

The Credit Crisis and Associated Liabilities

2009 Seminar on Reinsurance – Bermuda

François Morin, FCAS, MAAA, CFA

May 18, 2009

The subprime credit market crisis has helped trigger and fuel the global financial crisis

“Subprime mortgage crisis

**“US Federal Reserve loans
\$85 billion to American
International Group (AIG)
to avoid bankruptcy”**

**“Japanese company
Yamato Life files for
bankruptcy”**

**“Advised now for
\$5.9 billion of losses
D&O market”**

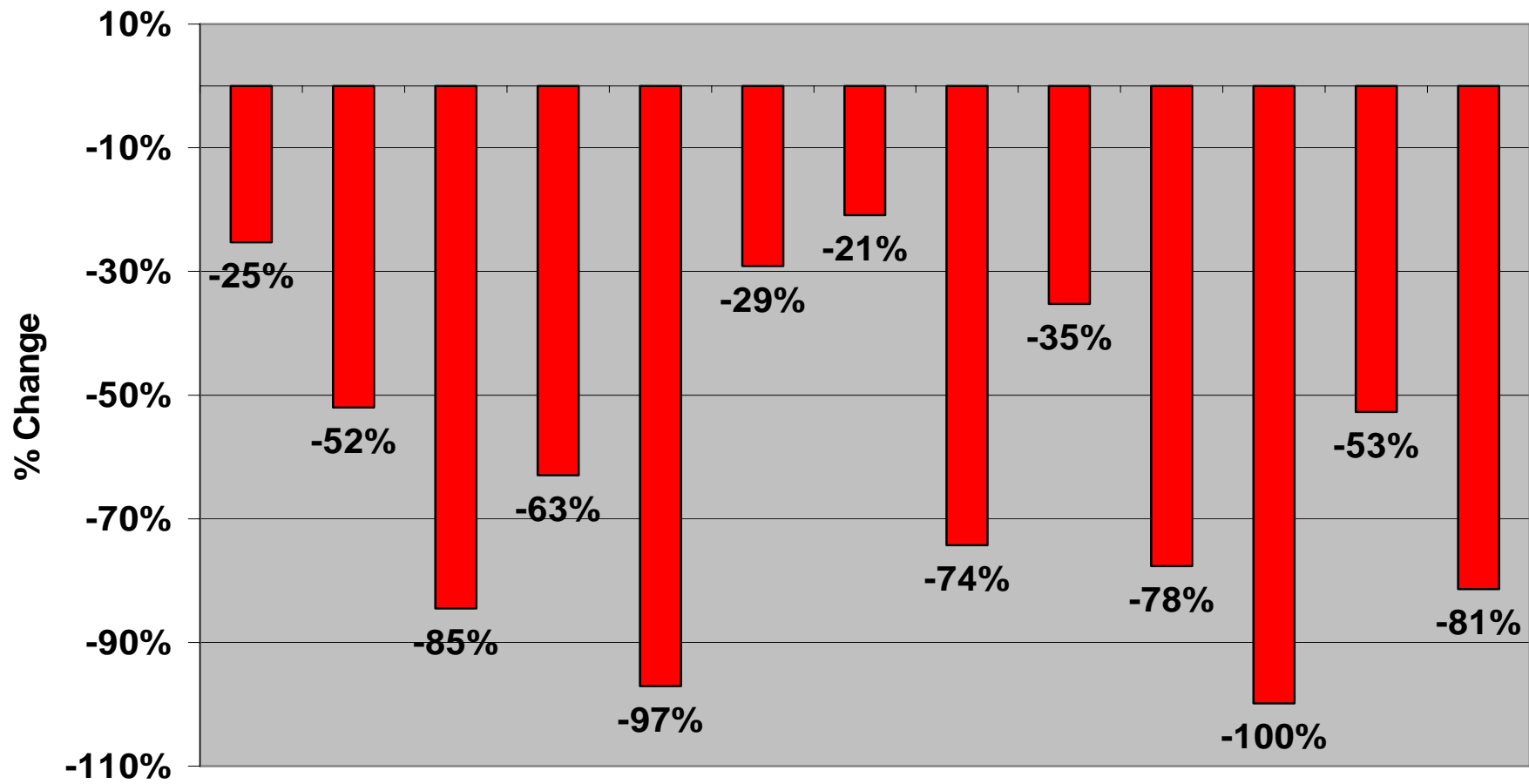
**“Bank of
America buys
Merrill Lynch”**

