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body over time has developed an "attitude" toward business in general and have policies directed toward specific types of business operations.

In the United States, small businesses are extremely important. Most jobs and many innovations are provided by small businesses. New job employment, are most often created by small businesses. Entrepreneurs attempt to commercialize new ideas or concepts and thus bring new products and services to the **consumer**. They keep the economic environment vigorous. Many societies depend on entrepreneurs to sustain growth since they often assume risks that larger and more established firms are not willing to consider. It would appear that as firms become successful and rich in terms of assets (cash, equipment, etc.), they are less willing to assume large risks. Their tolerance for assuming risk in the pursuit of gain diminishes as wealth is accumulated.

It is understandable that a firm with large resources would not want to take on a large-scale project, which required the assumption of considerable risk. But why wouldn't a large firm attempt a little project, which would have minimal impact in the case of failure? Consider whom they would put in charge of a small project? Not many executives have the breadth of knowledge or skills needed to handle all the aspects of running a firm. When executives and managers within a larger firm face complex problems that go beyond their area of expertise. They turn to a specialized support staff. Small-scale business ventures cannot afford to staff specialists in all fields.

In the arena of starting small businesses, entrepreneurs are unique individuals that have an edge over executives and managers from larger complations. That edge is the ability to tolerate more risk, take on more encount stag problems, make decisions with less knowledge and harness the drive and connectment that comes from being an owner. Because of the value ad et lossociety by small business, governments at different

levels have established small business provides.

Previe he Simulation Environment

In this course, you and your team will create and operate a simulated business. The simulation has a business environment with competing firms, a political, and an economic environment.

Business Environment:

The business environment in the simulation will have your firm operating as a distributor of your own product. You will have the product made for your firm by a manufacturer. Your firm will then sell the product to retail stores.

Your firm will be contracting for your private labeled products with manufacturing firms located in specific political and economic environments. Seniors and graduate students at the Advanced level of the simulation operate the manufacturing plants. (They supply finished goods to your firm, but do not compete in your markets.)

Private labeling means you have a legal right to the product's brand name, but you contract with a manufacturing firm to produce it for you. In the simulation you will need to create names that will be used for the product(s) your firm will be selling. Then you must locate a manufacturing firm and negotiate a contract with them to manufacture the products and paste your firm's label on it. The manufacturer will deliver finished

- **Technical Expertise:** Do I have the computer skills and knowledge to manage the • computer systems department?
- Analytical skills: How do I sort out and interpret all this information?
- **Leadership skills:** Can I influence employees to work toward the firm's goals?
- **People skills:** Can I get a group or committee to agree to work together to achieve mutually beneficial goals for the benefit of the firm?
- **Critical Thinking Skills:** Do I understand the concepts involved in the problem? Do I have the history of the problem and how this problem is integrated into other aspects of the firm?

Outsiders, managers in lower levels, and non-management employees often review decisions made by management. In the after-the-fact analysis, observers criticize the decision maker suggesting they could do better themselves. In a narrow sense when focused on that part of the decision affecting the reviewer that may be true. But decision making by managers must incorporate all the skill and knowledge items listed above. A decision may be switched from the very best possible to just a good one in order to prevent another problem (critical thinking skills) or to have the entire committee enthusiastically endorse the decision (leadership and people skills). To the outsider, the decision might look rather mediocre at best. To the insider the decision might box like a great decision made with skill, daring and a great deal of management expertise.

A third perspective of management is to view specific unctions that managers perform. These functions are often classified and

- Planning: set objectives and mp the strategy to ashave the objectives;
- Organizing: secure of have all resources and implement the plan;
 Staffing: Cervit the best people pessible for the tasks;
- Decong: create writt a drotives and train individuals
- **Controlling:** monttor performance of individuals and the entire project.

A fourth perspective of management is to view jobs as they are often classified in large-scale organizations:

- Human Resource Manager
- Financial Manager
- Production and Operations Manager
- Marketing Manager
- MIS Manager (Management Information Systems)
- Accounting Manager •
- Administrative Manager •

You will find these job classifications listed as majors in most schools of business. A reading of the catalog will help you see in some detail what each job entails. The administrative manager title is somewhat vague. In some schools it will be called a "management" option. It is not unusual to find specialized tracks in the management option of universities such as pre-law or international business. Within a firm, administrative manager may cover cross-functional jobs. An administrative manager may be responsible for a division (the natural juice division), a plant (the semiconductor

- 1. A college student buying pasta and bread at a local grocery store where the retail grocery store is the final stop in the distribution channel for food
- 2. A student purchasing a computer directly from a manufacturer's website is a modern Internet distribution channel, which concludes at the home where United Parcel or DHL delivers the product

Industrial customers use the product or service for their own business needs. Not all products find there way to retail stores (brick and mortar or virtual) and consumers. Some products are designed and placed to satisfy businesses as the end user. Examples are:

- 1. A dump truck with snowplow attachment sold by Ford Motor Company to the local highway department
- 2. Six drums of hydraulic fluid sold to a firm that manufactures breakfast cereal
- 3. An accounting service for a local motel

Industrial buyers usually look for a good quality product, prompt delivery and a competitive price. Because industrial buyers are less affected by emotions in their purchases than are retail customers, businesses in the supply chain focus on price delivery and good quality when promoting their products or services to mustrial buyers rather than packaging or emotional appeal.

A firm selling cleaning supplies may promote it products by emphasizing the fact that it can deliver a wide assortment of good winin 24 hours. This will enable the buyer of these items to keep a minimum amount of supplies on Land, thus reducing the amount of money tied up in **inventory**. Just-in-time relively of products and services allows firms to operate with less storage capacity and less money tied up in raw material inventories. It is critical in the type of operation to find businesses that can be depended on to deliver just-in-time.

Examine the marketing channel which exists between wheat growers to bread **manufacturers** presented in **Exhibit 1**. More channels are required to produce the product than we present in the exhibit. The exhibit only follows the wheat to bread channel with reference only to other supporting channels. The wheat to bread marketing channel requires numerous other channels in order to maintain the flow of product.

At some points in the channel, sales organizations arrange the sale between a seller and buyer without taking title to the goods. These **brokers**, **agents** and **sales representatives** act just like a real estate agent would. They assist the buyer in arranging for the sale of a product. Each channel has a history that created the system through which the product moves. Some systems transfer title or ownership at each step. Other channels use agents or brokers to facilitate movement of the product.

In general terms, brokers work on large, one-time deals like a home sale. Agents generally represent the same client for many deals. Agents represent the buyer or the seller and on rare occasion represent both sides. An agent, for example, might represent the author of a spy novel and will continue to do so through many books and movie contracts.

A sales representative (sometimes called a manufacturer's representative) promotes the firm's product along with similar products from other firms. Sales reps

wholesalers, agents, brokers and sales representatives provide a vital function in the marketing channel.

There is often great rivalry between wholesalers for accounts. The wholesaler is caught between two forces; the manufacturer who wants a lot of large volume orders from the wholesaler and the retail store that wants products quickly, in small amounts and in good condition. To be competitively priced, the wholesaler can only take a small profit on each item sold. To make money under these conditions, the wholesaler must sell the inventory quickly (called **turnover**, just like a restaurant must turnover its tables quickly). Competition in the wholesale business is keen and does not allow a firm to make many mistakes.





Marketing channels evolve and continue to change over time. Producers of goods and cervices often use marketing to be channel. A snack food manufacturer may run a fleet of their own trucks locally, sell to a national grocery chain which has its own warehouses and sell to numerous wholesalers who in turn contract via reps to deliver directly to small retail stores. One day the snack food company will have its truck deliver to a national grocery chain store warehouse. The next day the snack food company truck will deliver to four wholesalers at the wholesaler's warehouses. Over the next two days the wholesaler's trucks will deliver directly to local grocery stores and convenience stores based on orders taken by sales reps.

