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# Securities Class Action Damages

Craig J. McCann, Ph.D., C.F.A.  
President,  
Securities Litigation and Consulting Group, Inc.  
202-251-0273



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# Introduction

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- ◆ Securities class action lawsuits
- ◆ Class certification
- ◆ Materiality
- ◆ Aggregate Damages
  - ◆ Damaged shares
  - ◆ Damage per share
- ◆ Economists: scientists or clowns?



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# Securities Class Action Lawsuits

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- ◆ What makes a 10(b)-5 case?
  - ◆ A bear market
  - ◆ A risky business strategy
  - ◆ A bad outcome
- ◆ What economists do?
  - ◆ Investigate class conflict
  - ◆ Assess materiality
  - ◆ Estimate alleged damages
  - ◆ Assist expert discovery





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# Class Certification

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- ◆ Was the stock traded in an efficient market?
  - ◆ Analyst coverage, institutional investors (not just number of market makers), trading volume?
  - ◆ Did the stock price react to allegedly material events? Did it react on non-event dates?
- ◆ Are the named Plaintiffs typical and do they have common interests?
  - ◆ Seller-purchaser and equity-non equity conflicts.
- ◆ Are the Plaintiffs only subject to common defenses?
  - ◆ For example institutional Plaintiffs are subject to defenses not applicable to individual Plaintiffs.



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# Materiality Tests

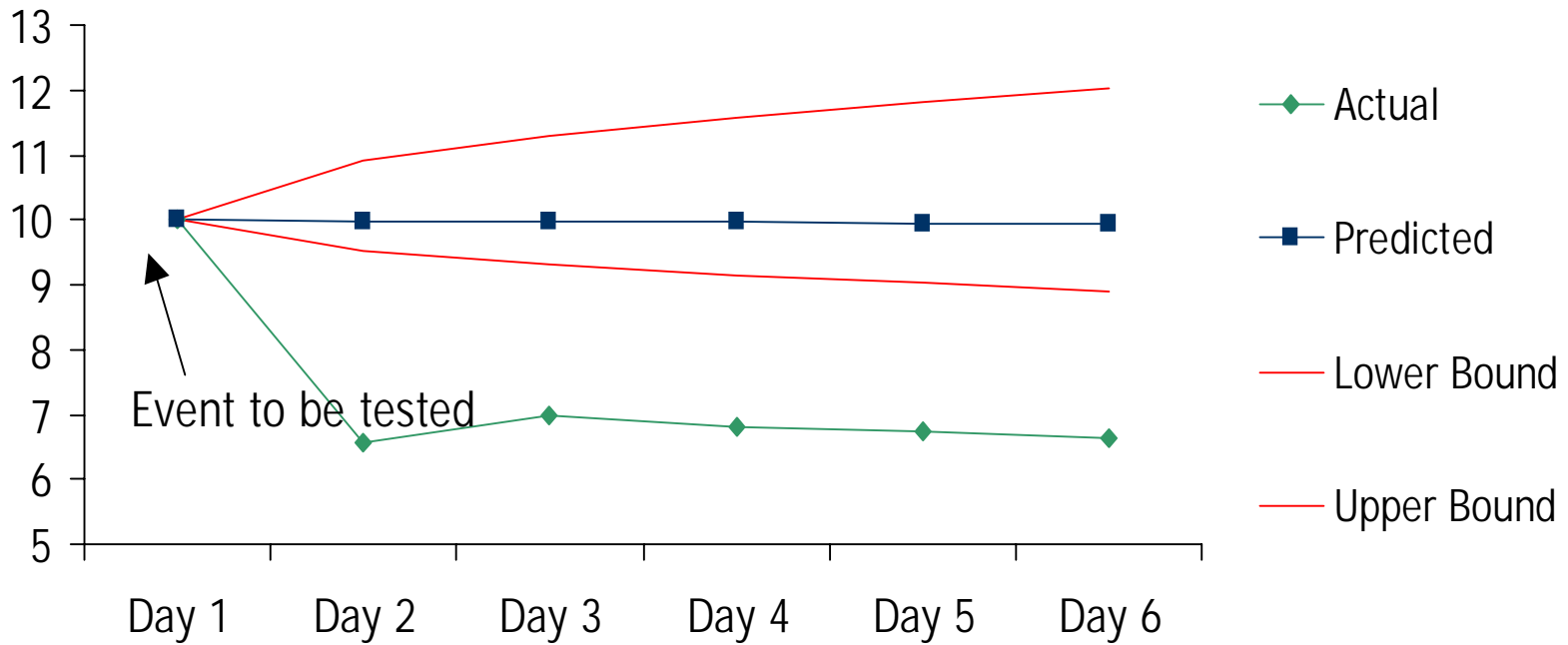
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- ◆ Financial economists use event studies to test materiality of alleged disclosures.
  - ◆ Most Complaints' alleged events didn't affect stock prices.
- ◆ Published academic research also informs expert opinion.
  - ◆ For example, after tax cashflows, not accounting earnings, matter.
  - ◆ Reference to the literature also helps parse complex disclosures into material and non-material items.



