

Business Damages

An Analytical Framework



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Business damages analysis usually focuses on three elements

- What had been
- What was
- What would (might) have been

Financially, only the last element is relevant to damages. Even the destruction of property is only meaningful to the extent it affects future cash flows.

Measure of Loss

- Reduction (Destruction) in Value
- Lost Profits

The value approach is applicable where the firm/division/product line has ceased to exist or if the most reasonable mitigation strategy post tort is to shut down

General Approaches

- Capitalization (Earnings, Cash Flow, Etc...)
- Value Goodwill
- Book Value

An Important Tax Consideration

If the award/settlement is a return of capital, it is not taxable. This approach can reduce damages 50%.

Key Issues:

- Reduction in Future Investment (Capital and Labor)
- Salvage Value
- Risk/Marketability Considerations

The important thing to remember is that most businesses earn a market rate on investment unless there are "special factors" (rents) involved. Therefore, the value of the firm seldom exceeds the market value of its assets.

Lost profits analysis is analytically similar to lost value -- It is the value lost for a limited period of time.

Lost profits is the more appropriate method where loss is best mitigated by continuing in business. Implicit in this approach is the existence of goodwill value.

Computing business damages is analogous to capital budgeting analysis. A cash outflow(s) is made in expectation of future cash inflows.

Loss is measured as the change in these amounts

Loss = f (Change in Cash Outflows,
Change in Cash Inflows,
Cost of Money)

Lost profits cannot be accurately measured using gross or net profit margins

- It is the change in Net Profits resulting from the wrongful act
- It changes over time as resources are redeployed and damage is mitigated
- There are offsets for reduced investment in both fixed and working capital

Measuring the Change in Net Profit

$$\begin{aligned} & \text{Gross Revenue} \\ - & \text{Cost of Goods Sold} \quad \checkmark \\ \hline = & \text{Gross Profit} \\ - & \text{Overhead} \quad \checkmark \\ \hline = & \text{Net Profit} \end{aligned}$$