The airline industry channel for ticket sales is shown in **Exhibit 4**. The **commission** paid to travel agents for providing the ticketing service is a small percentage of the total cost of a ticket, about 6%. If airlines write the ticket themselves, they keep the 6% commission. In the airline industry, 6% of sales amounts to millions and millions of dollars each year. The airline industry would like to have those millions instead of seeing them go to the travel agents.

Many buyers do not use the airline's ticketing service. Instead, they go to a travel agent and depend on the agent to do their ticket shopping for them. The air ticket buyer often has difficulty gathering information about flight schedules, class of service, cost and limitations on use of the ticket. Even if the customer could get all the information from several airlines, most cannot analyze the information efficiently. A travel agent, often install a manufacturer's monitor and video at the point where the product is purchased. This allows the manufacturer direct access to the end consumer interested in that type of product. The manufacturer has more time to promote the product than would be available in any media advertisement. And, the promotion hits a narrowly defined target market (in this example, customers in the store are interested in home improvement).

Video promotion is used extensively in trade shows where manufacturers and sales representatives promote their products and services to retail buyers. Tradeshow promoters rent a large convention hall and sell space (booths) to manufactures of products, distributors, and service providers. The tradeshow promoter then advertises the event to all potential retail buyers. The trade show is closed to the general public. There are so many buyers walking past a booth at any moment in time that talking with one potential buyer might loose the seller the opportunity to talk with a dozen other customers. The video helps inform the buyer who otherwise might not have the time to wait for a conversation with the seller.

Tradeshows are a major promotional vehicle, which allow new products to be efficiently promoted to potential retail buyers. Like shelf space in a supermarket, the prime booth space is very expensive and goes to established firms. Newcomers to the tradeshow often end up in remote corners of the coliseum building. Still, even the prote corner might be a better promotion technique than carrying samples from in the back of the entrepreneur's auto.

To lessen the potential fear a buyer may have of buying a product and having it fail, some firms are advertising on their product's packaging that they have phone support. This one-way package at lettising provides assurance to the buyer that if there is a problem with the poduct, two-way communication with the service provider or manufactures while possible. This process eminiates the cost of two-way containing except in costs where there is a real need to do so.

In starting a new lirm, the entrepreneur seeking to promote the firm's service or product might hire a marketing executive or contract with a marketing consultant. The marketing executive or consultant might determine that most of the promotional effort should be directed into advertising. A person with specialized knowledge about consumer behavior, market research and advertising might be added to the promotional campaign team. The team will need to gather information from the firms they might use for their promotional campaign (radio, television, magazines, newspapers, billboards, catalogs, direct mail, etc.).

For new firms, it can be a difficult process to determine the value of advertising. Should a new firm spend money on advertising or spend the advertising budget on improving customer service? If the firm is entering an established and competitive market, advertising may be needed. If the firm has high fixed costs and needs to sell a large number of units as soon as they go into operation, then advertising is essential. If the firm has been able to differentiate its product or service and can financially tolerate a longer period of lower sales, it may depend on free word-of-mouth advertising (customers recommending the firm's service or product to their friends and associates).

Pricing

How does a business decide on a price to be charged for a product or service? There are three choices to base price on:

- Cost
- Competition
- Demand

Price Based on Cost:

What price should a manufacturer, wholesaler or retailer put on a product? It is common sense that in most cases the price needs to be higher than what it cost the firm to make or buy the product. The difficult part of the common sense approach to pricing is to determine what the cost is.

When a product is manufactured it will have a labor cost and a raw material cost. Each time a unit of product is made, the total cost increases proportionately. Assume 15,000 units are made at a total labor and raw material cost of \$900,000 by 15,000 (the number of units produced). The answer of \$60 per unit is called the **variable cost**. The total cost varies directly with the number of units made. If no units are no luced, variable costs are zero. If 15,000 units are produced, variable costs are 200,000 in total or \$60 per unit.

Should you charge something more table? Yes, you need to cover other costs, and make a profit. What if you affet your sales representatives \$4.00 for each unit they sell? Add another \$4.00 per unit to your variable cost. (Now variable cost is up to \$64 per unit).

nit Variable Costs

TT 111 C		A <0

variable Costs	\$ 60
Sales Rep. Commission	<u>\$4</u>
Total Variable Costs	\$64

To set the price, suppose the president of a company decides to mark the product up 25% over variable costs. The price of the product would be \$80, or \$16 above variable costs.

$64 \times 25\% = 16$ 16 + 64 = 80

The \$16 difference between price and total variable costs per unit is called the **contribution margin**. This is the amount each unit "contributes" to paying other expenses such as **fixed expenses** (such as rent, salaries, and advertising) and profit, if there is any after expenses.

Unit Price, Variable Costs, And Contribution Margin

Production Costs	900,000			
Commissions	60,000			
Total Variable Expenses			<u>\$</u> -	960,000
Gross Profit			\$	240,000
Advertising	\$	50,000		
Rent	\$	5,000		
Salary	\$	50,000		
Total Fixed Expenses			\$ -	105,000
Net Profit before tax			\$	135,000
Taxes 30%			\$ -	40,500
Net Profit after tax			<u>\$</u>	94,500

Price Based On Competition:

Assume a marketing manager finds out that an established, competing firm is selling their units of a similar product for \$76.

The President realizes that as a new company, they can't sell more products than their well-established competition, which has a good reputation and a cheaper price. Therefore, he/she may suggest lowering the unit price to \$74. If price is lowered, the unit contribution margin goes down. This leaves less money for covering expenses and squeezing out a profit. How many units must be sold so the real pair does not lose money? What we want to find is the point a which evenues from sales and costs (variable costs and fixed expenses) are equal. This point is called the **break-even** point. Selling additional units beyond in spoint will give us a profit

We know t	hat If we sell one unit a	571, ve have a Contribu	ition Margin of \$10 to
cover Fixed Expen	ces. This is sumprize	below:	
DIE	P tr	\$ 74	

	ψ / τ
Production Costs	\$ 60
Sales Rep. Commission	\$4
Less Total Variable Costs	<u>\$ 64</u>
Contribution Margin	\$ 10

To find out how many units a firm must sell to break even, divide the total fixed expenses by your contribution margin. The result will be the number of units you need to sell to break even:

Total Fixed Expense divided by contribution margin = break-even point \$105,000 / \$10 = 10,500 units

Let's look at the proof of this. Examine the sample income statement below, which shows 10,500 units sold at \$74 per unit.

Income Statement

Total Sales Revenue	
Production Costs	630,000

\$

777,000

forecast demand for their industry and then estimate the firm's market share within that industry given the firm's price of \$74.

The estimation process is in two stages. First, the firm must estimate demand for the entire industry. That is, how many people in a given market will want the product being sold by the industry? This is difficult to do, even with good historical data. Hopefully, an industry association representing all the firms in that industry has been collecting data. In addition, financial firms such as banks, credit agencies and stock market related firms might have data.

Once industry demand has been forecast, the firm must estimate what its share of industry demand will be at a price of \$74. How does price affect customer demand? If they charged \$72.00 would the firm get a lot more market share? If they charged \$75.00 would they lose many customers?

Demand is a function of many items. Demand is dependent on each of the 4P's. Is the product acceptable? Is it in the right place at the right time? Has it been well promoted? Is it priced right? Price is unique among the 4P's. It is the only variable that makes money. The other 3P's cost money.