**“BNP Paribas agreed
to take over Fortis
from the Belgian
government for 14.5
billion euros”**

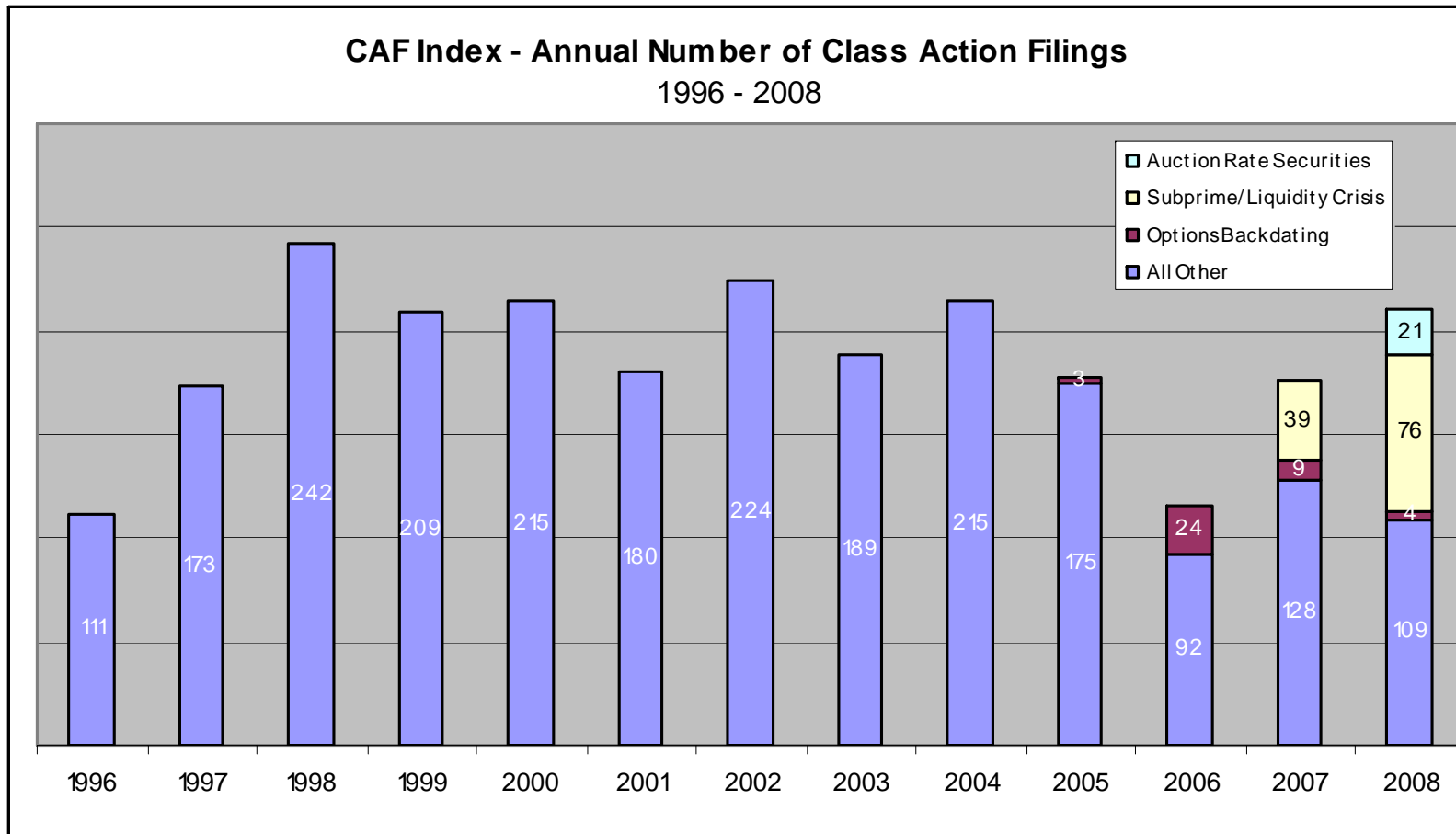
**“Washington Mutual seized by
the Federal Deposit Insurance
Corporation”**

Many financial institutions
have seen their stock value decline significantly

Change in Stock Price of Selected Financial Institutions May 1, 2008 to May 1, 2009



As a result, the number of SCA lawsuits* has increased over the last two years



* From Cornerstone Research, Stanford Law School Securities Class Action Clearinghouse

Traditional actuarial methods have limited value in developing liability estimates for the credit crisis

- Financial market instability is unprecedented
- Instability makes D&O and E&O claim estimation extremely difficult
- The implications of government intervention are yet to be fully understood
- M&A activity has also changed the landscape

We've developed a tiering model to estimate insurer exposure to credit crisis claims

- Tiering system organizes financial crisis D&O and E&O exposures by probability of hitting a layer and potential dollar cost
- Parameters reflect input from various experts
 - Claims
 - Legal
 - Underwriting
 - Reinsurance
 - Actuarial
- Categories are scored from 1 (most severe) to 5 (least severe)
- Analysis contemplates probability differences based on coverage (e.g. Side-A only) and attachment point
- Model can be adjusted in real-time, in response to emerging developments for each case/insured

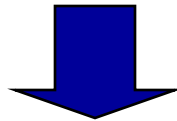
Estimates are first developed by account,
and then aggregated to get an overall estimate for each Tier

$$\text{Loss} = \text{Limit} \times \text{Frequency \%} \times \text{Severity \%}$$

$$= \$25\text{M} \times 85\% \times 85\% \text{ (Low)}$$

$$= \$25\text{M} \times 90\% \times 90\% \text{ (Central)}$$

$$= \$25\text{M} \times 99\% \times 100\% \text{ (High)}$$



$$\text{Exposure to Loss} = \$18\text{M to } \$25\text{M}$$

$$\text{Sum of individual losses} = \text{Total D\&O/E\&O load}$$

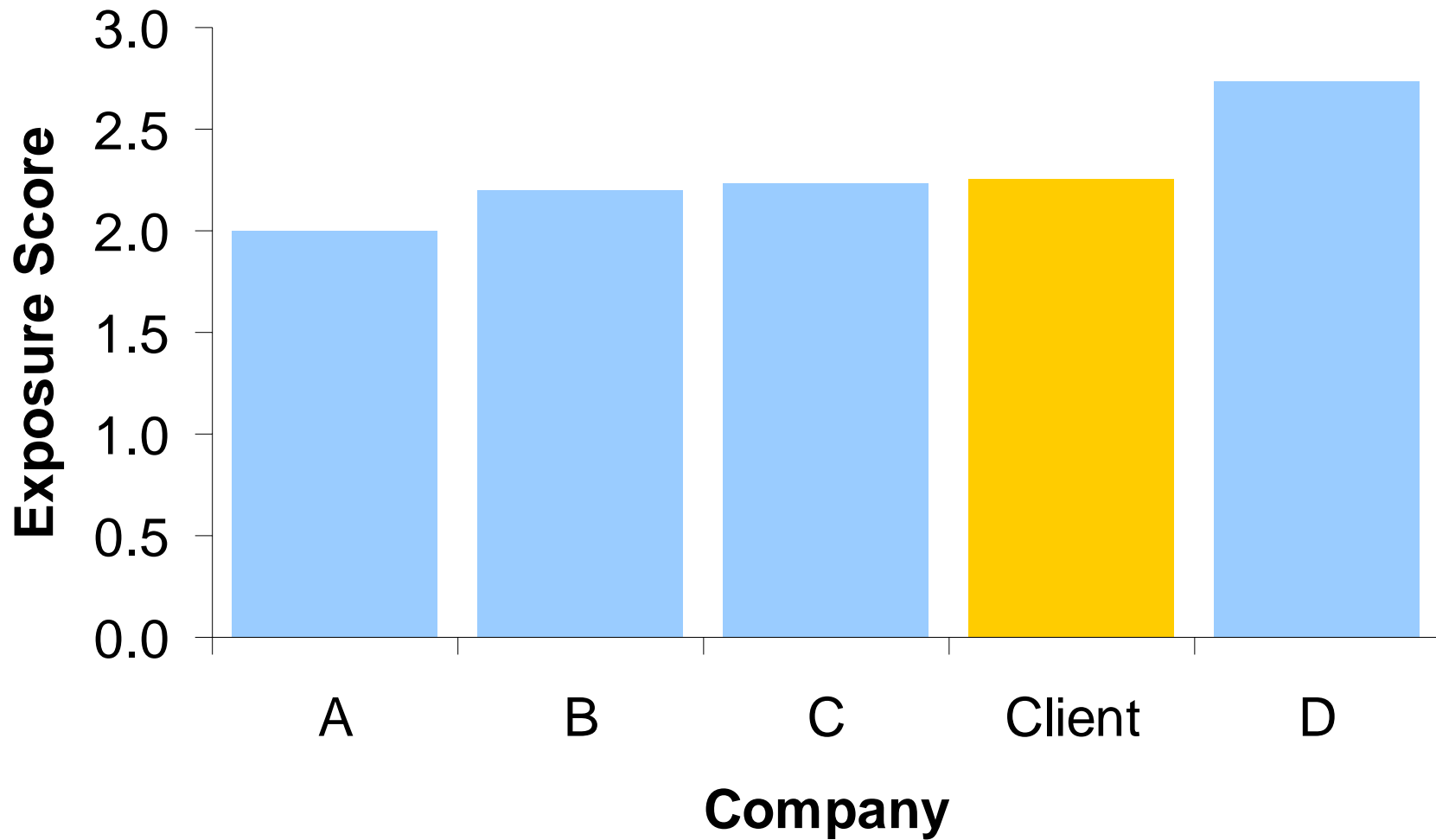
Issues specific to this event must be addressed when estimating the ultimate liability

- Policy period allocations/Inter-related events
- Data issues
 - Accurate list of claims
 - Are they consistent across cedants?
 - Potential claims
- Aggregate limits, deductibles
- Variety of opinions on the ultimate exposure from cedants

Benchmarking against peer companies provides additional value to senior management

- Scoring system can help re/insurers estimate their financial crisis-related D&O and E&O liabilities
 - Re/insurers can use these analyses to build stakeholder confidence in reported D&O and E&O losses
- Benchmark figures are developed by weighting the tier assignment for each individual claim by its limit
- Weighted-average tier group provides a D&O and E&O “Exposure Score”
- Exposure Score gives management a sense of its D&O and E&O liabilities compared to peers
- Results of peer analysis can be presented to senior management/Board of Directors
- While the Exposure Score provides guidance on the severity of the loss, the overall financial result for the line is also impacted by the level of diversification into non-financial institutions accounts
 - Private/Not-for-profit D&O
 - Commercial D&O

The exposure score gives a company a view on its risk profile, relative to its competitors



Towers Perrin estimates

\$4b to \$7b of insured D&O losses as of year-end 2008

- This estimate is for the U.S. P/C insurance industry only
 - There's more outside the U. S.
- This estimate represents a charge of approximately 30% on the 2008 industry D&O loss ratio
 - It is comparable to the impact on the 2007 loss ratio
- While D&O is the major source of loss, other lines will be affected (E&O, Fiduciary, etc.)
- More claims will emerge in 2009 and beyond
- D&O industry reserves appear to be sufficient in aggregate at this time to cover known exposures
- This estimate does not include claims related to Madoff and other Ponzi schemes