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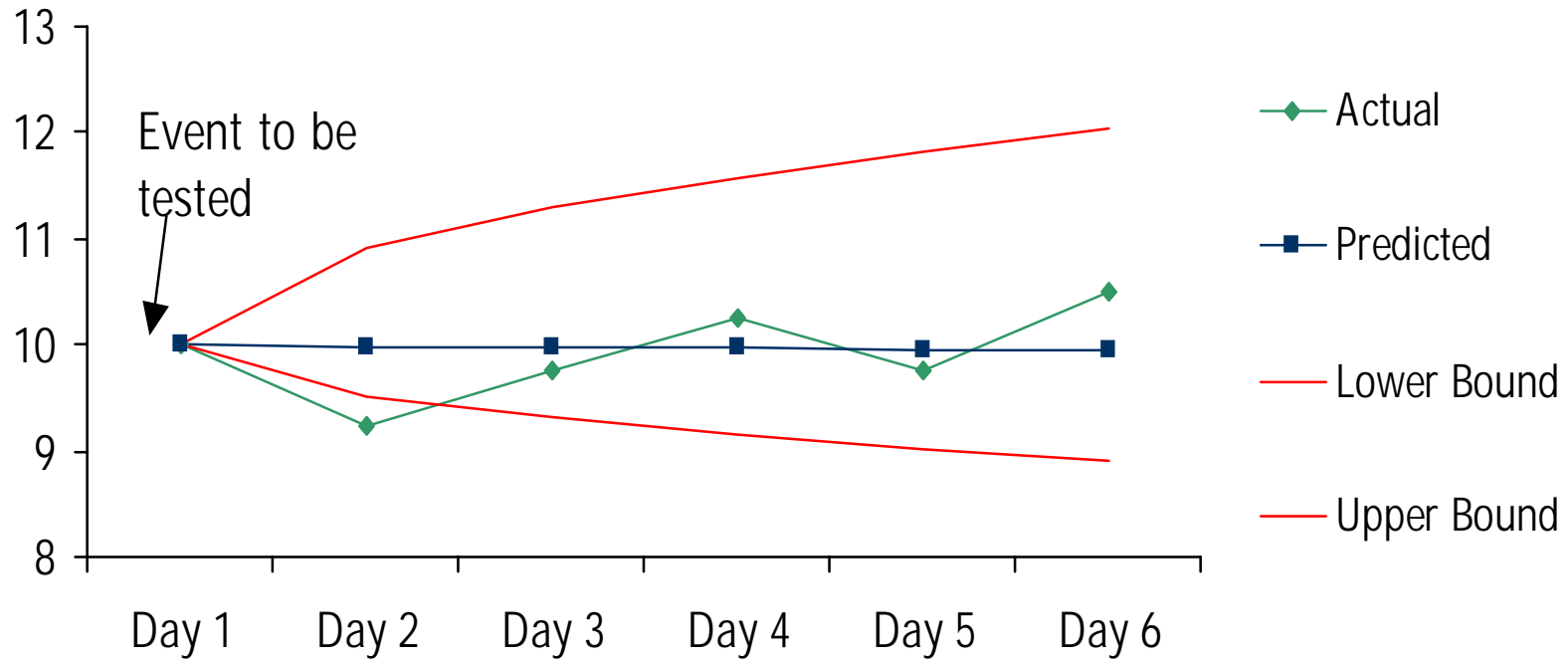
# Material Event