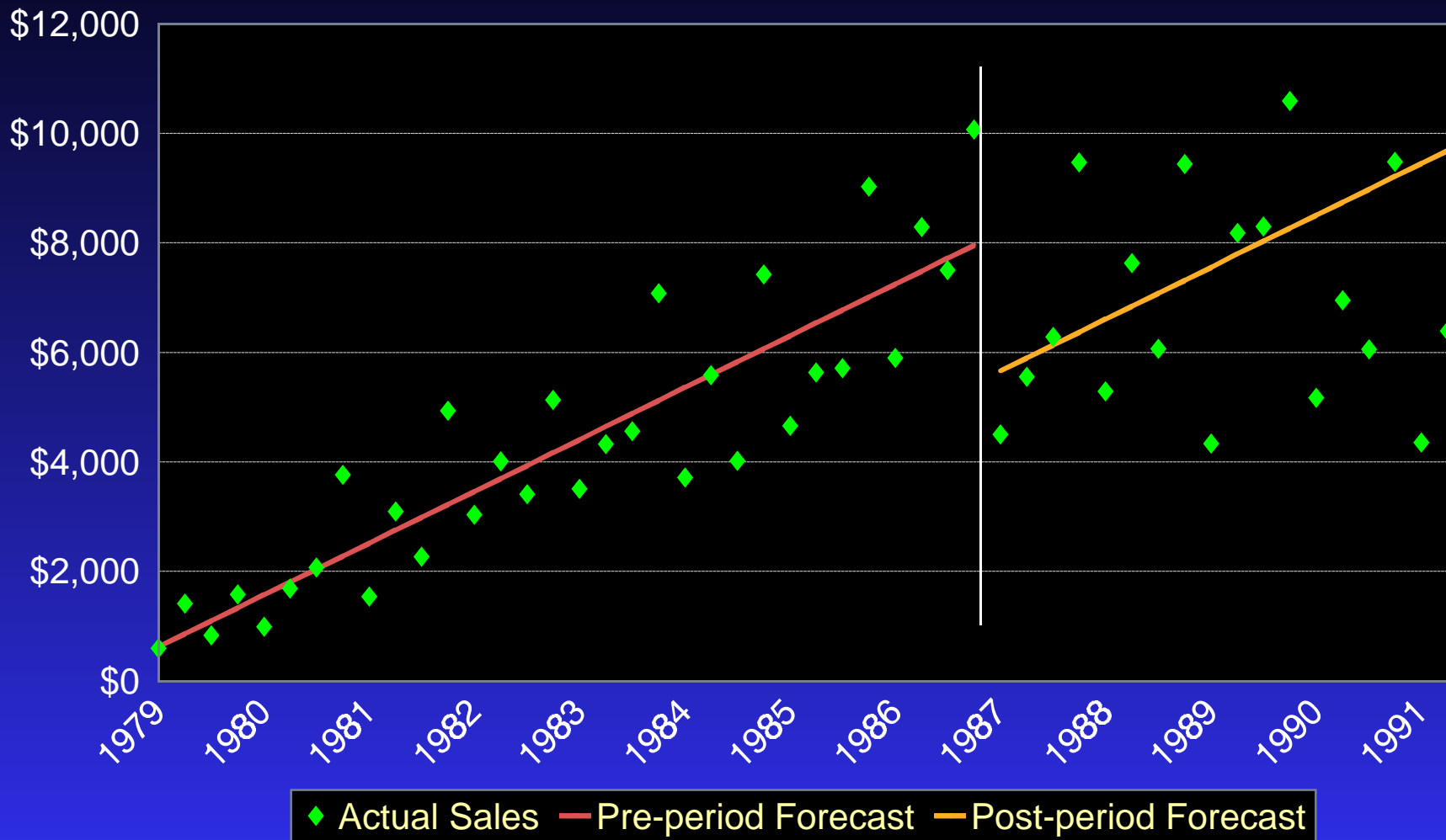
✓ -- Can change with change in sales

Forecasting Revenue

- **Trend Continuation or Extrapolation**
 - Cyclical & seasonal factors
 - Multi factor model
 - Event study methodology
- **Market Share**
 - Must first define "relevant market"
 - Function of cost and price elasticity
- **Undifferentiated Commodity**
 - Can sell all you can make at the market price
 - In absence of special factors, "rents" are rare
- **Special Cases**
 - Spatial monopolies (Redi-Mix)
 - Patents (product & process)
 - Effects of cost raising strategies by rivals

