

Question:

Is Price an Uncertainty
or a Decision?

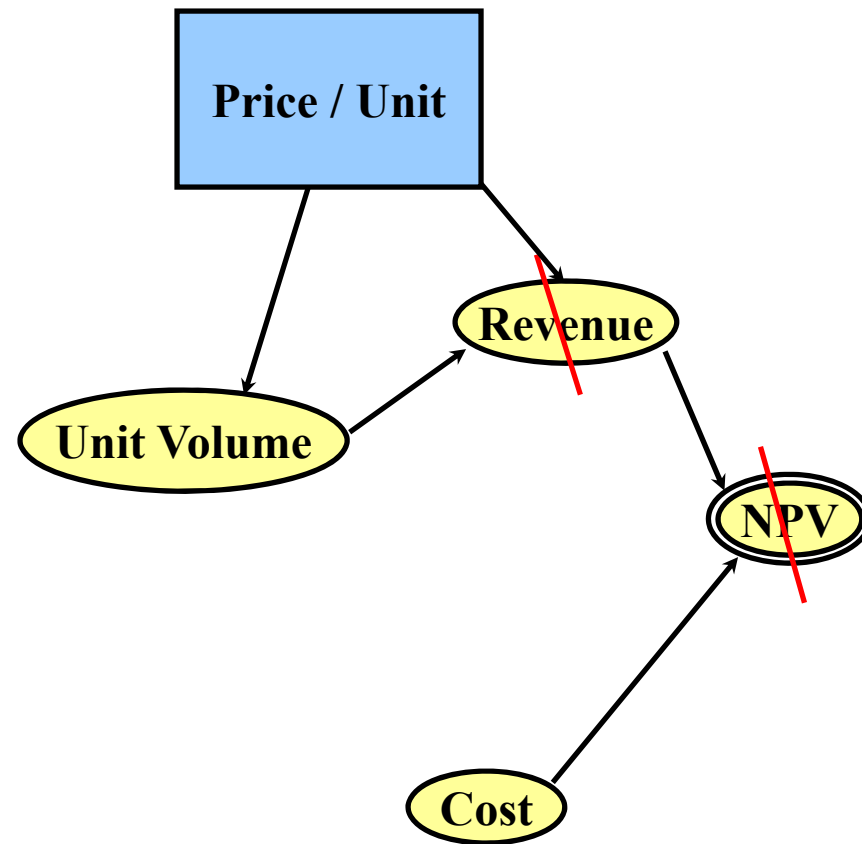
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The “Classical Situation”

- - Choose Price, Accept Volume - -

- In some circumstances there may be good business reasons to choose and hold a price regardless of what hit may occur in the unit volume of product.
- Price is a decision. Unit volume has inherent uncertainty on its own, but is also strongly influenced by the level of price chosen in a deterministic way.