Economists study the relationship of demand and price, and these relationships are presented in economic and marketing classes. The **price/demand** concept is simple, but securing reliable data to produce useful information for decision-making is sometimes difficult. That does not mean the decision-maker should insteaded the price/demand concept when setting price.

Let us establish a demand curve for a newer? On automobile you might consider is a Lambourgini. It sells for about quarter of a million dollars. **Exhibit 5** represents the relationship between plice and demant. We will start with a base price of \$250,000. If the dealer ais to the price by \$10,000 le you think demand would fall? The answer's yes, but not be nucl. A few of the poorer rich would not be able to pry the extra \$10,000. What if the dealer lowered the price in \$10,000 increments? Would there be more buyers at \$200,000? While there would probably not be a long line of people wanting to buy, a few more customers might come in to inspect the automotive piece of art. We might expect the demand at each price level to be as follows:

Exhibit 5



Price Demand Relationship (Not Based on Actual Data)

At some level, customers might sense the price is just too outrageous and represents a snob statement rather than an expression of appreciating lux moutautomotive art. On the lower end, if the price dips too low, rish e clients would not see the vehicle as an elite, expression of high-speed art, but enous as another high-powered luxury sports car in an already crowded made

Thus, the demand curve for a israre sports car might be one of the most unusual in business. What other produce might have a prevalent and relationship expressed by the curve in Erit(2), bo you think the more expensive lines of perfume might have a sin nucleae tusing, of course, this can dollar increments on the vertical axis)? What about designer clothing or shees? Someone willing to pay \$200 for a pair of tennis shoes probably would not buy that pair of shoes if just anyone could buy them. Therefore, if that \$200 pair of shoes was priced at \$35, the shoe company may lose the elitist clients in exchange for the price-conscious consumer. Sales may be equally low at both price extremes if people would be willing to pay just \$20-\$50 more than the lowest-priced shoe to buy a slightly more popular brand of shoes.

Exhibit 6

When Price Determines Image Rather Than Product Features



Electricity Usage

Most price/demand relationships are linear (straight line) over *limited* ranv.s. **Exhibits 5** and 6 show curved relationships as price moves into *extreme* ranges. Examine the **Exhibits 7** and **8**. We have identified two product with unasually curved demand functions. What products do you think fit into the mastic and elastic price/demand model?

Back to our scenario, assume the marketing manager obtained market research data that measured the currin price/demand relationship as being very elastic. From the data, the marketing in hager estimated that at 174.00 per unit the firm would sell 11,000 units to a since the demand in 0 eartic, if the price were \$70, the marketing manager expects they could sell 11,000 units in total. The choice is 11,000 units at \$74 or 15,000 units at \$70.

What is their profit at \$74 and what is it at \$70?

\$74 x 11,000 units = \$814,000 total sales revenue

\$70 x 15,000 units = \$1,050,000 total sales revenue

But remember this does not take expenses and taxes into account.

814,000 - 704,000 (variable costs) - 105,000 (fixed costs) = \$5000 net profit before tax

1,050,000 - 960,000 (variable costs) - 105,000 (fixed costs) = - \$15,000 net loss

In this case given the fixed and variable costs, the business would be better off selling fewer units at a higher price.

It is important to consider all aspects of pricing including cost, competition and demand. Reliance on one aspect alone might have the executive team miss a coming threat or an opportunity.

example, suppose a shampoo manufacturer wants to increase its share of the market by 5 percent in the next year; or increase sales by \$2 million. These objectives are easily measured.

Strategies are general statements about the way the firm plans to achieve objectives. For example, to increase market share, the manufacturer might adopt a low price to encourage consumers to try the product and make repeat purchases. It might also increase the distribution by getting more retailers to carry the product.

Tactics make up the program for implementing the strategies. Tactics describe specific actions. To implement the low price strategy, the shampoo manufacturer might decide to lower price to retailers by 5 percent. It might also implement coupon program giving consumers 50 cents off the retail price of the product. To encourage new retailers to carry the product, the firm might have to design special displays for retailers' shelves. The tactics would specify what the displays will look like, how much they will cost, and how they should be placed in stores.

Exhibit 2

Objectives, Strategy and Tactics

Objective (what)	Strategy (way)	Tactics (how)			
Increase Market Share by 5% within the next two years	Product : design a new product for the market	Develop a new shampoo/conditioner targeted "outdoors" market. The product will be high quality and provide protection against effects of wind and sun.			
	 Price: Low (introductory) price during product introduction Offer low price to new retailers 	 Price at \$10.95 for 12 oz., which is 7% below the current product to encourage trial and repeat purchase. Offer new retailers a 10% discount on their first three purchases. 			
	Promotion and Advertising:				
Preview	 Promotion: Coupon program Retail Support program 82 0 82 0 	 \$.50 off once coupon in \$10 off once coupon in \$10 off once coupon in \$10 off off once coupon in \$10 off off off off off off off off off of			
	 Advertising Retail cooperative advertising program 	• Grant top retailers (those that do 80% of sales) 50% cooperate advertising allowance beginning one week before the roll out of our new product. Allowance will last for six months.			
	 Place (distribution) Increase number of retail outlets 	 Add 50 new retail distributors within the next two years. These should be in major metropolitan areas, and should have beauty aid/supply sales of at least \$200,000 year. 			

Or, maybe the strategy was faulty. Perhaps the best way to get more market share would be to change the product, not lower price. Maybe the current product is not what the consumer's desire, and a lower price does make a difference. Finally, the tactics might not have been implemented well. Maybe the company did not meet with retailers

Cost Leadership:

Cost leadership comes about several ways. One way is to build large plants, allowing the firm to experiences efficiencies in production. Cost leadership can also result from tightly controlling costs such as overhead, distribution (through efficient distribution methods), and avoiding markets that do not return good profit relative to costs of doing business.

Differentiation:

This strategy entails creating a product that is seen as being unique in the industry. Differentiation can come about through product design, distribution, customer service, technologies or other ways of making the product or its offering appear unique to customers.

Focus:

Focus means concentration on a particular group of buyers or on a particular reagraphic segment. For example, a firm might choose to concentrate on the fernal charket, or on the age group 18-24. Some firms focus on high-income groups only. Or, a firm might focus geographically. Instead of trying to sell patient of a line might choose to sell regionally, or only in the larger metropolities markets. The assumption of the focus strategy is that a firm can be more successful selling to a smaller market than to a larger market. This might benarticularly true of small trans with more limited resources. In a cost focus strategy, the firm seeks trate allow cost leader in its target market, while with a differentiation focus, a firm seek strate allow cost leader in its target segment. For example, a shampoo manufacturer might want to focus on the outdoors market for people 18-34 years of age. It might develop unique (differentiated) products for this market.

Key Words:

- Competitive advantage
- Cost leadership
- Differentiation
- Focus
- Objectives
- Strategy
- Tactics

to be sure the balance sheet balances and that the numbers are accurate. Creditors and owners insist that accepted accounting standards and procedures be used to insure that the firm's financial statements meet a uniform standard. Such standards allow for comparison over time and also allow for comparison between firms. Let us examine the details of a balance sheet.

Assets:

The left side of a balance sheet lists the firm's real **assets**. Common practice lists the assets in order of their liquidity. The more liquid the asset, the closer it is listed to the top of the balance sheet. Liquid means how quickly and how safely (without a loss) an asset can be turned into cash. Cash is the ultimate liquid asset. Therefore, the assets listing on the balance sheet starts with cash (checking and money market accounts). As you spend the cash to buy assets, the accountant will decrease the cash account and increase other asset accounts such as inventories.

