

Overview

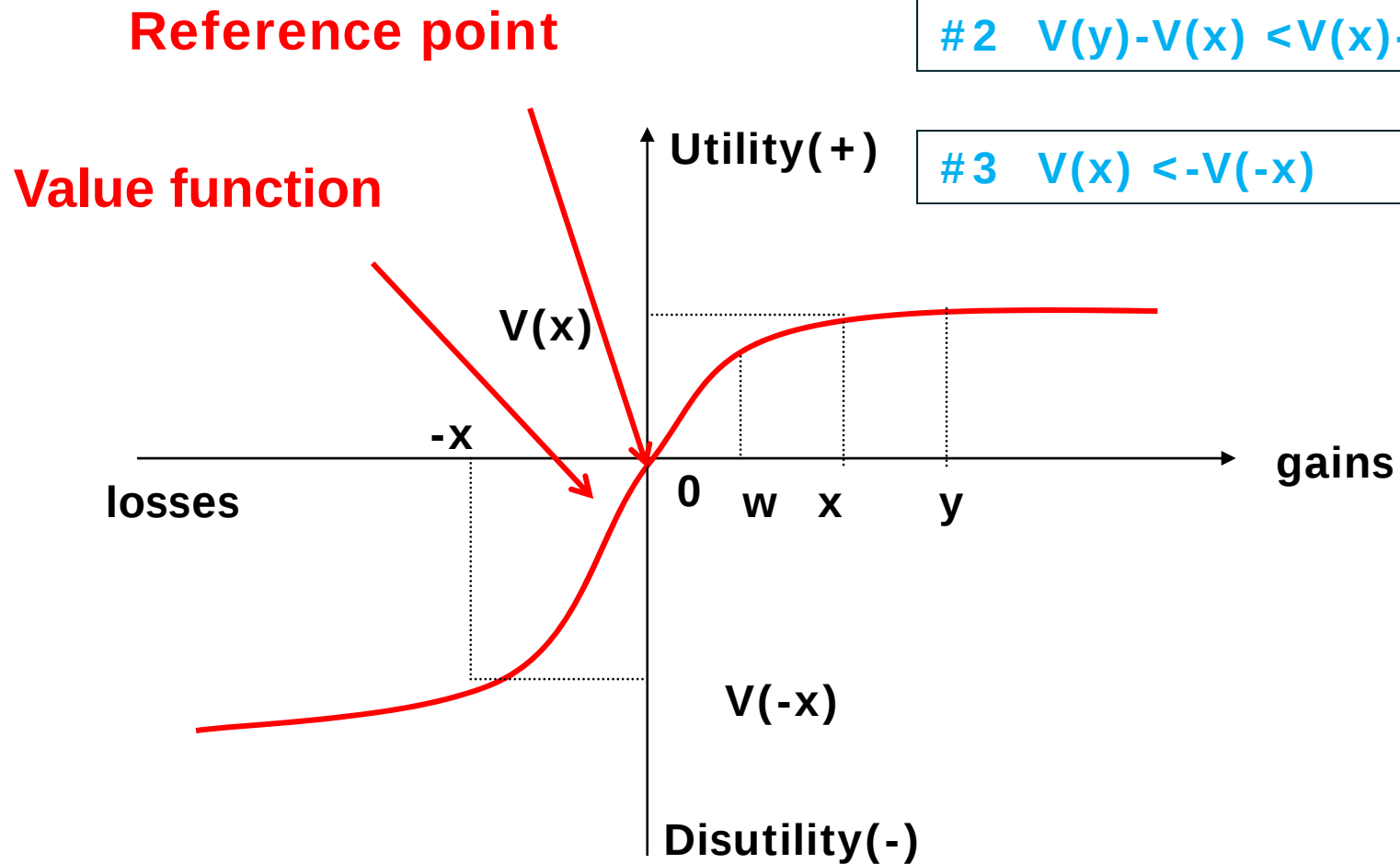
Prospect Theory

Reference Price

Sources of Reference Price



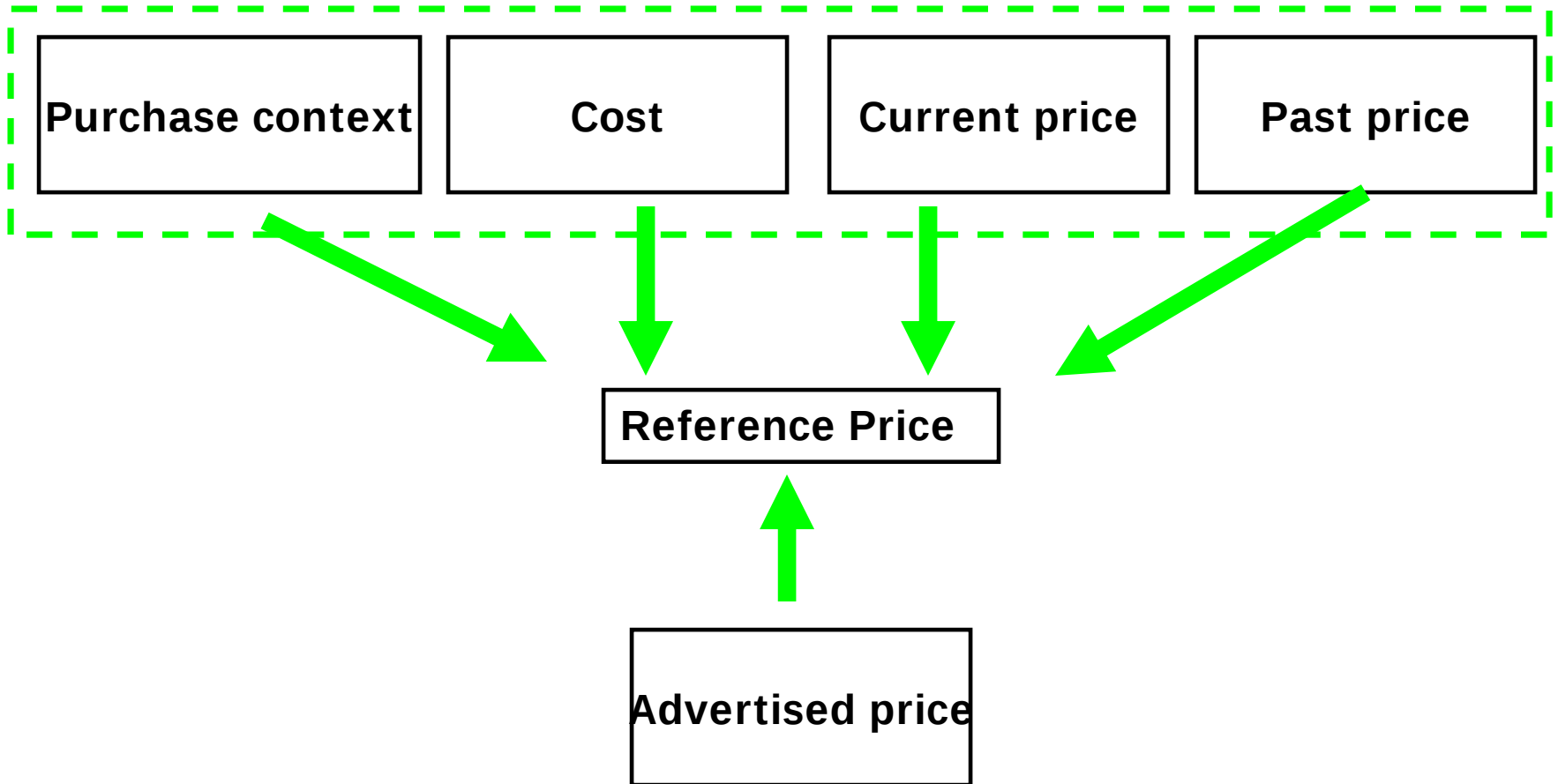
Value Function According to PT



#1 $V(w) < V(x) < V(y)$

#2 $V(y) - V(x) < V(x) - V(w)$

#3 $V(x) < -V(-x)$



Flanking Brand and Reference Price

FB can also be used strategically to manipulate consumers' reference prices.