The Classical Structuring Where Price is a Decision



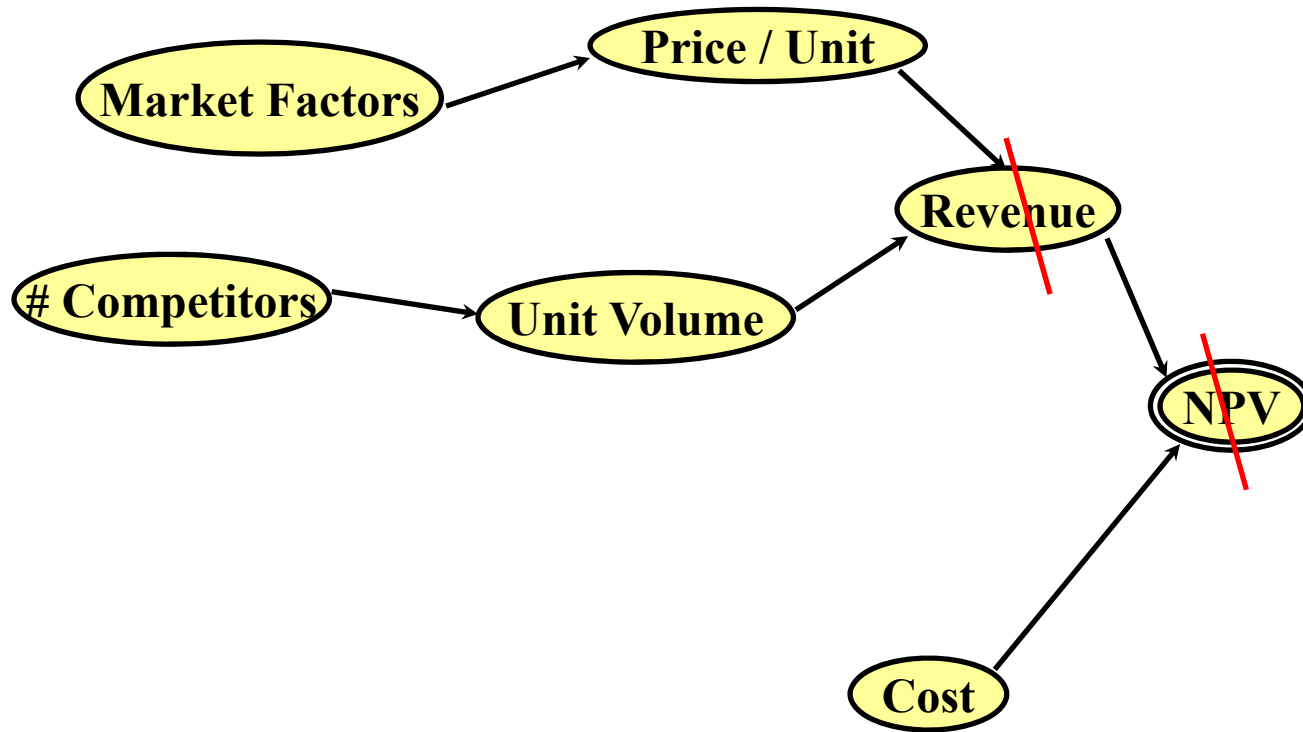
Many pricing situations
may not be this way

Here are some other patterns
and pricing strategies that are
quite common.

“Commodity” Market Situation

- Ability to raise price is very limited beyond a rather narrow market driven window.
- Lowering price will temporarily gain share but will lead to intense price competition.
- The market price will settle to a lower level and you wind up with basically the same share, but at a lower profitability.
- Both Price and Unit Volume are uncertain and are driven by external market factors. Choice is very limited.

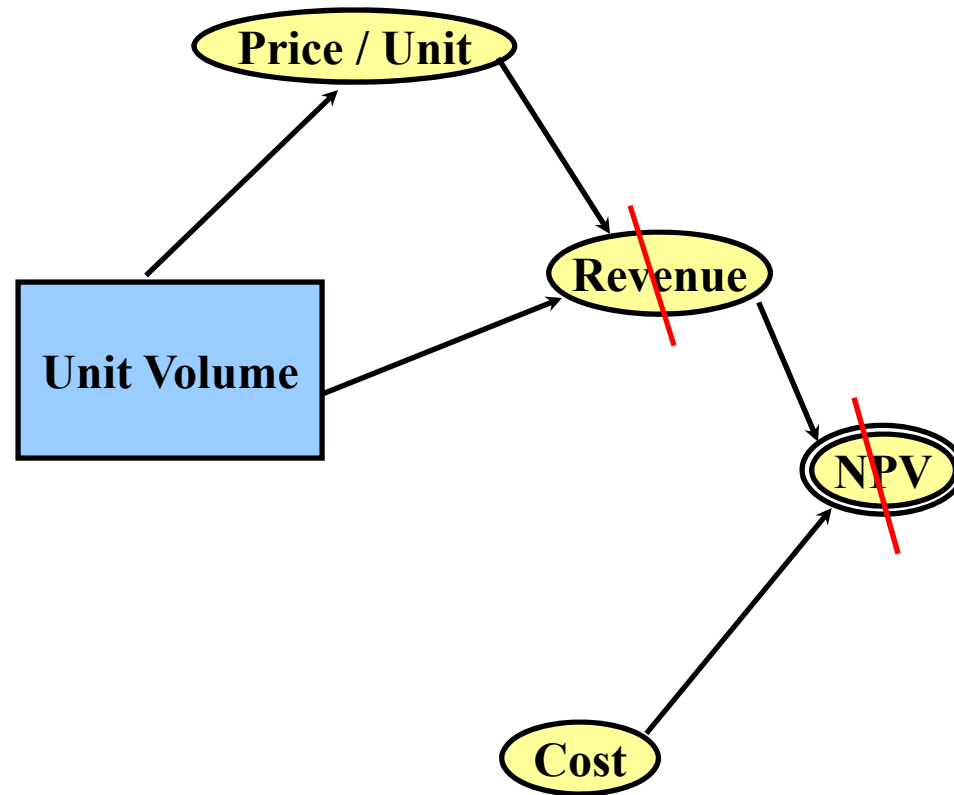
Influence Diagram for “Commodity Situation”



