be efficient.**

**This efficiency leads to a maximum GNP and standard of living.**

**Most systems of today are part capitalistic and part command.**

#### **Basic Economic Decisions**

What to produce

How to produce it

How much to produce

What price to sell it at

Who shall receive it

## **Economics of the Firm**

### **Market structure analysis**

Kinds of Competition

Pure Competition

**Characteristics (LAPPI)**

Large number of buyers and sellers

Access free to enter market

Price takers, no individual seller can effect the market price.

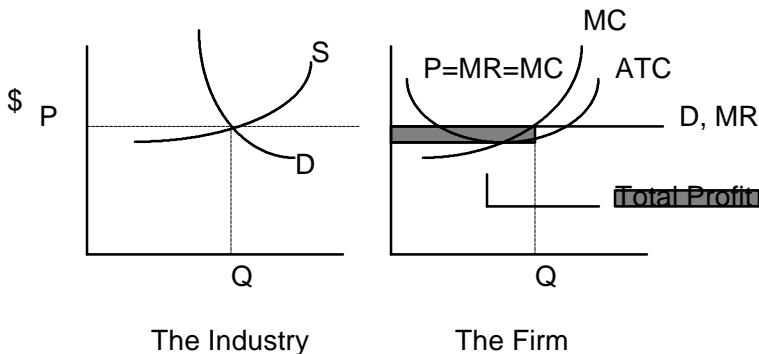
Perfect knowledge, firms know their revenue and cost; buyers maximize utility.

Identical products of all producers

**Supply and demand curve interaction determines price and output.**

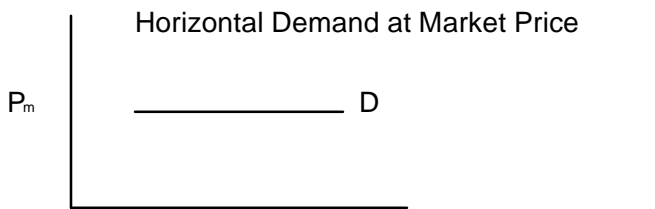
Perfect Competition

Profit Max Price and Output



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Individual firm faces horizontal demand curve at market price.



Profit maximization equals quantity where marginal cost equals marginal revenue.

Marginal Revenue = Market Price; Marginal Cost = Unit Variable Cost

(insert drawing)

if  $MR > MC$ , more units will contribute to fixed costs and increase profits or decrease losses.

If  $MR < MC$ , the firm should close down, because no contribution is being made to fixed costs.

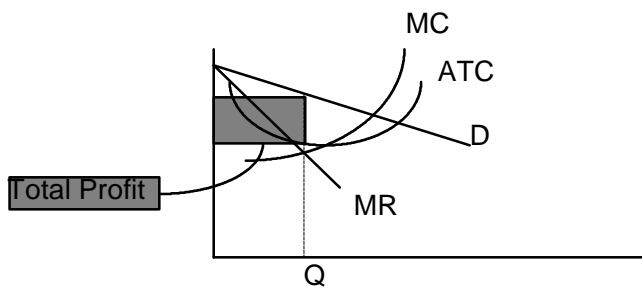
Thus, a firm's short run supply curve equals marginal cost curve.

Add all firms' supply curves = industry supply curve.

**Eventually price will equal long run average cost and there will be no economic profit.**

### Monopolistic Competition

Monopolistic Competition  
Profit Max Price and Output



#### **Characteristics (PEDAL)**

Price manipulations by individual firms is possible.

Easy entry into the market.

Differentiated products

Advertising.

Large number of firms in the industry.

**Examples: Aspirin, Breakfast Cereal**

**Highly elastic demand curve (near horizontal)**

Price elasticity of demand will depend on degree of differentiation and number of rival firms.

**Short run profit maximization is where  $MR = MC$**

**Production may be at less quantity than the lowest unit cost and thus fewer firms could produce total output at less cost (or higher efficiency).**

### Oligopoly

#### **Characteristics (FREEK)**

Few large firms supply most output.

Rigid prices.

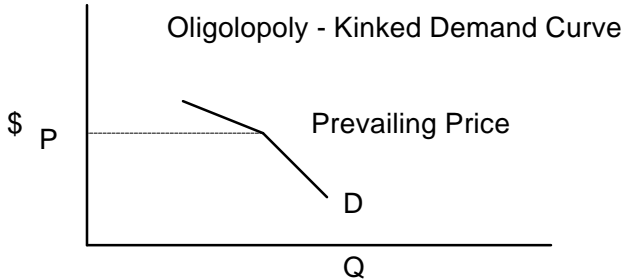
Entrance is difficult because of high investment.

Either differentiated or standard product.

Kinked demand curve above market price

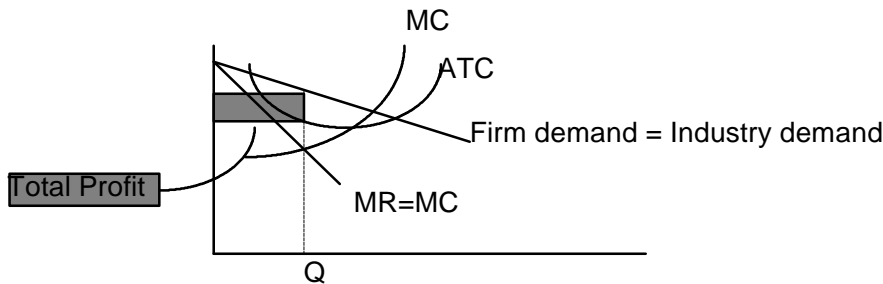
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Examples: OPEC oil , and DeBeers diamond cartels  
 Pure oligopoly is a standardized product, such as steel.  
 Differentiated oligopoly, such as automobiles or airlines.  
 High degree of interdependence in the industry and anticipation of competitors next move.  
 Kinked demand curve is highly elastic above the market price because competitors meet a price cut and may disregard a price increase.



### Pure Monopoly

Pure Monopoly  
 Profit Max Price and Output



### Characteristic (BUGSS)

- Blocked entry into industry.
- Unique product with no close substitutes.
- Goodwill advertising is often present.
- Single firm in the industry.
- Significant ability to set prices.

**Examples: Cable television, Telephone Co.**

Advertising is for goodwill purposes or to convert buyers from a substitute good. (electricity vs. natural gas vs. coal)

MR curve is below the demand curve  
 (insert drawing)

Profit maximization is still where MR = MC.

This profit maximization is at a higher price and lower quantity than pure competition.

(insert drawing)

### **Demand curve analysis**

Demand is the quantity of a good or service that consumers are willing and able to purchase at various prices during a period of time. Thus, demand is a schedule of amounts that will be purchased at various prices. Law of Demand - The price of a product and the quantity demanded are inversely (negatively) related; i.e., the lower the price, the higher the quantity demanded. Substitution effect - With a price decrease, new buyers will enter the market. The good will be cheaper relative to other goods, and is

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substituted for them. Income effect - With lower prices, individuals buy more of all goods than they formerly purchased.

### Dollar votes

reflect the consumers perception of a good's utility of the satisfaction derived from consuming a unit.

### Demand Curve

as unit prices fall, consumers will purchase more quantity

as unit prices increase, quantity demand will decrease

this produces a demand curve that is downward sloping to the right.

### **Qualifying Factors**

Change in Consumer's Taste's

Income

Related or Substitute Items

Expectations as to price or income changes

Range of available products

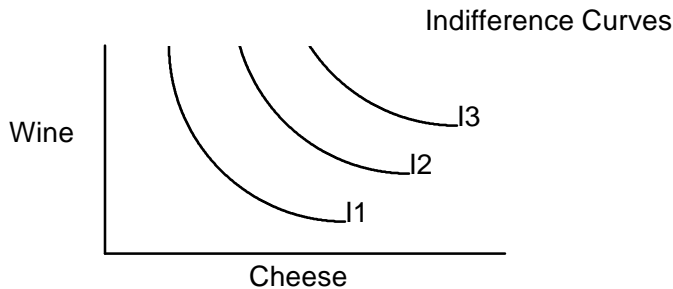
**Diminishing marginal utility**

means that each extra unit consumed provides less extra satisfaction.

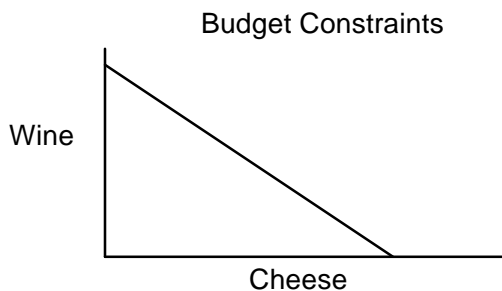
### **Utility of Savings**

The security and interest earned from savings provide some satisfaction or utility.

### **Indifference Curves**

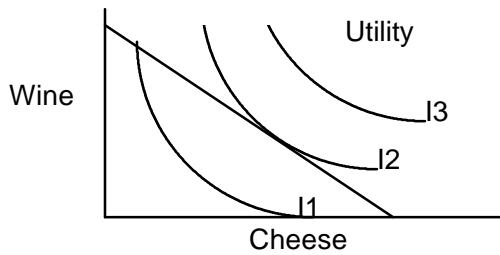


measure the consumer's perception of the utility of individual goods.

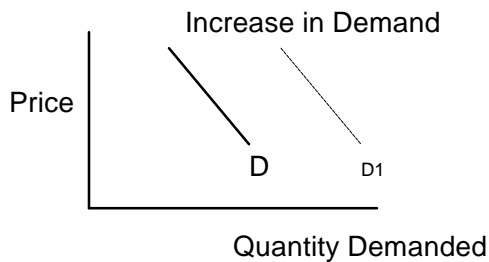


maximization of indifference curves is where the utility per dollar value of all goods and savings are the same

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**Demand Curve Shift**  
 to the right is caused by an increase in income  
 Shift to the left is caused by decrease in income or increase in substitute goods.



income  
substitute (competing) goods  
**Elasticity of Demand**

measures the responsiveness of quantity to a decrease in the product price and the effect on total revenue (quantity is always the numerator).

**product quantity change**  
**product price decrease**  
**total revenue change**  
**Elastic Demand**

Total revenue increase from a decrease in price, or,  
 Change in quantity greater than change in price  
 Curve is more horizontal (remember rubber band is elastic)  
 Horizontal Demand Curve

**Inelastic Demand**

Total revenue decrease from a decrease in price, or,  
 Change in quantity less than change in price  
 Curve is more vertical (remember toilet paper is inelastic)  
 Vertical Demand Curve

**Price Elasticity of Demand**

measures the effect on quantity purchased resulting from a price change.

Percent Change in Quantity  
Percent Change in Price  
Elastic (or inelastic) demand  
**Income Elasticity of Demand**

measures the effect on quantity purchased from a change in income.

If elasticity is positive it is a normal good (lobster).  
 If elasticity is negative it is an inferior good (beans).

Percent Change in Quantity  
Percent Change in Income  
Income Elastic (or inelastic) Demand  
Normal Good  
*Positive Income Elasticity*  
*Lobster*

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Inferior Good

*Negative Income Elasticity*

*Beans*

**Cross Elasticity of Demand**

measures the relationships of changes in two products.

Percent Change in quantity of y

Percent Change in quantity of x

Substitute (competing) products

*Positive cross elasticity*

*Coke and Pepsi*

Complimentary products

*Negative cross elasticity*

*Beer and pizza*

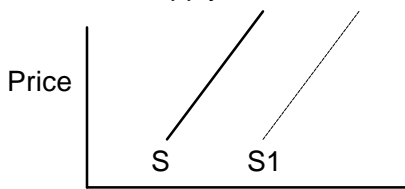
## **Supply curve analysis**

The supply curve depicts the quantity producers will sell at given prices.

Seller will bring less to market at a lower price; thus, supply curve is downward sloping to the left.

Movement on supply curve should be contrasted to shift in supply curve

### Supply Curve and Shift



Quantity Demanded

Government price support programs mean there will be greater supply than demand at the support price, the difference in quantity is purchased by the government.

## Production Function and Cost Factors

### **The production function**

The term production function refers to the physical relationship between a firm's input of productive resources (raw material, labor, capital, land, managerial talents) and its output of goods or services per unit of time.

A firm's production function thus relates the size of a flow of output to the size of the corresponding flow of input required to generate it.

Quantity of output per unit of time equals a function of specific quantities of input.  $Q = f(X_1, X_2, X_3, \dots, X_n)$ .

In the short run the quantity of output will be the result of combining variable input factors, for example, labor and raw materials, with fixed inputs, such as size of plant, major pieces of equipment, managerial capacity.

$Q = f(X_1, X_2, X_3, \dots, X_n)$ . The ( ) divides fixed and variable.

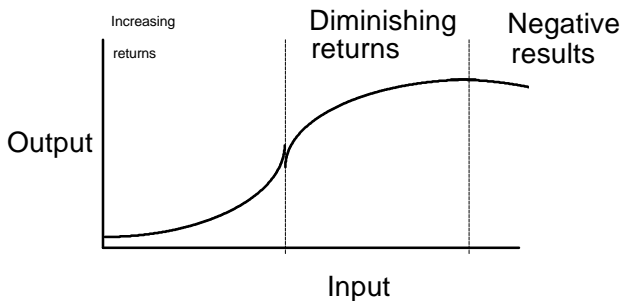
### **The production function objective**

is the most efficient method of producing the demanded quantity. This involves combining variable inputs (labor and raw materials) and fixed inputs (managerial capability, equipment, and space)

Increasing returns to scale mean output greater than input (from specialization).

Constant returns to scale assumes all inputs are variable.

The Law of Diminishing Returns means the marginal output (increase in total units) eventually decreases as more variable inputs are added and diminishing returns take effect.



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The Principle of diminishing marginal returns states that as the amount of a variable input is increased by equal increments and combined with a specified amount of fixed input, a point will be reached where the resulting increase in output will get smaller and smaller. Therefore, the quantity of output will reach a maximum and may then decrease.

### **Production Function Formula**

Total Costs equal Total Fixed Costs plus Total Variable Costs

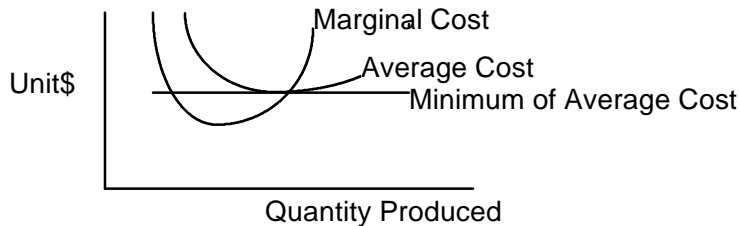
### **Marginal Costs**

equal the change in Total Variable Costs in the short term.

Diminishing Returns result from each variable input unit in the short term.

As long as marginal revenue exceeds marginal cost, a company should expand production.

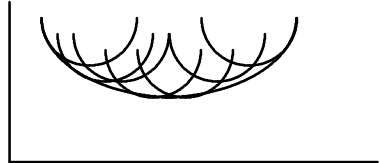
### **Marginal cost and average costs**



### **Long run average cost curve**

In the long term all costs become variable

so the long run average cost curve equals the low point of all short run average cost curves.



### **Economies of Scale**

result from specialization, division of labor, marketing advantages, by-product utilization, and volume purchase discounts.

### **Diseconomies of Scale**

may result from bottlenecks, transportation, and management problems.

### **Profit goals**

#### Accounting Profit

Generally Accepted Accounting Principles (GAAP) revenue less cost

#### Normal Profit

Return on an entities investment which is necessary to keep the venture capital from going elsewhere. Economists consider this a "cost" of the firm.

#### Economic Profit

Return in excess of normal rate.

### Resource Pricing and Employment

#### **Resource Supply and Demand**

#### Resource Markets

#### *Rent*

Land input returns rent.

#### *Wages*

Labor input returns wages.

#### *Interest (or)*

Capital input returns interest.

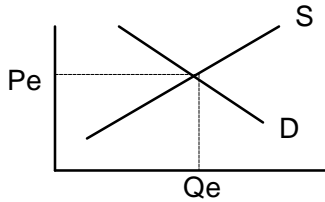
#### *Dividends*

Capital input returns dividends.

#### Equilibrium Price and Quantity

Industry demand and supply curves for an input determine the equilibrium price and quantity used.

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Pe = Equilibrium price

Qe = Equilibrium quantity

### *Input supply curve*

Input supply curve for an individual firm is horizontal, but becomes upward sloping as shortages begin to occur (aeronautical engineers in Seattle).

*Five factors affecting a firm's input demand for any particular resource:*

Consumer demand for firm's output, "derived demand".

Technology

Input prices relative to input price of substitutes.

Magnitude of marginal revenue derived from additional sales.

Percent of total costs attributable to that particular input.

### Imperfections in supply and demand forces

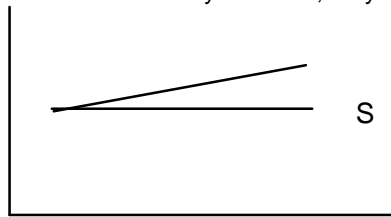
Minimum wage ensures marginal firms do not compensate for their weakness by paying substandard wages. However, it may also encourage firms to use less labor, and this may hurt unskilled workers. Wage-Employment Preference Path says that if labor input demand curve increases, an increase in quantity should result. However, if demand decreases, labor unions will opt for quantity decrease (backward kinked curve) to try to maintain the higher price.

Unions will win above-average wage gains where: industry is highly unionized; industry wide bargaining is in effect; profits are high; work stoppages affect the whole economy; unions control trade entry through apprentice programs.

A fertile area for unionization is where existing wage is less than the marginal value product.

Wage and price controls are effective to break wage-price spiral.

Such controls are inherently unstable, may create shortages, black market.



### **Maximization of resource usage**

is where marginal revenue product (MRP) = marginal revenue cost (MRC)

Similar to the marginal revenue (MR) and marginal cost (MC) decisions in pricing its output, management makes decisions about the amount and price of resources it purchases from employees and material vendors. Notice that the effect on previous units revenue and cost may effect the total revenue or total cost. Marginal revenue product (MRP) is the change in total revenue resulting from increasing one unit of input. Marginal revenue cost (MRC) is the change in total cost resulting from increasing one unit of input.

## **Fiscal Policy**

### **Study of aggregates**

Fiscal policy is the first of the macro economic subjects that addresses non-market factors. It is the study of aggregates and includes levels of national income, employment, fiscal policy, and the effect of taxation.

### **Circular monetary economy**

rewards workers for their labor with compensation which they use to buy goods and services. Aggregate output is gross national product (GNP) which is not adjusted for population or price level.

GNP -- Depreciation = net national product (NNP)

NNP -- indirect business taxes = national income (NI)

NI -- (Corporation + FICA taxes) + transfer taxes +

Personal Income (PI)

PI -- individual taxes = disposable personal income (DPI)

DPI = Either Consumption, Interest Payments, or Savings.

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Leakage's -- include net imports, taxes, and savings.  
Injections -- include net exports and government spending or investments.

Deficit spending fiscal policy maintains dis-equilibrium.

### **Consumption, Savings and Investments**

Average Propensity to Consume equals consumption over Income

Marginal Propensity to Consume equals change in consumption over change in income

Average Propensity to Save equals Savings over Income

Marginal Propensity to Save equals change in savings over change in income.

Non income factors include the consumer's stock of liquid assets, stock of on hand goods.

### **Multiplier Effect**

Increase in new spending multiplies throughout the economy so the final effect will be new spending stimulant times the marginal propensity to consume (1/1-MPC).

The marginal propensity to consume (1/MPS) is opposite the marginal propensity to save.

If MPC = 0.9 then MPS = 0.1 and if stimulant = 5 then increase in new spending final effect = 50 of which 90 % will be increased GNP and 10% will be increased Saving.

### **Accelerator Effect**

The acceleration of investment spending caused by the multiplier process.

### **Fiscal Policy**

The deliberate changing of taxes and government spending for the purpose of keeping GNP close **full employment** without causing **inflation**; simultaneously, fiscal policy endeavors to avoid **idle production capability** and to create conditions whereby the economy can achieve a **growth rate** that is neither too rapid or too slow.

### Fundamental objectives

Employment Act of 1946, Full Employment and Balanced Growth Act of 1978

Keep economic activity within **full employment** zone (4%)

**Avoid undue inflation**

**Avoid recessionary conditions**

**Keep the economy expanding** at an acceptable rate

### Stabilizers

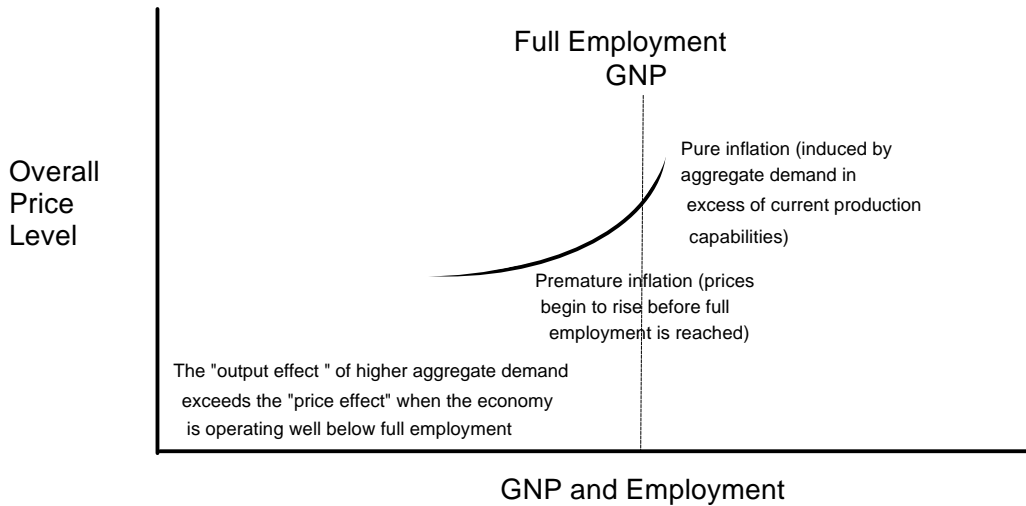
Features in the Federal Budget which reduce variability of economic fluctuations. For example, as GNP rises tax revenues automatically increase and this leakage from the main income stream restrains additional economic expansion.

### **Effect of Full Employment on Inflation**

Inflation is simply the rising general level of prices.

When aggregate supply and demand do not balance, upswings or downswings in the GNP will result.

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### **Taxation**

#### Fundamental principles

##### **Benefits received**

The benefits received principle holds that those who receive the benefits from governments spending programs should bear the burden of paying the taxes to finance those programs.

##### **Ability to pay**

The ability to pay principle states that the fairest tax a government can impose is one that is based on the financial ability of the taxpayer -- regardless of whatever benefits may be derived from public expenditures.

#### Classes of tax

As a result to the philosophical difficulties with both of these taxation principles, three major classes of taxes have evolved; regressive, proportional, and progressive.

##### **Regressive**

A regressive tax is a tax whose percentage rate decreases as the tax base increases.

##### **Proportional**

A proportional tax is a tax whose percentage rate remains constant as the tax base increases.

##### **Progressive**

A progressive tax is a tax whose percentage rate increases as the tax base increases.