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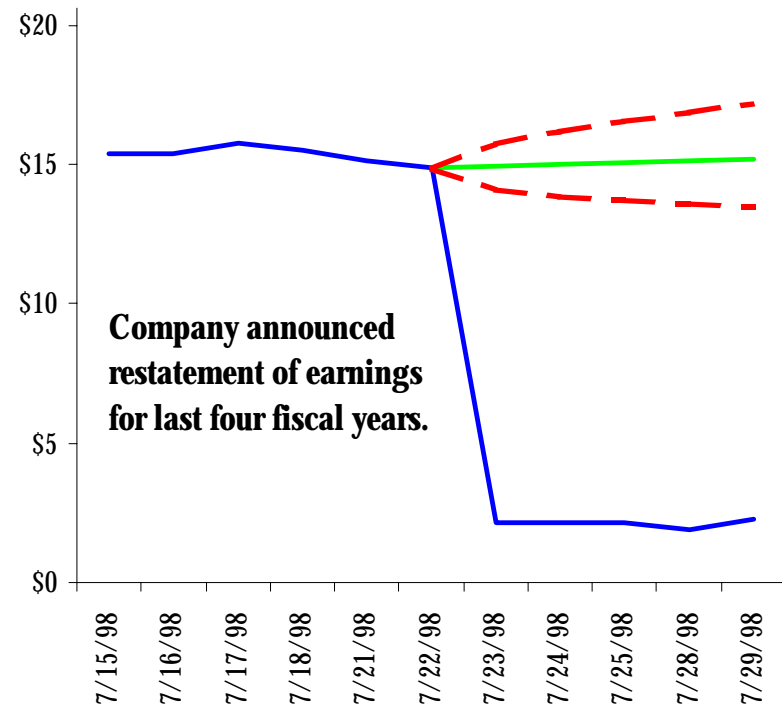
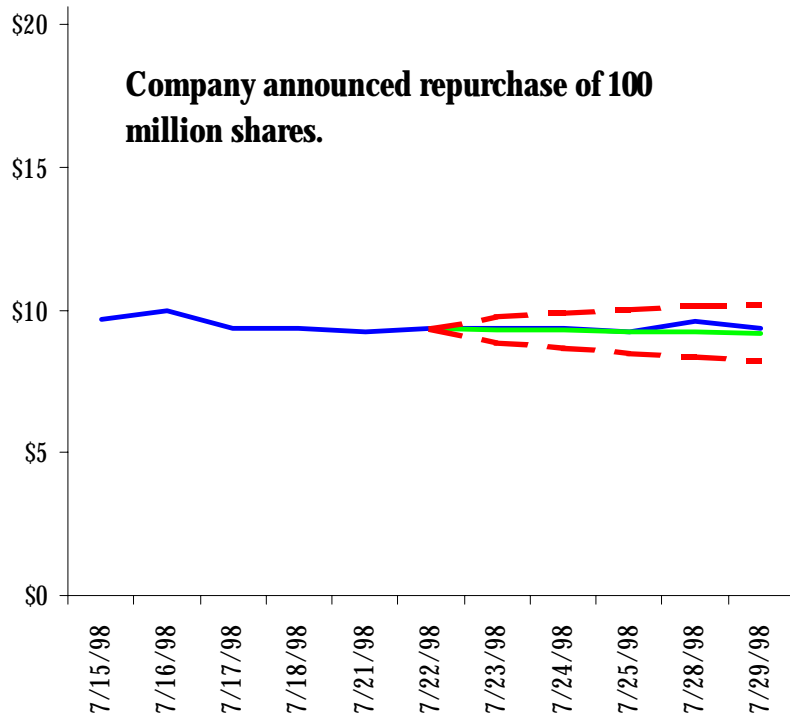
# Non-material event





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# The Difference Is Often Clear







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# Aggregate Alleged Damages

“Inflation in purchase price minus inflation in sale price.”