Seek Specified Unit Volume, Sacrifice Price

- Often it is sensible to gain a predetermined level of market volume even if it means lowering price to temporarily unprofitable levels.
- In this situation, the uncertainty is the price that will produce the desired unit volume.
- Unit volume becomes the decision.
- This decision (unit volume) also influences the distribution of the price that will be realized.

Influence Diagram for “Gain Unit Volume – Sacrifice Price”



In Most Situations Price Influences Volume or Vice Versa

- In all but the commodity situation, price and volume are tightly linked in a deterministic relationship where one or the other is a decision.
- But....when the decision is made, whether for either price or volume, there is still quite a lot of uncertainty remaining in the dependent variable.

When structuring situations are confusing, as they often are with pricing, I like to fall back on classic DA structuring question.

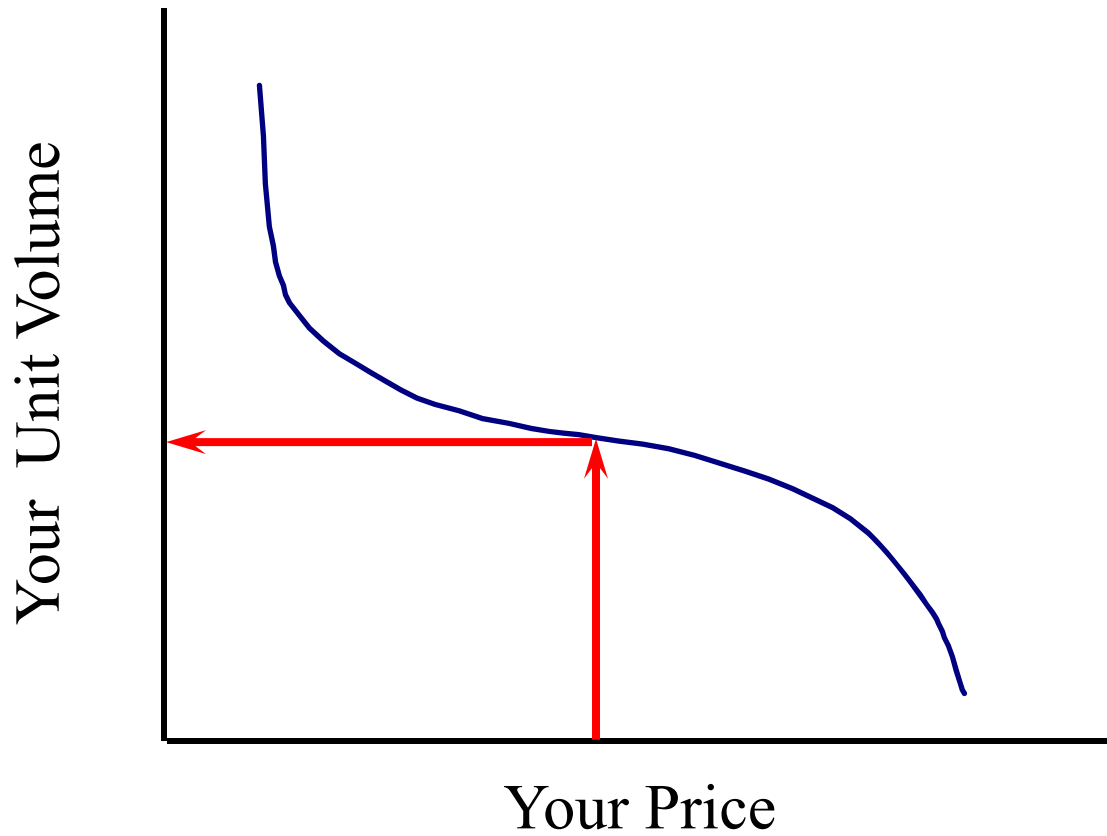
If you could have the answer to
one and only one question,
what would that question be?