The right hand side of your balance sheet lists where the funds came from to purchase the real assets on the left side of balance sheet. The list of funding sources is in order of shortest time until it must be paid back to the longest time. If creditors and stockholders put money into the firm, the real assets had better equal what they part in. If the amount of funding listed on the right side does not balance or equal the real assets listed on the left side, there is a serious problem. Either the new particulation made an error or there was a theft of real assets.

Employee theft is amajor source of loss to many firms. Sometimes employees take tools or finished goods, Employees that mindle noney are often tempted to pocket some cash. Businesses must find a way obcomo assets and employees without making employee ofter about in tail of trast. If you see clerks taking their change drawers out of the cash register at the end of their shift, that is a method the business uses to keep cash shortages isolated to just one employee. That makes each clerk responsible and accountable for the cash they handle - a good management practice. What if the drawer is short of cash? What would you do the first time it happens to an employee? What about the second time?

Liabilities:

The accounts on the right hand side of the balance sheet are grouped into two main sections. The sections are very important to the reader of a balance sheet. The top section shows all debt sources by categories. This section as a whole is called the **liability** section. When discussing this section people use various terms which all have about the same meaning.

- Liabilities
- Borrowed or owed sources of funding
- Indebtedness
- Creditor claims
- Debt financing

Economic Report

Economic Index:

This is a relative measure of economic activity. The number 109 does not tell us anything of value. If we consider the current index of 109 in relation to the economic forecast for next quarter (110.2) and for next year (108) we can determine the direction of economic change and its magnitude. The higher the index number the greater the dollar value of total products being produced and services provided. Given the numbers on the sample Economic Report, economics in this simulation expect a 1.2% increase next quarter, but a 2% decrease in economic activity by the end of the year (4 quarters from this report). In turn, your firm should expect sales to increase slightly next quarter after adjusting for any seasonal changes. However, when ordering product to be produced for your firm a year from now, you should order less.

How much less should you order? This is a very difficult question. If consumers purchase your product at the exact rate they make money, then your product demand will exactly match changes in the economic rate of growth. Some products such as beer tend to fall slower than the economy falls. Automobile demand tends to fall faster but not rise as fast, until consumer confidence also is high (next report). Then autos boom faster than the economy. Our recommendation is to assume your product emand rises and falls at the same rate as the economic index. In statistical teams, your product is perfectly correlated with the economic index. This is a same assumption until experience allows you make a different assumption. Inclu firms spend considerable effort to determine their product's statistical protocoletion for constant.

Workers produce here based and provide the service resulting in workers getting paid, which in turn results in demand for more products and services. If growth is too fast prices go up though the actual value of the product or service remains the same. This upward movement of prices for the same product or service is called **inflation**. Many citizens are financially injured by inflation but some do benefit. Usually it is the more wealthy people who benefit and those with limited or retirement incomes suffer. A **recession** occurs when the economy declines for more than two quarters in a row. Businesses do not make new investments in a recession and consumers sharply reduce spending. In this situation, individuals cannot find work resulting in less demand for products in general. A slowdown in consumer spending will cause businesses to make even fewer investments resulting in job layoffs. This means consumers will have even less money to spend. This cycle can cause increasing rates of job layoffs and lower demand. It is very important that the government monitor economic activity and adjust its economic policies to grow the economy at a reasonable rate.

Consumer Confidence Index:

This is a relative measure of the dollar value of a group of stocks. In the real financial markets, measures, called **indexes**, have been established. For reporting purposes a set of selected stocks are measured each day (value averaged). The daily measurement is compared to yesterday's measurement and measurements going back for

		Product 1	Product 2		Product 1	Product 2	
Total	Sales (in units)	6266	22431		5525	57282	
Total	Wholesale Orders	0	0		0	0	
Total	Backorders	0	0		0	22	
Total	Advertising	167000	167000		167000	167000	
Endin	g Sales Lost	0	0		0	439	
Avera	ge Commission	1.721	1.821		1.721	1.821	
Avera	ge Rep Salary	2242	2.857		2242	2.857	
Firm	Firm Name	Product 1	Product 2	Sales	Product 1	Product 2	Sales
				Reps			Reps
	Market Group	\$ 136.86	\$203.57		136.83	203.57	
	Average				Euro	Euro	
11	Firm 1	\$150.00	\$300.00	2	150 Euro	300 Euro	2
12	Firm 2	\$160.00	\$300.00	3	160 Euro	300 Euro	3
13	Firm 3	\$138.00	\$200.00	5	138 Euro	200 Euro	5
14	Firm 4	\$135.00	\$185.00	6	135 Euro	185 Euro	6
15	Firm 5	\$130.00	\$165.00	7	130 Euro	165 Furo	7
16	Firm 6	\$125.00	\$140.00	10	125 Euro	140 Etito	10
17	Firm 7	\$120.00	\$135.00	10	128 Euro	135 Euro	10
				26			
7 Firm	s pay sales rep commi	ission on prod	uct	60	1		
7 Firm	s pay sales rep commi	ission on prot	itct 2	c 🤈	11		
7 Firms pay sales rep salary							
.ieW . 113							

Prev Page and Marketing Report

The Sales and Marketing Report is a subcategory of the Market Group Report. The Sales and Marketing Report contains valuable information about your competitors. Careful analysis of this report will provide your firm with market group totals and averages to compare against your firm's expenditures and budgets.

Total Sales (in units):

Total sales are listed by product and area. Total sales are the total sum of all units delivered by all firms in the given market group for the given quarter. The seven firms listed in this example had combined sales totaling 6,266 units of Product 1 in their region (group), which is located in the NAFTA market (Area 1). Wholesale sales from a Global View firm to another Global View firm

Total Wholesale Orders:

Total wholesale orders (firm to firm sales) are listed by product and area, and is the total sum of all units sold by all firms in a given market group to other firms participating in the simulation. None of the sample firms shown in this chapter had any wholesale sales, so there are only zeros in this category of the report. None of the Introduction to Business

simulation) considers the credit rating and existing liabilities of a firm before setting a short-term interest rate. The interest rate given is the annual rate. Divide the rate by four to figure the quarterly short term borrowing rate.

Debt-to-Equity Ratio:

Debt-to-equity is a measure of financial risk undertaken by the firm. Within the simulation, debt-to-equity is a ratio of the total liabilities to total equity. The ratio can be stated as a ratio such as 1-to-1 or it can be divided and read as a percentage. A debt-to-equity ratio of 1-to-1 would indicate that a firm has equal amounts of debt and equity (the percentage figure would be 1.0).

To arrive at your firm's debt-to-equity ratio, divide total liabilities by total equity (both of these figures can be found on the right side of the balance sheet). A ratio of 0-to-1 equity is ultra conservative. An ultra-conservative strategy may be safe but it will restrict the potential growth in the stock price. The firm represented in this example chose to finance their firm entirely with stockholder investment money. They did not take on any debt, and liabilities are at a minimal \$17,500 (salary owed but not yet paid to executives), so their debt-to-equity ratio is 0.01.

A debt-to-equity ratio of 1.5 will begin to worry both stock investors and benkers. Above the 1.5 ratio one will find two types of firms: high risk firms resting thancial leverage to its maximum and firms that have lost a great deal of courty who are in financial difficulty. Stockholders start to lower price Southares of stock once the financial risk becomes excessive. Stock presence is simulation starts to suffer as the firm's debt-to-equity ratio exceeds 1.1. As financial risk increases, investors lower stock values at an increasing the.