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- ◆ Damaged Shares
  - ◆ Count damaged shares in claims process prior to trial.
  - ◆ Guess damaged shares using trading models
    - ◆ Use low-cost, readily available data, coarse assumptions, impenetrable software.
    - ◆ Estimate holding periods during class period.
- ◆ Damage Per Share
  - ◆ Alleged inflation must be estimated for each day during the class period.
    - ◆ Index approach.
    - ◆ Price reaction approach.
    - ◆ Valuation approach.



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# Retention and In/Out Damages

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- ◆ Shares purchased at fraudulently inflated prices and held through a full disclosure when the inflation is eliminated are referred to as *retention damaged* and the aggregate dollar damages on those shares is referred to as *retention damages*.
- ◆ Shares purchased at fraudulently inflated prices and sold when the inflation has been reduced but not eliminated are referred to as *in-and-out damaged* and the aggregate dollar damages on those shares is referred to as *in-and-out damages*.



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# Damage Per Share

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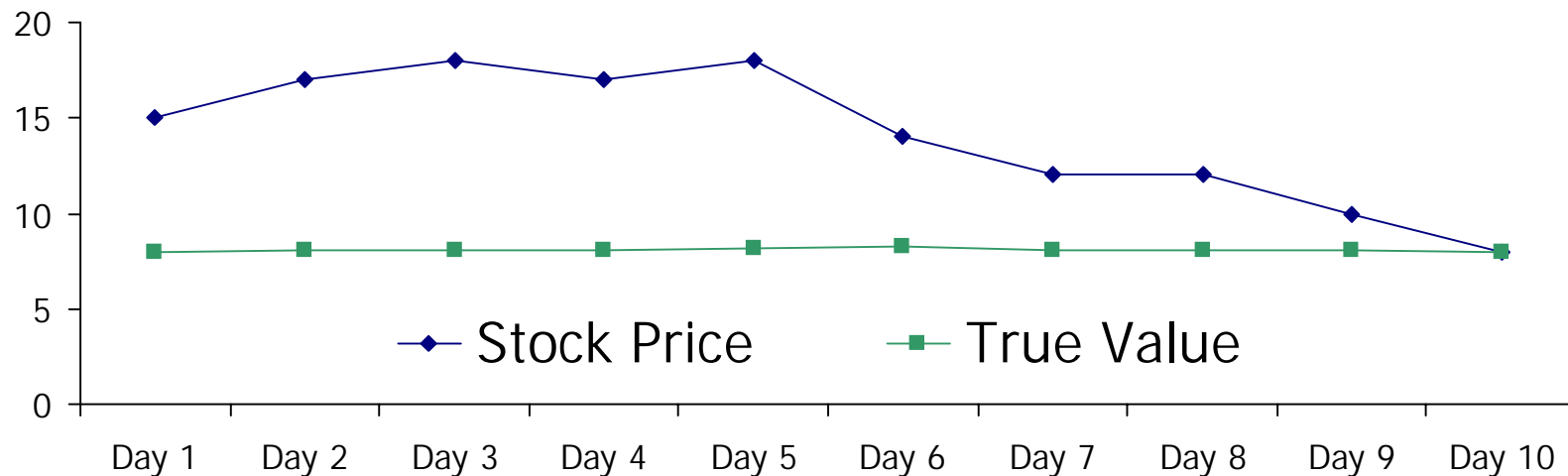
- ◆ Index Approach
  - ◆ Assumes all firm-specific returns are related to alleged fraud, typically yields outrageous “damages.”
- ◆ Price Reaction (Event Study) Approach
  - ◆ Estimates inflation per share by reference to price reactions surrounding disclosures.
- ◆ Valuation Approach
  - ◆ Estimates inflation per share using valuation models and effects of alleged fraud on underlying fundamentals over time.