In most pricing situations what I would want to know is the deterministic function relating price to volume.

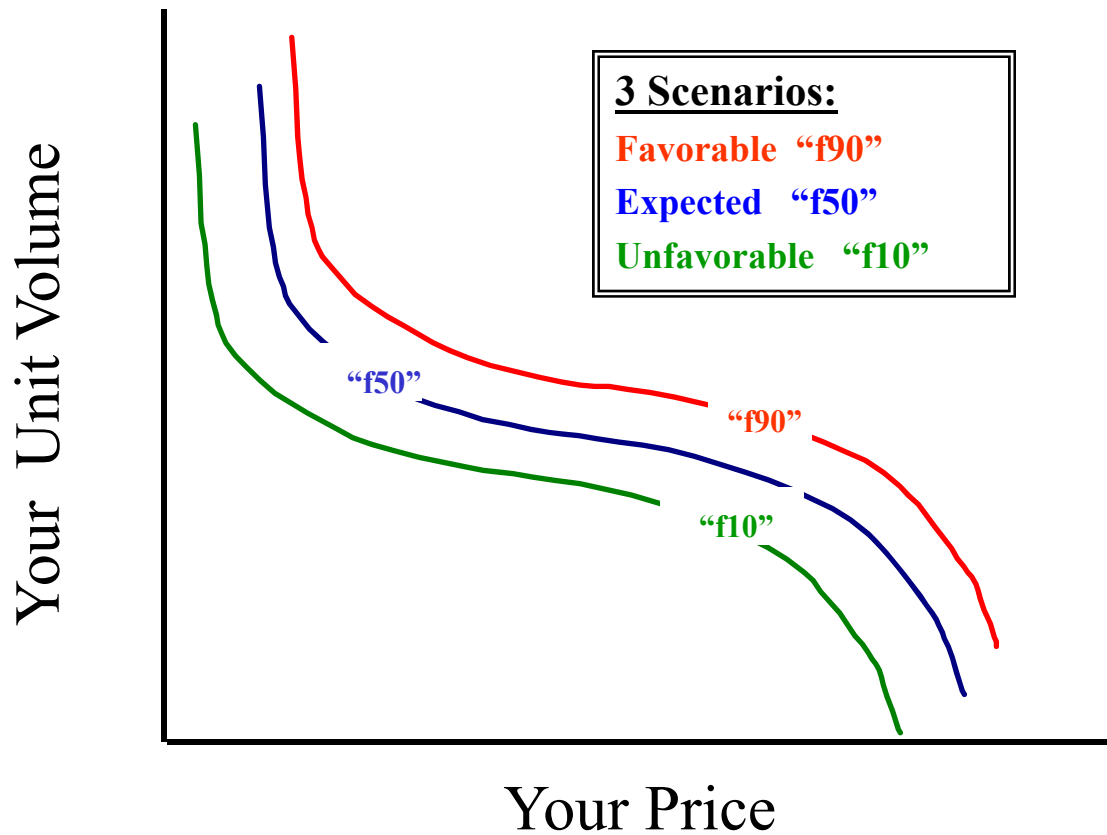
This is often called the “price elasticity curve”.

Here’s what it looks like in a picture.....