Sheald your team story of stay under a 1.0 debt-to-equity ratio? There may be some exceptions. Here are two reasons to exceed the 1.0 standard even if it initially hurts stock price:

- Use of debt resulting in a debt/equity ratio of 1.0 to 2.0 may produce additional earnings per share (EPS), which would boost stock price. The boost may more than offset the decline in stock values caused by the increased financial risk. The firm must have very profitable opportunities to make this strategy work.
- Excessive use of debt early in the simulation may be justified even if stock prices plummet, as long as the debt is used to execute a long-term strategy. Issuing few shares of stock and instead borrowing funds early to secure markets might produce large profits by the end of the simulation. The profits will increase the equity section each quarter, which will slowly reduce the debt/equity ratio. Eventually (if the firm survives the early quarters) the firm will emerge near the end of the simulation with a low debt/equity ratio, huge market share, huge profits and since they have so few shares outstanding, huge, huge, huge EPS (earnings per share). Stockholders will go nuts trying to buy the firm's stock. This strategy is very, very risky.

Association Global View

Sales and Marketing Report

Sales Reps:

Sales Reps is the total number of sales reps in each area.

Base Salary:

Base Salary is the amount of salary currently paid to each rep, by area, each quarter.

Sales Commissions:

Sales Commission is the amount of commission paid to reps for each unit of product they sell. Commissions are listed by product type and by area.

Product Prices:

Product Prices are for each product in each area. Area 2 prices are listed in Euros.

Market Share:

Market Share is by product and area. It represents your share of what the firms in your market group sold (current sales plus backorders from last quarter). Market share calculations do not include Ending Sales Lost, Current Backorders, or Sales Lost. If there were five firms in your market group, then your "fair share" of the market would be 20%. Given 8 firms (the maximum in any one market group), a "fair thare" your be 12.5%. In our example, Firm 11 captured only 5% market share for from the market 1. A 5% market share is very poor unless the firm has captured a with the product of the market.

Association Global Wice Production Report - Firm 11 22

	Are	Area 1 Are		ea 2		
	Product	Product	Product	Product		
	1	2	1	2		
Production Shift 1	0	0	0	0		
Production Shift 2	0	0	0	0		
Finished Goods Inventory	687	484	613	0		
Inventory Unit Cost	80	115	80	115		
Production Unit Cost	0.00	0.00	0.00	0.00		
	Type 1	Type 2	Type 1	Type 2		
Raw Materials Inventory	0	0	0	0		
RM units/FGU Product 1	6	12	6	12		
RM units/FGU Product 2	12	25	12	25		
	Stage 1	Stage 2	Stage 1	Stage 2		
Labor Hours - Shift 1	0	0	0	0		
Labor hrs/FGU Product 1	1.700	2.000	3.000	2.500		
Labor hrs/FGU Product 2	3.000	2.500	3.000	2.500		
New Construction (hours)	0	0	0	0		

Production Report

Equity		0	180)14	21	1801421		
Beginning Cash Balance =10,000								
Cash Inflows Cash Disbursements								
Net Cash Sales		7	12565		Ra	w Mtls at Mark	ket *.85	0.00
Investment Income			0.00		M	g Labor Costs	*.85	0.00
Income from Subsidiary			0.00		Ba	d Debts Exper	ise	2162
Collection of Receivable	es		0.00		Ad	lvertising Exp	ense	40000
Receivables Factored			0.00		Qu	ality Control	Expense	36000
New Special Loan			0.00		Pro	oduct Improver	nent	0.00
New Short Term Loan			0.00		En	gineering Studi	ies	0.00
Change in Term Loan			0.00		Sa	les Expense		27948
New Bond Less Discour	nt		0.00		Ad	lministrative B	Expense	32500
					*.6	5		
New Stock Issue		15	68000		In	ventory/Shippi	ing costs	1216
Cash Available for Ope	erations	22	90565		Maintenance Expense		0.00	
					Int	terest Expense		56700
					Fa	ctoring Expense	e	0.00
					Mi	iscellaneous Ex	xpense	66000
					Inc	come Taxo	COL	212341
					Be	gi mir e Chort I	Ferm Loan	0.00
					B	ginning Specia	al Loan	630000
		m			Pre	zay Bonds		0.00
					K	purchase Com	non Shares	0.00
iev			1.5	6	Ca	sh Dividends P	aid	0.00
prev.	boc	9			Ra	w Mtls Futures	*.70	0.00
Pag					Ne	w Construction	1	0.00
•					Total Cash Disbursements		1104867	
Computed Ending Cas	h Bal.	11	85698		Qu	arterly Stmt (Cash Bal.	1185699
Computed minus Actu	al Bal.		-1					

The cash flow report shows you where your cash came from and where it went during the quarter. Remember this is the record of your CASH, which may be different from profit or loss numbers claimed on the income statement. For example, you may have \$50000 worth of sales on your income statement but only \$30,000 as net sales on your cash flow report (60% of sales become cash immediately; the remainder will come in next quarter). The credit sales would be recorded as accounts receivable and represent the other \$20,000 of sales.

"Cash Available for Operations" is an important number that shows the amount of cash the firm had to work with for the quarter. In this example, the Firm had \$10,000 to start with due to the special loan, which included an extra \$10,000 for the cash account.

"Total Cash Disbursements" lists cash payments during the quarter.

"**Computed Ending Cash Balance**" is found by subtracting the cash disbursements from the cash available for operations.

Cash Flow Report						
Changes in Capital Accour						
Account L	Last Qtr This		Qtr	Change		
Bonds	0 10)000	0 100000		
Shares	0	30)000	0 300000		
Other Paid in Capital	0	100)200	0 1002000		
Unamortized Disct	0	-1	17862	2 17862		
Retained Earnings	0	18	8729 :	1 187291		
Equity	0	147	7142	9 1471429		
Beginning Cash Balance =1	10,000					
Cash Inflows				Cash Disbursem	ents	
Net Cash Sales	683	822	I	Raw Mtls at Mark	ket *.85	0.00
Investment Income	0.0	0	1	Mfg Labor Costs	*.85	0.00
Income from Subsidiary	0.0	0]	Bad Debts Expen	nse	2578
Collection of Receivables	0.0	0	A	Advertising Exp	ense	48000
Receivables Factored	0.0	0		Quality Control		36000
New Special Loan	0.0	0	I	Product In a over	0.00	
New Short Term Loan	t Term Loan 0.00			2 1 He ering Stud	0.00	
Change in Term Loan	0.0			sales Expense	28290	
New Bond Less Discount	rois	.197		Administrative H	Expense	32500
New Stock Issue		200]	inventory/Shipp	ing costs	1345
Call A vallable for Operat	nis 297	7019	1	Maintenance Exp	ense	0.00
]	Interest Expense	!	817000
			I	Factoring Expense	e	0.00
			I	Miscellaneous Ex	xpense	90000
]	Income Tax		169759
			I	Beginning Short 7	0.00	
]	Beginning Specia	630000	
			I	Prepay Bonds		0.00
				Repurchase Common Shares		0.00
				Cash Dividends P	aid	0.00
				Raw Mtls Futures	*.70	0.00
			1	New Construction	1	0.00
			, r	Fotal Cash Disbu	ursements	1120171
Computed Ending Cash Ba	al. 1	856848		Quarterly Stmt	Cash Bal.	1856849
Computed minus Actual B	al.	-1				

Firm Reports for Firm 12 (continued)