Plaintiff's Export's Forecast vs. Actual Sales

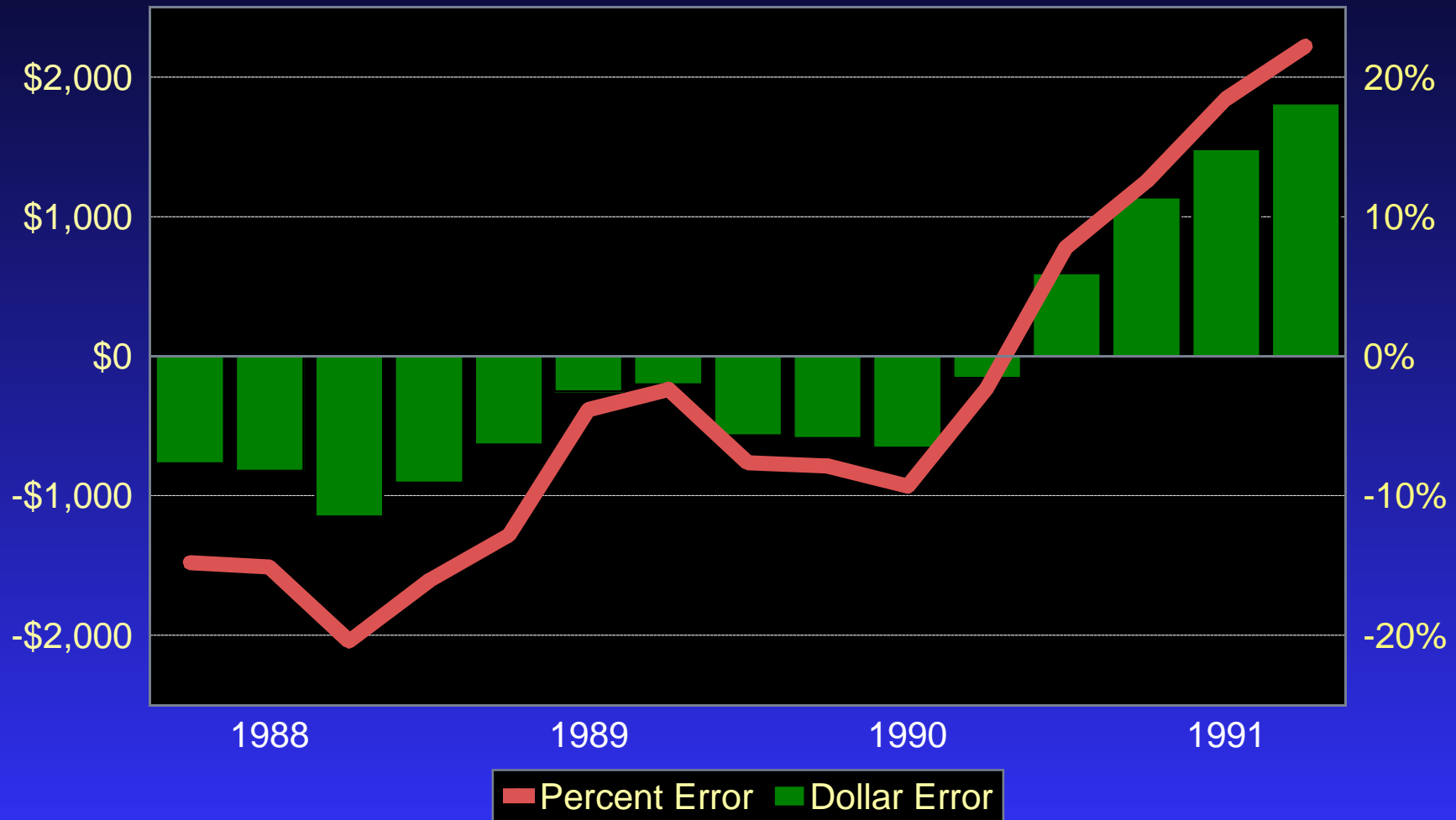
In Constant Dollars (1982)



(Vertical line separates pre & post periods)