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# Index Approach

- ◆ Essentially all returns during class period are driven by the alleged fraud.

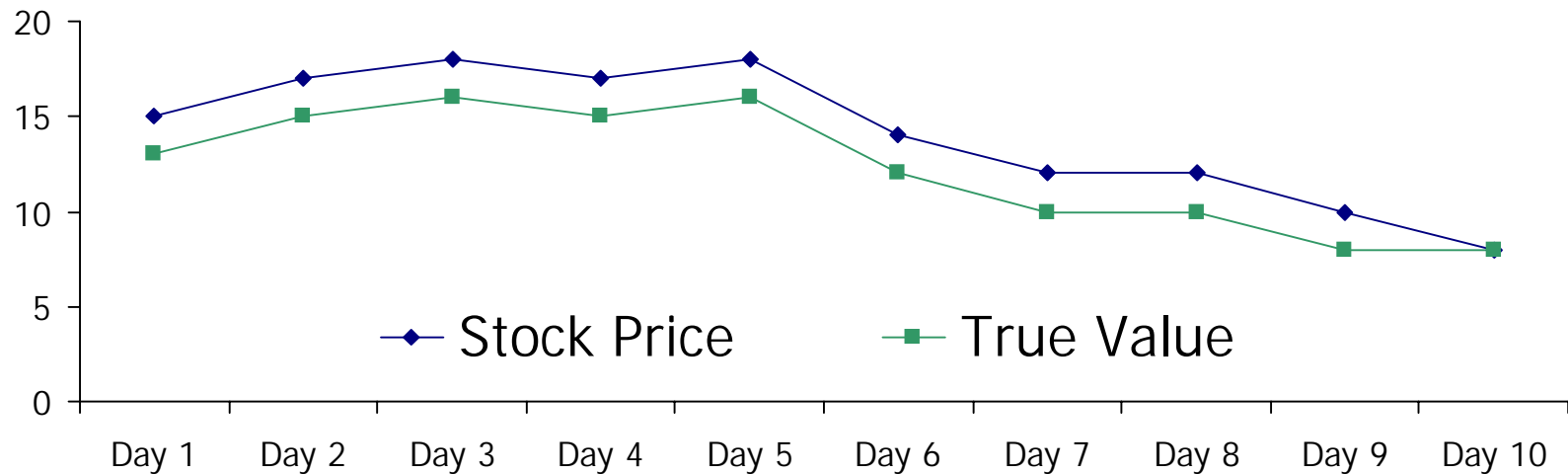




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# Price Reaction Approach

- ◆ Inflation a constant \$2 per share; better than index approach but is still flawed.