Cash Flow Repor	t							
Changes in Capital Acc								
Account	Last Qtr		This	Qt	r	Change		
Bonds	0		120000		00	1200000		
Shares		0	40000		00	400000		
Other Paid in Capital		0	102	240	00	1024000		
Unamortized Disct		0	-2	273	54	27354		
Retained Earnings		0	-11	175	35	-117535		
Equity		0	127	791	11	1279111		
Beginning Cash Balanc	e =10,00	0						
Cash Inflows					Ca	sh Disbursem	ents	
Net Cash Sales		6	93654		Ra	w Mtls at Mark	ket *.85	0.00
Investment Income			0.00		M	g Labor Costs	*.85	0.00
Income from Subsidiary			0.00		Ba	d Debts Exper	ise	3443
Collection of Receivable	S		0.00		Ad	vertising Exp	ense	60000
Receivables Factored			0.00		Qı	Quality Control Expense		49000
New Special Loan			0.00		Pro	oduct In prover	nent	0.00
New Short Term Loan			0.00		H	ane ering Studi	ies	0.00
Change in Term Loan			0.2		Sales Expense			34886
New Bond Less Discour	^{at} frC	11	71206		Ad	nini trative B 5	Expense	32500
New Stock Is up		14	24609		Inv	ventory/Shipp	ing costs	9267
Call Available for Ore	BIP LS	32	98860		Ma	intenance Exp	ense	0.00
					Int	terest Expense		201450
					Fa	ctoring Expense	e	0.00
			Μ		Mi	scellaneous Ex	xpense	168000
					Income Tax			0.00
					Beginning Short Term Loan		Ferm Loan	0.00
					Beginning Special Loan		al Loan	1905000
					Prepay Bonds		0.00	
					Repurchase Common Shares		non Shares	0.00
					Cash Dividends Paid		aid	0.00
					Ra	w Mtls Futures	*.70	0.00
					Ne	w Construction	1	0.00
					To	tal Cash Disbu	ursements	2463546
Computed Ending Casl	h Bal.	8	35314		Qu	arterly Stmt (Cash Bal.	835314
Computed minus Actua	al Bal.		0					

Firm Reports for Firm 14 (continued)

Cash Flow Report										
Changes in Capital Accounts										
Account	Last Qtr This		This	Qt	Qtr Change					
Bonds		0	1500000		00	1500000				
Shares		0	50	00	00	500000				
Other Paid in Capital		0	1250000		00	1250000				
Unamortized Disct		0	-3	58	53	35853				
Retained Earnings		0	75633		33	75633				
Equity		0	178	97	'80	1789780				
Beginning Cash Balanc	e =10,00	0								
Cash Inflows					Ca	sh Disbursem	ents			
Net Cash Sales		162	24852		Ra	w Mtls at Mark	xet *.85	0.00		
Investment Income			0.00		M	g Labor Costs	*.85	0.00		
Income from Subsidiary			0.00		Ba	d Debts Exper	ise	9690		
Collection of Receivable	S		0.00		Ad	vertising Exp		100000		
Receivables Factored			0.00		Qu	ality Sen fol	46125			
New Special Loan			0.00 Product Impro		and Improven	nent	0.00			
New Short Term Loan			Eng		En	ngineering Studies		0.00		
Change in Term Loan	Change in Term Loan		0.00 Sa		Sa	alis Eroense		55902		
New Bond Less Discount		14	622406 Ministrative *.65		ministrative B 5	Expense	32500			
New Stock Issue	020	17	50000		In	ventory/Shippi	ing costs	6010		
Cash Available for Operations		484	47112		Maintenance Expense			0.00		
					Int	erest Expense		273300		
			Fac		Fa	Factoring Expense		0.00		
					Miscellaneous Exp		xpense	198000		
					Income Tax			66690		
					Beginning Short Term Loan		Ferm Loan	0.00		
					Be	Beginning Special Loan		2620000		
					Prepay Bonds		0.00			
					Repurchase Common Shares		0.00			
					Cash Dividends Paid		0.00			
					Ra	w Mtls Futures	*.70	0.00		
					Ne	w Construction	1	0.00		
					То	tal Cash Disbu	ursements	3408217		
Computed Ending Casl	h Bal.	14	38895		Qu	arterly Stmt (Cash Bal.	1438895		
Computed minus Actua	al Bal.		0							

Firm Reports for Firm 15 (continued)

Finance Concepts and Strategy

Funding Sources:

An entrepreneur or team of entrepreneurs starts a business by forming a corporation through some government agency. In the United States, individual States have the right to charter a corporation. The next step for the management team is to sell stock. Raising money for a new firm can be more difficult than creating a vision statement, completing product development or marketing. It is difficult to part investors from their money. Management of many start-up ventures, desperate to sell stock to anyone, seek out relatives, friends, and business associates as potential shareholders.

Most states have laws that prevent entrepreneurs from attempting to sell stock, called **securities**, directly to the general public. Often State laws limit the number of shareholders to a small number, such as twenty. In addition State regulations may require each shareholder to sign a statement that they understand the great risk they are uccepting in buying the stock of a new firm. It is rare that the executive team would have the talent, knowledge and experience needed to raise capital for a new centure. The entrepreneurs putting the project together often require the hot of pecialists that provide or raise money for small and medium sized by sine ses. The special state known as venture capitalists. Venture capitalists that or jointly fund shall start-up or expansion businesses.

We the capitalists will pure ase stock if the analysis of the business plan indicates:

- Great potential in terms of returns in the longer run to stockholders.
- Management is capable, ethical, and will stick to the business plan.
- Initial funding is sufficient or will last until cash flows from sales can power future growth.
- External political and market conditions are appropriate.
- Competition is under control due to the firm's patents, copyrights, or longer term differentiated advantage.
- The venture capitalists' share of the total stock issue is fairly large relative to the capital put into the firm (venture capitalists would negotiate for a large portion of the shares of stock being distributed between the entrepreneurs with the idea, management people running the business, and the capitalists with the money).

The capitalists supply only a portion of the capital needed in exchange for stock and perhaps loans that can be converted into stock at a later date. It is rare that the capitalists would fund 100% of the firm's funding needs. They prefer management also have some financial stake in the firm. Venture capitalists are generally tough, seasoned negotiators who, if not carefully dealt with, will own more than a fair share of your Taxes = $42\% \times \$1$ profit = \$.42

\$1 income\$.50 interest expenseTaxes = 42% x \$.50 profit = \$.21

It is clear that the firm saved \$.21 cents in taxes only because it was funded partly by debt. The point that funding with debt produces a tax shield is very important. Debt can shield a firm from paying taxes and thus the real after tax cost of debt is lower than the stated interest charged, depending on the tax rate paid by the firm. Thus, the comparison is not 20+% equity cost compared to 12% debt cost. The 12% needs to be restated to its after tax cost which is 6.96% (1- tax rate x the interest rate OR 1 - 42% x 12%).

The Question

In your firm, would you rather have a stable and conservative source of funding from stock? Or, would you rather mix that funding with some debt?

Using debt will obligate the firm to make payments and thas increase its risk. Mixing 20% money with 7% after-tax debt mon viewers the cost of funds (sometimes called the cost-of-capital). Using debt in this way means required fewer shares of stock and, if you are successful, from the will then have higher parnings per share.

\$500,000 p com after tax 500,000 shares outstan P g EPS (earnings per share) = \$500,000/500,000 shares = \$1 EPS

430,000 (after 12% interest and taxes; financed the firm with half debt, half stock) 300,000 shares outstanding EPS = 430,000/300,000 shares = 1.43 EPS

EPS is the major driver of share price. Thus the stock in the second example with an EPS of \$1.43 will be much higher than the stock in the first example, which had \$1 EPS. HOWEVER, if the firm comes on hard times the reverse could be true.

\$0 income 500,000 shares outstanding \$0/500,000 = \$0 EPS

\$120,000 due to interest expense (tax carry forwards or backwards not considered)
300,000 shares outstanding
\$120,000/300,000 shares = -\$.40 EPS

Bonds generally expire (are due to be paid back) in twenty years. Bonds are sold in smaller denominations generally at \$1,000 each.