#### Tax shifting

Tax incidence (who pays the taxes) can be estimated by demand - supply analysis

### **Monetary Policy**

#### The role of money and a monetary system

##### **Money performs four basic functions.**

##### Medium of exchange

##### Measure of value

##### Standard of deferred payment

##### Store of value

##### **Monetary System**

Monetary system provides society with money that is:

*widely acceptable*

*flexible in supply*

##### **Types of Money in the US**

##### Coins

##### Paper currency

##### Demand deposits

Demand deposits are checking account balances in all depository institutions.

##### **Commercial banking and money creation**

Bank loans expand the money supply by the amount of the loan.

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### Stage 1

Balance Sheet of Bank A

Required reeserves	\$20,000	Demand deposits	\$100,000
Excess Reserves	80,000		
	<u>\$100,000</u>		<u>\$100,000</u>

**Customer of Bank A negotiates loan of \$80,000**

Note bank exchanged something that was money (check) for something that was not money (IOU). By monetizing the borrower's IOU the bank has created \$80,000 of new money. Postloan demand deposits at Bank A are \$180,000, whereas preloan deposits were \$100,000.

### Stage 2

Balance Sheet of Bank A

Required reeserves	\$36,000	Demand deposits	\$180,000
Excess Reserves	64,000		
Loans	<u>80,000</u>		
	<u>\$180,000</u>		<u>\$180,000</u>

**Borrower writes check for \$80,000 and sends it to supplier who deposits the check in Bank B**

### Stage 3

Balance Sheet of Bank B

Required reeserves	\$16,000	Demand deposits	\$80,000
Excess Reserves	64,000		
	<u>\$80,000</u>		<u>\$80,000</u>

Balance Sheet of Federal Reserve Bank

	Reserve account of Bank A	\$-80,000
	Reserve account of Bank B	+80,000

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Balance Sheet of Bank A

Required reserves	\$20,000	Demand deposits	\$100,000
Excess Reserves	0		
Loans	<u>80,000</u>		<u>          </u>
	<u>\$100,000</u>		<u>\$100,000</u>

### The money supply and monetary policy

#### **The equation of exchange: $MV=PQ$**

Provides clues into what will happen to output and prices when supply of money changes.

M=supply of money

V=income velocity of money

The effectiveness of the change in the supply of money on production and sales depends on a stable velocity of money.

P=average price each unit of final goods and services sold

Q=physical quantity of all goods and services currently produced

#### **The Federal Reserve System**

The Board of Governors of the Federal Reserve System has the responsibility of supervising and controlling the operation of our monetary and banking system.

The basic policy decisions of the Board of Governors are made effective through twelve Federal Reserve Banks, one in each of twelve geographical regions of the US.

### **International Trade and Finance**

Relationships between countries based on the distribution of economic resources.

#### The economic basis for trade

##### **First**

The distribution of economic resources among nations of the world is quite uneven.

##### **Second**

Production requirements differ between goods. Coffee production requires different resources than TV production.

Via international trade, the world economy can achieve a more efficient allocation of resources and a higher level of material well-being. The resource base and technology of each nation are different, which means that each country can produce particular goods and services at different real costs. To take maximum advantage of these differences in cost, each nation should produce those goods for which its costs are relatively low, and exchange these for products for which its costs are relatively high. If each nation does this, the world economy and each national economy can realize a larger income and output from the given supplies of resources available.

##### **The principle of absolute advantage**

The most obvious reason for trade.

The principle of absolute advantage states that a basis for trade exists when each party can provide the other with a good for less than what they would pay to produce the product at home.

##### **The principle of comparative advantage**

Trade can be profitable even if one of the parties can produce both products more efficiently than the other. Because the time spent at producing one service or product may generate more revenue than the other. The opportunity cost, revenue missed by spending resources on the product which generates the lower revenue, should be considered.

Free and unrestricted trade among nations encourages international specialization according to each nation's comparative advantage.

##### **Some problems with free trade among nations**

Particular industries may be hurt.

Although nations as a whole tend to gain from free international trade, particular industries and groups of resource suppliers can be hurt.

International trade shifts demand from the scarce toward the abundant products, causing prices of abundant resources to rise, and prices of scarce resources to drop.

##### Economic stimulation

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During slack economic periods, nations may stimulate their domestic economy by restricting imports.

### National defense

During periods of international tension, nations may protect their producers of materials and goods essential to national defense with tariffs and quotas.

### Greater diversification

Tariffs and quota protection needed by nations who want to provide greater diversification and less dependence on foreign markets for essential products

### Infant industry argument

Tariffs needed to shield young growing industries from the severe competition of large foreign corporations.

### **The balance of trade**

Most nations prefer to have a trade surplus rather than a trade deficit because this surplus brings net monetary wealth into the domestic economy

It is not possible for all nations to have a surplus.

### **The development of world markets**

Fewer trade restrictions, reduced transportation costs, and improved technology transfer result in products competing on the world rather than a domestic market.

### Increased competition

*Relocate production*

*Redesign production*

### Product life cycle and comparative advantage shift

As products catch on with consumers and demand builds up worldwide, then the item becomes a "commodity" product (not much if any differentiation from manufacturer to manufacturer) and comparative advantage can shift to countries which have a comparative advantage in standardized mass production at a low cost.

### Financing international trade

Different national currencies poses rate of exchange problems. A profitable contract can become unprofitable due to a change in the rate of exchange.

Sale stated in seller's currency.

Banks trade currencies, providing buyers with supply of sellers currency so buyer can protect themselves from change in exchange rate.

### **Financial relationships among nations involves:**

Trade relationships of exporting and importing

Purchasing or constructing plants in foreign countries.

Buying or selling securities of foreign firms.

Private grants between nations.

Grants and loans for military aid.

Government sales of military goods abroad.

### **The international balance of payments**

Not to be confused with balance of trade.

Purpose -- to show how the balance of trade was financed.

When a nation has a trade deficit, then its balance of payments statement must contain some compensatory transactions that show how its excess of receipts over payments was financed.

Compensatory transactions may be thought of as balancing items, which arise in order to accommodate differences in money inflows and outflows primarily resulting from import and export activities.

### **Correcting a balance of payments dis-equilibrium**

System of freely fluctuating exchange rates corrects this dis-equilibrium.

### Freely fluctuating exchange rates

International money market comprised of banks trading currencies.

Exchange rate determined by supply and demand.

### Using government controls to correct dis-equilibrium

*Foreign exchange controls*

*Rationing money available for imports.*

*Tariffs*

*Import Quotas*

# Pace General Business Model Outline

## Forecasting Standard

### **Long range**

3 to 10 years. Management's objective is to plan for resources and to obtain long-term objectives.

### **Intermediate term**

Involves the monthly, quarterly, and yearly operation and control of the business.

### **Short range**

Concerned with the day to day and weekly scheduling of production and cash needs.

## **Importance of Sales Forecasting**

Accurate forecasting of sales is key to forecasting all other areas of business. The sales forecast should integrate both external and internal conditions.

## **Stages of Forecasting**

### **Collecting information for the forecast**

Controllable and uncontrollable factors should be identified. Information is typically analyzed by:

Market

Product

Class of Customer

### **Evaluating and projecting the data**

Qualitative methods; statistical analysis and projections; and causal models are often used in varying degrees.

### **Operationally applying the forecast**

Timely feedback is key to effective application.

### **Controlling and auditing the forecast**

Immediate action controls the process.

## **Decision Model Standard**

### **Introduction**

#### Fundamentals of the Decision Process

Logical steps for reaching decisions. Decision theory.

#### Decision Analysis

Identifying and selecting relevant decision models. Identifying and selecting data for decision models. Selection of decision criteria. Includes such topics as capital budgeting models, linear programming, economic order quantity models, make-or-buy analysis, and other quantitative business analysis techniques.

#### Nature and Techniques of Model Building

Techniques to describe systems, such as flow charts or other diagramming devices. Mathematical representation of systems including statistical techniques to estimate parameters for the mathematical representations. The use of simulation techniques.

#### Information Systems and Data Processing

The theory of information systems. Accumulation of data for decision analysis and reporting. Nature of business data processing systems including computers and data controls.

#### Decision Model

A tool that decision maker uses in addition to other inputs to arrive at a decision.

#### Decision Situations

##### **Uncertainty**

Unable to assign probabilities.

##### **Risk**

Subjective probabilities

Objective probabilities

##### **Certainty**

Rarely encountered.

### **Probability and Decision Making**

#### Probability

Degree of likelihood of the occurrence of an event.

# Pace General Business Model Outline

**Rules of probability**

Mutually exclusive events

Occurrence of one precludes the occurrence of the other.  $P(A \& B) = 0$

Addition rule -  $P(A \text{ or } B) = P(A) + P(B) - P(A \& B)$

Conditional Probability  $P(A/B) = P(A \& B)/P(B)$

Multiplication rule -  $P(A \& B) = P(A/B) \times P(B)$

Independent events -  $P(A \& B) = P(A) \times P(B)$

$A/B = a$  given  $b$ .

Decision making with uncertainty

A firm is able to calculate the outcome (payoff) for each alternative but not assign probabilities to the outcomes.

**Maxmin rule**

Select the alternative that maximizes the minimum profit of the alternatives (Conservative - Utah)

**Maximax rule**

Select the alternative that maximizes the maximum profit of the alternatives (Not conservative - Alaska)

**Minimax regret rule**

Minimize the maximum opportunity loss (regret) from the alternatives (Texas).

**Conditional Profit Table**

	Alaska	Florida	Texas	Utah
High Profit	18	9	14	12
Medium Profit	12	6	10	11
Low Profit	3	5	6	9

**Regret Table**

	Alaska	Florida	Texas	Utah
High Regret	0	9	4	6
Medium Regret	0	6	2	1
Low Regret	6	4	3	0

Decision making under Risk

When either subjective or objective probabilities are available.

**Expected value rule**

Expected value = Outcome (payoff) X Probability of occurrence.

Select the alternative with the highest expected value.

**Vendo Company**

Hot-dogs sell for 50 and cost 30

History of hot-dog sales

*10,000 - 5 games*

*20,000 - 10 games*

*30,000 - 20 games*

*40,000 - 15 games*

**Constructing a Payoff table**

States of nature - left column

Possible actions - across top

Conditional profits - body of table

## Pace General Business Model Outline

Demand	Probability	Stock	Stock	Stock	Stock
		10,000	20,000	30,000	40,000
10,000	.1	2,000	<1,000>	<4,000>	<7,000>
20,000	.2	2,000	4,000	1,000	<2,000>
30,000	.4	2,000	4,000	6,000	3,000
40,000	.3	2,000	4,000	6,000	8,000

### Expected payoff

Calculated by multiplying each payoff in a column by the probability of receiving that payoff. The results are added together to yield the expected value of that alternative.

### Expected value of perfect information

Calculates the increased payoff that can be expected with complete knowledge.

The decision maker knows what state of nature will occur for each decision. The strategy with the highest payoff will be selected each time.

The difference between the expected value under risk and the expected value with complete knowledge equals the expected value of perfect information.

### Utility

When an individual judges that one particular course of action is preferable to another, the decision is based on a personal utility function. A utility function describes the choices that an individual would make under different circumstances.

An individual may be a risk taker (aggressive) or risk averse (conservative). This may affect the course of action selected.

### **Decision Trees**

Useful when a series of decisions must be made. Clarifies a complicated situation. Payoffs, probabilities, and expected values are shown on the branches.

#### Decision Tree

<u>Action</u>	<u>State of Nature</u>	<u>Payoff</u>
<u>Order 0</u>	Demand = 0	\$ 0
	Demand = 1	0
	Demand = 2	0
<u>Order 1</u>	Demand = 0	(50,000)
	Demand = 1	200,000
	Demand = 2	200,000
<u>Order 2</u>	Demand = 0	(100,000)
	Demand = 1	150,000
	Demand = 2	400,000

### **Incremental Cost Analysis**

#### Relevant Costs and Revenues

Items in the future that will be different for the alternatives under consideration.

#### **Future costs**

Will be incurred in the future. A past, historical cost is a sunk cost and irrelevant.

#### **Differential costs**

## Pace General Business Model Outline

Varies among the alternatives under consideration. A cost that is the same under all alternatives under consideration is not differential and is irrelevant.

### **Opportunity costs**

An economic benefit given up when an alternative is rejected. Although not a recorded accounting cost, it is relevant.

### Types of Decisions

In any decisions we should consider quantitative and qualitative aspects of the decision.

#### **Make or Buy**

Compare relevant costs of each. The relevant costs of the buy alternative is generally the quoted price. The relevant cost of the make alternative is the incremental cost of production that could be avoided if the item is purchased. If the item is purchased and the facilities freed up have an alternative use. The opportunity cost of the facilities should be added to the relevant costs of the make alternative. Also, consider the qualitative aspects of the decision (quality, dependability, control, etc.).

#### **Add or Drop**

A product line.

Subtract the fixed costs that can be avoided if the product line is dropped from the product line contribution margin. If the result is positive, the product line should be retained. The product line is contributing to the payment of common fixed costs. If negative, consider dropping. Even if the result is negative, we may retain the product line to keep a well rounded product offering (loss leader concept). Consider sales of complimentary goods. Sales of substitute goods could go up.

#### **Sell Now or Process Further**

The joint product costs incurred before the split off point are irrelevant.

If the incremental revenue generated by further processing exceeds the cost of additional processing, the product should be processed further. If not, sell at split off point.

#### **Special Order**

If the plant has idle capacity, compare the revenue from the special order to the incremental costs of production (not full allocated costs).

If the plant is at full capacity, compare the revenue from the special order to the incremental costs of production plus contribution margin of the regular sales given up.

### **Pricing Decisions**

#### Cost Based Pricing

Base selling price on the cost of production.

##### *Full Absorption Cost*

Used in practice, but conceptually weak.

##### *Variable Cost*

Conceptually more sound.

#### Other Factors Affecting Pricing Decisions

Company goals.

Costs.

Consumer demands.

Competition.

Legal influences.

Social responsibility.

#### Robinson-Patman Act

Illegal to quote different prices to different customers, unless due to actual cost differences.

Supports the full cost approach.

### **Capital Budgeting**

#### Process of capital budgeting

**Find investment opportunities**

**Collect information about opportunities**

**Select discount rate (generally the cost of capital)**

**Financial analysis of cash flows**

**Make a decision**

**Implement the alternative selected**

**Project evaluation and appraisal**

#### Techniques of capital budgeting

**Discounted cash flow approach**

Consider time value of money.

#### Discounted rate of return

Is the rate which caused the present value of the inflows to equal the present value of the initial investment.

## Pace General Business Model Outline

Accept the project if the discounted rate of return is greater than the cost of capital rate.  
Problem, the reinvestment assumption.

### Net present value

Subtract the present value of the initial investment from the present value of the inflows.  
Accept the project if the net present value is positive.

### Present value index

Divide the present value of the initial investment into the present value of the inflows.  
Accept the project if the result is greater than one.

### **Non Discounted Cash Flow Approaches**

Ignore the time value of money.

### Payback period

Initial investment (over)

Annual cash flows

Problem, it ignores cash flow after the Payback period.

### Accounting rate of return

Average annual accounting net income (over)

Investment (Initial or Average)

Problem, it uses accounting net income and not cash flows.

### Types of decisions

Investment decisions are made for many purposes. Sometimes they are necessary to meet the present needs of the firm such as the replacement of machinery or they may be the result of a strategic decision as in the case of moving to a new market by introducing a new product. Most decisions, however, can be classified into one of the four categories:

#### **Obligatory**

This group of projects includes those legally required such as pollution control devices and those required for reasons of morale, public relations, and social responsibility.

All of the techniques of capital budgeting use some form of profitability analysis in ranking the investment opportunities. However, for projects in the obligatory category, profitability may not be a consideration. But even here, if the objective could be accomplished in two or more ways, the techniques can be used to rank the possible alternatives.

#### **Replacement**

These projects assure the productive capacity of the firm through replacement of worn or damaged equipment.

#### **Cost reduction**

Projects in this category are designed to cut operating costs.

#### **Expansion**

This would include projects that expand current product lines or add new ones.

### Initial investment

After tax amount.

Equipment

Sales tax

Freight costs

Installation costs

Operator training costs

Test runs

Additional working capital requirements

### **Schedule of Net Investment**

---

<sup>1</sup>Thomas H. Vernon, "Capital Budgeting and the Evaluation Process," Management Accounting, 1972 (October)20.

## Pace General Business Model Outline

Initial cost	\$200,000	
Sales tax	10,000	
Freight	2,000	
Installation	20,000	
Sub Total		232,000
Less Investment Credit	23,200	208,800
Working capital		10,000
Operator training & test runs	11,000	
Less tax benefit	4,400	6,600
Less		
Proceeds from sale	15,000	15,000
Book value	5,000	
Gain on disposal	10,000	
Tax on gain	40%	4,000
Total net proceeds		11,000
Total Net Investment		\$214,400

### Cash inflows

Interested in incremental, after tax cash flows.

#### **Operating cash flows**

##### Long method

- + Revenue
- Cash Expenses
- = Net Income before depreciation and taxes
- Depreciation expenses
- = Net income before taxes
- Tax expense
- = Accounting net income
- + Depreciation expense
- = Operating cash flows

##### Short method

(Tax Expense = T)

Net income before depreciation and taxes  $X(1-T)$

+ Depreciation expense  $X(T)$

= Operating cash flows

#### **Terminal cash flows**

- + Proceeds from sale of asset
- + Working capital released
- + Tax savings from loss on disposal or
- Tax payment from gain on disposal
- = Terminal cash flow

### Capital budgeting under risk

Use pessimistic, most likely, and optimistic estimates and compare the results.

Use higher cost of capital for riskier alternatives.

Use sensitivity analysis to understand how outcome will be affected by changes in the variables.

### Adjusting for inflation

The best approach is to adjust both the discount rate and the expected cash flows to allow for the anticipated inflation; because, depreciation expense is based on historical cost.

### Lease purchase decisions

## Pace General Business Model Outline

Compare the present value of the net cash flows of the lease alternative (after tax) to the present value of the cash flows of the purchase alternative, and select the alternative with the lowest present value. Since this is a financing decision and not an investment decision, the discount rate used should be the after tax cost of debt.

The decision to acquire an asset is an investment decision, the discount rate to be used is the cost of capital. The investment must be acceptable before the decision as to how to acquire the asset is made.

### **Linear Programming**

Application of matrix algebra used to solve business problems that can be represented by a system of linear equations.

#### Formulation

A firm is attempting to maximize profits given a set of constraints it faces.

##### **Objective function**

Max  $7A + 2B$

##### **Constraints**

$2A + B < \text{or} = 1,000$

$B < \text{or} = 700$

$A < \text{or} = 400$

$A + B < \text{or} = 800$

##### **Graphic Solution**

Useful when only 2 variables.

The optimal solution must be one of the end points on the feasible region.

##### **Minimization**

Generally want to minimize costs.

The constraints are typically greater than or equal to rather than less than or equal to.

The optimal solution is still on an end point of the feasible region.

##### **Postoptimality (sensitivity) Analysis**

Alter the assumptions set up in the objective function or alter the constraints to determine the impact on the optimal solution.

##### **The Dual Linear Programming Model**

Every linear programming problem can be recast from its initial formulations into a mathematically related format called the "dual" problem. Solving either the primal or the dual problem will generate the same solution.

##### **Simplex Method - Maximization**

Used in place of graphical analysis when there are many constraints. It is an iterative process that systematically locates feasible corner points that will improve the objective function until the optimal solution is reached.

Constraints are rewritten by introducing slack variables ( $2A + B + S = 1,000$ ). The profit equation is rewritten as  $Z - 7A - 2B = 0$ .

The simplex method uses tableaus, which are matrices written in tabular form.

##### **Simplex Method - Minimization**

Simplex techniques can be used to solve minimization problems also.

##### **Computer Solutions to Linear Programming Problems.**

Generally used in the real world. Packages which generate standard type of solution output.

### **Basic Statistical Concepts**

#### Measures of central tendency

##### **Median**

The middle value of a group of ranked items.

##### **Mode**

Most frequently described value in a group of items.

##### **Mean**

Arithmetic average of a group of items.

##### **Skewness**

When the distribution of values is not symmetrical.

#### Measures of dispersion

##### **Range**

Difference between maximum and minimum value.

##### **Variance**

A measure of variability of values.

##### **Standard deviation**

A measure of variability of values.

## Pace General Business Model Outline

### Degrees of freedom

Equal to the denominator  $n$  when solving for the mean, and the denominator  $n-1$  when solving for the variance.  $N-1$ , one of the sample observations is not free because it is defined by the sample sum minus all the other observations.

### Population parameters

and corresponding sample statistic.

Population mean / sample mean

Population variance / sample variance

Use sample statistics to estimate population parameters.

### Sample selection

#### Judgmental

Block or haphazard - may be biased.

#### Random

Each item in the population has an equal chance of being selected.

### Central limit theorem

If we draw a multitude of samples from a population, the mean of the sample means will equal the population mean. Also, the variance of the sample means will equal the population variance divided by  $n$ .

### Probability distributions

#### Normal distribution

Symmetrical

Standardize the elements of the population with the following formula:

Normal distribution represents the number of standard normal deviations that a value is from the population mean. The result is a distribution of normal distributions with a mean of zero and a variance of one.

#### Student's t distribution

Used when only sample statistics are available.

$t$  = student's  $t$  statistic which is very similar to the normal distribution.

Different tables must be used to compute probabilities from  $t$ .

There is a separate table and distribution for each sample size.

If the degrees of freedom exceed 40, the normal distribution may be used.

### Confidence interval estimation

#### Point estimate

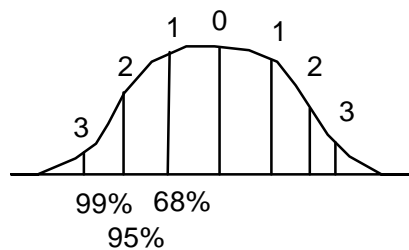
When a sample is drawn, the sample mean and variance are point estimates of the population mean and variance.

#### Confidence interval

At a given reliability percentage, an upper and lower limit of values can be determined.

#### Developing confidence intervals

Confidence interval is built around the sample mean.



#### Hypothesis testing

Set up a confidence interval around the hypothesis.

### Decision criteria

#### Estimation sampling for variability

In an audit must:

**Specify precision of the estimate based on the amount considered material.**

**Specify confidence level based on the reliability desired.**

**Estimate population standard deviation based on prior work.**

**Calculate sample size.**

**Randomly select the sample.**

**Audit the sample.**

# Pace General Business Model Outline

**Construct a confidence interval.**

**Make an audit decision.**

## Hypothesis testing

Set up the problem so that the hypothesis is accepted or rejected. Establish a null hypothesis and the alternative hypothesis.

### Risk of Decision Error

**Type I error (alpha risk)**

Is the risk of incorrect rejection.

**Type II error (beta risk)**

Is the risk of incorrect acceptance.

### Estimation sampling of proportions (attributes)

In audits of internal control, when compliance tests are performed, the auditor can use attribute sampling to determine the upper limit of the deviation (error) rate in the population. This will be the basis for judging the reliability of internal controls.