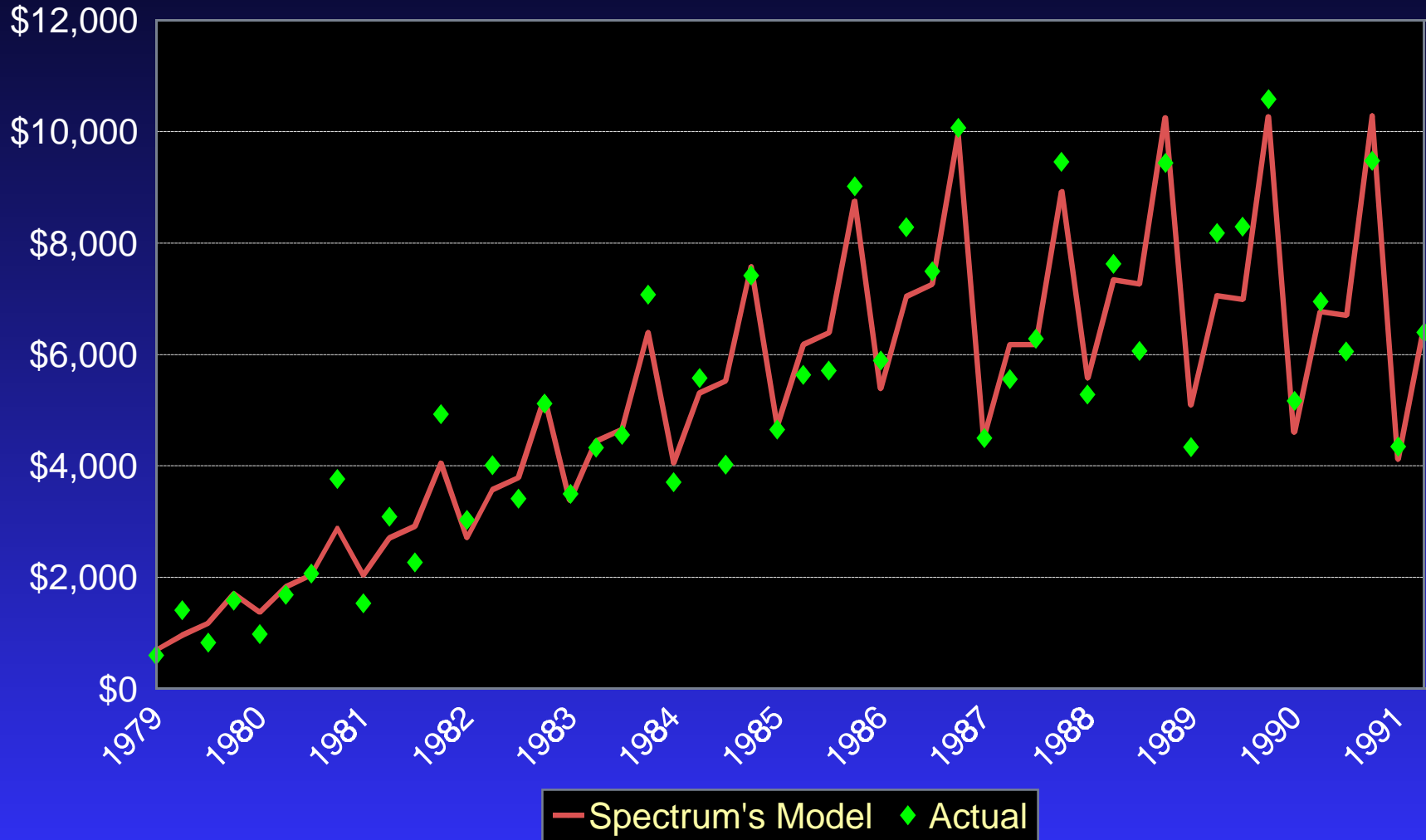
Post-period Forecast Errors (4-Qtr MA)

(Plaintiff's Expert's Model, If Quarterly Adjusted)



Spectrum's Model vs. Actual Quarterly Sales

In Constant Dollars (1982)



Analysis of Cost of Goods Sold

The goal is to determine:

- Which costs vary with sales
- Which resources can/will be redeployed

There are usually numerous "confounding" influences and the analyst must be aware of and fully understand the impacts of external and strategic factors on reported costs.