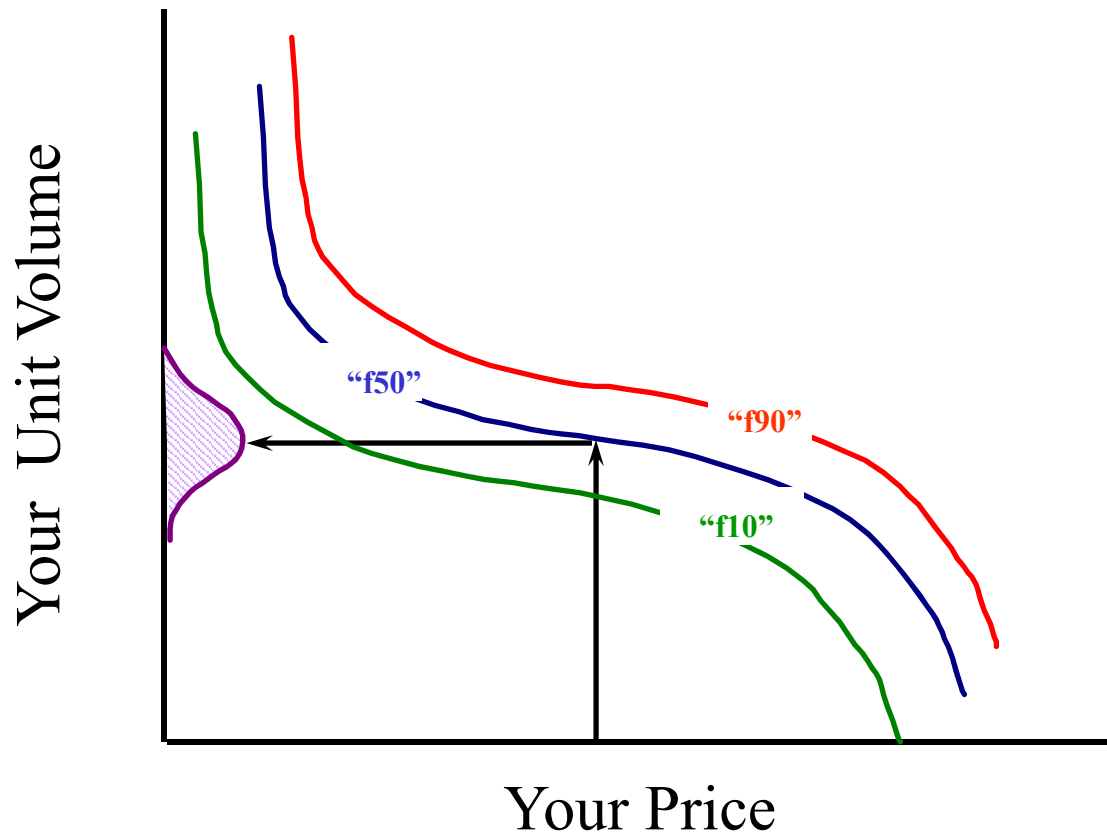
The “Price Elasticity Curve” Expressing Price as the Decision



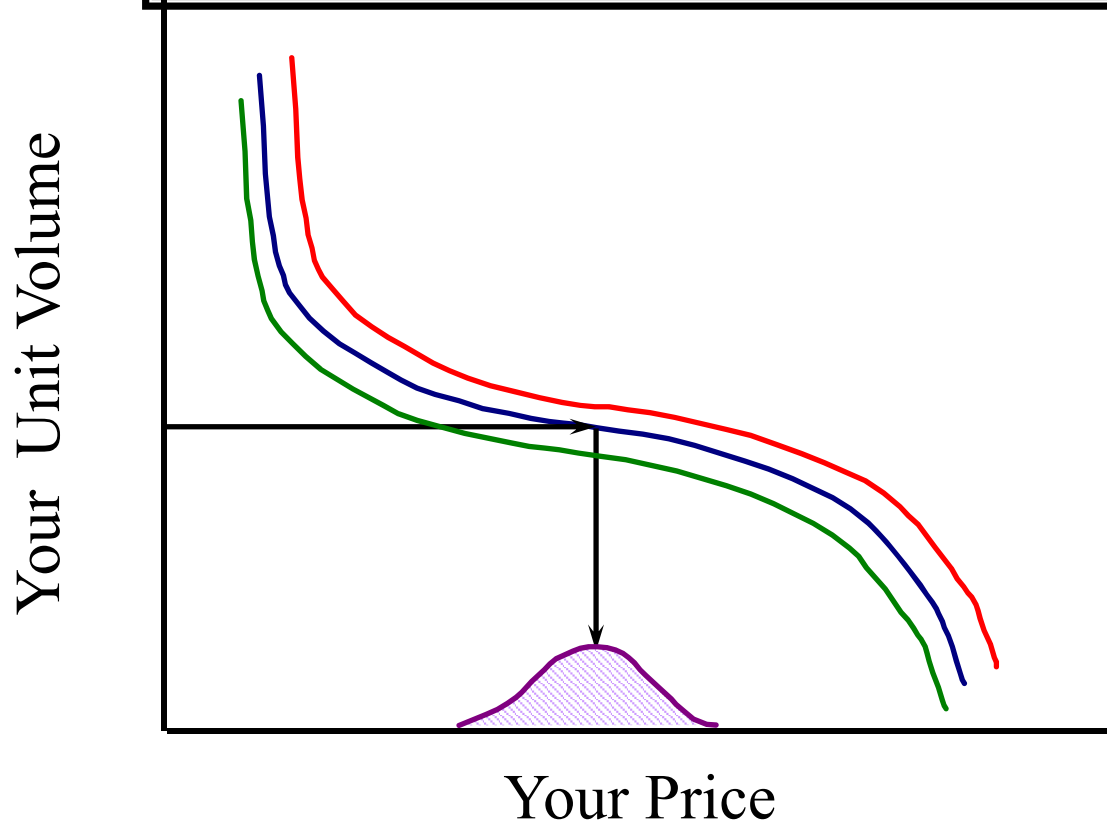
Unfortunately it is the Elasticity Curve Itself that is Uncertain