Bonds are sold in small denominations to make them attractive to average investors. This is in contrast to loans, which are very large and made in agreement with large lenders such as banks and insurance companies. Smaller investors however, cannot be expected to negotiate loan terms directly with the firm. Therefore the firm appoints a well-known and respected financial institution to help define the terms of the bond and to act on behalf of the bondholders (the investors) over the life of the bonds. With someone to monitor the firm to protect the terms of the contract, investors feel comfortable buying bonds. If the firm is well known and it appears that it can honor the bond contract the bonds should sell well.

There are some situations where bonds will not find a ready market of eager investors.

- The interest rate was set is too low compared to what is available from other bonds in the market.
- The firm is not well known and the size of the issue is very large.
- The firm has a poor record of earnings or its position in the market is not stable.
- The firm is a new firm with little if any history.
- The firm is attempting to fund its operation with excessive dept to omparison to a small amount of equity.

If the financial advisors misjudge any of the above considerations or if the interest rates in the general market are on using often, then the bord contract may be unacceptable to the bond buyers. If the bond is not caractive to investors not all the bonds will still an they may sell at a discount.

To attract invertors a command its financial advisors may keep the terms as stated in the bond contract but lower the price. Since it would take weeks or months to rewrite the contract and promote the sale, the firm will simply lower the price (take a discount) on the \$1,000 bonds. A discount in financial terms is the same as a discount in a clothing store sale where an item is reduced in price from its original value. With a **bond discount** the firm will mark the \$1,000 face value (original stated value) down to a price that will sell well to investors. The discount means that the firm is still obligated to repay the investor the full \$1000 for the bond when it is due for repayment, but the investor may only have to pay \$980 to purchase the bond. All other contract terms including interest stay the same. (For information on how a bond discount affects the balance sheet or income statement, refer to the accounting chapter.)

Financial Assessments

Financial assessment measures management's performance against external benchmarks. Analysis of financial performance is usually quantitative and the benchmarks external, thus financial assessment is a rigorous method of measuring management's performance. In this section we examine the variables often used when Firm A was considering the purchase of a bottling machine at a cost of \$1,200,000 that would last 10 years. Firm A estimated the following profits and cash flows over the life of the machine:

Year 1 = \$150,000 profit with 100,000 being available in cash Year 2 = \$450,000 profit with 200,000 being available in cash Year 3 = \$600,000 profit with 400,000 being available in cash Year 4 = \$600,000 profit with 500,000 being available in cash Year 5 - 10 = 600,000 profit with 500,000 being available in cash (per year)

By the end of Year 3 profits equaled the \$1,200,000 cost of the machine. But only cash counts. Therefore, payback in this example is 4 years found by adding the cash flows from years 1 through 4 to equal \$1,200,000. Note that years 5-10 are not even considered in this method of financial analysis.

Future Value; Present Value; Rate of Return

These three methods for financial analysis or assessment all use the same three variables.



Examples:

Complete the table below. Assume you put \$1 (value) into a special savings account at the beginning of Year 1 that earns 5% (rate) each period (one year in this case). Assume the interest earned on the original value is retained in the account to earn more interest. Years 1 and 3 have been filled in for you to ensure that your calculations are correct.

Future	Value
	,

Rate of	Present Time is	Period	Period	Period	Period	Period 5				
Return	Period 0	1	2	3	4					
5%	\$1.00	1.05		1.1576		?				

Congratulations, you have just moved money through time (called **compounding**).

Next complete the present value table below. How can you mathematically move money back through time? In the future value example above you moved money forward each period by *multiplying* the value by 1+ the rate: value X (1 + rate). This time, to

- 4. The investor thinks this tech stock will be worth \$200 five years in the future. He/She requires a 10% return for that type of risk. What is the most the investor should pay for the stock today?
 - A. \$112
 - B. \$200
 - C. \$124
 - D. \$322

Hint: You should have estimated that the number would be considerably less than \$200 since you are moving from a future value back to a present value using a fairly high discount rate. \$1 future value moved back 5 periods at 10% to the present is worth \$.6209. \$200 moved back in this problem would be worth \$200 X .6209.

- 5. Problems 3 and 4 both analyzed the purchase of a share of stock for the same hypothetical company. The investor in problem 4 researched the company and made an independent decision about its expected year 5 value. The same devestor made an independent decision to discount the stock back through thre at 10% instead of 5% to account for the extra risk of being in the stock market. Should the investor in Problem 4 purchase the stock three current market value is \$112? A. Yes
 - A. Yes B. No C. Norehouga information Of 21

Hite. In the investor part 121 the calculated present value) for the stock, the return would meet the required return of 10%. Since the stock is being sold at \$112, the answer is, yes the investor should purchase the stock.

If in problem 5, we net out the \$112 cost of the stock from the calculated present value of \$124 the result is called NET PRESENT VALUE or NPV. In this case, \$124 - \$112 = \$12 above expectations or \$12 above value using the required 10% return. If a NPV value is positive, this means you have exceeded investment expectations.

The Present Value Concept Applied in the Simulation for Assessment Purposes

The same NPV system discussed is used in the simulation to rank your firm's financial performance. Stockholders in the simulation expected a 20% annual return (or 5% per quarter). If your team can make the stock rise by 5% per quarter you will have made the exact return stockholders expected. The calculated present value and your firm's reported market value per share would be exactly equal. When exactly equal, if you subtract the market value from the present value the result will be an NPV of zero

(0). Zero is a great NPV as it means you are giving stockholders just what they expect. A positive NPV is even better. An NPV of \$1.25 means the market value of your stock is \$1.25 higher than the value expected by the stockholders. An NPV of \$-2.22 means the market value of your stock is \$2.22 less than the present value expected by your stockholders.

Firm Number	NPV
22	2.21
23	1.12
75	.89
112	0
17	-1.62

Ranking Example:

In this example of ranking simulation performance, firms 22, 23, and 75 all performed above stockholder expectations by the end of the quarter reported. Firm 112 is exactly meeting stockholder expectations. Firm 17 is not doing well in the ranking. Firm 17 might be making profits and its stock might be moving up very slowly, but its share price at this point in time is \$1.62 under what stockholders expected.

NPV is a highly respected method of ranking investments, oran the simulation, ranking firm performance. The PV (Present Value) and NPV (correspondence) are difficult to master and generally introduced to students in their (Garar (5^{-1}) year of a business program. If you have understood the concept even if you cannot to the problems you still have gained valuable insights) to how business prople make decisions.

We present a Future Value method new for waryzing your firm's performance. Future Value is a ser to understand since you nave more experience thinking about moving money forward in the than backwards. You and your team members should fill in the chart below and compare answers. Calculating expected market prices for future quarters will be of great help in understanding what stockholders expect of you and your team partners.

The Future Value Concept Applied in the Simulation for Assessment Purposes

Variables:

A. IPO price of your stock: _____?

Required rate of return by investors is 20% annual. Since the simulation works with quarters of a year we will use 1/4 of 20% or 5% per period. You can calculate what the value of your stock should be by the end of any quarter by multiplying your stocks IPO price by the quarterly factors (factors are from a future value table using 5% per period).

Quarter	0	1	2	3	4	5	6	7	8
Factor	1.0	1.05	1.103	1.158	1.216	1.276	1.34	1.407	1.478
Expected									
Market Price =									
\$IPO x factor									

IMPORTANT STRATEGY: You can reduce the size of your stockholder's expected market price and perhaps increase your firm's rank. To employ this strategy, get some cash into the stockholder's hands by paying a dividend. Dividends are a cash payment direct to the stockholder and help satisfy their desire for a 20% annual return. Paying dividends earlier rather than later are more valuable to the stockholder.