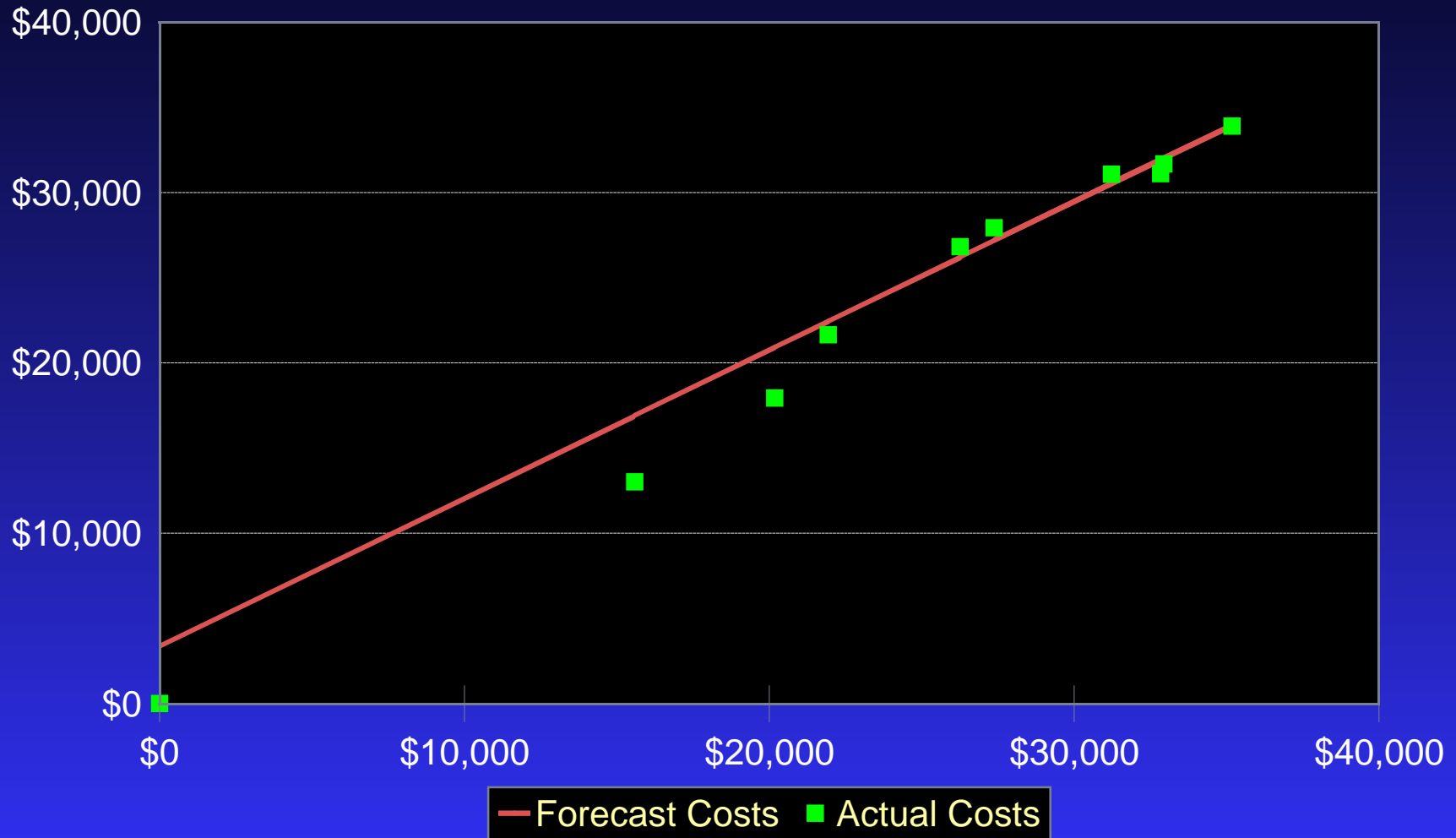
Just because accounting convention defines something as fixed or variable doesn't make it so! In the very short run, almost all costs are fixed. In the long run, all costs are variable. Furthermore, accounting classification is largely ad hoc.

General Approaches

- Classification of cost categories as to percent variable based on financial analysis and statistical correlation
- Engineering model of production process based on detailed analysis of facilities
- Use of regression analysis on TC and TR or subsets to provide direct estimates of fixed and variable components

Spectrum's Lost Profits Model

(Forecast vs. Actual Costs)



Lost Profits Duration

- Key is the nature of the business
 - Ability to redeploy assets
 - Contract standards
 - Impediments to growth pre tort
- If another line of business/product exists which can mitigate loss, why wasn't it used pre tort to increase profit?
- Some shrinkage of lost profits will occur simply because of obligation to mitigate. Fixed costs can be reduced over a multi year period.
- One can use post tort business plan to establish a reasonable scenario

Confounding Investment and Financing

Financing	No Debt	50% Debt	99% Debt
Net Income	\$1,200	\$1,200	\$1,200
<u>Depreciation</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>
Earnings	200	200	200
+ Depreciation	1,000	1,000	1,000
- <u>Amortization</u>	<u>0</u>	<u>500</u>	<u>990</u>
= Cash Flow	1,200	700	230
Investment	\$1,000	\$500	\$10
"OPM" Effect @ 20%	\$1,000	\$1,083	\$1,182

Discounting To Present Value

- Lost profits damages are taxable, therefore pre-tax lost profits should be discounted at an after-tax cost of funds
- The discount rate used depends on whether one is discounting lost earnings (equity) or cash flow
- One should never include interest expense as a cost--this is called "confounding the investment and financing decisions"
- Pre-tax cost of debt is sometimes used as a proxy
- Capital cost adjustments should be made

Present value of lost profits cannot exceed the value of the firm

And now for some...