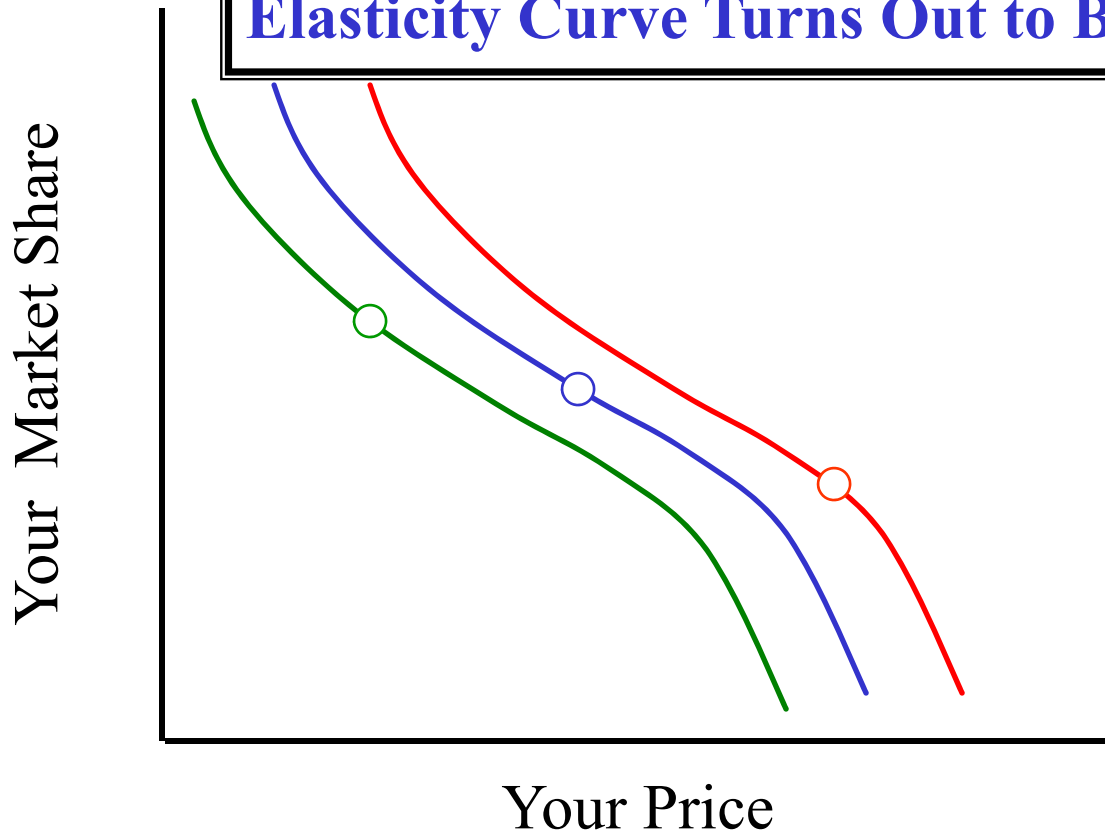
Strategy: Hold Price and take Uncertainty
in Realized Unit Volume