### Discovery sampling

A variation of sampling for proportions when we are dealing with an extremely critical control procedure and have a very low beta, risk of incorrect acceptance.

### Stratified sampling

Break up a population with high variability into several strata. Purpose is to reduce the impact of population variance on sample size or to increase the precision of sample results for a given sample size. It creates sampling efficiency.

### **Dollar unit sampling**

The use of techniques for estimation of proportions which is applied to a problem of estimating population totals not proportions.

Sampling for variables will call for very large sample sizes when the population is not normally distributed and has a low error rate.

Use of dollar unit sampling creates audit efficiency. Sampling with dollars rather than accounts.

The statistical sampling methods rely on central limit theorem and the standard normal distributions for their effectiveness. Non normality in the underlying distribution of accounting data can be expected. Low error rate frequency is to be expected in accounting populations. The non normality condition and the low error rate condition lead to a need for large sample sizes. Large sample sizes are expensive.

Binomial and Poisson techniques are used for situations with non normal distributions and low error rates, but the most common interest of accountants and auditors is the dollar value of accounts or measures under study. The dollar unit sampling technique will generally require or much smaller sample, but the other techniques may remain the preferred choice. Treat the dollars as the units.

### **Regression and cost behavior analysis**

Regression analysis identifies associations between variables without proving them. (Relational not causal) We have a better basis for planning if we can identify causal relationships between measurable variables.

### Simple regression

One dependent and one independent variable.

#### **Data collection**

Obtain observations from past experience concerning values of the dependent and independent variables at various points in time.

**Create the cost line -  $Y = A + B(X)$**

#### High low method

Simple but imprecise.

#### Scatter graph and visual fit

Imprecise.

#### Least squares method

Using equations

*Coefficient of correlation*

0 means no correlation.

+1 means perfectly positively correlated

-1 means perfectly negatively correlated.



# Pace General Business Model Outline

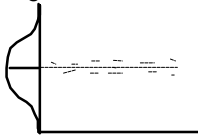
## *Coefficient of determination*

Calculates how much variability of the cost's values is explained by the regression line, the higher the number the better the fit of the line.

Regression coefficient = strength

Strength of relationships = coefficient of determination

High coefficient of determination



## *Mean square error*

Residual variance which measures the uncertainty associated with the regression line.

## *Standard error of the estimate of the regression*

The square root of the mean square error.

## **Multiple regression**

One dependent and multiple independent variables. Generally handled by computer programs.

## Non linear cost functions and regression

Linear regression techniques may be applied to hypothesized non linear cost relationships. An example would be "learning curve" experienced in the start-up phase of a complex manufacturing process.

## Time series analysis

Used to identify consistent patterns of data behavior over time as input to a forecasting model. Regression techniques can be used on time series analysis. The four components of a time series are:

### **Trend**

### **Cyclical movements**

### **Seasonal movements**

### **Random variations**

### Random independent variables

Under certain conditions, regression analysis techniques can be used when the independent variable occurs randomly and is not under the control of management.

## **Modeling: Inventory, CPM, Queuing**

### Modeling Concepts

#### **Model**

A set of objects joined together by a set of interactions or interdependencies. A model is generally only an abstraction of the real system used for analysis and testing purposes.

#### **Steps in model building**

Identify and relate those factors of the real environment that are important to the analysis.

Supply the model with the appropriate data input on which to operate.

#### **Classification of Models**

##### Open system or closed system

If model relies on activities that derive from outside the model, the model is an open system.

##### Deterministic or Stochastic

Relates to the certainty of the model results.

##### Physical or mathematical

Physical wood or plastic.

Mathematical graph or formula.

##### Static or Dynamic

A static model provides a solution when the system is in equilibrium. Dynamic models describe the process followed over time to arrive at the equilibrium solution.

##### Analytic or Numeric

General statement of the relationships between the variables - analytic.

Specific solutions for particular value inputs - numeric.

## Inventory Modeling

For deterministic, mathematical, static, and analytic.

### **Costs**

#### Ordering costs

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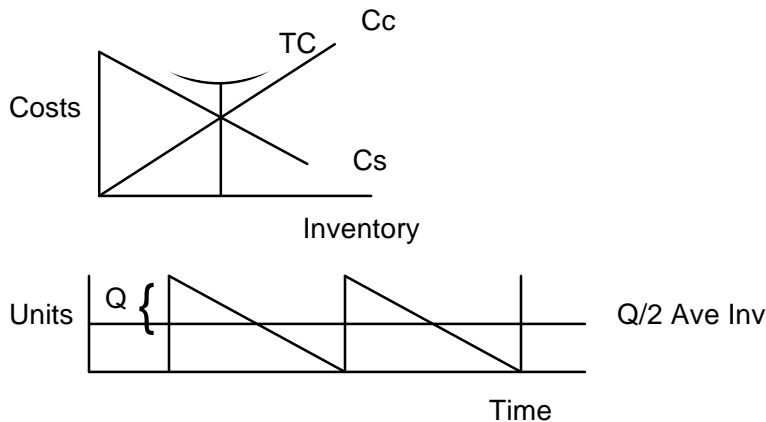
PM 04

## Pace General Business Model Outline

Carrying costs

Inventory stock out costs

**EOQ Graph**



**Economic Order Quantity (EOQ) with known demand**

**EOQ and Regression Analysis**

Regression analysis can be used to forecast annual demand and estimate costs to order and carry the inventory. These figures can then be used in the EOQ formulas.

**EOQ with known Demand and Back Ordering**

**EOQ and known lead time**

**Continuous production and lot size**

When there is a continuous inflow of inventory as production progresses or continuous order delivery.

Schedule Modeling

**Critical Path Method (CPM)**

Used in planning and control of well defined projects with an identifiable beginning and end composed of a set of sequenced interdependent activities.

CPM Nodes

Activities requiring time

CPM Branches

Indicate precedence relationship

Critical path

Path on which any delay in an activity will delay the total project.

Early start

Early finish

Activity time

Late finish

Late start

Slack time

Difference between late start and early start for the activity.

When slack time is zero, activity is critical.

Procedures

**Program Evaluation and Review Technique (PERT)**

Similar to CPM except that uncertainty as to activity times is introduced. Distribution of activity times for each activity is required. PERT nodes and branches not same as CPM nodes and branches.

PERT Nodes

Represent starting and termination points.

PERT Branches

Represent activities.

Procedures

Exactly the same procedures are followed for mean time as were followed in the CPM procedures.

**PER/Cost**

If management can alter activity times.

In PERT/Cost and CPM the time/cost relationship of performing an activity was fixed. If management can alter times to perform activities at a cost inversely related to time, PERT/Cost should be used. Cost/time

## Pace General Business Model Outline

tradeoffs should always be considered along the critical path. Continue to make these tradeoffs until an optimal solution is discovered.

### Queuing

(waiting line analysis)

#### **Input**

Population characteristics

Arrival times

Population behavior on arrival

#### **Line discipline**

Number of lines

Service order

#### **Service Facilities**

Number of servers

Service time distribution

Server operation

#### **Output**

Satisfied customer

Error in service

### Markov Chains

Useful for studying changes in behavior of systems over time.

The Markov model is a mathematical model with dynamic properties solved by numeric methods.

#### **Requirements**

Process must possess the Markovian Property

The probability of a future event is conditional on only the current state.

There must be a finite number of states that the system can occupy.

There must be an initial set of state probabilities.

There must be a set of stationary transition probabilities.

### Monte Carlo Simulation

In a system simulation it is necessary to generate a sequence of numbers whose successive values are random and distributed in such a manner as to describe the stochastic variable.

#### **Applications**

Used when a deterministic model is so complex as to defy solution by analytic means.

Random numbers are drawn and the model is solved for the numeric values generated.

Used when the model itself is composed of one or more stochastic variables.

Random numbers are generated to simulate the behavior of the stochastic variables used to represent some basic stochastic property observed in the real system. Simulations can be used to test the reasonableness of a mathematical model.

## **Information System and Data Processing Standard**

### Introduction

#### **Information Systems and Data Processing**

The theory of information systems. Accumulation of data for decision analysis and reporting. Nature of business data processing systems including computers and data controls.

### Information System

(Input \_\_\_\_ Data Processing \_\_\_\_ Output)

#### **Role of the management accountant**

Active in the design and use of the system

#### **Management information systems (MIS)**

Means by which information is provided to decision makers to allow them to make and implement the necessary decisions to optimize the interrelationship of the available resources to most effectively reach the organization's goals.

#### Criteria for MIS

Provide accurate, timely and meaningful data for management planning analysis and control. Properties of an effective MIS include providing information that is:

## Pace General Business Model Outline

*Relevant*

*Accurate*

*Timely*

*Complete*

*Concise*

*Economical*

*Flexible*

MIS Development

*Define the goals and their priorities.*

*Critical success factors*

Identify factors critical to the success of each goal.

*Design a MIS system*

Design a system structure to achieve the goals.

*Implement the system.*

*Monitor and control the system.*

Question to address in MIS design

*What data needed*

*When data needed*

*For whom data needed*

*Where data needed*

*In what form data needed*

*How much data costs*

*Priorities of data*

*Control requirement*

*Mechanism for evaluating and improving the system.*

MIS Pressures

Need for MIS improvements because of the growth in size and complexity of firms, social changes, technological improvements, world economics, rising costs and competition.

New approaches to MIS design

*MIS is viewed in terms of user*

*MIS is detached conceptually from the computer.*

*Quick response systems are developed*

Database management systems, distributed processing.

*Better integration of information processing activities.*

**Classification of Business Information**

Different information is necessary to satisfy different users.

Internal users

External users

Users with a direct interest

Users with an indirect interest

Mandatory needs

Discretionary needs

Action/non action

Recurring/non recurring

**Business information systems**

Logistics

Inventory, production, distribution.

Personnel

Financial

Marketing

Research and Development

Strategic Planning and Policy Making

Management Accounting System

**Traditional System**

Profit Maximization Aid

Goal Allocation Device

Control Device

**Modern System**

Information System

## **Pace General Business Model Outline**

Provide Data for Decision Making  
Serve as a Communication Medium

# Pace General Business Model Outline

## Reporting Standard

### Public Reporting Standard

#### Introduction

#### Public Reporting Standard, Auditing and Taxes

##### Reporting Requirements

Current standard controlling financial reporting to the public, including the importance of footnote and materiality. Broad outline of how this standard has been established. Standard controlling reporting to various government regulatory agencies. Filing requirements under SEC and stock exchange practice. Legal and ethical responsibilities in public reporting. Audit Protection  
An understanding of the protective nature of auditing. How internal and external audits are organized and carried out. Operational vs. financial audits.

##### Tax Accounting

Principal features of corporate taxation under US. federal law to understand tax consequences of ordinary business operations and to recognize tax situations that require specialized knowledge and expertise. Accounting for income taxes.

#### Establishment of Accounting Standard

The fundamental function of financial accounting is to provide users of financial statements with information that will help them make decisions.

#### Prior to 1920

No formal standard setting body.

#### 1920 to late 1930's

New York Stock Exchange (NYSE) and American Institute of Accountants (AIA) initiated efforts. Securities Acts of 1933 and 1934. Commission passed responsibility for determining accounting and reporting standard along to AIA with the understanding the SEC retained final approval power over standard.

#### Committee on Accounting Procedure (CAP) - 1938-1959

Authorized by AIA to issue Accounting Research Bulletins. Bulletin 43 of 51 was a restatement of all previous except those dealing with wartime issues and those dealing specifically with terminology. In 1961 the American Institute of Certified Public Accountants (AICPA) published Accounting Research and Terminology Bulletins: Final Edition.

#### Accounting Principles Board (APB) 1959-1973

Accounting Research Studies (ARS), then Board deliberations, Then Board releases Opinions on the subject.

During the period of its existence the APB issued a total of 31 Opinions as contrasted to only 15 ARS issued by the research division.

One of the more dramatic conflicts between APB and ARS research division occurred in connection with the initial, and some believe the most important, task charged to the Board, that is, to develop a broad conceptual framework upon which a consistent set of accounting and reporting requirements could be based. ARS # 1 and ARS # 3, outlining basic postulates and principles upon which financial reporting should be based which were rejected by the Board as being "...too radically different from present generally accepted accounting principles for acceptance at this time."

Board did issue a statement (APB Statement #4, Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises) which was a last ditch effort by the Board to define a framework. Lacking the two thirds majority vote required for release as an Opinion of the APB, however the Statement may be considered an informative, but not an authoritative pronouncement of the Board.

#### Financial Accounting Standards Board (FASB) (1973-present)

Full time board - 7 members

The steps that must be adhered to in the development of a financial accounting standard.

Broad participation in standard setting participation by three groups: individual management accountants, organized groups of management accountants, and business firms.

#### Major Influences on Accounting Theory

##### Environment

##### Variety of Users

##### Economic System

##### Social Concerns

##### Information Technology

##### Institutions

AICPA

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# Pace General Business Model Outline

SEC

NAA - National Association of Accountants

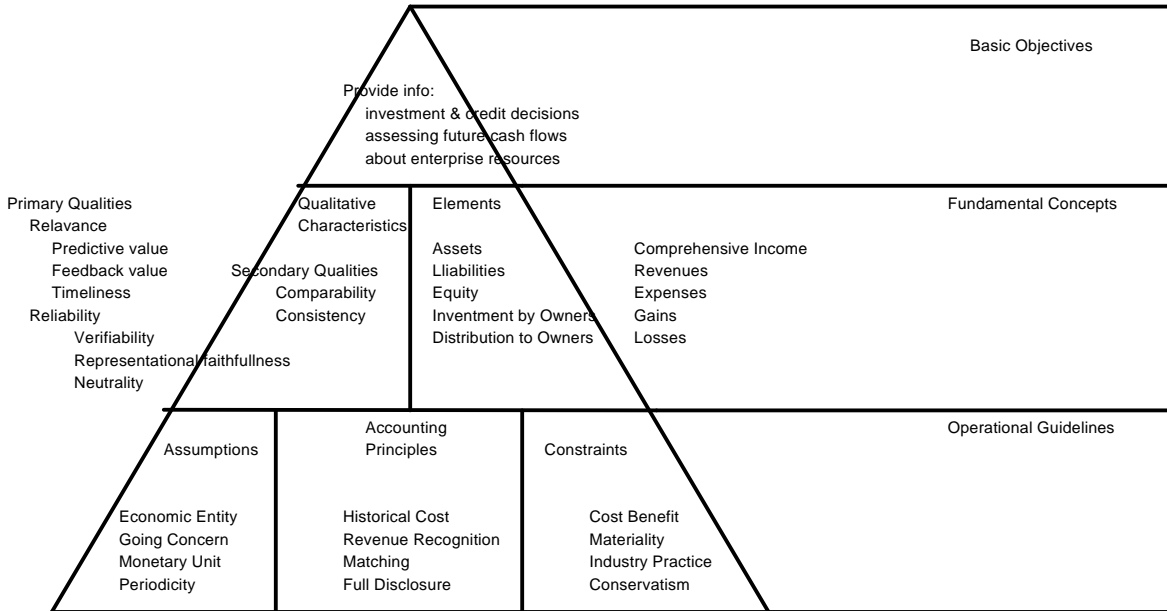
FEI - Financial Executives Institute

FAF - Financial Analysts Federation

AAA - American Accounting Association

## Conceptual Framework

Environmental aspects of financial reporting.



### Basic Objectives

Statement of Financial Accounting Concepts (SFAC) # 1

**Provide information:**

Useful in investment and credit decisions

Useful in assessing future cash flows

About enterprise resources, claims to resources, and changes in them.

### Fundamental Concepts

**Qualitative Characteristics**

Primary Qualities

*Relevancy*

*Predictive value*

*Feedback value*

*Timeliness*

*Reliability*

*Verifiability*

*Representational faithfulness*

*Neutrality*

Secondary Qualities

*Comparability*

*Consistency*

**Elements:**

Assets

Liabilities

Equity

Investment by Owners

Distribution to Owners

Comprehensive Income

# Pace General Business Model Outline

Revenues

Expenses

Gains

Losses

## Operational Guidelines

### **Assumptions**

Economic entity

Going concern

Monetary unit

Periodicity

### **Accounting Principles**

Historical cost

Revenue recognition

Matching

Full disclosure

### **Constraints**

Cost benefit

Materiality

Industry practices

Conservatism

## **Regulatory Agencies**

### Securities and Exchange Commission (SEC)

Created 1934

#### **Securities Act of 1933**

Regulates initial offering of securities.

#### **Securities Act of 1934**

Regulates subsequent trading of securities.

#### **Other Security Laws**

#### **Initial Filing Requirements**

When initially sell securities (under both 1933 and 1934 Acts) all the financial information included in the registration statement must be certified by an independent certified public accountant (CPA).

Form S-1 and form S-10 are the basic forms used to register securities under the respective acts. These forms require a registrant to disclose information concerning:

Nature and history of the issuer's business.

Its capital structure.

A description of any material contracts.

A description of the securities being registered.

Salaries and security moldings of the officers and directors.

Details of any underwriting arrangements.

An estimate of the net proceeds and the uses to which such proceeds will be put, and detailed financial information such as summary of earnings, certified balance sheets, profit an loss statements, and supporting schedules.

#### **Subsequent Reports**

Under 1934 Act.

10-K basic annual report: within 90 days after fiscal year end.

*Cover Page*

*Part I*

*Item 1 Business*

*Item 2 Properties*

*Item 3 Legal Proceedings*

*Item 4 Security ownership of central beneficial owners and managers.*

*Part II*

*Item 5 Market for common stock*

*Item 6 Selected financial data*

5 year summary.

*Net sales or operating revenues.*

*Income from continuing operations and related per common share amounts.*

## Pace General Business Model Outline

*Total assets.*  
*Long term obligations and redeemable stock.*  
*Cash dividends declared per common stock.*  
*Item 7 Managers discussion and analysis of financial condition and results of operations.*  
*Item 8 Financial statements.*  
*Part III*  
*Item 9 List directors and executive officers.*  
*Item 10 Management remuneration and transactions*  
*Part IV*  
*Item 11 For 8-K - Exhibits, schedules, and reports.*  
*Signatures and supplemental information*  
Majority board of directors plus chief executive officer, chief financial officer, and chief accounting officer.  
Annual report to shareholders  
Integrated disclosure - make the annual report the summary reporting document: incorporate by reference.  
*Compliance with regulation S-X*  
Financial statement in annual report must be in compliance with SEC regulation S-X and 10 K.  
*S-X disclosures required in annual report:*  
Reconciliation of tax expense to statutory rates. Details of the deferred tax provision, and foreign and domestic pre-tax income.  
Excess of replacement cost or current cost over the LIFO value of inventories.  
Unused lines of credit information and compensating balances.  
Long term contracts - disclosures regarding Receivables and inventories.  
Five year maturity of long-term debt.  
Provision for doubtful accounts and notes.  
Oil and gas reserve data.  
Defaults.  
Form 10 Q  
Quarterly report, filed 45 days after end of first 3 quarters.  
Need not be audited.  
Includes condensed financial statements, selected disclosures and management discussion.  
Form 8 K  
File 10 days after the end of the month in which a material event occurs. Material events:  
*Change in control.*  
*Acquisition or disposition of a majority owned subsidiary.*  
*The filing or termination of material legal proceedings.*  
*Material default on senior security.*  
*Increase or decrease of more than 5% of any class of outstanding security.*  
*Write down, write-off, or abandonment of assets.*  
*Change in auditors.*  
**The SEC and Accounting Policy**  
Leaves most of the basic accounting principles to the FASB: focuses on disclosures required.  
SEC pronouncements  
*Financial reporting releases (FRR)*  
replace non-enforcement ASR's  
*FRR #1 Codification of existing ASR's*  
*Accounting and auditing enforcement releases*  
replace non-enforcement ASR's  
**The Cost Accounting Standards Board (CASB)**  
CASB purpose was uniformity and consistency.  
1970-1980  
Standards still applicable  
Cost accounting principles followed by defense contractors and subcontractors under federal contracts. Size limitations.  
19 Standards  
Most are consistent with GAAP, except 404 and 414.  
*404 Identifiable general and administrative expenses are capitalized.*  
*414 Cost of money included as a cost.*  
**The Federal Trade Commission (FTC)**

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Regulates firms in interstate commerce.

Line of Business disclosures (1974). Information from largest manufacturers with over 200 manufacturing segments.

Revenue, income assets, and expenses for each line of business with total revenue in excess of \$10M.

### **New York Stock Exchange**

Certain minimum exchange requirements for listing.

Requires timely financial information and soliciting of proxies for all meetings of stockholders.

Continued listing requirements.

### **Accounting Standard**

#### Accounting Measurement

##### **Revenue recognition principle**

When all three conditions exist:

Can measure.

Exchange transaction

Earning process virtually complete, generally point of sale except:

*Percentage of Completion*

*End of production*

*Receipt of cash (installment or cost recovery method)*

##### **Matching principle**

Associating cause and effect, direct to specific sale.

Systematic and rational allocation, indirect to period.

Immediate expensing, period cost, no future benefit.

##### **Price Level**

##### **Foreign Exchange**

##### Foreign currency transactions

*Denominated in US Dollars - no problem.*

*Denominated in foreign currency - and accounting problem, because it must be measured in US dollars.*

*Rule: At each balance sheet date, revalue each receivable and payable to the spot exchange rate. Report a related exchange gain or loss in the income statement of that period (two transaction perspective).*

*Accounts receivable*

*If US dollar is appreciating report an exchange loss.*

*If US dollar is depreciating report an exchange gain.*

*Accounts payable*

*If US dollar is appreciating report an exchange gain.*

*If US dollar is depreciating report an exchange loss.*

The amount of the gain or loss and restatement of the receivable or payable is equal to the change in the exchange rate from the inception of the transaction to the balance sheet dates times the number of foreign currency units involved.

An additional exchange gain or loss may be reported in the period of settlement, if the spot exchange rate changes from the balance sheet date to the date of settlement.

##### Foreign currency Financial Statement Translation

*Functional Currency*

*Current Rate Method*

*Re-measurement Method*

#### Accounting for Current Assets

##### **Investment in Stocks (APB # 18)**

Initially record at cost which equals the purchase price plus any incidental expenditures. Subsequent accounting depends on percent interest:

Greater than 50% use equity method and consolidate.

20% to 50% use equity method if significant influence.

Less than 20% use cost method (lower of cost or market (LCM) for marketable equity securities), assuming no significant influence.

LCM separates the accounting for short and long term portfolios.

Cash dividend received entry

Credit dividend income.

Stock dividends received/ stock split

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No entry. Change unit cost basis of all shares.

### Stock rights received

Allocate portion of cost of common stock to the rights.

### **Accounting for Bad Debts**

GAAP requires that an allowance be established as a contra to accounts and notes receivable. There are two methods of establishing an allowance:

#### Estimate based on sales.

#### Estimate based on accounts receivable

### **Inventories**

#### Method of inventory measurement

##### *Perpetual*

(or book inventories)

The cost of goods sold and inventory balances are determined with each sale or issue of raw material to production.

##### *Periodic*

The assets costs are accumulated in a purchase account. A periodic physical inventory is necessary to calculate costs of goods sold and prepare statements.