Amazing Stories

Present Value of Investment -- "Gain"

Income or Sales Assumed Ratio or Sales Multiplier	PE	Lyons Spectrum	Lyons Lyons	Actual Spectrum	Actual Lyons	
Revenue Multiplier		\$58,223	\$73,361	\$41,914	\$52,812	No Capital
After Tax Income Capitalization		\$30,361	\$58,605	\$35,334	\$68,203	Investment
Pre Tax Income Capitalization**		\$43,373	\$83,721	\$50,477	\$97,433	
Revenue Multiplier		\$26,111	\$41,249	\$9,802	\$20,700	Low Capital
After Tax Income Capitalization		\$8,679	\$19,564	\$1,766	\$31,103	Investment
Revenue Multiplier		\$26,111	\$41,249	\$9,802	\$20,700	Medium Capital
After Tax Income Capitalization		\$13,395	\$14,848	\$5,161	\$27,708	Investment

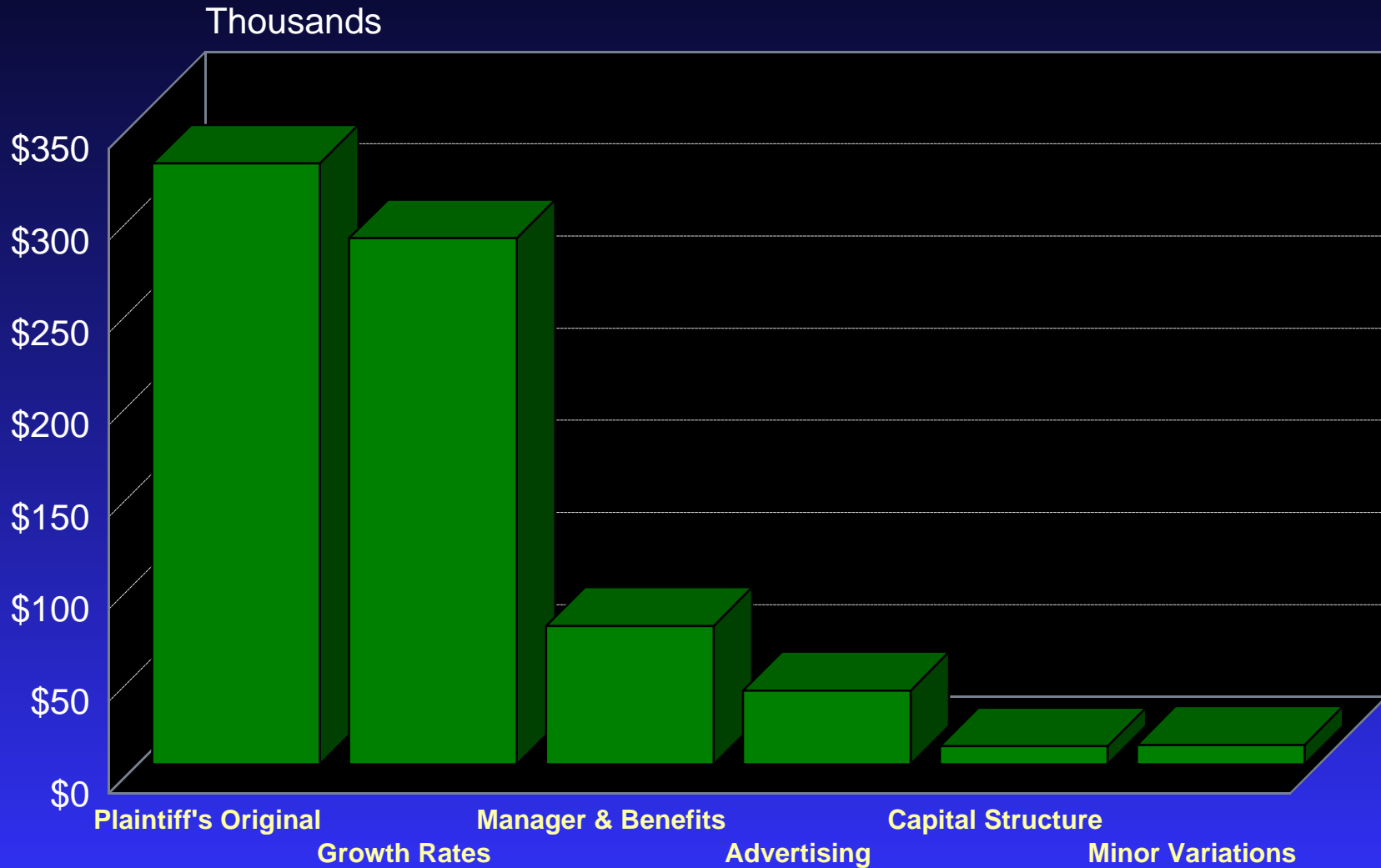