Strategy: Hold Unit Volume and take
Uncertainty in Realized Price



**Choose Different Pricing Strategies
Depending on How Favorable the
Elasticity Curve Turns Out to Be**



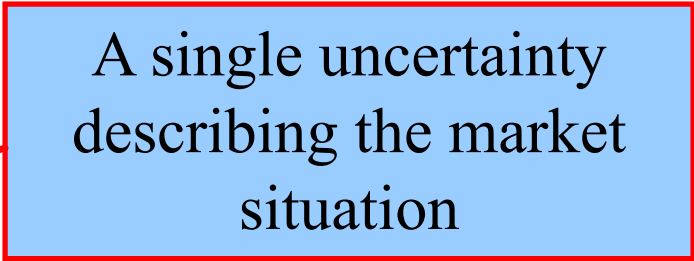
What is the Learning in all of This?

- The real uncertainty is the price-elasticity curve.
- Your particular pricing strategy determines how you set up the assessment of price and volume.
- In all but the commodity situation, price and volume must be assessed together in a conditional way.

One Structuring Approach I Find Useful

- 1) I often find it useful to think of the price / volume as a single uncertainty called “Market Situation”. Its outcome scenarios would be something like: “Unfavorable”, “Expected”, “Favorable”.
- 2) For each of these 3 scenarios, I would ask the market expert to describe underlying factors driving each scenario. Then the expert would assess Price and Unit Volume together 3 times, once for each for each of the 3 scenarios. The pricing strategy would be reflected in these assessments.
- 3) The uncertainty in the decision tree is “Market Situation” whose outcomes are: Unfavorable, Expected, Favorable.
- 4) The “Payoff” calculation would use the price / volume values associated with each scenario as dictated by the decision tree.

Influence Diagram for “Delay Launch 1 Year”



Part of the Microsoft Excel Workbook
where Price and Volume (Share) are used to
Calculate Revenue and Cost of Goods

| | | | | | | | |
|--------------------------------------|------------------------------------|---|-------------|-------------|-------------|-------------|--|
| Units Multiplier 1,000,000 | COGS / Unit (\$) \$ 0.45 | | | | | | |
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | |
| Base Market Size (M) | 25 | 30 | 35 | 40 | 45 | 46 | |
| "Actual" Market Size (M) | 25 | 30 | 35 | 40 | 45 | 46 | |
| Our Price / Unit | \$ 0.80 | \$ 0.80 | \$ 0.80 | \$ 0.80 | \$ 0.80 | \$ 0.80 | |
| Our Share | 35% | 40% | 40% | 40% | 40% | 40% | |
| Revenue M\$ | \$ 7.0 | \$ 9.6 | \$ 11.2 | \$ 12.8 | \$ 14.4 | \$ 14.7 | |
| COGS M\$ | \$ 4.7 | \$ 6.5 | \$ 7.6 | \$ 8.6 | \$ 9.7 | \$ 9.9 | |
| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | |
| Price Scenrios | | | | | | | |
| | Anticipated | <== Scenario Currently Being Used | | | | | |
| Anticipated | \$ 0.80 | \$ 0.80 | \$ 0.80 | \$ 0.80 | \$ 0.80 | \$ 0.80 | |
| Favorable | \$ 0.90 | \$ 0.90 | \$ 0.90 | \$ 0.90 | \$ 0.90 | \$ 0.90 | |
| Poor | \$ 0.60 | \$ 0.60 | \$ 0.60 | \$ 0.60 | \$ 0.60 | \$ 0.60 | |
| Share Scenrios | | | | | | | |
| | Anticipated | <== Scenario Currently Being Used | | | | | |
| Anticipated | 35% | 40% | 40% | 40% | 40% | 40% | |
| Favorable | 45% | 50% | 50% | 50% | 50% | 50% | |
| Poor | 15% | 15% | 15% | 15% | 15% | 15% | |

In Conclusion.....

- 1) The real uncertainty in most pricing situations is the actual coordinates of the elasticity curve.
- 2) Pricing strategy determines where you “play” on those curves and how uncertainty needs to be represented in the DA.
- 3) The practicality is that price and volume can be structured and assessed as a single uncertainty in most situations.
- 4) I often find it useful to think of this uncertainty as “Market Situation” whose outcome is one of 3 scenarios.
- 5) Each of these scenarios is represented by a vector of linked price and volume over the timeframe of the problem.