“Omne trium perfectum”

Low-end \$1,099



Mid-range \$2,549



High-end \$6,949



Reference Price Effects of a High-End Product

Microwave Oven Model	Choice %	
	Group 1 (n = 100)	Group 2 (n = 100)
Panasonic II (1.1 cubic feet; regular price \$199.99; sale price 10% off)	--	13
Panasonic I (0.8 cubic feet; regular price \$179.99; sale price 35% off)	43	60
Emerson (0.5 cubic feet; regular price \$109.99; sale price 35% off)	57	27

Source: Itamar Simonson, and Amos Tversky, "Choice in Context: Tradeoff Contrast and Extremeness Aversion," *Journal of Marketing Research*, 29 (August 1992), 281–95.

Formulation of Reference Prices

■ Current Price

Product-line pricing – adjustment of the product line can significantly influence consumers' reservation prices for lower-priced items within the product line.

flanking Product

- A flanking product is an extra version of product.
- A flanking brand can be used to
 - Segment market
 - Minimize extreme bias (consumers' aversion for going extreme)
 - Manipulate reference price.

Example of using flanking product



	Unit Price
Tall: 12 oz, \$2.75	22.9 cents
Grande: 16 oz, \$3.35	20.9 cents
Venti: 20 oz, \$3.55	17.8 cents

- More examples of use of flanking product?

Formulation of Reference Prices

■ Current Price

- Order Effects – reference prices tend to be greater if a high price is shown to the consumer first.