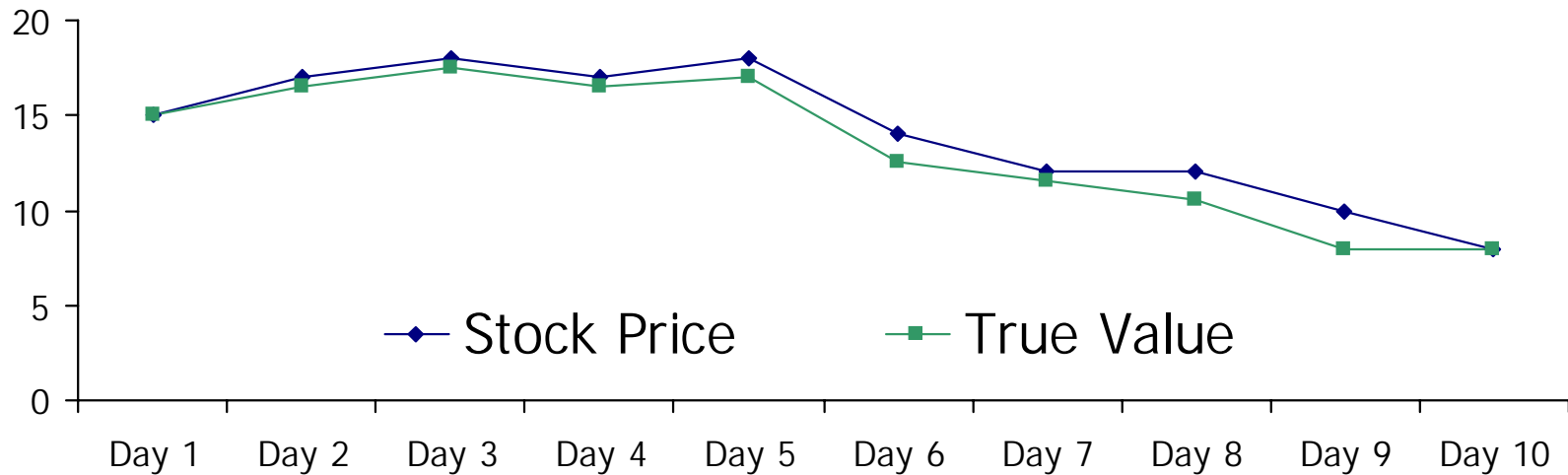




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# Valuation Approach

- ◆ Inflation varies because of interim disclosures, changing fundamentals.





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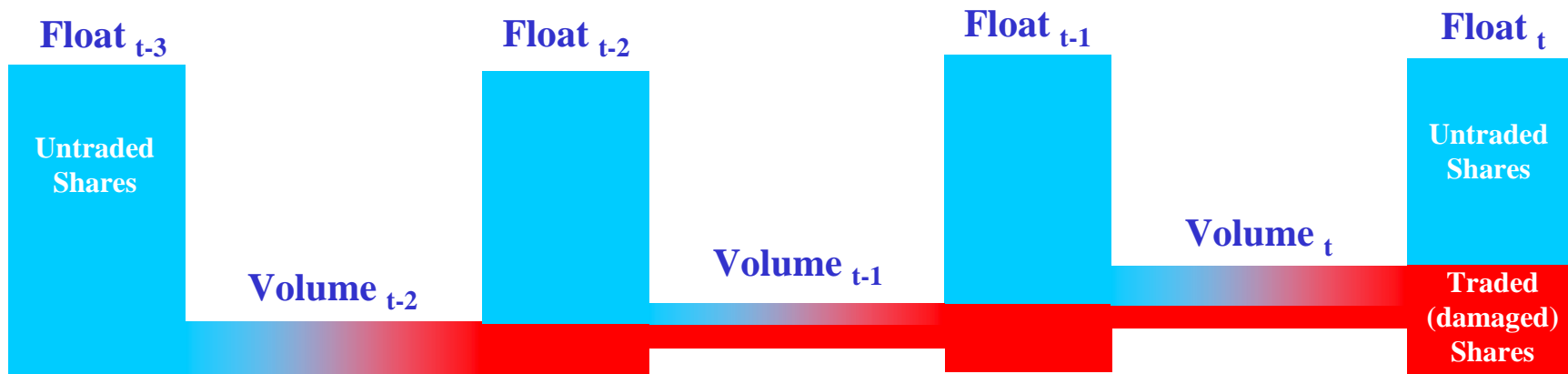
# Damaged Shares

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- ◆ Pre-trial Claims Process
  - ◆ Submit claims forms in advance so only liability and pattern of alleged inflation to be determined.
  - ◆ Most accurate, most intellectually honest, not happening.
- ◆ Trading Models
  - ◆ Widely used but no real basis.
  - ◆ Helpful in sizing and strategizing cases.
  - ◆ All change “blue” shares to “red.”
    - ◆ Proportional Trading Model.
    - ◆ Multiple Trading Models.
    - ◆ Accelerated Trading Models.

# Trading Models

- ◆ Float = Untraded Shares + Traded Shares
- ◆ Trading Volume = Retraded Volume + Newly Traded Volume



- ◆ The rate at which shares are damaged depends on how much of each day's volume is drawn from Traded Shares.





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# Proportional Trading Model

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- ◆ The PTM assumes each share in the float is equally likely to trade, regardless of who owns it and when it was traded last.