##### *Gross Profit Method*

The gross profit method uses the normal relationship between the sales and cost of goods sold to estimate cost of goods sold. The estimate of cost of goods sold implies an estimate of inventory. The gross profit method is used in situations in which it is not possible to take a physical inventory, mostly for interim financial statements or in determining inventory in the event of fire or casualty.

#### Adjustments to inventory cost

Cash discounts should be treated as a reduction of the cost of purchases. There are two ways to accomplish this:

##### *Discounts lost account*

##### *Discounts account*

#### Inventory valuation / cost flow assumptions

##### *Specific identification*

##### *3 Retail methods*

An inventory method in which most inventory records are maintained at retail.

##### *The three basic steps in any retail method are:*

Find ending inventory at retail

Find cost to retail ratio

Multiply ending inventory at retail by cost to retail ratio to find ending inventory at cost.

##### *Average Cost -*

Calculated by finding a weighted average cost of goods available for sale. It is based on the assumption that the ending inventory consists of a mixture of goods from the beginning inventory and current periods purchases.

##### *FIFO retail method*

First-in, first-out assumes that the earliest goods purchased by the firm are the first goods sold. Therefore, the ending inventory is made up of the latest purchases.

Beginning inventory is excluded from the calculation of cost to retail ratio.

##### *LIFO retail method*

Last-in, first-out makes the opposite assumption from that of FIFO. It assumes that the last goods purchased were the first sold and that the ending inventory consists of the earliest purchases.

#### Inventory valuation methods

Other than historical cost

Inventory valuation and revenue recognition are closely tied. Increases or decreases in inventory prior to sale result in revenue recognition prior to sale.

##### *Lower of cost or market*

##### *Net realizable value*

##### *Replacement cost*

##### *Selling price*

##### *Percent of completion on construction contracts*

##### *Completed contract method*

##### *Revenue recognition at the completion of the production activity*

##### *Installment sales*

#### Inventory Estimation Procedures

Gross margin method

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## Pace General Business Model Outline

Retail Inventory method

Conservative inventory valuation

To provide a conservative valuation of inventory, markups are included as part of the ratio computation but markdowns are excluded. This treatment is said to approximate lower of cost or market.

Dollar value LIFO

Dollar value LIFO retail

### Accounting for Non Current Assets

#### **Fixed Assets**

Constructed Assets

Capital Expenditures

*Additions*

*Betterment*

*Extraordinary repair*

Depreciation

*Straight line*

*Accelerated methods*

*Declining balance*

*Sum-of -the-years'-digits*

*Activity or production methods*

*Service life*

*Productive output*

Exchanges (APB # 29)

*If similar*

*If dissimilar*

#### **Intangible Assets**

Research and Development (FASB #2)

*Elements of R&D*

*Research is planned search ...*

*Development is translation of research findings ... into a plan or design for a new product or process...*

*Strict requirements of FASB #2 designed to standardize what is and what is not R&D cost, which must be charged to expense as incurred*

*R&D arrangements (FASB #68)*

Patents

Organizational Costs

Goodwill (APB # 17)

#### **Long-term Investments in Stocks**

Cost method

Equity method

#### **Investment in Bonds**

#### **Consolidation**

### Accounting for Liabilities

#### **Bonds Payable**

Effective interest method

Straight line method

Bond issue costs

Bonds issued between interest dates

Convertible bonds

Bonds with warrants

Bond redemption

Disclosure of long term obligations

Classification of callable obligations.

#### **Contingencies**

Conditions required to recognize a contingent loss

Gain contingencies

**Troubled Debt Restructuring (FASB # 15)**

**Classification of Short Term Obligations (FASB # 6)**

#### **Income Tax Allocation**

**Accounting for Leases (FASB # 13)**

Different types of leases

## Pace General Business Model Outline

*From the Lessee's point of view*

*Capital leases*

*Operating leases*

*From the Lessor's point of view*

*Capital leases*

*Sales-type leases*

*Direct financing leases*

*Operating Leases*

*Leveraged Leases*

Capital leases

*Criteria*

*Lessee's point of view (one or more of the following)*

*The lease transfers ownership to the lessee by the end of the lease term.*

*Lease contains a bargain purchase option.*

*Lease term is 75 percent or more of the leased property's estimated economic life.*

*Present value of the minimum lease payment is 90 percent or more of the fair market value of the property to the lessor.*

*Lessor's point of view*

*Same as above*

The lease transfers ownership to the lessee by the end of the lease term.

Lease contains a bargain purchase option.

Lease term is 75 percent or more of the leased property's estimated economic life.

Present value of the minimum lease payment is 90 percent or more of the fair market value of the property to the lessor.

*Plus*

*Collectability of the minimum lease payments must be reasonably assured.*

*No important uncertainties surround the amount of unreimbursable costs yet to be incurred by the lessor.*

*Minimum lease payments*

*Discount rate*

*Amortization of the lease and the effective interest method*

Accounting for Capital Leases

Operating Leases

Lease Disclosures

**Accounting for Pensions**

(APB #8 , Pension Reform Act of 1974, and FASB #35)

Accounting for pensions is a complex and difficult problem. Pensions and pension accounting must not only meet the requirements of generally accepted principles, but also the rules and regulations of the Internal Revenue Service and the Employee Retirement Income Security Act of 1974 (ERISA). There are different types of pension plans. Most pensions are funded, and are under the control of a trustee. That is, the employer makes annual contributions to the pension fund. In addition, most plans are qualified pension plans under IRS regulations. This insures favorable tax treatment to both the employee and employer.

Defined benefit plans

A defined benefit plan provides the method for computing the benefits to be paid to the retirees but does not define the annual contribution to be made by the employer. The contribution is based on the benefits to be paid.

Defined contribution plans

A defined contribution plan defines the employer's annual contribution but not the benefits to be paid to the retirees. The benefits are then based on the amount contributed to the fund.

Accounting problems

There are a number of significant accounting problems associated with pensions. The two most significant are

*(1) determining when*

to recognize pension cost expenses and

*(2) determining the amount*

of those expenses and the related liability.

## Pace General Business Model Outline

### *Deferred pension charge or credit*

Methods used to determine pension cost expense may be different than those used for funding purposes. This results in a deferred pension charge or credit.

### Determining pension costs

#### *Normal Cost*

The annual cost assigned, under the actuarial cost method in use, to years subsequent to the inception of a pension plan or to the particular valuation date.

#### *Past Service Cost*

Pension cost assigned, under the actuarial cost method in use, to years prior to the inception of a pension plan.

#### *Prior Service Cost*

Pension cost assigned, under the actuarial cost method in use, to years prior to the date of a particular actuarial valuation. Prior service cost includes any remaining past service cost.

### *Minimum*

The annual provision for pension cost should not be less than the total of

- (1) normal cost
- (2) unfunded prior service cost interest
- (3) possible vested benefits provision

### *Maximum*

The annual provision for pension cost should not be greater than the total of

- (1) normal cost
- (2) 10 percent of past service cost (until fully amortized)
- (3) 10 percent of the amounts of any increases or decreases in prior service costs (until fully amortized) and
- (4) interest equivalents on the difference between provisions and amounts funded.

### Accounting for Stockholder's Equity and Earnings per Share

#### **Stockholder's Equity**

Capital contributed in excess of par value  
Stock issued for less than par value  
Treasury stock  
Preferred stock  
Stock dividends and stock splits

#### **Earnings per Share**

Stock dividends and stock splits.  
Dual presentation  
Common stock equivalents

### **Auditing Standard**

#### Auditing: Types, Processes, Procedures

##### **Types of Audits**

##### **Types of Auditors**

##### **Financial Audit Objectives**

##### **Audit Strategies**

##### **Financial Audit Process**

##### General understanding of client

##### Review of system of internal accounting control (IAC)

##### *Preliminary evaluation*

##### *Compliance tests*

##### *Reliance on system of IAC*

##### Substantive tests

##### Form opinion

##### Issue report

##### **Internal Audit Process**

##### Define audit objective

##### Determine type of audit

Functional, Organizational, Management Study, or Program Audit.

##### Consider constraints

(ROAM)

##### *Resource availability*

##### *Organizational constraints*

## Pace General Business Model Outline

- Availability of sufficient evidence*
- Measurement methods and judgment criteria*
- Conduct preliminary survey
- Make preliminary evaluation of controls
- Draft audit program
- Perform evidence procedures
- Information*
- Evidence*
- Audit evidence procedures:(POCDIMAC)
  - Physical examination*
  - Observation*
  - Confirmation*
  - Documentation*
  - Inquiry*
  - Mechanical accuracy*
  - Analytical review*
  - Circumstantial evidence*
  - Evaluate evidence and draft report
  - Provide for audit response
- Audit Evidence Procedures**
- (POCDIMAC)
  - Physical examination
  - Observation
  - Confirmation
  - Documentation
  - Inquiry
  - Mechanical accuracy
  - Analytical review
  - Circumstantial evidence
  - Assurance Level of Evidence**
  - CPA - sufficient, competent
  - IA - sufficient, competent, relevant, useful
  - Nature
  - Timing
  - Extent
  - Sample selection
  - Internal Control**
  - Responsibility of management
  - Inherent limitations
  - Reasonable assurance
  - Cost/benefit
  - Broad objectives
- (SOAP)
  - Safeguard Assets**
  - Promote operational efficiency
  - Ensure accurate and reliable financial data
  - Encourage adherence to prescribed management policies.
    - Accounting vs. administrative controls
    - Review system to determine reliance on IAC
  - Primary Elements of Internal Control**
- (CATSUP)
  - Competent personnel
  - Authorized transactions
  - Transactions recorded properly
  - Segregation of duties
  - Access to assets limited
  - Periodic comparisons
  - Additional Elements of Internal Control**
- (JEM BIRP)
  - Job rotation

## Pace General Business Model Outline

Enforced vacations  
Mechanical devices (turnstiles)

Bonded employees  
Internal audit department  
Reconciliation  
Renumbered documents

### **Detailed Internal Control Objectives**

Transactions are: (CARRTSVV)

*Classified correctly*

*Authorized*

*Recorded*

*Reasonable*

*Timely*

*Summarized from subsidiary records*

*Valid*

*Valued properly*

### **Evaluating the Internal Control System**

Determine errors (accidental) or irregularities (fraud, intent) that could occur

Review systems design

Form preliminary opinion of IAC system adequacy

Perform compliance tests

Form final evaluation of the system

### **Foreign Corrupt Practices Act**

Prohibits US companies from bribing foreign officials, however, it also contains two accounting provisions for all publicly traded companies:

Keep reasonably detailed records that accurately and fairly reflect company financial activities.

Devise and maintain a system of IAC sufficient to provide reasonable assurance that transactions are properly authorized, recorded, and accounted for.

### **Substantive Audit Tests**

Procedures used: POIVRRAS

Physically examine

Observe

Confirm

Inquire

Vouch

Recompute

Retrace

Analytically review

Scan

**Audit Risk**

**Procedures and Standard**

**Audit Programs and Work Papers**

**Audit Sampling**

**Auditing Computerized Systems**

## Auditing: Roles and Services of CPA's and Internal Auditors

### **Generally Accepted Auditing Standards (GAAS)**

General

(TIP)

*Training and proficiency*

*Independence in attitude and appearance*

*due Professional care -best defense against negligence*

Field work

(SIE)

*Supervision and planning*

## Pace General Business Model Outline

*Internal control*  
*Evidence*  
Reporting  
(CADO)  
*Consistency*  
*Accounting principles*  
*Disclosure*  
*Opinion*  
**The Independent Audit: Purposes**  
Objectives  
*Primary - high degree of assurance to the public*  
*Secondary - benefit management*  
Fair Presentation  
*Materiality*  
*GAAP Guidelines concerning fairness*  
*Fraud detection and disclosure*  
*Disclosure of illegal acts*  
*Related party transactions*  
*Must be disclosed*  
*Adequate disclosure*  
Scope of Financial Statements  
Comparative Statements  
Supplementary and other information  
**Engagements Less than Audits**  
Compilation and review services  
*Compilations = no assurance*  
*Reviews = negative assurance*  
*Audit = strong assurance*  
Review of "Interim Financial Information"  
Letters for Underwriter's  
**Non financial Statement Attestations**  
Reports on Internal Accounting Control (IAC)  
Reports on Financial Forecasts  
"Long Form" Reports

### **Tax Standard**

#### Corporate Tax Formula

(ABC&D)  
**All income and betterment less statutory exclusions**  
less  
**Business ordinary and necessary expenses**  
less  
**Contributions (limited to 10% above)**  
less  
**Dividend received deduction of 80%**  
apply  
**Tax Rates**  
equals  
**Gross Income Tax**  
less  
**Credits and Prepayments**  
equals  
**Net Tax**

### **Internal Reporting Standard**

#### **Introduction**

#### Concepts of Information

Theory of information including its value and cost. Limitations of financial data in terms of historic cost, disclosures, realization of income, economic expectations, and entity segmentation. Internal and external users and their needs

# Pace General Business Model Outline

## Basic Financial Statements

Principal financial statements and their primary purposes. Interim and annual statements. the impact on financial statements from the use of alternative accounting principles. Periodic reporting to lenders and directors.

## Profit Planning and Budgetary Controls

Strategic planning and operating projections. Setting objectives and integrating planning data. Forecasting techniques, including statistical methods and incremental cost relationships. Analysis and reporting of budgetary variances and forecast changes.

## Standard Costs for Manufacturing

Theory of standard costs. Interrelationships with production control, industrial engineering and cost control. Development of standard. Exception theory and variance analysis. Cost allocations to products and processes. Disposition of variance and variance changes.

## Analysis of Accounts and Statements

Ratio analysis and statement of interpretation. Receivables administration dealing with aging analysis and bad debt control. Inventory costing and approaches to physical inventory counts and inventory control. Analysis of fixed asset, depreciation, depletion accounts for management control.

## **Information, Communication, and Accounting**

### Information and Communication Concepts

Information and data are considered synonyms by APB No. 4. Both must be relevant and understandable.

### Influences on Accounting information

#### **Qualitative Aspect**

#### Variety of users and information needs

Economic activity - income, savings, and investment patterns.

#### Social Concerns

#### Accounting Conventions

conservatism, emphasis on income, accountant's judgment.

### Qualitative objectives of financial statements

#### **APB # 4 1970, Supplanted by SFAC # 2**

#### Relevance

The capacity of information to make a difference in a decision; to help users form predictions about the outcomes of past, present and future events; or to confirm or correct prior expectations.

#### Understandability

The quality of information that enables users to perceive its significance.

#### Verifiability

#### Neutrality

#### Timeliness

#### Comparability

#### Completeness

#### **SFAC #2**

#### Users

#### Decision Makers

#### Pervasive Constraint

#### Benefits > Costs

#### User-Specific Qualities

#### Understandability

#### Decision Usefulness

#### Primary Decision Specific Qualities

#### Relevance

#### Reliability

The quality of information that assures that information is reasonably free from error and bias and faithfully represents what it purports to represent.

#### Ingredients of Primary Qualities

#### Relevance ingredients

#### Predictive value

The quality of information that helps users to increase the likelihood of correctly forecasting.

#### Feedback value

The quality of information that enables users to confirm or correct expectations.

#### Timeliness

having information available to a decision maker before it loses its capacity to influence decisions.

## Pace General Business Model Outline

### *Reliability ingredients*

#### *Verifiability*

The ability through consensus among measures to ensure that information represents what it purports to represent. Or, that a chosen method has been used without bias or error.

#### *Neutrality*

Absence in reported information of bias intended to attain a predetermined result or to induce a particular mode of behavior.

#### *Representative faithfulness*

Correspondence or agreement between a measure or description and the phenomenon that it purports to represent. (sometimes called validity).

#### Secondary and Integrating Qualities

##### *Comparability including Consistency*

##### *Comparability*

The quality of information that enables users to identify similarities in and differences between two sets of economic phenomena.

##### *Consistency*

Conformity from period to period with unchanging policies and procedures.

##### Threshold for Recognition

##### *Materiality*

The magnitude of an omission or misstatement of accounting information that in the light of surrounding circumstances make it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement.

### Nature of Financial Accounting Reports

#### **Statement of Financial Accounting Concepts (SFAC) # 5 -**

#### **Recognition and Measurement of Financial Statements of Business Enterprises**

A full set of financial statements for a period should show: Financial Position at the end of the period; Earnings for the period (net income); Comprehensive income for the period (total non-owner changes in equity); Cash flows during the period; Investments by and distributions to owners during the period.

#### **SFAC # 4 Definition of Accounting Elements**

Defines 10 elements - 7 elements of financial statements of both enterprises and not-for-profit organizations and three elements of business enterprises only: investment by owners, distribution to owners, and comprehensive income. It also defines three classes of net assets of not-for-profit organizations and the changes in those classes during the period: permanently restricted net assets; temporarily restricted net assets; and unrestricted net assets.

##### Assets

Probable future economic benefits obtained or controlled as a result of past transactions or events.

##### Liabilities

Probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services in the future as a result of past events.

##### Equity (or net assets)

The residual interest in the assets that remain after deducting liabilities.

##### Characteristics of investments by and distributions to owners

Transactions between an enterprise and the owners as outsiders.

##### Comprehensive income of business enterprise

The change in equity from transactions and other events and circumstances from non-owner sources. It includes all changes in equities except those from investments and distributions to owners.

### **Basic Financial Statements**

#### Balance Sheet

Statement of Financial Position (APB #4)

Reporting on the financial position and its changes

##### **Current Assets**

##### **Non-Current Assets**

##### **Current Liabilities**

##### **Long Term Liabilities**

##### **Owners Equity**

#### Cash Flow

Statement of Changes in Financial Position (SFAC # 95)

##### **Purpose of the statement of cash flows (SFAC # 95)**

##### Primary purpose

## Pace General Business Model Outline

The primary objective of the statement is to provide information about cash receipts and disbursements during the period.

### Secondary purpose

the secondary objective is to provide information about the entities investing and financing activities.

### **Usefulness of the statement of cash flows (SFAC # 95)**

Assess the ability to generate future positive net cash flows.

Assess the ability to meet obligations, pay dividends, and the need for external financing.

Assess the reasons for differences between income and associated cash receipts and payments.

Assess the cash and non-cash aspects of the firms investing and financing activities.

### **3 Categories of the statement of cash flows (SFAC # 95)**

These should total the net changes in cash during the period. The statement should reconcile the beginning and ending cash and cash equivalents balance and report the net cash flows for each of the three categories. The netting of cash inflows and outflows in a given category is generally prohibited. (use the broad treatment).

### Operating Activities

all activities not financing or investing.

### Investing Activities

Includes acquisition and sale of assets other than those sold in the normal course of business.

### Financing Activities

Includes obtaining cash from equity sources and returning cash to owners. Also, includes obtaining cash from creditors and repayment to creditors that is allocated as principle reduction.

### **Elements of Cash Flow Statement**

#### Cash Provided by Operations

Certain changes in current assets and current liabilities do not affect cash provided by operations. They should be reported in their own section of the statement of cash flows. For example, changes in temporary investments; changes in notes receivable and notes payable; changes in dividends payable.

*Net Income from Continuing Operations, or Net Income before  
Extraordinary Items*

*Plus Expenses That Reduce Accounting Net Income That Did Not  
Require Cash*

*Less Income That Increased Accounting Net Income That Did Not  
Require Cash.*

#### *Additions*

*Receivables decrease*

*Inventory decrease*

*Prepaid decrease*

*Accounts Payable increase*

*Accrued Liabilities increase*

*Loss on Sale of Current Assets*

#### *Deductions*

*Receivables increase*

*Inventory increase*

*Prepaid increase*

*Accounts Payable decrease*

*Accrued Liabilities decrease*

*Gain on Sale of Current Assets*

*Equals Cash Provided by Continuing Operations*

### **Sources and Uses of Cash (cash approach)**

The intent is to identify the sources and uses of cash.

The sources and uses are determined by analyzing the changes in the account balance during the accounting period for each account in the balance sheet except cash.

The major difference between the cash approach and the working capital approach is that analysis of the current accounts is incorporated into the body of the cash approach formal statement. Therefore a separate "schedule of changes in working capital" is not required.

### **Steps**

Steps in preparing the Statement of Changes in Financial Position (cash approach)

Obtain a comparative balance sheet, an income statement, and additional information.

Determine the net change in cash for the period.

Analyze and explain the change in each non-cash account to determine the effect that the original transactions had on cash (source or use).

## Pace General Business Model Outline

Identify and report transactions that caused non-cash accounts to change, but had no effect on cash (all financial resources concept).

Report all sources and uses of cash from steps 3 and 4 in the body of the formal statement. The first item reported should be cash provided by operations. Total sources, total uses, and the net change in cash should be identified.

### **Other Considerations**

#### Extraordinary Items

Should be separately presented in the Statement of Cash .. apart from the calculation of cash provided by operations. (Same is true for discontinued operations and the cum effect of a change in accounting principle).

#### Indirect vs. Direct approach

adjusting net income to calculate resources provided by operations is referred to as the "indirect approach". The direct approach ("income statement approach") can be used wherein each revenue and expense is directly converted from the accrual basis to the cash basis.

#### "T" Account approach

an alternative to the worksheet approach

#### Non Cash Activities (SFAC # 95)

The results of non cash activities which represent significant financing and investing activities should be presented in a separate schedule and not part of the formal statement of cash flows.

### Income Statement (APB # 4)

#### **Revenues**

General rule APB #4 - revenue is generally recognized when;

earning process is complete and an exchange has taken place.

#### **Expenses**

General rule expenses are:

matched against related revenue by:  
*expensed as incurred or a systematic and rational allocation*

#### **Gains / Losses**

peripheral transaction and all other transactions except revenue/expense or investment/withdrawal by owners.

### **Format of Income Statement**

#### Single Step

all revenues as a group, all expenses as a group.

*Revenues*

*Expenses*

*Gains*

*Losses*

(Multiple Step)

*Sales*

*Cost of Sales*

*Gross Profit*

*Expenses*

*Net Income Before Taxes*

### Statement of Retained Earnings

The purpose of this statement is to show the amount and nature of all changes that have occurred during the period in the retained earnings account.

Some companies combine the this statement with the income statement. A major objection to this presentation is that the net income does not appear as the "bottom line" final figure in the statement.

Other companies present the changes in retained earnings along with other changes in owners equity in a statement of changes in owners equity.

#### **Net Earnings or Loss**

#### **Prior Period Adjustment**

#### **Dividends Declared**

### Related Issues

#### **Extraordinary Items and Prior Period Adjustments (APB #30)(FASB #16)**

#### Extraordinary Items (APB # 30)

## Pace General Business Model Outline

Both unusual and infrequent

Disclosed separately on the income statement below net earnings from operations, net of applicable income taxes. The effect on earnings per share must be disclosed.

Prior period adjustments (FASB # 16)

Both are presented as adjustments to beginning retained earnings.

*Correction on a error in the financial statements of a prior period.*

*Adjustments that result form realization of income tax benefits of pre-acquisition operating loss carry forwards of purchased subsidiaries.*

**Disposal of a Business Segment (APB # 30)**

Results of the segment's operations and gain or loss from the sale are disclosed separately on the face of the income statement before extraordinary items, net of applicable income tax effects. The effect on earnings per share is not required but may be presented. If a loss is expected, it should be provided for in the financial statements at the measurement date (the date that management approved a plan committing the entity to dispose of the segment).