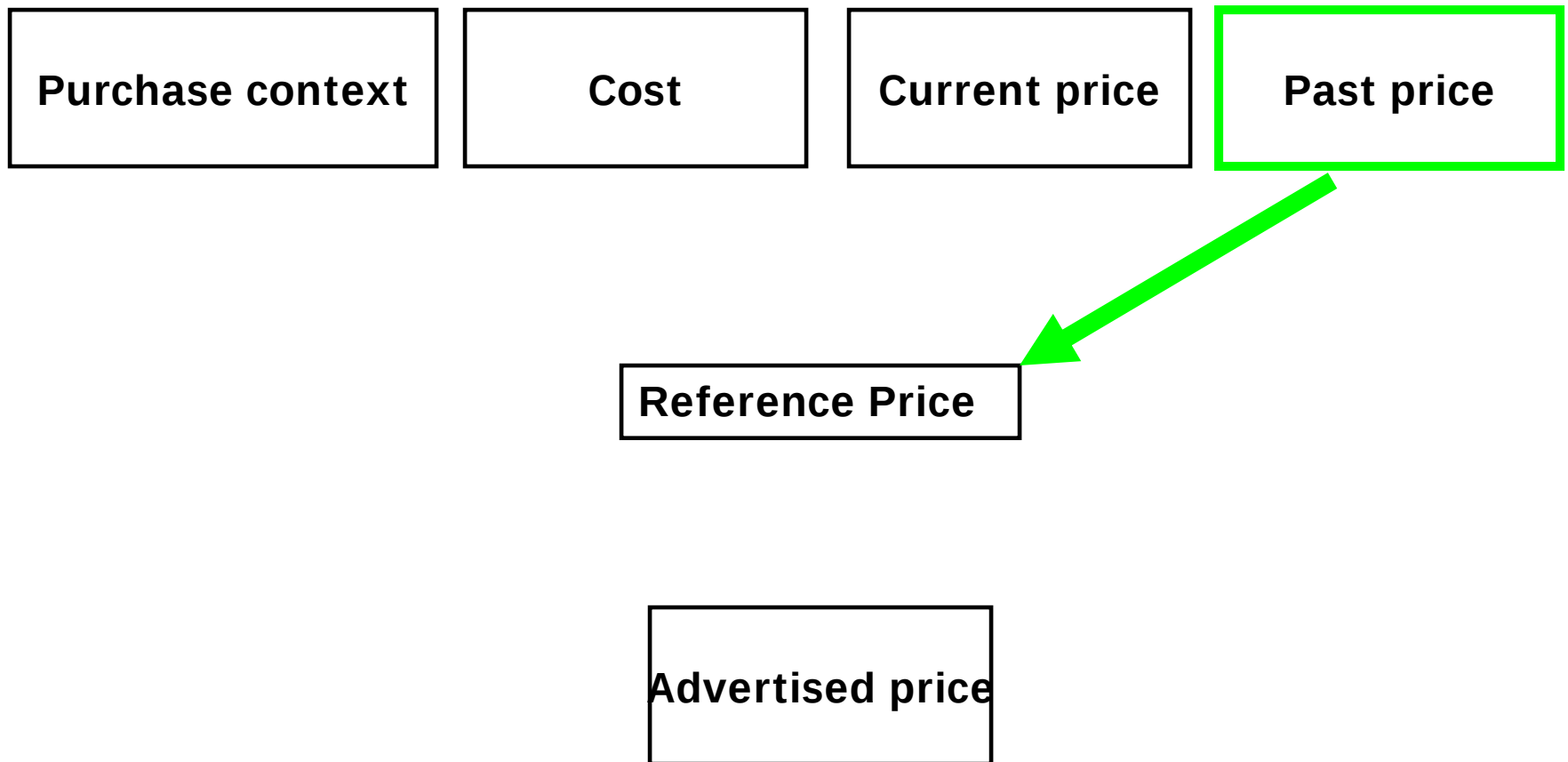
Example: Mail Order Catalogs

Higher priced items are almost always listed first.

This is called top-down selling – showing a consumer a higher-priced item first rather than the lower-priced item they initially intended to evaluate and/or purchase.

Goal is to reduce the customer's price sensitivity.

Formation of Reference Price

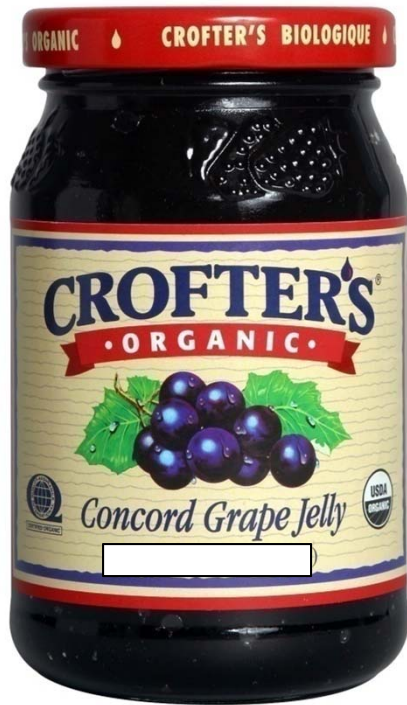


Formulation of Reference Prices

■ Past price

- The past price of a product can influence a consumer's reference price.
- A new product initially priced very low can have an enduring effect on consumers' reference prices. When product is priced at *regular price*, consumers may perceive the price as being too high or greater than their internally constructed reference price.
- Price increases are often the direct result of rising raw material or labor costs, which companies often pass down to consumers in some way.

Implication of past-price effect



Implication of past-price effect

- How do companies deal with raw material price increases?
 - Pass the increase in costs directly to consumer as a higher retail price

Research suggests that consumers are more sensitive to price than to quantity because of the reference price effect
 - Downsize the product (example: grape jelly price remains at \$2.99, but container is reduced from 12 ounces to 10 ounces – an effective price increase of 20% $[(2.99/10)-(2.99/12))/(2.99/12)]$).
 - Alternatively,
 - consider changing the quantity.
 - Redesign product to include fewer attributes
 - Redesign product to include less costly attributes

A Point of Reflection

Consumers' reference price is malleable and dynamic.

Managers must be careful about how the formation of reference price is influenced by past marketing mixes as well as external factors.

Mind the Reference Price - A Case Study

Scenario 1

Your favorite sports team has made the playoffs. Its first-round playoff series is a best-of-seven series with four of the possible seven games played on your team's home field. General admission tickets had been priced at \$20 during the regular season. The team decided to raise general admission price to \$40 for these four playoff games. Is this price increase fair or unfair?

Mind the Reference Price - A Case Study

Scenario 2

Your favorite sports team has made the playoffs. Its first-round playoff series is a best-of-seven series with four of the possible seven games played on your team's home field. General admission tickets had been priced at \$20 during the regular season. General admission tickets were also priced at \$20 for Games 1 and 2 of the playoffs. After Game 2, the team decided to raise prices to \$40 for Games 5 and 7. Is this price increase fair or unfair?