WARNING: Your firm must have positive retained earnings as shown on the balance sheet in order to pay dividends. Paying out earnings (dividends) without having earned anything as shown in the retained earnings account, is unethical, perhaps fraudulent and your firm is subject to severe government fines.

NOTE: There will be a difference in the calculation in the simulation program versus your own calculation whether you use the NPV method or the Future Value method. The simulation uses 1/4 of the last four stock prices to determine PV. This is done to make sure that a poorly managed firm with some great luck in the 8th quarter does not win the game by chance. It also means that a great firm that did well in 7 quarters but makes a serious data entry error in Q8 does not end up on the bottom of the rankings. If your stock is volatile and changing radically over the quarters the computer's a king will be very different than yours. If your stock is fairly stable, the proceedings should be closer together.

A \$4 IPO stock is not better of worse than a \$2 IPO stock. What makes all the difference in the simulation and in the real stoch market is how much value is being added to the starting IPO stock value. So don't worry much about your IPO price. Direct your concerns towards in naging your firm to make profits that will push the IPO price higher and higher over the quarters.

We offer a very short case aimed at your personal life long consumption patterns. If you were to purchase a home using credit it is likely to be a smart move because your equity in the home will more than likely have a more rapid increase in value than what you pay in interest charges.

Do credit cards work the same way? No, because credit card expenditures are not used to purchase assets that increase in value. Credit is supplied to enjoy the consumption of material things (meals, trips, etc.) before you can afford to buy them with cash. Calculate your cost to enjoy early consumption over the next thirty years.

- What is your expected credit card balance per year over the next thirty years =
 \$_____? (A common amount would be \$3,000)
- 2. What is the rate you expect? (A common amount is 20%)
- Calculate cash paid each year to credit card companies (balance X rate) =
 \$______.
- 4. Cash paid out over 30 years = \$_____? (This is consumption that you could have had but that some stockholder at the credit card company is going to enjoy instead.
- 5. Value of the same cash put into a tax free retirement account each year that is invested in a moderate stock portfolio = your annual interest charge from 3

Appendix C:

The Second Trial Decision

Appendix C will help you apply the concepts learned in Chapter 7 and prepare your team for entering decisions for your second trial decision. Having experimented with the marketing variables, your team should reexamine its marketing strategy and fine-tune the marketing decisions. If the first trial decision brought disastrous results, perhaps the firm should analyze the marketing strategy and decide whether or not to rewrite the vision statement, the marketing plan, or both. Refer back to Appendix A if your team has questions about marketing decisions, or Appendix G for specific instructions on entering decisions.

You will need to work with your team to design financial strategies that integrate seamlessly with the firm's marketing strategies. Both the marketing and financial strategies must integrate and support the agreed upon management o lie lives and strategies which support the firm's vision statement (see the Thapter 3 on "Management").

By now your firm should have a geocridea of the products your firm will be distributing in the simulation. The stability or continual ease of being able to sell the firm's product will benete, to some extent, how much debt a firm can tolerate. The more seasonal, the more untested the product, the more inexperienced the management, and the more competitive the industry the less debt a firm should carry. In the simulation, you have three choices of debt explained below.

- 1. **Short-term loans:** the interest rate is unique for each firm. See your rate, which can be found, at the top of your last Firm Report. We recommend only a small amount of debt to test the results. A short-term loan is a good source when you need the funds only for a short period of time. Otherwise there are less expensive sources of debt.
- 2. Long-term loan (or "term loan"): the interest rate is general for all firms. The interest rate for a long-term loan is lower than the rate for short-term loans. Once a long-term loan is taken out, however, the funds must be kept for at least one year. The rate in the simulation is variable. That is, it changes over time. In this simulation, the banks have the right to change the rate once a year. If they do change it you can then pay it off or keep it for one additional year at the new rate.
- 3. **Bonds:** has a very low interest rate. The firm is obligated to make interest payments each quarter (every 3 months) and also to pay off the bond discount. Repayment of the bonds is not made for 5 years (20 quarters) unless your firm enters a decision to reduce the amount of outstanding bonds. Since money is made available by lenders for the long run, they are cautious about lending, and will only lend to high quality

Practice Decision Forms

Marketing Decision Form

Advertising	g: Area 1		Area 2	
Product 1				_
Product 2				_
Prices:	Area 1		Area 2	
Product 1				-
Product 2				- co.uk
Sales Reps:	Area 1		Not	esale.com
Trance Change in S	Sales Rep Area 1	Salaries:	Area 2	-
Change in S	Sales Rep Area 1	Commissi	ons: Area 2	
Product 1				_
Product 2				_
Credit Poli	cy:			
	0 1	2	3 4	5

Inventory Carrying Costs

The firm's warehouses will have ample receiving and storage space. It will also have a shipping dock capable of inventorying large amounts of finished goods. The charges to the firm, should finished goods storage be used, is as follows:

- Finished Goods, Product 1 costs **\$.60** per unit per guarter to store.
- Finished Goods, Product 2 costs **\$.90** per unit per quarter to store.

Shipping Costs

Shipping of the finished goods within the firm's market area is FOB. Thus, the firm has no shipping charge. To ship the product overseas between NAFTA and the EU, however, will cost your firm.

- Product 1 shipping = \$2.25 per unit. Minimum shipment is 1000 units.
- Product 2 shipping = **\$6.25** per unit. Minimum shipment is 1000 units.

Returned Products are co.u. The cost to retrieve, credit the client's ecconn and replace or ally ge a returned unit is 30% of that unit's sales price. The cost to retrieve page

THE PROCESS OF CHANGE

In the chapter on management, we discussed the process of change. We noted the old Chinese proverb that change creates so many disruptions in life that it can be seen as a curse or a threat instead of an opportunity. Following is a discussion that will help you understand change as it relates to your personally. We urge you to pause and contemplate the information. It will help you visualize your life within a society that is "on the move".

Perhaps every generation considers itself to be the generation subject to change. If we could go back in time, there are many generations that would share the same feelings. Change has always been with us. The group of Native Americans living in Northern California before recorded history certainly saw change. It is thought that their civilization fell victim to technology as another group of Native Americans pushed south into their territory. The power of the new group was one of technology, the bow and arrow. In turn, that technologically superior group was replaced with the technological power of another group, the European settlers and their technology.

Change is always with us. Change, however, is not a constant. Change as a process, can evolve in a society through multiple generations. Change can also come at such speed and in sudden bursts that evolution is a most inappropriate word. Pevolution is a better word to describe change that occurs so suddenly that the full impact is felt on a single generation.

You are now living in such a revolutional yperiod. So have the last few generations. While exact dates are fifticule to provide this trians do know that the pace of change suddenly picked up in the 1700's in ring in it. By 1800, the industrial revolution was view derived way. Technological knowations in agriculture allowed a movement of workers from fail not to industrial production. Industrial production, to be efficient, needed resources close by which included human resources. As a result, cities grew rapidly.

If you are wondering why we are taking a side trip into history, we believe this historic overview of the business environment is of extreme importance to you. This historic side trip may help you view where you should live, the job you should train for, and how you view the process of change as it effects your life.

The industrial revolution started in England between 1730 and 1800. After 200 to 270 years the revolution is still continuing! Certainly a very short revolution when set in the history of human kind, but it still is alive and some think it is just picking up speed. If that is true, the rate of change that people experienced in England in the early 1800's will continue in your life at an even faster pace. History lives on with important lessons for us all. How did individuals cope with such stress in their life? How well did your grandparents handle rapid change? How did they adapt and not feel left out of the system? What about your parents and relatives of their generation? Did they take the "curse" of living in interesting times, and turn it into an opportunity for themselves and their children?

The Revolution Continues: