



## The Risk Management Lessons of the Last Year? Not All Losses are Created Equal!

by

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Managing Risk Post 9-11 Conference  
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November 20, 2002

### Lesson 1: The Value of Risk Management with Perfect Information



Firm



$$\text{Value} = \frac{\sum E[\text{Earnings}|\text{Mgmt}]_i + \varepsilon_i}{(1+r)^i}$$

Prediction: With perfect information investors can differentiate between good management and random earnings volatility. No need to manage  $\varepsilon_i$ .

## Lesson 1: The Value of Risk Management with Imperfect Information



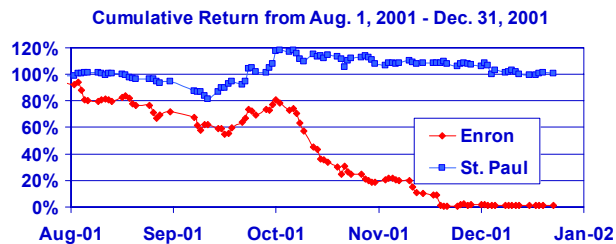
$$\text{Value} = \frac{\sum E[\text{Earnings} + \varepsilon_i | \text{Mgmt}]_i}{(1 + r)^i}$$

Prediction: With imperfect information, investors would like to differentiate between good management and random earnings volatility. Demand to manage  $\varepsilon_i$ .

## Two Case Studies



| Company                              | Net Pretax Estimated Loss | Shareholder's Equity Dec. 31 2000 | Net Loss as % of Equity | Net Income 2000 |
|--------------------------------------|---------------------------|-----------------------------------|-------------------------|-----------------|
| St. Paul Co's WTC Loss Sept. 11      | 941                       | 7,178                             | 13.1%                   | 993             |
| Enron's Earnings Restatement Oct. 16 | 1,181                     | 11,470                            | 10.3%                   | 979             |



## The People of The State of New York vs. Dennis Kozlowski and Mark H. Swartz



- Mr. Kozlowski allegedly improperly borrowed \$29,756,000 ... between 1997 and 2000.
- Mr. Kozlowski allegedly used corporate relocation monies to purchase, among other items,
  - ❖ \$6,000 shower curtain
  - ❖ \$15,000 dog umbrella stand,
  - ❖ \$2,200 for a gilt metal waste basket ...



## Any Evidence?



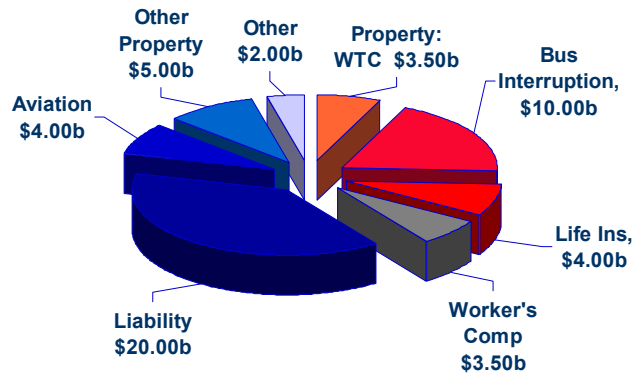
- DaDalt, Gay and Nam (2002) "Asymmetric Information and Corporate Derivatives Use."
- Research question
  - ❖ Do firms that actively practice risk management have more informative earnings?
- Hypothesis Tested
  - ❖ Is analyst forecast error negatively related to firms that use financial derivatives?

$$\text{Error} = \frac{\text{ABS}[\text{Ave. Forecast EPS} - \text{Actual EPS}]}{\text{Price}}$$

| Users |       |        | Non-Users |       |        |      |
|-------|-------|--------|-----------|-------|--------|------|
| No.   | Mean  | Median | No.       | Mean  | Median | Sig. |
| 1165  | .0034 | .0011  | 2094      | .0051 | .0019  | Yes  |

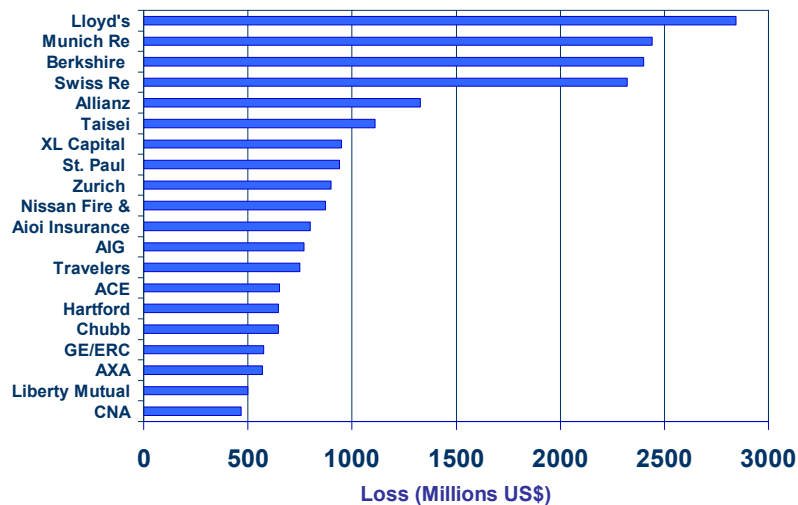


## Estimated Insured Losses: WTC Attack

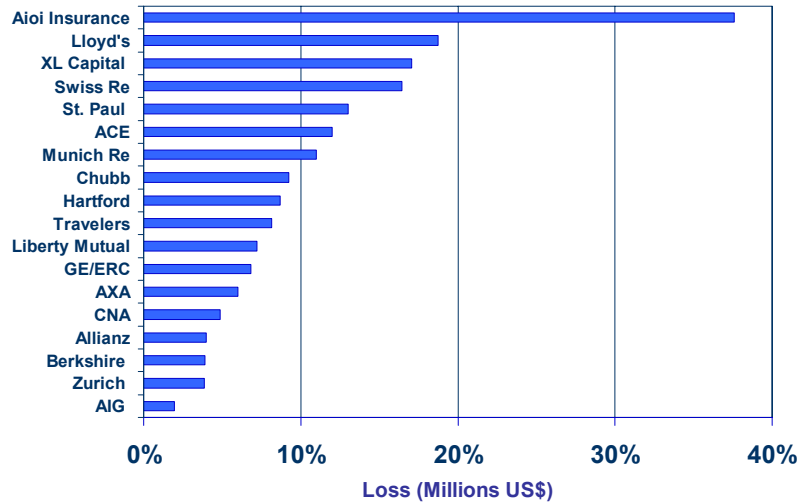


Total Projected Insured Losses = \$52 Billion

## Top 20 Companies in WTC Net Insured Losses



## Top 20 Companies in WTC Ratio: Net Insured Losses –to– 2000 Capital

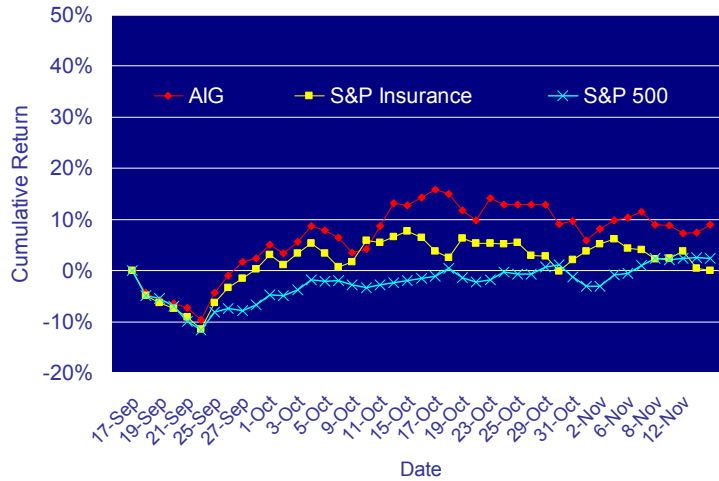


## Lesson 2: The Value of Risk Management and Capital Preservation

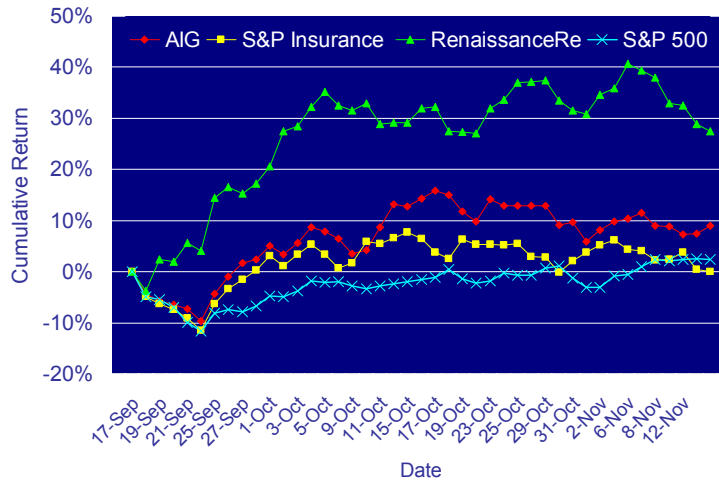


- Lesson 2a – Protect your own company
  - ❖ Take risks KNOWINGLY within your own tolerances
  - ❖ Use sound risk management and leverage internal capital to signal value to stakeholders
    - Headline: "AIG Board Approves Share Buyback of 50 million Shares" Sept. 14, 2001
- Lesson 2b – Use risk management to take advantage of strategic opportunities
  - ❖ AIG headlines
    - "AIG to Lead Aviation War and Hijacking Coverage" Sept. 24, 2001
    - "AIG Board Approves New Lloyds Syndicate", Nov. 6, 2001
    - "AIG Announces New Zero Coupon Bond Issue" Nov. 7, 2001

## Insurer Stock Performance Sept. 10 – Nov. 13



## Insurer Stock Performance Sept. 10 – Nov. 13





## Industry Wealth Effects Post 9-11

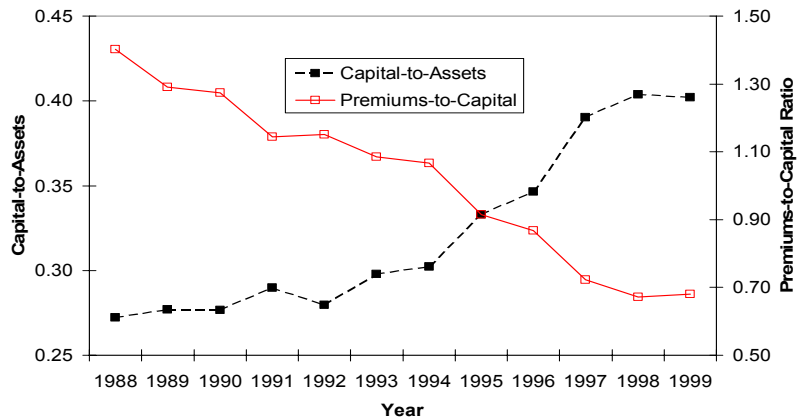
- Cummins and Lewis (2002)
  - ❖ “Catastrophic Events, Parameter Uncertainty and the Breakdown of Implicit Long-term Contracting in the Insurance Market: The Case of Terrorism Insurance”
- Research question
  - ❖ Measure the effects of the World Trade Center attacks on the stock returns of traded insurers
- Hypothesis
  - ❖ Market returns to individual insurers following the WTC attacks will be relatively high for insurers with strong financial ratings based upon year-end 2000 information
    - Sample: 43 publicly traded national P&C insurers

## Insurer Cumulative Average Abnormal Returns by A.M. Best's Financial Rating



| A.M. Best Rating | No. of Insurers | Cumulative Average Abnormal Returns |            |             |
|------------------|-----------------|-------------------------------------|------------|-------------|
|                  |                 | Days [0,1]                          | Days [0,4] | Days [5,30] |
| A++              | 6               | -2.95                               | -2.62      | 7.80        |
| A+               | 17              | -6.74                               | -8.38      | 9.30        |
| A                | 12              | -3.37                               | -7.05      | -0.88       |
| A-               | 3               | -2.06                               | -5.51      | -8.75       |

## U.S. Property-Liability Industry Capitalization Ratios: 1988-1999



## Lesson 3 – Which risk matters?



- Typical Corporate Risk Classification
  - ❖ Strategic, e.g.,
    - Consumer demand
    - New market entrant
  - ❖ Operational
    - Fraud
    - Supply chain management
  - ❖ Financial
    - FX exposure
    - Commodity input price volatility
  - ❖ Hazard
    - Property risk
    - Products Liability
    - Workers' Compensation
- Which risk does the CEO of an investment bank care about?
 

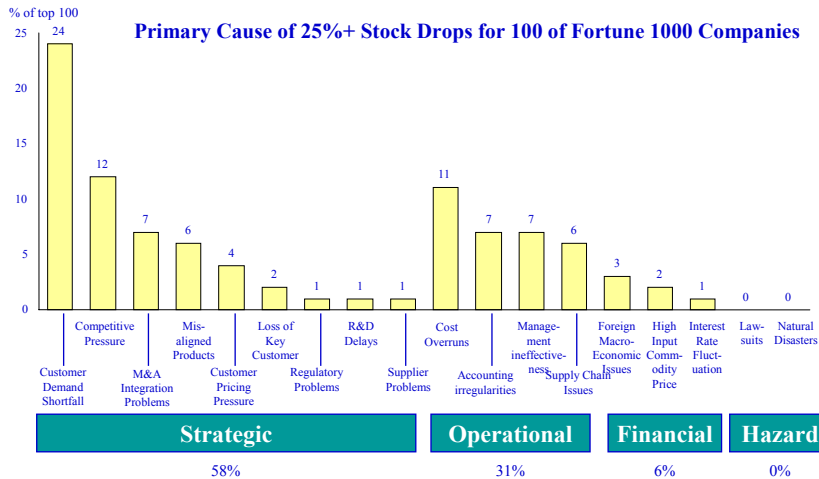
*“Risks to our reputation and our integrity could put us out of business. Volatile markets are not going to put us out of business.”*

John Mack, CEO, CSFB  
*Business Week*, Sept. 23, 2002



## What Risks Impact Shareholder Value

The frontier of risk management is managing *operational* and *strategic* risks



## Lessons of the Last Year

- Lesson 1: Good risk management leads to better transparency
  - ❖ How transparent is your company?
  - ❖ The market will tolerate volatile earnings
- Lesson 2: Sound risk management is sound business management
  - ❖ Understand when access to capital is valuable for
    - Your own company
    - Strategic placement in the marketplace
- Lesson 3: Enterprise risk management is coming
  - ❖ Financial and hazard risk management techniques highly advanced
  - ❖ “Science” of operational risk management is developing rapidly



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