Possible pricing strategies and outcomes

	1. Raise prices to \$50, \$80, \$90 before playoff	2. Keep prices constant at \$20, \$30, \$40 during playoff	3. Raise prices to \$50, \$80, \$90 during playoff
Revenue of Game 1			
Revenue of Game 3			
Revenue of Game 5			
Goodwill			

Lecture 3

Cost-based and Value-based Pricing

Alternative Approaches to Value Creation

Product Led

Product ➡ Cost ➡ Price ➡ Value ➡ Customers

Customer Led

Customers ➡ Values ➡ Prices ➡ Costs ➡ Products

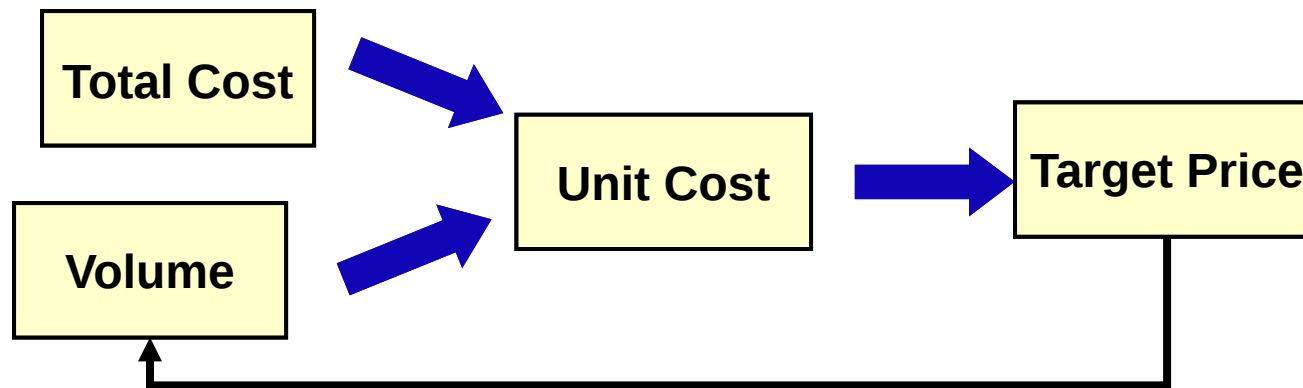
Tactical Pricing Orientations

- Cost-Driven Pricing
- Customer-Driven Pricing
- Competition-Driven Pricing

Cost and Cost-Plus Pricing

Cost-Driven Pricing

Price every product to yield
a fair return over full cost



Consider the following statement:

I plan to sell x units of products in U.S. annually. Given that the fixed cost is \$ y million, and the variable cost is \$ z , the unit cost is $\$z + y/x$. I also believe a 25% markup is a fair return for the investment, thus the unit price will be $\$1.25 \cdot (z + y/x)$

Example of Cost-based Pricing

**Projected Costs and Revenues at
Expected Sales = 1,000,000 units**

	Total	Per Unit
Direct Variable Costs	\$3,000,000	\$3.00
Direct Fixed Costs	\$3,000,000	\$3.00
Administrative Overhead	\$1,500,000	<u>\$1.50</u>
Full Cost	\$7,500,000	\$7.50
Revenue	\$9,000,000	\$9.00
Profit	\$1,500,000	\$1.50

Example of Cost-based Pricing

**Actual Costs and Revenue at
Actual Sales = 750,000 units**

	Total	Per Unit
Direct Variable Costs	\$2,250,000	\$3.00
Direct Fixed Costs	\$3,000,000	\$4.00
Administrative Overhead	\$1,500,000	\$2.00
Full Cost	\$6,750,000	\$9.00
Revenue	\$6,750,000	\$9.00
Profit	\$0	\$0

How would you solve this problem?

Example of Cost-based Pricing

Projected Costs and Revenues with Price Increased to \$10.50 Per Unit

	<u>Current</u>	<u>5% Decline in Unit Sales</u>	<u>33% Decline in Unit Sales</u>
Price	\$9.00	\$10.50	\$10.50
Unit Sales	750,000	712,500	500,000
Variable Costs	\$3.00	\$3.00	\$3.00
Fixed Costs	\$4.00	\$4.21	\$6.00
Admin. Overhead	\$2.00	\$2.11	\$3.00
Unit Cost	\$9.00	\$9.32	\$12.00
Unit Profit	\$0	+\$1.18	-\$1.50
Total Profit	\$0	\$843,750	-\$750,000