**Accounting Changes and Errors (APB # 20)**

Change in Accounting Principle

*Financial statements of prior periods should not be changed (minor exceptions)*

*Cumulative effect on retained earnings at the beginning of the period in which the change is made should be included in the net income of the period of change.*

The effect is shown after extraordinary items but before net income on the face of the income statement.

*The effect on earnings per share of the change must also be disclosed.*

Change in Accounting Estimate

Accounted for in the period of the change in estimate and future.

Change in Accounting Entity

The financial statements of all periods present should be restated (retroactive).

Correction of an Error

Adjustment to retained earnings at the beginning of the period in which the error is discovered.

**Notes to Financial Statements (APB # 22)**

Accounting Policies Disclosure

Information about accounting policies must be disclosed. Disclosure should include principles and policies which involve the following:

*A selection from alternatives*

*Principles and methods peculiar to the industry.*

*Unusual or innovative applications of GAAP.*

**Interim Financial Reporting (APB # 28)**

General rule - same principles and practices used for annual statements.

Revenue - same basis

Costs - associated with revenue same way.

certain exceptions such as estimated gross profit rates (ABP # 28)

*Other costs and expenses*

*As incurred or allocated*

*As incurred if can't identify with activities or benefits of other periods.*

*Arbitrary assignment of costs to an interim period should not be made.*

*Gains and loses should not be deferred unless they would have been deferred at year end.*

*Seasonal variations - disclose and consider 12 month statements.*

*Provide for income taxes at the estimated effective tax rate.*

**Restating Financial Statements (FASB #s 33, 70, 82)**

### **Analysis of Financial Statements**

Nature of Financial Statement Analysis:

**To determine risk and the anticipated return on an investment.**

The relationship among financial statement amounts and the stability of such amounts over time provide evidence as to risk and return. The purpose of this analysis is to evaluate such interrelationships.

# Pace General Business Model Outline

## **Analytical Procedures**

### Ratio

Relationship between two numbers, need not be limited to a single statement.

### Turnover

special form of ratio. IS over BS. Cost of sales over Average Inventory. Inventory turnover is the number of times in an accounting period that the Balance Sheet item is consumed.

### Component percentages

Amount of one financial statement item is related mathematically to another financial statement item (common size financial statements).

### Trends

Trends plot operating performance over time for the purpose of indicating stability or direction of the items.

## Analytical Methods of Major Investor Groups

### **Short Term Creditor's Analysis**

Ratios of significance generally indicate quick return of investment.

#### Current Ratio

Indicates an entities ability to meet its short term obligations.

*Current Assets (over)*

*Current Liabilities*

#### Quick Ratio

Indicates the entity's ability to meet its short term obligations with items most easily converted to cash.

*Current Assets (less)*

*Inventory (and)*

*Prepaid (over)*

*Current Liabilities*

#### Working Capital into Total Assets

Measures the liquidity status of all the entity's assets.

*Total Assets (over)*

*Working Capital*

#### Accounts Receivable Turnover

the number of times in an accounting period that account receivable is consumed by sales.

*Net Credit Sales (over)*

*Average Accounts Receivable*

*Days Sales in Accounts Receivable*

Days in accounting period over turnover.

*days in period/365 (over)*

*ART*

#### Inventory Turnover

Indicates the number of times the entity liquidates its inventory during the period. This ratio can be calculated for each class of inventory (RM, WIP, FG).

*Cost of Sales*

*Average Inventory*

*Average age of inventory*

*days in period/ 365 (over)*

*Inventory turnover*

### **Long Term Creditor's Analysis**

Concerned with the debt paying ability of the entity over time. So all the ratios for the short term creditor apply also to the long term creditor plus these three ratios, which measure the entities leverage, or the ability of the enterprise to use debt financing to improve the rate of return on stockholders' equity. The key is paying a lower rate on borrowed funds than what the entity is earning on its investments.

#### Debt Ratio

*Total Debt (over)*

*Total Assets*

#### Equity Ratio

*Total Equity (over)*

*Total Assets*

#### Debt to Equity Ratio

*Total Debt (over)*

*Total Equity*

### **Preferred Stockholder's Analysis**

Concerned with same as long term creditors plus:

## Pace General Business Model Outline

### Times Interest Earned Ratio

Measures the entities ability to meet interest payments with current earnings.

*Net Income Before Income Taxes (over)*

*Interest Requirement*

### Times Preferred Dividends Earned Ratio

Measures the entity's ability to meet stipulated preferred dividend commitments out of current earnings.

*Net Income (over)*

*Preferred Dividends Requirement*

### **Common Stockholder's Analysis**

Concerned with price in relation to perceived market value and with dividend paying ability.

### Earnings Per Share

*Net Income (less)*

*Preferred Dividends (over)*

*Weighted Average Common Shares Outstanding*

### Price Earnings Ratio

Reflects the number of dollars investors are willing to pay per dollar of earnings.

*Market Price (over)*

*Earnings Per Share*

### **General Analysis**

### Return on Sales

Measures operating efficiency. High return on sales = high efficiency.

*Net Income (over)*

*Sales*

### Asset Turnover

Measures operating effectiveness.

*Sales (over)*

*Assets*

### Return on Investment

Measures both efficiency and effectiveness of operations. Investment amount may be total assets or stockholders' equity.

*Net Income (over)*

*Assets*

### Other

### **Operating Cycle**

Inventory

Sales

Accounts Receivable

Cash

Inventory

### **List of Objectives of financial statement analysis**

Liquidity

Profitability

Performance

Leverage

Long run solvency

Market price

Operating cycle

Interest coverage

Return on investment

### **Cost Accounting Standard**

### Cost Terms and Classifications

### **By Nature**

Manufacturing costs

All production costs incurred to complete a product and place it in a salable condition.

Direct materials

All raw material costs that become an integral part of the finished product and that can be conveniently and economically assigned to a specific unit manufactured.

Factory overhead (Burden)

All manufacturing costs other than direct material and direct labor. Examples include: rent, depreciation, utilities, indirect materials, and indirect labor.

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PM 04

## Pace General Business Model Outline

### Indirect materials

Materials and supplies that cannot be identified to specific units manufactured.

### Indirect labor

Labor costs that cannot be identified to specific units manufactured, examples include supervisors, maintenance, and personnel.

### Prime costs

Total direct materials and direct labor.

### Conversion costs

Total direct labor and factory overhead.

### Non manufacturing costs

Costs related to selling and other activities not related to the production of goods.

### Common costs

Costs that benefit two or more operations, products, or services.

### **By Variability**

For planning and control.

Classifies all costs as either variable or fixed.

### Variable costs

Costs that change directly in proportion to changes in activity, (direct materials, direct labor, and variable factory overhead).

### Fixed costs

Costs that remain unchanged for a given time period regardless of changes in activity, (rent, depreciation, and insurance).

### Semi-variable costs

costs that contain both fixed and variable elements, (social security taxes, heat, lights, and power).

### **By Inventory Type**

### Raw materials

Cost of all purchased but unused raw materials at period end.

### Work in process

Cost associated with partially complete goods at period end.

### Finished goods

Costs of completed but unsold goods at period end.

### **By Attachability**

For external reporting.

Question is "are the costs inventoriable"?

All costs classified as either product costs or period costs.

### Product costs

Costs associated with getting inventory into a sellable location and condition, (raw materials, direct labor, all manufacturing overhead ( absorption costing)).

### Period costs

Costs that are charged against current period income. Examples include: selling and administrative expenses. Fixed factory overhead is considered a period cost under direct costing.

### **By Behavior**

Costs used for planning and control.

All costs classified as either variable or fixed.

### Budget

A plan of action for a specific time period expressed in dollars or units or both.

### Static budget

A budget prepared for a single level of activity.

### Flex budget

A budget prepared for a range of activity. Budget = Fixed + (Variable x Volume).

### Continuous budget

A twelve month budget that perpetually adds data for a month or quarter in the future as the data for the just ended period is deleted.

### Direct costing

(Variable costing, marginal costing)

A type of product costing in which only variable manufacturing costs are charged to the product. Fixed are expensed as incurred. Non GAAP. Used for internal reporting.

### Absorption Costing

(Conventional costing, full costing)

## Pace General Business Model Outline

A type of product costing in which variable and fixed production costs are assigned to the product. This method is acceptable for GAAP, SEC, and Tax reporting purposes.

### **By Timing**

Costs used for decision making.

Costs classified as either incremental costs or sunk costs.

#### Incremental costs

(Relevant costs, differential costs)

The additional costs to be incurred if one of two alternatives is chosen. Incremental costs must be future costs that are different for each alternative. Incremental analysis is used to determine if other alternatives would yield better results.

#### Sunk costs

(Incurred costs, irrelevant costs)

Costs that have been incurred and therefore are irrelevant to a decision.

#### Opportunity costs

The maximum amount that could have been received by selecting an alternative use of resources.

Opportunity costs should be considered in decision making.

### **By Controllability**

For performance evaluation.

All costs are either controllable or uncontrollable.

See factory overhead variances.

#### Controllable costs

#### Uncontrollable costs

### Job Order Costing

A costing system in which the cost of direct materials, direct labor, and factory overhead are individually assigned to each unit produced. Costs assigned may be standard or actual. Factory overhead costs are assigned using a predetermined overhead rate. Job order costing is typically used by industries whose products are distinguishable.

#### **Predetermined overhead rate**

Determined in advance because actual costs and total activity will not be known until the end of the period. Most billing and cost control systems require such cost information prior to period end.

The overhead rate is determined as follows:

#### Estimated manufacturing overhead (over)

#### Activity base

Common activity bases used are: direct labor hours; direct labor cost, materials cost, machine hours, and units produced.

The activity base chosen should closely correlate to changes in overhead costs. For example, in a highly automated environment, machine hours might be an appropriate activity base.

#### **Indirect cost allocation**

Costs incurred by service departments that directly assist the production process are inventoriable. These costs must be allocated to the production department in some reasonable manner so they will be ultimately charged to the product. Predetermined rates are usually charged to facilitate timely cost accumulation and identification of variances.

#### Direct method

Service department costs are allocated directly to production departments.

#### Step method

Service department costs are allocated to other service departments and then to production departments.

Once a service department is closed, no further costs are allocated to it.

#### Simultaneous equations

Can be used, but the additional precision gained usually does not justify the added cost.

### Process Costing

Typically used by industries whose products are not distinguishable.

#### **FIFO method**

Assumes that the product in beginning inventory is the first to be transferred out. For costing purposes, the units in beginning inventory and their related costs are kept separate from the units placed into production and costs incurred during the period.

A B C D E

FIFO = Costs over Units = BCD over BCD

## Pace General Business Model Outline

### Weighted average method

Combines all units and costs in the production process during the period. The same unit cost will result for all units.

A B C D E

Weighted average = Costs over units = ABCD over ABCD

Same if no beginning inventory

The same unit cost will result under both FIFO and weighted average methods if no beginning inventory.

### **Five steps to process costing problems**

Account for all units

Compute equivalent finished units

Compute unit costs

Prepare cost of production report

Account for all costs

(from notes) Develop an average

*Track units*

*Track costs*

*Adjust to equivalent units*

*Calculate cost per unit*

*Assign cost per unit to ending inventory, transferred out, or spoilage.*

Spoilage

*Normal*

Spoiled units are ignored in the computation of equivalent finished units, thereby resulting in increased unit cost.

*Abnormal*

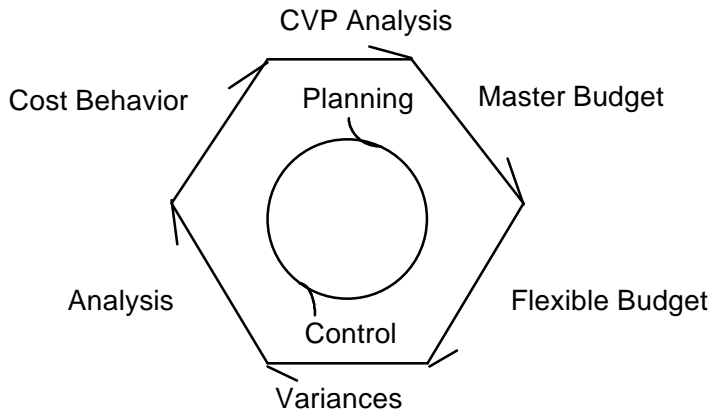
Cost of spoiled units is written off as a period loss.

# Pace General Business Model Outline

## **Analysis Standard**

For businesses, budgets assume a particularly important role as the monetary expression of the objectives of the firm. However, the budget is just one part of a comprehensive planning and control system designed to achieve the ultimate goals of the firm. In order to have an effective budgeting and control process, the firm should study the relationship between cost, volume, and profit. Therefore, this section is the same as Profit Planning Standard.

## Managerial Accounting Tools for Planning and Control



## **Cost Volume Profit Analysis**

Selling price; number and type of products to manufacture; amount to spend on promotion costs, and type of equipment to buy are decisions that are made after the relationship between cost, volume, and profit has been completely analyzed. The key to establishing this relationship is understanding the value of the contribution margin.

### **Contribution margin**

(Marginal income, marginal contribution)

Difference between sale price and variable costs. It is the amount available to cover fixed costs first and then provide a profit. Contribution margin can be both expressed in terms of total dollar values and in terms of contribution margin per unit.

### **Variable costs**

Costs which vary directly with production and can include costs for both manufacturing and selling and administrative activities.

### **Break-even analysis**

The break-even point is the point where there is neither a profit nor a loss from sales. It is the point where all fixed and variable costs are covered and nothing is left for profit. The break-even point can be expressed in terms of units or sales dollars.

### **Equation Approach**

Sales = Net Income + Fixed Expenses + Variable Expenses

### **Contribution Margin Approach**

Fixed Costs / Contribution Margin = Break-even in units.

Fixed costs / [1 - Variable cost ratio] = Break-even in dollars

Variable cost ratio = Variable costs / Selling price

### **Flexible Budgets**

Make performance analysis possible when output deviates from planned levels. The actual volume produced is used for cost analysis in determining the efficiency of operations. Variable costs are viewed as having a linear relationship with units produced. Fixed costs are considered constant within a relevant range of activity.

### Types of fixed costs

#### **Programmed costs**

## Pace General Business Model Outline

(Managed or discretionary costs)

Costs that are budgeted one period at a time and are subject to change within the period. These costs differ from variable costs in that they are not correlated to the level of activity. Examples include R&D, training costs, and consulting fees.

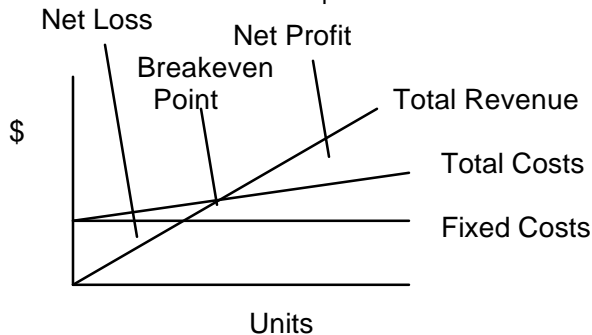
### **Committed costs**

Costs that require a longer permanent commitment by management. (depreciation, long-term lease agreements, property taxes, and insurance.)

Such costs are not responsive to short term operating decisions.

### Graphic Approach

Illustrates the interrelationships of the revenue and expense data.



### **Assumptions underlying CVP analysis**

The break-even chart is based on a large number of assumptions. If the assumptions are not true, the break-even point or desired profit level may vary.

#### All costs are linear

And can be divided into either fixed or variable components. Fixed costs remain constant while variable costs change proportionally with variations in volume.

Sales price per unit does not change  
with changes in volume.

#### Sales mix is constant

If multiple products are simultaneously being analyzed.

#### The price of the input factors does not change.

Materials, labor, etc.

#### The only factor that influences costs and revenue is changes in sales volume.

No allowance is made for efficiency and increased productivity as volume increases.

### **Semi variable costs**

Costs that contain both fixed and variable elements, (social security taxes, heat, lights, and power).

Methods such as the method of least squares and high-low method are used to determine the fixed and variable components of a semi-variable

Another example would be a service, such as maintenance, that requires a minimum fee plus additional fees for agreed upon work.

## **The Budgeting Process**

### **Objectives of budgeting**

To force managers to analyze the company's activities.

To direct some of management's attention from the present to the future.

To enable management to anticipate problems or opportunities in time.

To motivate managers to achieve the company's goals and objectives.

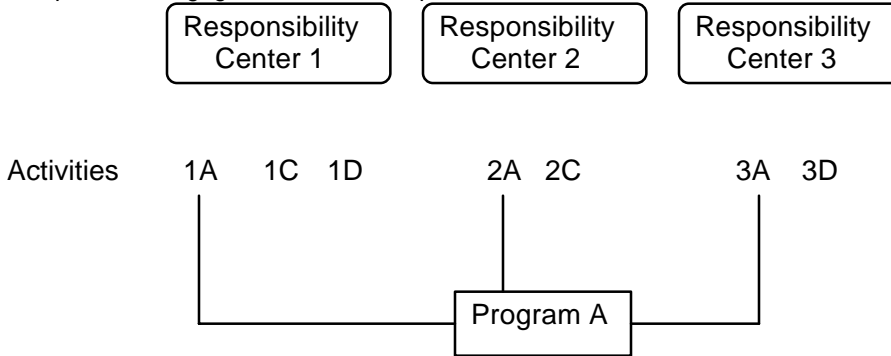
To remind managers of actions they have decided on.

To provide a reference point to measure control.

# Pace General Business Model Outline

## Activity Budgeting

When emphasis of budgeting is placed on activities rather than departments. This method is effective when a department engages in several independent activities.



All activities are independent except those which relate to program A. In preparing the budget for these responsibility centers, emphasis is placed on programs. Program A and the individual separate programs or activities at each center. Activity budgeting is called program planning.

### Zero Base Budgeting

Requires each manager evaluate the benefits expected from the requested program, and to rank them according to their desirability

**Activities divided into packages**

**Each package is ranked ordinally**

**Managers at higher levels consolidate, providing their own ordinal rankings.**

### **Administration of Budget**

The budget is usually administered by a budget director, possibly in combination with a budget committee.

Sales budget

Production budget

Direct materials budget

Direct labor budget

Expenses budget

Cash budget

Pro forma financial statements

## **Direct Costing**

### **Absorption Costing and Direct Costing**

#### Summary of costs included

Direct costing includes all variable costs of production, whereas absorption costing includes all fixed and variable costs of production.

The difference is fixed factory overhead.

Absorption Costing      Direct Costing

DM                              DM

DL                              DL

FO                              VFO

#### Effects on net income

When production and sales are the same, net income under each method is the same. When production exceeds sales, absorption costing income will exceed direct costing income.

### **Internal use of direct costing**

Direct costing is commonly used internally because it facilitates easy determination of the contribution margin, therefore, direct costing lends itself to CVP analysis.

### **External use of direct costing**

Not acceptable for GAAP, SEC, or Tax reporting purposes.

## **Contribution Margin Analysis**

## Pace General Business Model Outline

The causes of an increase or decrease in the budgeted contribution margin can be isolated by analyzing the variance.

### **Sales price variance**

For each product, equal to the actual minus the standard sales price multiplied by the quantity sold.

### **Cost variance**

For each product, equal to the actual minus the standard cost multiplied by the quantity sold

### **Quantity variance**

For each product, equal to the actual minus the standard contribution margin multiplied by the quantity sold.

### **Mix Variance**

For each product, equal to the actual minus the budgeted quantity sold multiplied by the difference between the budgeted and average contribution margin, where the average contribution margin is the average for all units produced, not only this product.

## **Standard Cost Variance Analysis**

### **Standard Costs**

A costing system in which the uniform costs are assigned to products and differences between standard and actual are accumulated in variance accounts. Use of standard gives management criteria for evaluating performance. Standard costs should always be developed based on normal production capacity.

#### Use of standard costs

##### **Cost control**

To have an effective cost control system, there is a need to have a standard that specifies how the job is to be done and how much it should cost.

##### **Establishing budgets**

Standard costs are a source of information for estimating requirements.

##### **Inventory costing**

GAAP require historical actual costs for inventory purposes in most instances, but if variances represent efficiencies or inefficiencies, it may be appropriate to charge them against income in the period incurred rather than allocate them.

##### **Product pricing**

National Association of Accountants research study suggests standard costs are more easily adjusted and projected into the future than are past actual costs for the following reasons:

Standard costs are free from distortions caused by excess spoilage, reoperations, and so on.

Standard is easily adjusted to reflect changes in materials and labor prices.

Standard overhead rates based on normal activity level are an acceptable basis for pricing that provides for the full recovery of overhead costs in the long run.

Standard costs for marketing activities can easily be assigned to the product, although not entered in the inventory records.

##### **Motivating employees**

A standard cost developed jointly by management and the individual responsible for the costs, if accepted by the individual as his or her own personal goal, can be a motivating influence.

##### **Reducing paperwork costs.**

Since the inventory ledger is kept only in terms of quantity.

Less time to prepare budgets and production reports.

Analysis easier because deviations from standard are highlighted.

#### Variance Analysis

##### **Material variances**

The responsibility for direct materials is split between the purchasing and production managers. The purchasing manager has the responsibility of acquiring the proper quantity of raw materials at the time needed and at the correct price. The production manager must see that the materials are used efficiently. It is important for each manager to be responsible for only those factors over which he or she has control. Using both price and quantity standard helps in assigning responsibility to the individual in a position to exercise control over the costs. Isolating price variance at time of purchase enables earlier corrective action. Where price is stable and the amount of inventory carried is low, the price variance can be isolated at time of issue.

##### **Materials Price Variance**

Actual Quantity Purchased

# Pace General Business Model Outline

Actual Price  
 Standard Price  
 Material Price Variance  
**Materials Usage Variance**

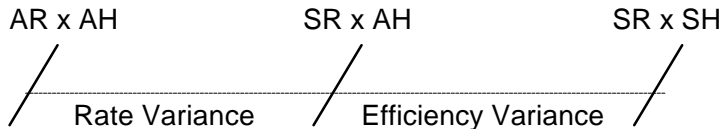
Actual Quantity Used  
 Standard Quantity Allowed  
 Standard Price  
 Material Usage Variance

**Labor Variances**  
 Direct Labor Rate Standard  
 Determined by negotiations.  
 Determined by prevailing local labor market.  
**Labor Efficiency Standard**

Time in motion studies  
 Work layout.  
 Condition of equipment.  
 Availability of materials.  
 Past performance.  
 Methods engineer.  
 Effect on motivation.

**Labor Rate Variance**  
 Actual Hours  
 Actual Rate  
 Standard Rate  
 Rate Variance

**Labor Usage Variance**  
 Actual Hours  
 Standard Hours  
 Standard Rate  
 Usage Variance

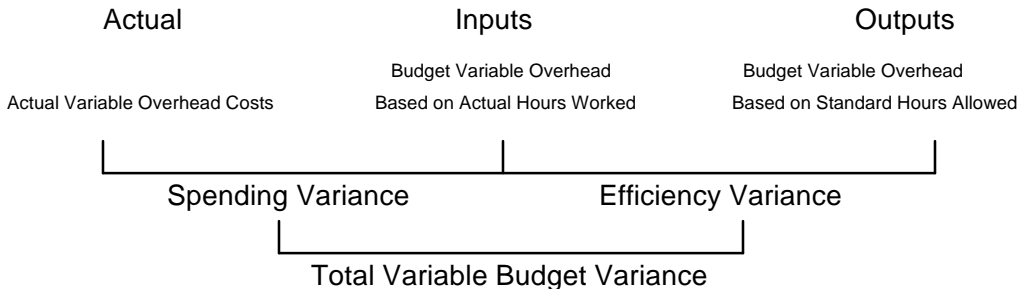


**Factory Overhead Variances**

Because of the nature of fixed costs, it is necessary to break the overhead costs into two parts- fixed and variable- in order to estimate them accurately for any given output level.

Variable overhead analysis.

The variable overhead cost fluctuates proportionally with changes in activity levels. The variable rate is developed after analyzing the past behavior patterns of the overhead costs and by considering expected changes in those costs. This rate is correlated with an activity variable such as direct labor hours, direct labor costs, machine hours, materials costs, or units produced. If the costs are based on an input activity, two variable overhead variances can be calculated: spending and efficiency. If the variable overhead costs are correlated with some measure of outputs (for example, units, pounds, and so on), then only a budget variance can be determined.



Fixed overhead Analysis

The budgeted fixed overhead costs do not change as the activity level changes within a given range. The two variances normally determined in fixed overhead analysis are a budget and a volume variance.

# Pace General Business Model Outline

## Activity level

For direct materials, direct labor, and variable overhead, the level of activity used in establishing the standard is not too critical as long as the operations are within a reasonable range; however, this is not true for fixed overhead. Two activity levels are frequently used: expected annual and normal level. The expected annual level is simply the activity level anticipated for the next period while the normal level represents the average output expected over a long enough time period to incorporate sales trends. In order to use the normal approach, management must be able to forecast sales with a reasonable degree of accuracy for a period longer than 1 year. Since this is not an easy task for many businesses, the expected annual output is the more frequently used activity level.

It would appear that volume variances resulting from the use of the normal approach should be carried forward in the balance sheet at year end. The accounting profession and the Internal Revenue Service, however, have not allowed this. Under normal and expected annual output, the variance is frequently charged to cost of goods sold. While this may appear to make the two methods, in the final analysis, result in the same net income per year, it does not, since the amount of fixed costs in inventory is different.

## Volume variance

A volume variance occurs when there is a difference between the planned and actual production levels and the fixed costs are applied to the units as they are produced. Thus a process that uses a direct cost system does not have a volume variance. The volume variance is also referred to as the capacity, idle capacity, or denominator variance.

The volume variance is the amount of over or under absorbed fixed overhead cost. It is simply caused by the fact that the actual output does not equal the planned output. It is known as the uncontrollable variance.

## Two variance Method

To determine the controllable variance.

*Actual Fixed Overhead*

*Budgeted Fixed Overhead*

*Applied Fixed Overhead*

*Uncontrollable Volume variance*

*Controllable Budget variance*

*Total fixed overhead variance*

## Three variance method

To break the controllable into spending and efficiency.

*Actual inputs*

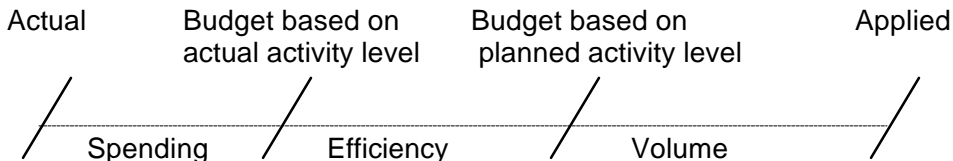
*Budget based on actual hours worked*

*Budget based on standard hours allowed*

*Spending variance*

*Efficiency variance*

*Total budget variance*



## Disposition of Variances

If material, allocate between costs of goods sold, work in process, and finished goods based on the applied overhead in each account.

If immaterial, write off to cost of goods sold.

## Mix and Yield Variances

A mix variance occurs when the combination of materials placed in process differs from the standard mix.

A yield variance occurs when the quantity produced differs from the expected output based on the total quantity of materials placed in the process.

## **Divisional Performance Evaluation**

### **Nature of Decentralization**

When the power to make decisions and take action is shifted from top management to others in the organization, the two primary categories of decentralization are:

#### Operational

Occurs when technological or geographical specialties necessitate divisions.

## Pace General Business Model Outline

### Motivational

Occurs when long chains of command result in too impersonal an organizational structure. Decentralization provides local motivation and encourages internal competition.

### **Return on Investment (ROI) Analysis**

ROI is the most widely used measure of divisional performance.

ROI = Net Income over Investment.

### Difficulties of ROI Analysis

#### **Net Income**

The net income used should only include those revenues and expenses within the manager's control

#### **Investment**

Decisions of which items and how to value them must be made.

#### **Goal congruence**

Attention may be directed away from the common goal of the company as a whole. Attention is directed to the short run.

### **Residual Income**

Eliminates the goal congruence problem.

Residual income is the net income of division less cost of capital deduction.

This method stresses dollar value of residual income rather than return on investment.

### **Transfer Pricing**

When ROI's are used to value divisional performance, prices of interdivisional transfers must be carefully established. The pricing system selected should provide for:

#### Goal Congruence

goals of divisions coincide with goals of the company.

#### Performance Evaluation

managers must be held responsible only for those decisions which are controllable by them.

#### Autonomy

Each unit must be free from constant interference by top management.

### Current Practices

#### **Market price**

Problems may arise if the division looks outside the firm.

#### **Negotiated price**

Conflict among division managers.

#### **Selling division's costs**

Either full cost, marginal costs, or cost plus profit. The advantages of using cost are ease of administration, availability of cost, potential for reducing conflict between managers.

#### **Opportunity costs,**

The transfer price is based on the outlay of costs to the point of transfer plus the opportunity costs for the firm as a whole. Emphasis is on goal congruence.

#### **General Motors Example**

Chevy, Pontiac, Buick, Olds, Caddy, Trucks

Divide and Conquer

Problem of how do you evaluate.

ROI dysfunctional behavior. Numbers game, short run focus, no incentive to replace obsolete equipment, because of the way we measure investment.

ROI increases just because of depreciation. ROI = NI over Investment

How should we calculate investment.

Adding back depreciation would not take care of the whole problem- opportunity cost, inflation.

Use Residual Income to eliminate goal congruence problem

ROI good for measuring economic efficiency and effectiveness, but not for personnel evaluation.

### **Comparing Centralization and Decentralization**

You can have similar org charts but one company can be more decentralized than another because the key is where the decisions are being made.

### Advantages of Decentralization

#### **Quicker decision making process**

#### **Better information**

#### **Greater capacity for problem solving**

#### **Development of managers**

#### **Motivation of employees**

## Pace General Business Model Outline

### Disadvantages

Loss of control

# Pace General Business Model Outline

## Financing Standard

### Introduction

#### **Roles of Financial Management in an Organization**

Financial management is concerned with the proper specification of the financial goals of the firm as well as the measurement of performance relative to the achievement of those objectives. The scope of the financial planning function varies significantly according to the size and type of the business entity established by the owners. Smaller firms typically commit fewer resources to the total finance function because discretionary capital is less available and economic survival is the dominant issue. Nevertheless, the primary financial objectives are the same for both large and small companies, even though the depth of analysis may be sharply different among them.

### **Working Capital Finance / Near Term Resources**

#### **Objectives of the Firm**

##### Social goals

such as the elimination of pollution or the hiring of employees on an affirmative action basis

##### Community goals

the reduction of local unemployment and the revitalization of the inner cities.

##### Financial goals

in a private enterprise system the financial goals are placed first among the priorities of top management. Nevertheless, most large businesses do pursue multiple objectives which includes social and community goals along with financial goals.

#### **Three key variables to Investment Decisions;**

##### Return expected

##### Risk assumed

##### Time value of money

#### **Net Working Capital**

Near term assets less near term liabilities; Current Assets less Current Liabilities.

#### **Near Term Assets:**

Turning within one year or within production cycle

##### Cash

##### Marketable Securities

##### Accounts Receivable

##### Inventory

#### **Near Term Source of Funds**

Paid within one year.

##### Accounts Payable

##### Taxes Payable

##### Bank loans

##### Factoring

##### Leasing

##### Current Portion Term Loans

#### **Liquidity Management**

##### Cash

##### **Currency and demand deposits.**

##### They are non-earning and liquid.

They are held for transactions, precautionary, speculative motives only.

##### **Methods to expedite cash inflows:**

##### Tighter credit terms

##### Prompt billing

##### Factoring

##### **Methods to delay cash outflows:**

##### Paying late

##### Using check float,

##### Etc.

## Pace General Business Model Outline

### Marketable Securities

**Marketable Securities** are temporary excess funds,  
treasury bills  
commercial paper  
certificates of deposit.

### Accounts Receivable

**variables include:**

credit term length  
cash discount offered  
extent of collection efforts  
special terms to regular customers  
quality of Receivables

**Collection policy addresses the tradeoff between cost of collection and cash collected.**

### Inventory

**Tradeoff between sales lost and carrying cost**

**Inventory turnover**

measures how effectively the inventory portion of working capital is being used.

Cost of Sales (over)

Average Inventory

**Number of days in inventory**

measures the efficiency of inventory management.

360 (over)

Turnover

**Economic Order Quantity (EOQ)**

EOQ minimizes order and carrying costs.

but, does not measure shortage costs.

square root of cut over carry

cost per order

units demanded per time period

carrying cost

### Sources of Short Term Financing

**Trade Credit -**

readily available but cost if not taken. Also, can hurt credit rating if pay too slowly.

**Commercial Paper**

Unsecured short term promissory notes sold in the money markets, but not normally available to small firms.

**Bank Loans**

Can be fixed term, an unsecured line of credit, or a revolving credit agreement.

### Methods of Interest Calculation

**Regular**

Interest (over)

Borrowed amount

**Discounted**

Interest (over)

Borrowed amount less interest

### Factoring

The sale of accounts receivable to a factor.

**Higher interest cost than bank loans.**

**Can eliminate credit department accounts, receivable staff and bad debts (if non recourse).**

**Often, Factors deduct a 10% reserve which will be returned after 60 days.**

### **Intermediate Term Financing**

Concerns the matching of an asset's cash inflow with the required financing cash outflows.

Creditors protect their security interest by filing the UCC form

**locally at the county seat for real estate and fixtures and centrally (Olympia) for personal property.**

# Pace General Business Model Outline

## Bank Term Loans

One to five year term loans are usually collateralized. They may be at a fixed or variable interest rate. Each payment is applied first to interest and then to principal. Intermediate term loans may be more flexible than long-term financing.

## Leases

An "off balance sheet" source of financing, often with a purchase option at the end of the term. Tax deductible to the lessee.

### **Lease vs. Term Borrowing decision**

Take present value of cash flow under both alternatives. Lease payment and interest portion of term loan should be net of tax. Factor in depreciation expense.

## **Long Term Financing / Capital Structure**

### **Important decision**

The investment in and management of permanent or fixed assets by the firm is the most important decision for two reasons:

- (1) The dollar amount committed is usually three to ten times the magnitude of dollars devoted to ordinary working capital.
- (2) The term nature of fixed capital assets is, of course, much longer duration which requires more effort on the part of management before the investment decision is made.

Once the investment in fixed capital is made there is little opportunity to recoup all the dollars committed in the event that a disinvestment is deemed desirable.

### **Interactive subsystem**

The sources and uses of funds employed in the long-term financial planning process are usually analyzed in the context on an interactive subsystem.

### **Fixed investment techniques - Capital budgeting**

Capital budgeting describes the techniques recommended for making the fixed capital investment.

### **Concepts for planning the source of funds:**

Cost of capital

Capital structure

Dividend policy

Institutional sources of Financing

### **Capital Structure Planning**

The object of capital structure theory and practice is to determine what the optimal financing mix consists of that provides the firm with the least expensive funds for capital investment. In particular, the problem is to find the best ratio of debt to equity to use in the firm's overall capital structure such that the total value of the business is maximized at each point in time. Before considering certain theoretical models of capital valuation, the idea of leverage must be developed first.

### Leverage Concept and Formulas

**Measures the relative amount of the firm's total capital structure is derived from fixed outside sources, such as debt.**

Increasing leverage creates additional risk, because fixed debt service costs increase to take larger percentage of operating income, gamblers ruin concept.

A firm should increase debt as long as the marginal return on investment exceeds the marginal cost of the related capital.

### **Types of Leverage**

In financial management there are two basic types of leverage, operating and financial.

#### Operating Leverage

refers to the degree that fixed costs are utilized in the production process during one complete cycle.

*impact of decision on earnings before interest and taxes (EBIT) with changes in the variable cost to fixed cost ratio.*

*In many companies, the ratio of gross working capital to fixed assets is a good surrogate for the variable cost to fixed cost relationship.*

#### Financial Leverage

refers to the percentage of fixed financing costs in the total cost of capital to the firm. Since debt financing incurs fixed interest charges, the ratio of debt to equity or total capitalization is one common measure of financial leverage.

## Pace General Business Model Outline

### **Leverage Formulas**

#### Income Statement Skeleton

*Sales*

*Less Cost of Goods Sold*

*Equals Net Operating Income*

*Less General and Administrative Expense*

*Equals Net Income*

#### Degree of Total Leverage (DTL)

*% change in Net Income (over)*

*% change in Sales*

#### Degree of Financial Leverage (DFL)

*% change in Net Income (over)*

*% change in Net Operating Income*

#### Degree of Operating Leverage (DOL)

*% change in Net Operating Income (over)*

*% change in Sales*

### **Capital Budgeting**

Models of capital valuation.

The technique and procedures used in making long term financing decisions.

Important because both dollar value and time factor are high.

#### Payback Method

Easy to calculate, ignores time value of money.

#### Net Present Value

The excess of present value of cash inflows over present value of cash outflows.

#### Internal Rate of Return

Compared to investment return.

#### Profitability Index

Ratio of present value of future cash inflows over cost.

#### Accounting Rate of Return

Increase in net income over cost.

#### Stop Gap

Investment by crisis.

### **Cost of Capital**

The cost of capital is defined to be that rate of return that a project must earn in order to leave the market value of the firm unchanged. Thus, the cost of capital measures the real and opportunity costs to the firm of financing. Critical for sound management decisions, the cost of capital is computed by a weighted averaging of the sources of funds to the firm.

#### Sources of funds

##### **External**

##### Debt

*Short term permanent*

*Intermediate term*

*\*Long term bonds*

*\*Preferred stock*

*\*Equity*

*Common stock*

*Capital surplus*

*Retained earnings*

##### **Internal**

Net income after tax

##### Depreciation

##### **Debate**

over including short term permanent and intermediate term sources. Argument for: they are permanent and have identifiable interest costs. Argument against: the cost of capital is used to make long term decisions and should not reflect shorter maturity sources.

over including depreciation as a source. Argument for: If funds mean change in the cash account on the balance sheet, then every other account becomes a potential source of funds. If funds mean net working capital, then a negative change in the fixed capital account (depreciation) should be a source of funds.

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## Pace General Business Model Outline

Argument against: . Since depreciation is not recognizable as coming from debt, preferred stock, or equity, calculate depreciation using the weighted average cost of capital, making the depreciation as a source of funds debate a moot question.

### The Cost of Capital Definition

The cost of capital is defined to be that rate of return that a project must earn to exactly equal the average cost of the firms other sources of funds , leaving the market value of the firm unchanged.

Thus, the cost of capital measures the real and opportunity costs to the firm of financing investment opportunities and is critical for sound management decisions.

### Computation

The cost of capital is computed by a weighted averaging of the sources of funds to the firm.

#### **The sources of funds**

to be included in the cost of capital calculation are:

long-term debt

preferred stock

net worth accounts

(common stock and retained earnings).

#### **Depreciation cost excluded**

Depreciation cost can be defined as equal to the weighted average cost of capital and therefore excluded from the computation.

### Marginal cost of capital

Marginal cost of capital is the market cost of the next dollar of financing. As long as the marginal cost is less than the expected rate of return the firm should invest.

### Historical weighted average cost of capital

Historical weighted average cost of capital is the product of the after tax cost times the weighted percentage of all capital sources.

### Ratios used in capital budgeting

to compare with historical averages and industry averages.

#### **Fixed Asset Turnover**

Net Sales (over)

Net Fixed Assets

#### **Total Asset Turnover**

Sales (over)

Total Assets

#### **Debt to Equity Ratio**

Debt (over)

Common Stock Equity

#### **Debt Ratio**

Debt (over)

Assets

#### **Times Interest Earned**

Net Income (+)

Interest Expense (+)

Federal Income Tax (over)

Interest Expense

#### **Profit Margin**

Net Income After Taxes (NIAT) (over)

Sales

#### **Return on Assets**

NIAT (over)

Total Assets

#### **Return on Stockholder's Equity**

NIAT (over)

Common Stockholder's Equity

#### **Earnings per Share**

Net Income (less)

Preferred Dividends (over)

Weighted Average Number of Shares

Note: if potential dilution exceeds 3%, must present both primary and fully diluted calculation by adding shares to denominator and income saved to numerator.

## Pace General Business Model Outline

### **Book Value per Share**

Net Assets (less)  
Preferred Redemption (over)  
Shares Outstanding

### **Common Stock Yield**

Dividends per Share (over)  
Market Price per Share

### **Dividend Policy**

Addresses what percentage of net income to pay out and what percentage to retain for internal growth. Theoretically if a firm earns a high return on investment (ROI) it should return more.

#### Declaration Date

Board declares a dividend.

#### Ex-Dividend Date

Four days before holder of record date.

#### Holder of Record Date

Payee is determined.

#### Payment Date

Dividend mailed to shareholder.

### **Non Cash Dividend**

A way to placate shareholders without using cash. Especially appropriate if the business can earn a higher return on its investments than shareholders can theirs.

#### Stock Dividend

Transfer par value of shares from retained earnings to capital stock. Net worth and ownership interest is unchanged. Non taxable to shareholders, unless they receive the right to receive cash.

#### Stock Split

No change in capital accounts, but may make share trading range more attractive.

#### Stock Repurchase Program

Dividend funds are used to buy treasury stock, thus, increasing proportional ownership of remaining shareholders. Taxable to shareholders at capital gains rate. Desirable if asset book value per share exceeds share price.

### **Sources of Long Term Capital**

#### Bonds

Provide creditor with security and priority in both earnings and liquidation. The interest is deductible to corporation and no dilution of equity, but creates more risk. Bonds (debentures) have no collateral. The interest on an income bond is only payable if income is earned. Sinking fund may accumulate bond retirement funds. Refunding is the process of issuing new bonds to replace old. Call premium is the price of the issuer's right to call the old issue prior to maturity.

#### Convertible Securities

(Bonds or Stock) exchangeable for common at owners option on or before a stated time in the future. Warrant is a common stock option which is often sold as a detachable companion to a bond.

#### Zero Coupon Bond

Pays no interest until maturity, so easy on a corporation's cash flow but bondholder takes "phantom" interest to taxable income.

#### Preferred Stock

Some preferential treatment as compared to common stock, in dividends, liquidation, cumulative, participating.

#### Common Stock

##### **Cumulative:**

meaning each shareholder votes his shares times number of open seats and may group his votes for only one seat; MBCA would impose unless shareholders agree to the contrary.

##### **Last priority**

in liquidation and no right to receive dividend.

##### **Preemptive Rights**

to subscribe to newly authorized shares.

##### **Stockholder's rights include:**

Approving loans to director's and officers.

Voting in person or by proxy.

Receiving annual financial statements.

## Pace General Business Model Outline

Bringing suits against members of the board for gross negligence or fraud.

Approval of fundamental changes such as mergers, dissolutions, or amendments to the articles, require a super-majority shareholder approval of two thirds.

Dissenting shareholders have appraisal rights to receive the fair market value of their shares in cash.

### Retained Earnings

Not distributed as dividends

Does not disturb present ownership.

### Stock Redemption

Producing treasury shares.

#### **Advantages**

Increase Earnings Per Share

Increase Market Price

May cost less than new issue

Obtain control

Tax benefit (capital gain to shareholder if distributed)

#### **Disadvantages**

Liquidity problem

Increased financial risk

Precludes other opportunities

Increases risk of takeover

### **The markets for capital**

The allocation of capital resources is among the most important decisions that must be made by any economy.

#### Vital to the public

It is vital to the consuming public who eventually purchase the goods and services produced by the committed capital.

#### Crucial to the firm

It is crucial to the firms that must attract sufficient quantities of capital to combine with labor to produce the goods and services offered in the marketplace.

#### Links economy to the future

In fact, capital commitment now is the economy's link with the future.

#### Efficiency of capital markets

Determined by the flexibility and speed of response of the mechanism that guides the allocation of capital resources.

#### Capital resource allocation properties

The organized securities markets possess a number of properties that render them suitable as capital resource allocates:

(1) They provide information on current cost of capital.

(2) They provide accessibility to a vast number of capitalists, many of whom possess small amounts of money and yet in the aggregate have command over vast quantities of wealth.

(3) Markets offer a relatively simple mechanism for the transfer of funds that impose only a minimum of effort upon the lender.

#### Primary issues

**Same process for debt or equity**

#### Direct placement of securities

#### **Through the Investment Banking Function**

Of spread between price charged to investors and net proceeds to the company,

20% to origination function

30% to underwriting risk born by the syndication

50% for distribution by managers and/or selling group

#### **Process**

Investigate financial condition of the firm

*volume of capital funds required*

*the going rates for different sources of capital*

*the current market environment for securities placement*

## Pace General Business Model Outline

### Origination function

*Agree upon approach*

Agree on an approach for type and placement of the securities.

*Set language*

Lawyers from both firm and investment bankers set the language of the prospectus.

*Get approval*

SEC approval and registration

### Underwriting risk

*Investment bankers underwrite the price per share or per bond*

### Distribution of the securities

*Original investment manager*

*Other investment bankers*

*as co-managers*

*or as members of a selling group*

### Investment banking separated from commercial banking

Until now, the investment banking and commercial banking functions have been separated to ensure arms-length transactions between companies and commercial banks on large commercial loans whose rates are not tied to any future securities placement activity.

### Second-hand markets

The so-called second-hand market for securities includes the organized securities markets and smaller unorganized markets.

**first tier - 80%**

New York Stock Exchange (NYSE)

American Stock Exchange (ASE or AMEX)

**second tier**

Regional stock exchanges

**third market**

Over the counter

*off the floor of the exchanges*

*securities not listed*

**fourth market**

Securities traded directly by institutions

### **Growth and Failure**

Growth is important because it permits economies of scale, and competition may dictate growth or failure.

Growth may stimulate employees by creating promotions and increased salaries.

### Internal growth

is adding more inputs.

### External growth

is acquisitions which may speed the corporation's growth and allow the acquisition of good management.

### **Purchase of Assets**

can produce a goodwill account

### **Pooling of Interests**

consolidates balance sheet accounts

### **Holding Company**

acquires other companies

### **Objective**

is to acquire company with a lower Price Earnings (PE) ratio.

### **Synergism**

Qualitative advantages to merger, such as economies of scale, controlling supply or customers, eliminating competition.

### **Financial Failure**

### Remedies Prior to Bankruptcy

but non assenting creditors are not bound

### **Composition**

creditors take less than full debt.

### **Assignment**

assets transferred to a trustee for benefit of creditors.

### **Receivership**

creditors collateral protected against debtors dissipation.

## Pace General Business Model Outline

### Bankruptcy

#### **Chapter 11 Reorganization**

Order of relief stays creditors for 120 days. Debtor must present plan out of insolvency.

#### **Chapter 7 Straight Liquidation**

Watch for the voiding power of trustee used to retrieve collateral transferred for security interest given within 90 days prior to petition, expanded to one year if transferee is a "related party".

### Shareholders Liability

**Shareholders are not generally liable beyond their investment.**

**Exceptions include watering stock, impairing capital, or a veil piercing action to avoid unjust enrichment.**

Disregarding corporate formalities, commingling of funds, or an estoppel situations may be fact patterns appropriate to this equitable remedy.

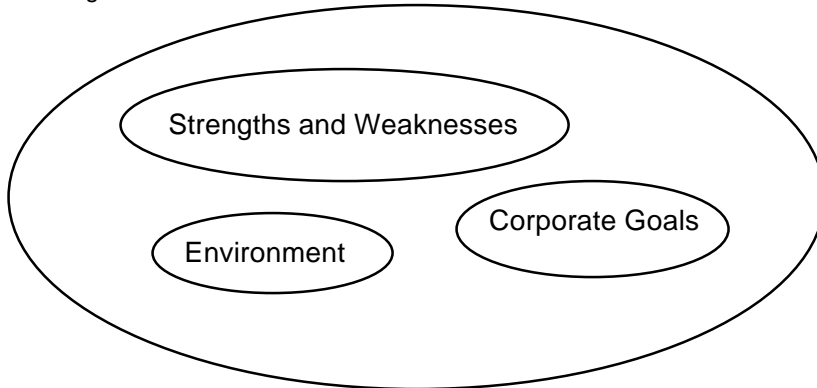
### **Efficient Capital Markets: The Capital Asset Pricing Model**

# Pace General Business Model Outline

## Planning Standard

### **Strategic Planning Standard**

The process of deciding on changes in the objectives of an organization, the resources to be used in attaining these objectives, and the policies that are to govern the acquisition and use of these resources. Creating a vision.



#### **Strengths and Weaknesses**

##### Evaluate:

- Technical expertise
- Production capability
- Administration
- Organizational structure
- Competitive ability
- Market capability

#### **Environmental Forces**

##### Evaluate:

- Market
- Customers
- Competition
- Suppliers
- Government
- Society
- Capital Market

#### **Statement of Corporate Goals**

A company will generally make statements of corporate goals in each of the following areas:

##### Evaluate:

- Desired rate of growth
- Desired rate of return
- Desired market share
- Research and development
- Employee development
- Financial policy

#### **Relationship to other planning**

The product of the strategic planning process provides the input for a 3 to 5 year or longer profit plan. The detailed profit plan will hopefully enable the company to accomplish its objectives.

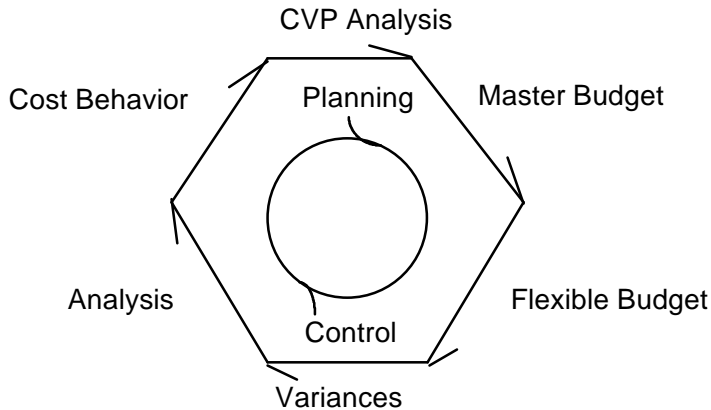
### **Profit Planning Standard**

For businesses, budgets assume a particularly important role as the monetary expression of the objectives of the firm. However, the budget is just one part of a comprehensive planning and control system designed to achieve the ultimate goals of the firm. In order to have an effective budgeting and control process, the firm should study the relationship between cost, volume, and profit.

Therefore, this section is the same as Analysis Standard.

# Pace General Business Model Outline

## Managerial Accounting Tools for Planning and Control



### **Cost Volume Profit Analysis**

Selling price; number and type of products to manufacture; amount to spend on promotion costs, and type of equipment to buy are decisions that are made after the relationship between cost, volume, and profit has been completely analyzed. The key to establishing this relationship is understanding the value of the contribution margin.

#### Contribution margin

(Marginal income, marginal contribution)

Difference between sale price and variable costs. It is the amount available to cover fixed costs first and then provide a profit. Contribution margin can be both expressed in terms of total dollar values and in terms of contribution margin per unit.

#### Variable costs

Costs which vary directly with production and can include costs for both manufacturing and selling and administrative activities.

#### Break-even analysis

The break-even point is the point where there is neither a profit nor a loss from sales. It is the point where all fixed and variable costs are covered and nothing is left for profit. The break-even point can be expressed in terms of units or sales dollars.

#### Equation Approach

Sales = Net Income + Fixed Expenses + Variable Expenses

#### Contribution Margin Approach

Fixed Costs / Contribution Margin = Break-even in units.

Fixed costs / [1 - Variable cost ratio] = Break-even in dollars

Variable cost ratio = Variable costs / Selling price

#### Flexible Budgets

Make performance analysis possible when output deviates from planned levels. The actual volume produced is used for cost analysis in determining the efficiency of operations. Variable costs are viewed as having a linear relationship with units produced. Fixed costs are considered constant within a relevant range of activity.

#### **Types of fixed costs**

##### Programmed costs

(Managed or discretionary costs)

Costs that are budgeted one period at a time and are subject to change within the period. These costs differ from variable costs in that they are not correlated to the level of activity. Examples include R&D, training costs, and consulting fees.

##### Committed costs

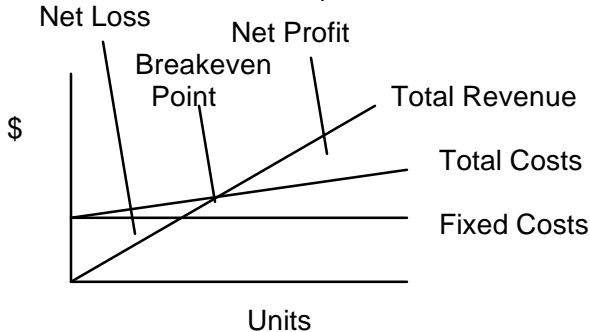
## Pace General Business Model Outline

*Costs that require a longer permanent commitment by management. (depreciation, long-term lease agreements, property taxes, and insurance.)*

*Such costs are not responsive to short term operating decisions.*

### **Graphic Approach**

Illustrates the interrelationships of the revenue and expense data.



### Assumptions underlying CVP analysis

The break-even chart is based on a large number of assumptions. If the assumptions are not true, the break-even point or desired profit level may vary.

#### **All costs are linear**

And can be divided into either fixed or variable components. Fixed costs remain constant while variable costs change proportionally with variations in volume.

#### **Sales price per unit does not change**

with changes in volume.

#### **Sales mix is constant**

If multiple products are simultaneously being analyzed.

#### **The price of the input factors does not change.**

Materials, labor, etc.

#### **The only factor that influences costs and revenue is changes in sales volume.**

No allowance is made for efficiency and increased productivity as volume increases.

### Semi variable costs

Costs that contain both fixed and variable elements, (social security taxes, heat, lights, and power).

Methods such as the method of least squares and high-low method are used to determine the fixed and variable components of a semi-variable

Another example would be a service, such as maintenance, that requires a minimum fee plus additional fees for agreed upon work.

### **The Budgeting Process**

#### Objectives of budgeting

**To force managers to analyze the company's activities.**

**To direct some of management's attention from the present to the future.**

**To enable management to anticipate problems or opportunities in time.**

**To motivate managers to achieve the company's goals and objectives.**

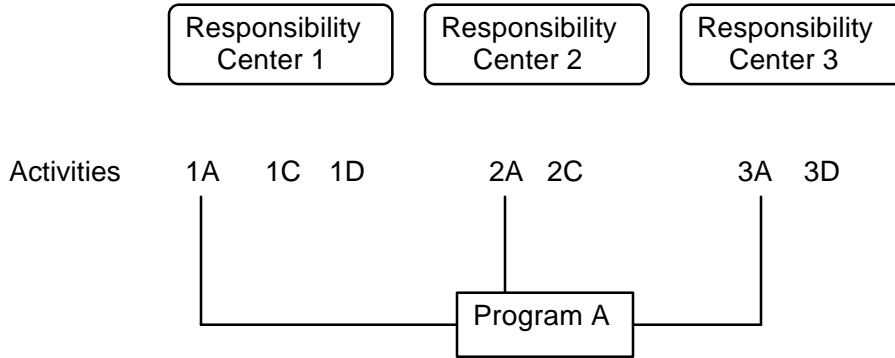
**To remind managers of actions they have decided on.**

**To provide a reference point to measure control.**

#### Activity Budgeting

When emphasis of budgeting is placed on activities rather than departments. This method is effective when a department engages in several independent activities.

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All activities are independent except those which relate to program A. In preparing the budget for these responsibility centers, emphasis is placed on programs. Program A and the individual separate programs or activities at each center. Activity budgeting is called program planning.

### **Zero Base Budgeting**

Requires each manager evaluate the benefits expected from the requested program, and to rank them according to their desirability

Activities divided into packages

Each package is ranked ordinally

Managers at higher levels consolidate, providing their own ordinal rankings.

### Administration of Budget

The budget is usually administered by a budget director, possibly in combination with a budget committee.

**Sales budget**

**Production budget**

**Direct materials budget**

**Direct labor budget**

**Expenses budget**

**Cash budget**

**Pro forma financial statements**

### **Direct Costing**

#### Absorption Costing and Direct Costing

##### **Summary of costs included**

Direct costing includes all variable costs of production, whereas absorption costing includes all fixed and variable costs of production.

The difference is fixed factory overhead.

Absorption Costing	Direct Costing
--------------------	----------------

DM	DM
----	----

DL	DL
----	----

FO	VFO
----	-----

##### **Effects on net income**

When production and sales are the same, net income under each method is the same. When production exceeds sales, absorption costing income will exceed direct costing income

#### Internal use of direct costing

Direct costing is commonly used internally because it facilitates easy determination of the contribution margin, therefore, direct costing lends itself to CVP analysis.

#### External use of direct costing

Not acceptable for GAAP, SEC, or Tax reporting purposes.

### **Contribution Margin Analysis**

The causes of an increase or decrease in the budgeted contribution margin can be isolated by analyzing the variance.

#### Sales price variance

For each product, equal to the actual minus the standard sales price multiplied by the quantity sold.

#### Cost variance

For each product, equal to the actual minus the standard cost multiplied by the quantity sold

#### Quantity variance

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For each product, equal to the actual minus the standard contribution margin multiplied by the quantity sold.

### Mix Variance

For each product, equal to the actual minus the budgeted quantity sold multiplied by the difference between the budgeted and average contribution margin, where the average contribution margin is the average for all units produced, not only this product.

### **Standard Cost Variance Analysis**

#### Use of Standard Costs

A costing system in which the uniform costs are assigned to products and differences between standard and actual are accumulated in variance accounts. Use of standard gives management criteria for evaluating performance. Standard costs should always be developed based on normal production capacity.

#### **Cost control**

To have an effective cost control system, there is a need to have a standard that specifies how the job is to be done and how much it should cost.

#### **Establishing budgets**

Standard costs are a source of information for estimating requirements.

#### **Inventory costing**

GAAP require historical actual costs for inventory purposes in most instances, but if variances represent efficiencies or inefficiencies, it may be appropriate to charge them against income in the period incurred rather than allocate them.

#### **Product pricing**

National Association of Accountants research study suggests standard costs are more easily adjusted and projected into the future than are past actual costs for the following reasons:

Standard costs are free from distortions caused by excess spoilage, reoperations, and so on.

Standard is easily adjusted to reflect changes in materials and labor prices.

Standard overhead rates based on normal activity level are an acceptable basis for pricing that provides for the full recovery of overhead costs in the long run.

Standard costs for marketing activities can easily be assigned to the product, although not entered in the inventory records.

#### **Motivating employees**

A standard cost developed jointly by management and the individual responsible for the costs, if accepted by the individual as his or her own personal goal, can be a motivating influence.

#### **Reducing paperwork costs.**

Since the inventory ledger is kept only in terms of quantity.

Less time to prepare budgets and production reports.

Analysis easier because deviations from standard are highlighted.

### Standard Cost Variance Analysis

#### **Material variances**

The responsibility for direct materials is split between the purchasing and production managers. The purchasing manager has the responsibility of acquiring the proper quantity of raw materials at the time needed and at the correct price. The production manager must see that the materials are used efficiently. It is important for each manager to be responsible for only those factors over which he or she has control. The use of both price and quantity standard help in assigning responsibility to the individual in a position to exercise control over the costs. Isolating price variance at time of purchase enables earlier corrective action. Where price is stable and inventory is low, the price variance can be isolated at time of issue.

#### Materials Price Variance

*Actual Quantity Purchased*

*Actual Price*

*Standard Price*

*Material Price Variance*

#### Materials Usage Variance

*Actual Quantity Used*

*Standard Quantity Allowed*

*Standard Price*

*Material Usage Variance*

#### **Labor Variances**

Direct Labor Rate Standard

*Determined by negotiations.*

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*Determined by prevailing local labor market.*

Labor Efficiency Standard

*Time in motion studies*

*Work layout.*

*Condition of equipment.*

*Availability of materials.*

*Past performance.*

*Methods engineer.*

*Effect on motivation.*

Labor Rate Variance

*Actual Hours*

*Actual Rate*

*Standard Rate*

*Rate Variance*

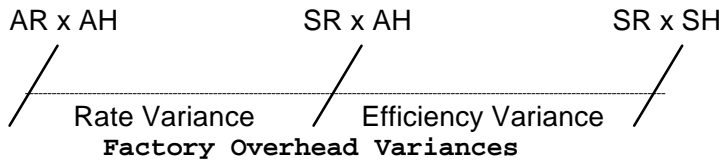
Labor Usage Variance

*Actual Hours*

*Standard Hours*

*Standard Rate*

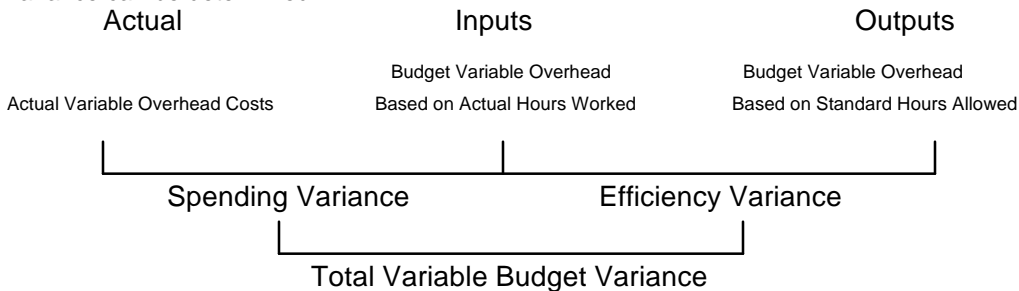
*Usage Variance*



Because of the nature of fixed costs, it is necessary to break the overhead costs into two parts- fixed and variable- in order to estimate them accurately for any given output level.

Variable overhead analysis.

The variable overhead cost fluctuates proportionally with changes in activity levels. The variable rate is developed after analyzing the past behavior patterns of the overhead costs and by considering expected changes in those costs. This rate is correlated with an activity variable such as direct labor hours, direct labor costs, machine hours, materials costs, or units produced. If the costs are based on an input activity, two variable overhead variances can be calculated: spending and efficiency. If the variable overhead costs are correlated with some measure of outputs (for example, units, pounds, and so on), then only a budget variance can be determined.



Fixed Overhead Analysis

The budgeted fixed overhead costs do not change as the activity level changes within a given range. The two variances normally determined in fixed overhead analysis are a budget and a volume variance.

*Activity level*

For direct materials, direct labor, and variable overhead, the level of activity used in establishing the standard is not too critical as long as the operations are within a reasonable range; however, this is not true for fixed overhead. Two activity levels are frequently used: expected annual and normal level. The expected annual level is simply the activity level anticipated for the next period while the normal level represents the average output expected over a long enough time period to incorporate sales trends. In order to use the normal approach, management must be able to forecast sales with a reasonable degree of accuracy for a period longer than 1 year. Since this is not an easy task for many businesses, the expected annual output is the more frequently used activity level.

It would appear that volume variances resulting from the use of the normal approach should be carried forward in the balance sheet at year end. The accounting profession and the Internal Revenue Service, however, have not allowed this. Under normal and expected annual output, the variance is frequently

## Pace General Business Model Outline

charged to cost of goods sold. While this may appear to make the two methods, in the final analysis, result in the same net income per year, it does not, since the amount of fixed costs in inventory is different.

### Volume variance

A volume variance occurs when there is a difference between the planned and actual production levels and the fixed costs are applied to the units as they are produced. Thus a process that uses a direct cost system does not have a volume variance. The volume variance is also referred to as the capacity, idle capacity, or denominator variance.

The volume variance is the amount of over or under absorbed fixed overhead cost. It is simply caused by the fact that the actual output does not equal the planned output. It is known as the uncontrollable variance.

### Two variance Method

To determine the controllable variance.

*Actual Fixed Overhead*

*Budgeted Fixed Overhead*

*Applied Fixed Overhead*

*Uncontrollable Volume variance*

*Controllable Budget variance*

*Total fixed overhead variance*

### Three variance method

To break the controllable into spending and efficiency.

*Actual inputs*

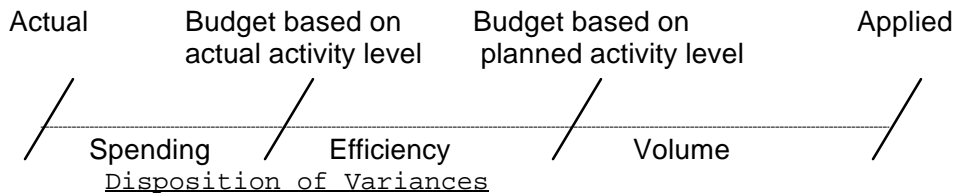
*Budget based on actual hours worked*

*Budget based on standard hours allowed*

*Spending variance*

*Efficiency variance*

*Total budget variance*



If material, allocate between costs of goods sold, work in process, and finished goods based on the applied overhead in each account.

If immaterial, write off to cost of goods sold.

### Mix and Yield Variances

A mix variance occurs when the combination of materials placed in process differs from the standard mix.

A yield variance occurs when the quantity produced differs from the expected output based on the total quantity of materials placed in the process.

## **Divisional Performance Evaluation**

### Nature of Decentralization

When the power to make decisions and take action is shifted from top management to others in the organization, the two primary categories of decentralization are:

#### **Operational**

Occurs when technological or geographical specialties necessitate divisions.

#### **Motivational**

Occurs when long chains of command result in too impersonal an organizational structure. Decentralization provides local motivation and encourages internal competition.

### Return on Investment (ROI) Analysis

ROI is the most widely used measure of divisional performance  $ROI = \text{Net Income over Investment}$ .

#### **Difficulties of ROI Analysis**

##### Net Income

The net income used should only include those revenues and expenses within the manager's control

##### Investment

Decisions of which items and how to value them must be made.

##### Goal congruence

Attention may be directed away from the common goal of the company as a whole. Attention is directed to the short run.

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### Residual Income

Eliminates the goal congruence problem.

Residual income is the net income of division less cost of capital deduction.

This method stresses dollar value of residual income rather than return on investment.

### Transfer Pricing

When ROI's are used to value divisional performance, prices of interdivisional transfers must be carefully established. The pricing system selected should provide for:

#### **Goal Congruence**

goals of divisions coincide with goals of the company.

#### **Performance Evaluation**

managers must be held responsible only for those decisions which are controllable by them.

#### **Autonomy**

Each unit must be free from constant interference by top management.

#### **Current Practices**

##### Market price

Problems may arise if the division looks outside the firm.

##### Negotiated price

Conflict among division managers.

##### Selling division's costs

Either full cost, marginal costs, or cost plus profit. The advantages of using cost are ease of administration, availability of cost, potential for reducing conflict between managers.

##### Opportunity costs,

The transfer price is based on the outlay of costs to the point of transfer plus the opportunity costs for the firm as a whole. Emphasis is on goal congruence.

##### General Motors Example

Chevy, Pontiac, Buick, Olds, Caddy, Trucks

Divide and Conquer

Problem of how do you evaluate.

ROI dysfunctional behavior. Numbers game, short run focus, no incentive to replace obsolete equipment, because of the way we measure investment.

ROI increases just because of depreciation.  $ROI = NI \text{ over Investment}$

How should we calculate investment.

Adding back depreciation would not take care of the whole problem- opportunity cost, inflation.

Use Residual Income to eliminate goal congruence problem

ROI good for measuring economic efficiency and effectiveness, but not for personnel evaluation.

### Comparing Centralization and Decentralization

You can have similar org charts but one company can be more decentralized than another because the key is where the decisions are being made.

#### **Advantages of Decentralization**

Quicker decision making process

Better information

Greater capacity for problem solving

Development of managers

Motivation of employees

#### **Disadvantages**

Loss of control

# Pace General Business Model Outline

## Organization Standard

### Introduction

#### **Organization, Accounting, and Behavior**

##### Decision Making and Organization Theory

Management styles and their impacts on human behavior. Group dynamics, interpersonal relationships, and the change process. Hierarchical, line and staff structures, and centralized and decentralized functions of organizations and their contributions to and effects on decision making.

##### Behavioral Science in Accounting

Goal congruence. Possible and desired behavioral impacts of budgets, performance standard, profit center accounting, auditing, and other accounting activities.

##### Motivation

Human needs and self-fulfillment. Job content, enrichment, and satisfaction. Potential dysfunctional behavior. Support relationships, reinforcement, and other motivation theories.

##### Communication

Formal and informal communication networks. Psychological and attitudinal impacts of communication, including effects on task accomplishment. Selective listening and communication receptivity. Information content, credibility, and overload.

#### **Partnerships, Proprietorships, Corporations**

Distinguishing corporations from proprietorships and partnerships.

#### 5 Characteristics Distinguishing Corporations (CCATL)

	<u>Corp.</u>	<u>Prop./Part.</u>
1 Centralized Management	Yes	No
2 Continuity of Life	Yes	No
3 Agency Relationship	No	Yes
4 Transferability of Interest	Yes	No
5 Limited Liability	Yes	No

### **Organization Structure Components**

Need strategic objectives and knowledge of resource markets.

Division of Labor (Specialization)

Job Scope and Depth

Levels (of management)

Span of (management) control

Departmentalization

Unity of Command

### **Organization Relationship**

Need Organization structure and knowledge of work flow responsibility.

Authority , delegation

Responsibility, decentralization

(vision)

Superior-Subordinate

Communication

Work groups - Work flow

### **Organization Development**

Need knowledge of Organization relationships and corporate culture.

Rewards

Sanctions

Rituals

Heroes

### **Personal Development**

Need knowledge of Organization development and employees.

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# Pace General Business Model Outline

Coaching  
Council  
Career Planning  
Job Enrichment  
Sensitivity Training  
Behavior Modification  
Transactional Analysis

## Group Development Decisions

Need knowledge of Organization relationships and Organization development.

## Ethical Standard

Business professionals have ethical responsibilities to: the firm, the employees, the customers, the stockholders, others in society, and themselves.

### Ethical Principles

#### Justice

The principle of justice entails fairness in the treatment of others. A recent issue involving this principle was the inclusion of pregnancy as a compensated illness in medical policies of firms.

#### Truth

Truth can assume a slightly different meaning in business when the telling of the truth must be balanced with the effects of revealing that knowledge. As Walton observes: Truth, in short, is not simply a give and take operation between any knower and any inquirer. The latter's right to "private" knowledge has to be established before he may assert a claim to know<sup>2</sup>.

#### Courage

This term includes the ideas of brazenness and standing up for what you believe in. An example would be refusing to go along with an advertising campaign that portrays women or minorities in a deprecating manner.

#### Freedom

This concept involves having independence in thought and expression as well as being free of physical restraints. An example of this principle would be an individual's right to determine his or her lifestyle outside working hours.

#### Fairness

This term dictates that there be justice and impartiality in decision making and in the treatment of others. A frequently encountered situation involving this idea is judging a person on his/her merits rather than on one's personal feelings toward that person.

#### Sharing

Sharing involves the inclusion of others in the power process, the "others" being workers, union leaders, and so on. An example of implementing such a policy would be to invite workers to participate in the budgeting process to help set the goals and standard by which they will be judged.

### Ethical Guidelines

#### Competence

Management accountants have a responsibility to:  
Perform professional duties in accordance with relevant technical standard, regulations and laws.  
Maintain their professional competence by updating their skills, techniques and general knowledge.  
Prepare accurate reports and recommendations which reflect relevant factual information and appropriate technical analyses.

#### Integrity

Management accountants have a responsibility to:  
Refrain from engaging in any activity which may be or may appear to be in conflict with the organization's interests.  
Advise their organization fully and clearly of any potential conflicts of interest.  
Recognize their technical limitations and inform the organization if directed to undertake assignments for which they are not technically competent.  
Refrain from engaging in any activity that would prejudice their ability to carry out their duties.  
Refuse any gift, favor or hospitality that influences or appears to influence their actions.  
Refrain from engaging in any activity that would discredit the provision.

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<sup>2</sup>Clarence C. Walton, *Ethos and the Executive: Values in Management Decision Making* (Englewood Cliffs, New Jersey: Prentice-Hall, 1969), p. 35.

# Pace General Business Model Outline

## Confidentiality

Management accountants have a responsibility to:

Refrain from disclosing confidential information unless authorized, or either legally or professionally obligated to do so.

Refrain from using or appearing to use for personal advantage or for the advantage of third parties information acquired in the course of professional work.

Inform subordinates regarding the confidentiality of information acquired in the course of professional work and monitor their activities to protect that confidentiality.

## Objectivity

Management accountants have a responsibility to:

Fairly and objectively present information.

Disclose relevant information that may influence user's understanding of the reports and recommendations presented.

## **Company Code of Ethics**

## **Individual Code of Ethics**

## **Corporate Legal Standard**

### **Introduction**

A corporation is a legal entity by authority of the state corporate statute. The Model Business Corporation Act (MBCA) is this statute standard for corporate law in most states.

### A corporation is:

Separate and distinct from its shareholders.

Limited liability (generally).

Capable of perpetual life.

Under the authority of directors, which are elected by shareholders.

Professionals may incorporate -

if in applicable statute, but, professionals do not have limited liability in some states.

A Professional Service Corporation must have provisions to buy out members, who become disqualified to practice.

### **Statutory Constraints**

Economic statutes constraining supply and demand.

### Relationship between statute and regulation

Government regulations are both statutory and regulatory in nature.

A federal statute requires both Senate and House to pass and President to sign the act. The statute may create an administrative agency or commission which must publish the regulations by which they operate.

The regulatory agency itself may have enforcement powers and usually an internal system to resolve disputes.

### Rights

Administrative law itself includes substantive and procedural rights designed to ensure fairness in agency actions, to provide a judicial remedy for arbitrary and capricious decisions.

Agencies must publish the rules by which they regulate their own procedures. This must include notice, and opportunity to be heard must be extended to all affected parties. Judicial appeal is only possible if the appellant has standing because of a personal stake in the outcome of the case, the case is ripe with immediate injury, and all internal agency administrative remedies have been exhausted.

### Judicial Review

#### **Agency determinations of fact**

are upheld if supported by substantial evidence.

#### **Agency determinations of law**

are subject to a high degree of security and are more susceptible of reversal than questions of fact.

#### **Agency conclusions**

as to applications of law to a particular factual setting are upheld unless an abuse of discretion, arbitrary, and/or capricious.

### Agency Intervention in free market

These regulatory agencies may determine decisions normally made by the free market. Often intervention is justified where there is a high public interest, such as public resources, utilities etc. Fortunately, intervention applies to an inelastic demand curve, natural monopolies, and other situations such as the phone company.

#### **Price**

The agency, through rate hearings, may determine the price the market will pay.

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### Supply

They may also regulate the supply, such as when a cable TV company must get permission to expand into a new area.

### Various Statutes

(in order of importance but not inclusive):

#### **Security Market Regulations**

##### The Security and Exchange Commission (SEC) Act of 1933

The Security and Exchange Commission (SEC) Act of 1933 requires a registration statement and prospectus to be filed with SEC 20 days prior to any public offering. Such information as the business management team, details of the offering, expected use of the proceeds, and financial statements are usually included in the filing.

##### *The purpose*

of this disclosure is to ensure investors are aware of all adverse facts, so as to facilitate an informed decision. The SEC does not pass on the merits of the offering .

##### *Liability exposure*

Director, officer, issuer, underwriter, and/or other expert associated with false statements or material omissions in the registration process are subject to a very high degree of liability exposure. The Common Law's reliance element is eliminated as a prerequisite to recovery.

##### *Exceptions*

Exceptions to the SEC Act of 1933 (CPASIND)

##### *Casual sale by an ordinary investor*

*Private sale of restricted securities to a sophisticated investor.*

*"A" regulation - under \$1.5M annually.*

*Safe Harbor Rule - dictates two year holiday period.*

*Intrastate offering - shifts regulation to state "blue sky" laws.*

*"No Sales" such as reorganizations, consolidations, and mergers.*

*"D" regulation - under \$500K annually.*

##### *Frequently tested*

Exemptions from the SEC Act's registration requirements are frequently tested. An offering may qualify under more than one exemption. The mnemonic is CPASIND.

##### The SEC Act of 1934 focuses on reporting.

##### *10K and Audited Financial Statements*

all listed companies with 500 or more shareholders must submit to the SEC the annual form 10K and audited financial statements.

##### *Form 8K*

Form 8K must be filed within 10 days if the company changes auditors, defaults on an obligation, or a stock control change of over 5 percent.

##### *Insiders Transactions*

Insiders must report their ownership and transactions in the security.

Short swing profit, washed sales, and matched orders are prohibited.

##### The Insider Trading Act of 1984

The Insider Trading Act of 1984 imposes treble damages on both the tipper and the tpee.

##### *Proxy solicitations*

Proxy solicitations must be filed with the SEC - disclosing all matters and resolutions to be decided at the meeting. Minority shareholders must be allowed to submit reasonable proposals.

#### **Antitrust Restraining Acts**

##### The Sherman Act.

*Section One, dictates that certain agreements between horizontal producers are "per se" illegal.*

This includes price fixing, allocating markets, limiting production levels, joint boycotts of a customer, and resale price maintenance. All other horizontal agreements are analyzed under rule of reason to determine whether they restrain trade.

*Section Two attempts to punish any participant in a monopoly scheme.*

The Federal Trade Commission (FTC) and Justice Department may proceed criminally or issue cease and desist injunction orders.

The Clayton Act outlaws certain restraints if plaintiff can show they "substantially lessen competition".

This "market share" orientation may be an easier standard for plaintiff to meet than the "unreasonable" test of the Sherman Act.

Exclusive enforcement authority is vested in the FTC.

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*Outlawed are:*

*price discrimination between buyers in the same market, exclusive dealing "requirement" contracts, interlocking directorships and tying agreements where a purchaser is required to purchase an undesirable item to get the desirable item.*

Mergers that substantially lessen competition are illegal.

There are three types of mergers.

*Horizontal mergers,*

which substantially lessens competition are illegal, such as GM buying Ford, unless one of the companies will fail without it.

*Vertical mergers*

, GM buys Goodyear tire, are only suspect if a competitor complains.

*Conglomerate mergers,*

GM buying General Foods, are almost never questioned.

The Foreign Corrupt Practice Act of 1977

prohibits the payment of bribes to candidates or officials of foreign governments or their intermediaries.

The exact distinguishing characteristics between a bribe and a commission are not clear. Some foreign nations only sell their resources through state appointed agents. Too large a contribution to a foreign official may be suspect.

*Requires accounting controls*

The act requires corporations to maintain accounting controls sufficient to detect asset depletion which contain illegal payments.

Management must disclose to the auditor all material facts of such depletion or payments.

**Employers Restrictions on Labor and Safety**

Norris-LaGuardia Act of 1932

prohibits a court from issuing a labor injunction without a showing of violence or fraud.

National Labor Relations Act of 1935

gives employees the right to collectively bargain and requires employers to bargain in good faith with unions.

Fair Labor Standards Act of 1938

provides for minimum wage and requires time and half for over 40 hours a week or 8 hours a day.

Taft-Hartley Act of 1947

authorizes the President to obtain an injunction requiring an 80 day cooling off period if the national security or welfare is effected.

States were allowed to pass right to work laws (don't have to be a union member to get hired).

Landrum-Griffin Act of 1959

prohibits secondary boycott and restricts some picketing situations.

This statute requires union to maintain financial records and provide them to the Government.

Civil Rights Act of 1964

prohibits employment discrimination based on gender, race, or religion.

Supreme Court decisions have required affirmative actions to compensate for past abuses.

Employee Retirement Income Security Act (ERISA) of 1974

limits discrimination in retirement programs against low level employees by requiring eligibility and vesting requirements to meet a certain standard.

Pregnancy Discrimination Act of 1978

prohibits discrimination against pregnant employees unless condition affects performance. Health plans must cover pregnancies.

Seller's and Manufacturers UCC Liability protects consumers.

Causes of action- consumer has 3 potential causes.

*Strict liability without a required showing of fault.*

*The tort action of negligence for failure to exercise reasonable care.*

*An express or implied warranty.*

Warranties are express or implied.

*Express warranty action includes all affirmations of fact which become part of the basis of the bargain.*

*Implied warranty action - the UCC imposes certain implied warranties.*

Merchant ability - their goods must be merchant able. - means pass without objection in the trade, be of fair average quality and fit for their ordinary purpose for which the goods are used.

Fitness for a particular purpose - this warranty applies if the buyer has asked the seller to use his expertise in selecting the most appropriate item.

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Title and against infringement - seller required to have title.

*Limitations - Sellers can attempt to limit warranty. the policy of the law is against limitations or disclaimers.*

*Exclusions - where the seller is attempting to escape all liability. Exclusions are subject to a two step analysis. First the exclusion must meet our 4 C's test of :*

*Clear - so the buyer understands there is no remedy.*

*Conspicuous*

*Conscionable: bargained for in good faith and not expected.*

*Consistent: with express warranties in same document.*

*Magic Words:*

the second analytical step in attempting to escape liability is whether exclusionary language meets one of two tests:

*"as is" "with all faults" - Language which calls buyers attention to the exclusion*

*Sellers are allowed to exclude implied warranty for a particular purpose with the written statement: "there are no warranties which extend beyond the description of the face hereof."*

Consumer Protection Legislation

*Truth in Lending Act-*

Disclose clearly the annual percentage rate and finance charge. Three day cooling off period for solicited credit transaction. \$50 liability lost or stolen credit cards.

*Federal Trade Commission Act*

places the regulation of fraudulent, deceptive, and unfair practices under FTC jurisdiction. Advertisers may be subject to preliminary injunctions and temporary restraining orders. Corrective advertising on a violator and prohibits bait and switch advertising.

*Magnuson Moss Act*

requires certain disclosure when a seller issues a warranty to a consumer designated "full" or "limited". Anti lemon provision - repair or replace warranty limitation. The FTC is charged with enforcement, a civil action including class action is possible if there are at least 100 plaintiffs.

*Consumer Product Safety Act -*

designed to protect the public against hazardous products, by establishing mandatory consumer product safety standard. Can ban and can require corrective actions.

### **Model Business Corporation Act (MBCA)**

#### Formation Process

##### **Promoter**

fiduciary, agency rules of undisclosed principal apply if promoter does not disclose the planned corporation. Promoter always personally liable on pre-incorporation contracts. Third party can go against either. or both.

##### **Articles of Incorporation**

MBCA 9 allows incorporator to reserve a corporation's name.

MBCA 55 requires duplicate originals of the articles of incorporation to be filed with the Secretary of State

MBCA 54 requires Articles to include names and addresses of the incorporator's registered agent, the corporate purpose, share details, and the names and addresses of persons who are to serve as directors until the first annual shareholder's meeting.

MBCA 58-65 authorizes article amendment but only after shareholder approval

##### **De Facto, De Jure, and Estoppel**

###### De Facto

If there is not a substantial effort to comply with the state corporate statute law, the corporation is "de facto" and shareholders may be held personally liable as partners.

###### De Jure

Substantial compliance with the statute results in "de jure" characterization. Shareholders become insulated from personal liability.

###### Estoppel

a corporation by estoppel may result when a third party deals to his detriment with what he believed to be a corporation. Later, after the corporation reaches "de jure" status it may be estopped from denying liability.

##### **Organization Meeting**

MBCA 57 provides for an organization meeting where a corporation receives stock subscriptions and the shareholders receive their shares and elect the board of directors who appoint the officers.

MBCA 27 specifies that the board shall adopt corporate bylaws which define and specify the day to day rules applicable to operating the corporation.

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In this meeting it is also usual for the corporation to adopt promoter's pre-incorporation contracts, discuss and perhaps execute buy-sell agreements, and enter resolutions in the corporate records discussing and authorizing major corporate acts and plans. This is often the time to discuss and enter resolutions concerning tax options and fringe benefits. The corporation must file a report specifying the officers and directors with the Secretary of State's office within 30 days of this organization meeting.

### **Tax Free Incorporation**

A transfer of assets to a corporation is a taxable sale or exchange. Internal Revenue Code (IRC) 3512 dictates no gain or loss shall be recognized if property is transferred to a corporation solely in exchange for shares by transferors whose control constituted 80% of the voting shares of the new corporation. "Boot" or other property received by the contributor is taxable per IRC 351(b). Also taxable to the contributor is the corporation's assumption of liabilities in excess of the shareholder's adjusted basis in the contributed assets under IRC 351(c). The transferor's basis in the contributed property carries over to the corporation. the stockholder's basis in his shares is generally the same as his basis in the contributed assets.

### Domestic or Foreign Status

MBCA 106-124 specify that corporations are domestic in their state of incorporation and foreign in all other states. A foreign corporation is deemed to be "doing business" in a state if the in-state activities are permanent, substantial, and continuous.

The foreign corporation must register, obtain a certificate of authority, appoint an in-state registered agent, and pay the state taxes. Failure to comply may result in fines, personal liability to shareholders, and deprive the corporation of the right to sue. The right to defend, however, cannot be denied under the constitution. Some states tax corporations under a unitary theory, by using a worldwide income allocation approach, rather than merely taxing the income derived from that state's activities.

### Corporate Liability

MBCA 14 specifies that proper service of process may be made upon the corporate registered agent.

### **Officers and Agents**

Corporate liability extends to the contracts of its officers and agents.

### **Employees**

A corporation is also liable for the torts of employees if the agent was within the course and scope of employment under the doctrine of "respondent superior".

### **Defense**

A corporation may attempt to defend by alleging the employee or agent exceeded his actual authority. Also, the defense of "ultra vires" may be asserted. "ultra vires" means outside the corporation's statute or bylaws. However, a corporation may ratify an agent's contract by accepting its benefits. Last, implied or apparent authority may override the "ultra vires" defense unless third party knew of the restriction.

### Director and Officer Liability

#### **Board of Directors**

MBCA 35 dictates the board of directors shall exercise all corporate powers and manage the business and affairs of the corporation.

#### Elections

Either straight or cumulative voting; cumulative voting is designed by the MBCA to give minority shareholders representation on the board. Each shareholder may cumulate his total votes (shares x open seats) for one director nominee. MBCA 33 mandates this shareholder right unless the articles of incorporation provide to the contrary. The formula to elect one director: votes required = (number of shares voting over number of open seats + 1) + 1

#### Dividends:

MBCA 45 gives the board the sole power to declare dividends. In most states may only be made from earned surplus or current profits. A dividend may not be paid if the corporation is insolvent or the dividend will render it insolvent. Directors are also liable for loans to officers and distributions to shareholders where sufficient assets to pay creditors are not retained.

#### Fiduciary Duties

Duty to stay informed, exercise due diligence, remain loyal and obey corporate articles, by laws, policies, and resolutions.

Directors cannot give voting right proxy to another.

Directors must avoid conflict of interest in their dealings with the corporation.

Director and officers indemnification and defense agreements require shareholders' approval.

Directors inherent conflict of interest requires that interested transactions be disclosed in the corporate minutes, and be fair and reasonable (at the market price and terms)

Interested directors cannot vote, but may be counted towards quorum requirements.

### **Officers**

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MBCA 50 specifies the corporate officers shall consist of a president, vice president, secretary, and treasurer, each of whom shall be elected by and serve at the discretion of the board of directors.

Shareholders normally ratify the board's decision as to the officer's salaries. Their exact duties and responsibilities are enumerated in the corporate by laws.

Any two or more offices may be held by the same person except the office of president and secretary. Officers, like directors, are responsible for their own negligence.

### **Business Judgment Rule**

Directors and Officers must exercise due care and diligence in managing the corporation. Honest errors of judgment made after reasonable investigation do not usually lead to liability. A director is entitled to rely upon officers and employees if he reasonably believes them to be reliable and competent. This includes expert opinion such as accountants and counsel.

The test for the "tier of fact" is whether a prudent person under the circumstances could have reasonably reached the same conclusion. Courts are reluctant to second guess most business judgments when fraud or gross negligence was not present.

### **Reporting Requirements**

The 1933 and 1934 SEC acts require "insiders" to report their stock transactions. This includes director, officers, and "over 10%" shareholders. The statutes dictate insiders are liable for short swing profits (purchase and sale within six months). Also, insiders cannot sell short just before bad news is released to the public. The 1984 Insider Trading Sanctions Act provides for treble damages of three times the profit gained or losses avoided.

# Pace General Business Model Outline

## **Communication Standard**

Communication is the secret to the success of any manager. A manager's ability to understand other people, and their ability to understand the manager, are crucial to accomplishing organizational objectives. Communication is the link that ties an organization together and transforms a diverse group of people into a cohesive whole. Being a good communicator does not ensure that a person will be a good manager, but virtually every good manager is a good communicator. Communication should not be viewed as a separate managerial activity. Every aspect of management requires good communication.

## **Classification**

### **Formal**

Budgets, bonus programs.

### **Informal**

grapevine, lunch groups.

### **Direction of communications**

#### Downward

(from superior to subordinate) - orders, instructions, notices, memos, bulletins, newsletters, handbooks, loudspeakers, chain of command.

#### Upward

Morale surveys, grievance procedures, interviews, conferences. Upward communication must overcome more barriers and is slower than downward communication.

#### Horizontal

among peers, across organizational channels.

## **Elements**

The communication process elements:

### **Sender**

originates the message.

### **Symbols**

in which the message is encoded.

### **Medium**

the channel through which the message flows.

### **Receiver**

the person who decodes the message and interprets the sender's meaning.

### **Feedback**

acknowledging to the sender that the message was correctly understood.

### Feedback measures Effectiveness

The effectiveness of communication can be determined only by the sender's seeking out feedback and observing the impact of the communication on the receiver. The sender is obliged to solicit feedback to ensure the communication process is complete. The receiver is obliged to give feedback to the sender. The importance of feedback to check on the effectiveness of the communication process indicates the limitations of one-way communications (e.g., memos).

## **Organization**

### **Traditional or classical management**

stresses the sending of one-way communications from top management down to the subordinates. This military model of organization is autocratic or mechanistic and ignores the need for feedback.

### **Participative management**

stresses multidirectional communication. All parts of the organization are allowed and expected to communicate with each other, and not merely along lines of authority.

### **Systems theory**

stresses the importance of feedback in determining the effectiveness of communications. Without a channel from the receiver back to the sender, the sender has no idea how the information has affected the performance or actions of the receiver, if at all.

### **Communication networks**

Various characteristics:

#### Wheel network

## **Pace General Business Model Outline**

is the fastest and most accurate means of information flow, channels all communication to a central supervisor.

The result is lower satisfaction among participants.

### Cross communication

Extensive cross communication results in:

Free flow

The emergence of a leader

More innovation.

### Chain-type communication

Chain-type communication is slower, usually results in more mistakes and a lack of clear understanding.

## **Problems and Solutions**

### **Problems in communication**

Badly encoded messages.

Faulty channel selection

Noise

Interpersonal problems

Loss in transmission and poor retention

Non-reception

Formal organization channel breakdowns

### **Guides to overcoming problems**

Sender must:

send message in receiver's context of perceptions.

monitor channels to ensure they are free from distortion or breakdown.

actively solicit feedback.

establish an interpersonal climate that eliminates interpersonal barriers to communication.

look for nonverbal cues or feedback.

remember it is sender's responsibility to deliver the communication with appropriate symbols over appropriate channels, and never make assumptions about the receiver's reaction.

use two way communication whenever possible to permit ease of feedback.

sender can improve communication by using redundancy, that is, repeating the message in several different formats and in several media.

### **Listening**

Listening is the responsibility of both the receiver and sender.

### Guides to more effective listening

Empathy

Gobbledygook

People listen faster than words can be spoken.

Pre-judgment of the message may reduce ability to listen objectively.

Lying, partial truths, or using communication channels for enhancement of personal status.

### Sensitivity training

designed to result in better listening skills, tolerance for individual differences, and an awareness of the impact of one's own personality on other people.

Disadvantage is that some managers may spend a disproportionate amount of time focusing on relationships rather than day-to-day problems of the job.

### Interpersonal communication training

advantage is everyone has the same training and can practice working together using specific problems.

### Conflict management

Forms of conflict management: confronting, smoothing, negotiating, and compromise.

This method does not emphasize the underlying cause of the conflict.

### **Other forms of communication**

Audit reports

Employee handbooks and accounting manuals

Nonverbal communication

Telecommunication