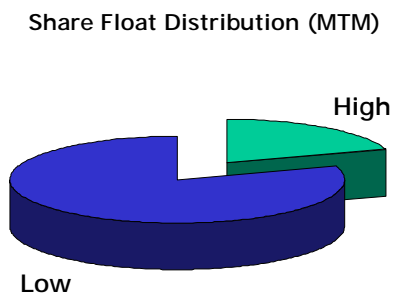
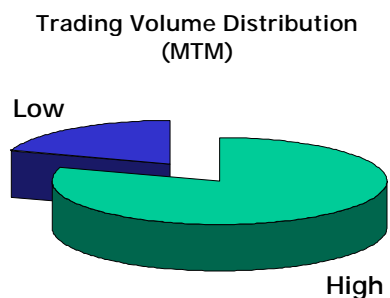
$$\frac{\text{Retraded Volume}}{\text{Traded Shares}} = \frac{\text{Newly Traded Volume}}{\text{Untraded Shares}} = \frac{\text{Volume}}{\text{Float}}$$

- ◆ No empirical basis, never tested, not accepted in the scientific community.
- ◆ Struck by Daubert motion in Kaufman v Motorola.



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# Multiple Trading Models



## High Activity Traders

$$\frac{\text{Retraded Volume(H)}}{\text{Traded Shares(H)}} = \frac{\text{Newly Traded Volume(H)}}{\text{Untraded Shares(H)}} = \frac{\text{Volume(H)}}{\text{Float(H)}}$$

## Low Activity Traders

$$\frac{\text{Retraded Volume(L)}}{\text{Traded Shares(L)}} = \frac{\text{Newly Traded Volume(L)}}{\text{Untraded Shares(L)}} = \frac{\text{Volume(L)}}{\text{Float(L)}}$$

$$\frac{\text{Volume(H)}}{\text{Float(H)}} \geq \frac{\text{Volume(L)}}{\text{Float(L)}}$$

No better supported in science than PTM.



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# Accelerated Trading Models

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- ◆ Shares which have already traded during the class period are more likely to trade than shares which have not yet traded.

$$\frac{\text{Retraded Volume}}{\text{Traded Shares}} = \text{TLR} \frac{\text{Newly Traded Volume}}{\text{Untraded Shares}}$$

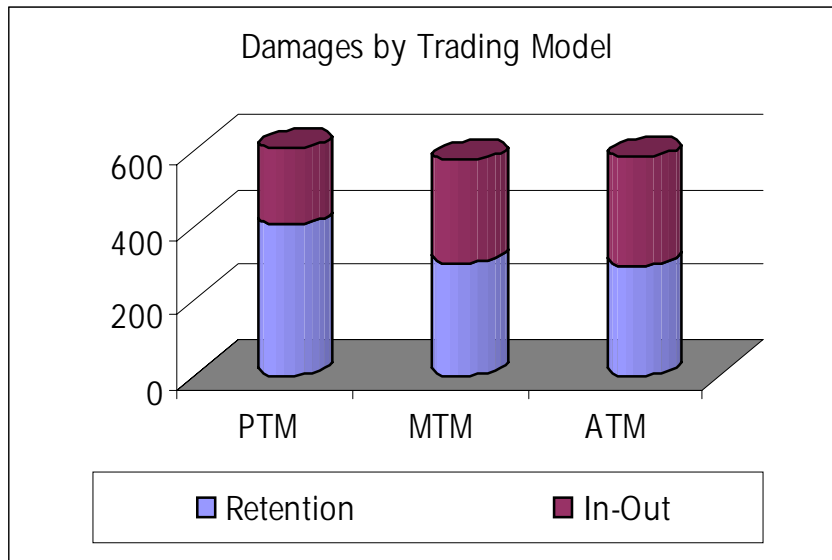
No better supported in science than PTM or MTM.