Example of Cost-based Pricing

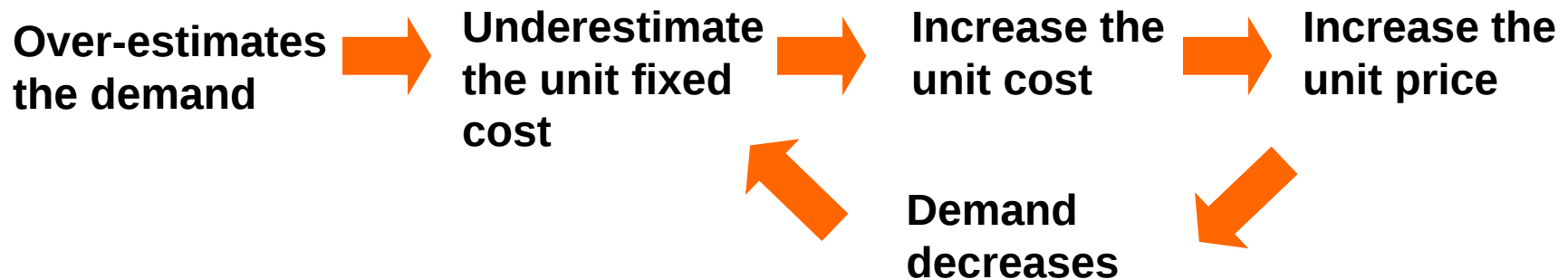
Financial Implications of a 10% Price Cut

	Current	5% Increase in Unit Sales	33% Increase in Unit Sales
Price	\$9.00	\$8.10	\$8.10
Unit Sales	750,000	787,500	1,000,000
Variable Costs	\$3.00	\$3.00	\$3.00
Fixed Costs	\$4.00	\$3.81	\$3.00
Admin. Overhead	\$2.00	\$1.90	\$1.50
Unit Cost	\$9.00	\$8.71	\$7.50
Unit Profit	\$0	-\$0.61	+\$0.60
Total Profit	\$0	-\$480,375	\$600,000

Death Spiral as Result of CPP

What's not right about this “pricing strategy”?

- Cost-plus pricing may lead to over-pricing in a weak market
- Cost-plus pricing may lead to under-pricing in a strong market



Value Creation

Defining *VALUE*

Use Value (Utility)

- Savings gained from using a product/service offering
- Monetary gain from using a product/service offering
- Satisfaction received from using a product/service offering

Economic Value/Exchange Value

- Value based on substitutes/alternatives in marketplace
- Calculated using reference value and differentiation value

Illustrating Value: Pricing of Market Research



market research helps to provide information and **reduce uncertainty** in decision making



Value of Information

How much can you charge for the information?

- Sell as much as the information is worth, but no more
- Value of information is based on improved decision!
- Value of imperfect information will be less than value of perfect information .

An Example

Decision:

- A company has to decide whether to switch to a new product or keep selling the current product.

Payoffs:

- Current product: \$5 million
- New product: \$ 1 million (failure), \$ 6 million (success)

Consider two general cases:

- (1) there is no uncertainty in prospect of the new product.
- (2) there is uncertainty in the prospect of the new product.

Case 1: No uncertainty in revenue

What should the company do if the probability of success is 0%?

What should the company do if the probability of success is 100%?

Case 2.1: Uncertainty in revenue

Suppose that manager's belief about success: 50%

Now assume that a marketing research project can be done to accurately predict the success or failure of the new product. The cost of doing research is \$450,000

Can you sell the research? Why?

Calculation

1. Identify the status quo course of action when no market research is available, by calculating expected revenue and/or expected cost.
2. Identify the scenario in which market research can change the course of action and the associated odds.
3. Determine the gain conditional on that scenario.
4. Multiply the conditional gain and the probability for the occurrence of the scenario.

	Case 2.1
Decision without MR (step 1)	
Odds that MR will change the decision (step 2)	
Gain conditional on the change (step 3)	
Value of research (step 4)	

Case 2.2: Uncertainty in revenue

Suppose that manager's belief about success: 90%

Now assume that a marketing research project can be done to accurately predict the success or failure of the new product. The cost of doing research is \$450,000

Can you sell the research? Why?

	Case 2.1	Case 2.2
Decision without MR (step 1)		
Odds that MR will change the decision (step 2)		
Gain conditional on the change (step 3)		
Value of research (step 4)		

Next Lecture

Guest Lecture