** Technically Incorrect

 Lyons Calculations

 Reasonable Estimates

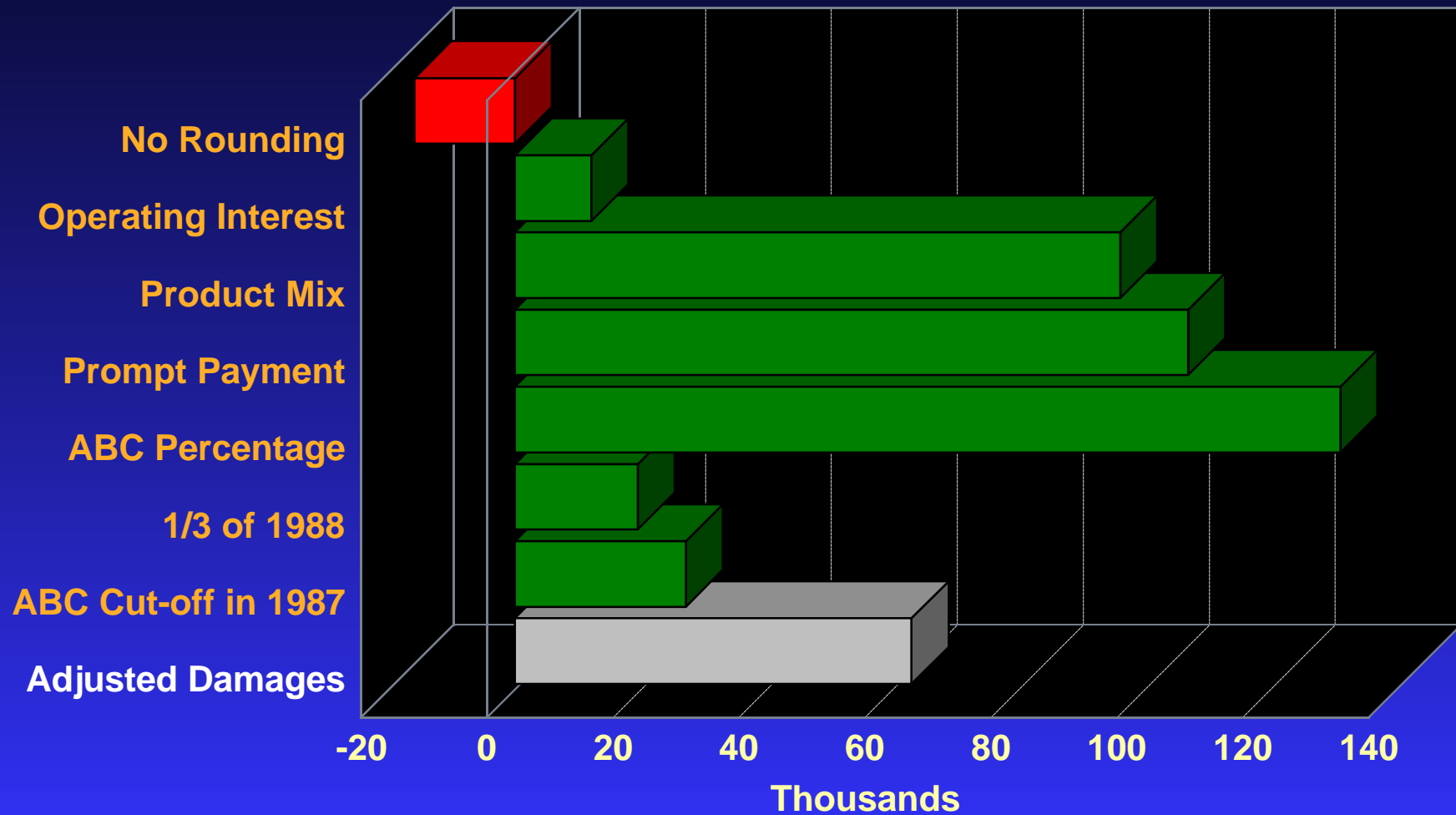
Damages Models

(With Adjustments)



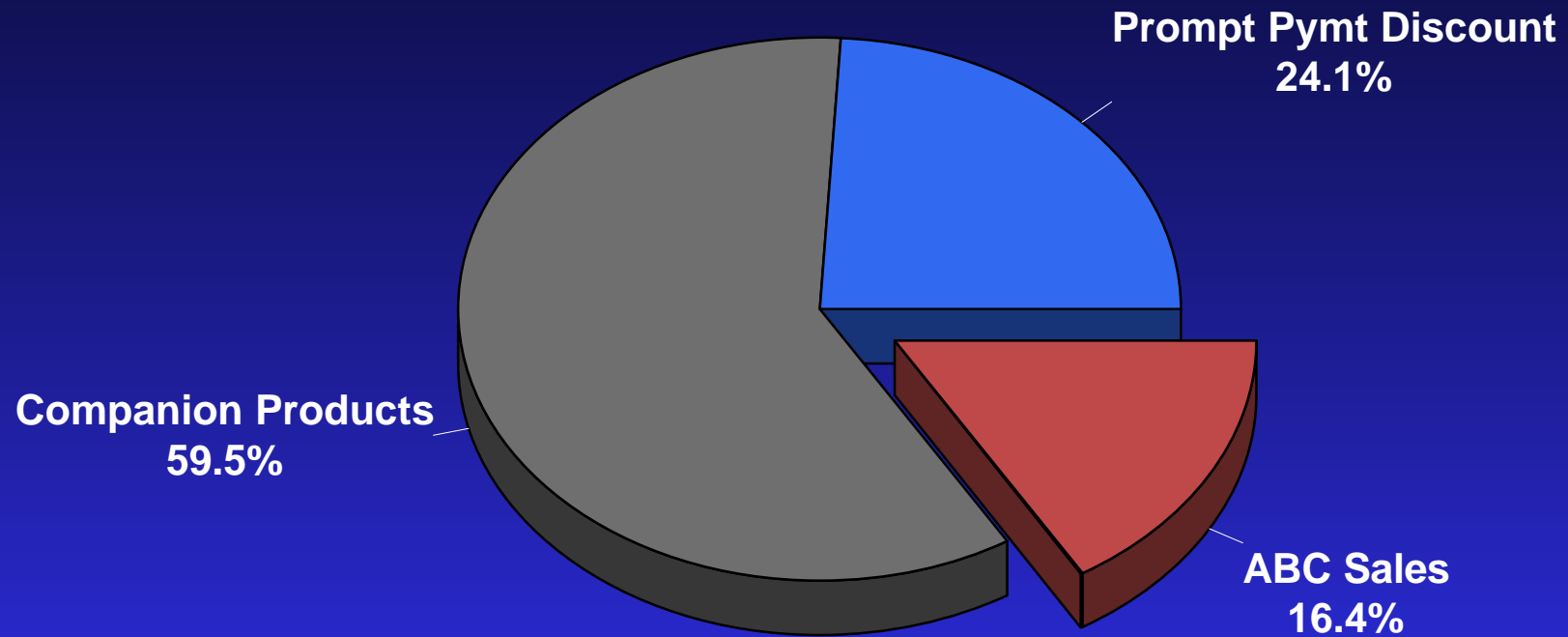
Adjustments to E&Y Model

Reduction to Unrealized Profits (Losses)



Comparative Fault

For Losses & Unrealized Gains (1985-88)



Available Credit

First National Bank of the Plains