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# Damages: Distribution

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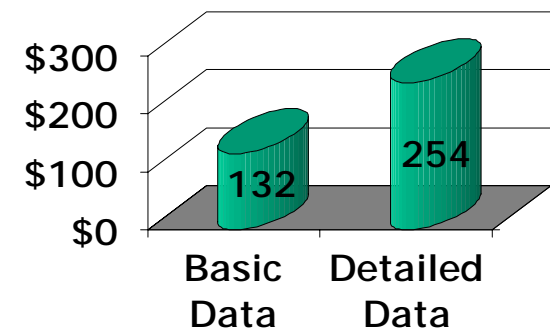
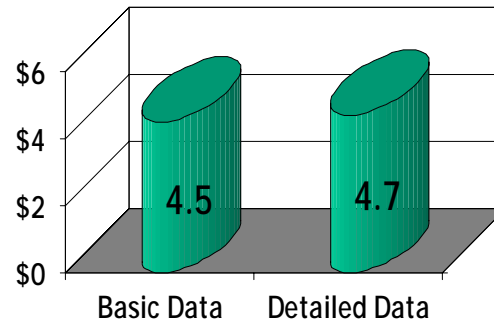
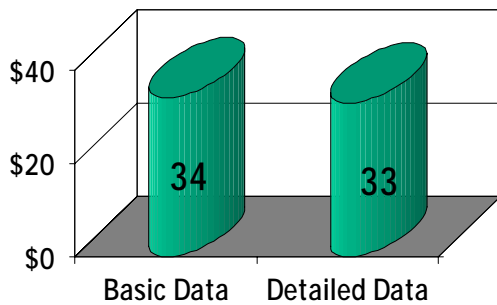
- ♦ *Distribution* between retention and in-and-out depends on model.
- ♦ *Totals* do not vary too much, especially if the class period is long.



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# Damages: Data Matters

- ◆ Depth of data research can matter a lot.





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# Damages: Data Is Costly

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- ◆ The cost (and time) of acquiring data differs.

	<u>Low-Cost</u>	<u>High-Cost</u>
Price	X	
Volume	X	
Shares Outstanding	X	X
Short Interest	X	X
Insider Trading		X
Institutional Trading		X



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# Damages: Summary

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- ◆ Per share damage estimates matter more than trading models.
- ◆ Completeness of data matters more than trading models.
- ◆ None of the trading models any scientific reliability.
- ◆ Small changes in class period matters, especially moving the end of the class period earlier in time.



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# Expert Reports

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- ◆ In Re Oracle Securities Litigation 829 F. Supp 1176 (N.D.Cal. 1993)
- ◆ Plaintiffs' expert (Hammerslough) used a price/earnings multiple of alleged overstated earnings with a proportional trading model.
- ◆ Judge Walker severely criticized damages report for lacking an event study and not accounting for firm specific factors.
- ◆ In Re Executive Telecard Securities Litigation Lexis 16307 (S.D.N.Y. 1997)
- ◆ Plaintiffs' expert (same expert as in Oracle) used both comparable company index and a constant percentage price reaction approaches along with a proportional trading model.
- ◆ Granted motion to exclude plaintiffs' expert report because it did not include an event study to measure inflation.





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# Expert Reports (continued)

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- ◆ In re Northern Telecom Ltd. Securities Litigation 116 F. Supp. 2d 446 (S.D.N.Y. 2000)
- ◆ “Investor’s expert’s (Torkelson) testimony would be accorded no weight in securities fraud action, ..., where expert did not perform an event study or similar analysis ... and did not challenge event study performed by corporation’s expert.”
- ◆ Alleged misrepresentations didn’t affect stock price, Judge Cedarbaum wouldn’t excuse lack of evidence based on recasting allegation as omissions.
- ◆ Kaufman v Motorola (N.D.Ill.), 2000, WL 1506892
- ◆ Plaintiffs’ expert (Jarrell) used a proportional trading model and admitted the model didn’t pass Daubert criteria.
- ◆ Judge excluded the aggregate damages testimony based on trading models.
- ◆ Criticism of the PTM equally applicable to the MTM favored by Defendants.
- ◆ Is this a good outcome for Defendants or for Plaintiffs.