



SOCIETY OF ACTUARIES

**ERM Symposium**  
**April 2010**

**2F - What Went Wrong? Risk Management**  
**Lessons from the Crisis**

Jeffrey Brown  
Melissa Van Hees

**Moderator**  
Neil Strauss



Where Cutting Edge Theory Meets Some of the Best Practice



## Welcome to Chicago ERM Symposium 2010 Concurrent Session 2F



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## What Went Wrong? Risk Management Lessons from the Crisis

Neil T. Strauss, ASA, MAAA, CERA, Principal, Neil T. Strauss Associates, LLC

Melissa Van Hees, Chief Risk Officer, Ore Hill Partners

Jeffrey Brown, Managing Director, Promontory Financial Group

- Neil Strauss: Risk Management Lessons from Insurers, Rating Agencies and Bond Insurers
- Melissa Van Hees: Liquidity Risk Management: Communication and Influence
- Jeff Brown: Issues relating to Regulations and Issues relating to Financial Models

**Risk Lessons from Insurers, Rating Agencies & Bond Insurers or How I worked at all of them & lived to tell the “Tail”**

Neil T. Strauss, ASA, MAAA, CERA  
Principal, Neil T. Strauss Associates, LLC

- What can be learned from the tales of financial companies in the eye of the storm: insurers, rating agencies and bond insurers?
- Consider the experiences of one non-traditional actuary who worked at each over the past several years in the decade of the 2000's. Must be luck, skill or watch his career for stocks to short!

## Global Multi-line Insurer

- What was Impressive about Company
  - CEO was a genius – built multi-line multi-country insurance empire. He knew big picture and small picture of all of his businesses better than basically everybody else in the business.
- On the Other Hand...
  - built-up at least one major concentration risk which severely hurt the company. Also, so much power in the hands of one hurt when that 'one' was out.
- Risk Related Lessons to Learn
  - As much as concentration kills and insurance industry keeps seeing it, happens over and over again: Executive Life, Mutual Benefit, General American, etc.
- Quotable Quote
  - "I can't believe European Reinsurers had over 10% equities in early 2000's. None of the top 15 executives at this insurer would ever make such a stupid mistake as those guys did." - Heard from Senior Risk Officer (2004)

# Global Rating Agency



What's Going Right? There's More to It Than It Seems

- What was Impressive about Company
  - Runs a billion dollar business which doesn't risk its own capital. People buy its opinions but company can always say – it's just an opinion.
- On the other hand...
  - The rating agency business model gives the players more upside potential than downside. Risks are not aligned. Eventually you can be blinded to the obvious.
- Risk Related Lessons to Learn
  - Sensitivity testing of key assumptions is mandatory, not optional.
  - If risks are not aligned, can be fatal (Still a problem!)
  - Applying the same discipline to yourself that you expect of others is important if you are a rating agency or an insurer or ... a parent, for that matter. Consider that insurers and most financial players did a better job of RM for their customers than they did for themselves.
- Quotable Quote
  - "How can you think that 1 event could hurt so many reinsurers? If you are right, our CDO model would be totally wrong, which, of course, it is not. - Heard from Senior Analyst (2006)

# Leading Bond Insurer



What's Going Right? There's More to It Than It Seems

- What was Impressive about Company
  - Company had very long track record of minimal losses on its core business, municipal bond insurance, over very long period of time.
- On the other hand...
  - Made mistake of assuming that structured finance transactions were not that much different than traditional muni deals. Exacerbating the problem, did not cap the risk from them.
- Risk Related Lessons to Learn
  - Mono-line type companies must expand their skill sets significantly if they expand beyond their knitting.
- Quotable Quote
  - "You say we need a Chief Risk Officer....What's a Chief Risk Officer?"
    - Heard from Bond Insurer Senior Executive (January 2008)

## Summary and Conclusions ... or ...every risk management lesson to learn I already learned in “Risk Management” Kindergarten



What's Good (or) What's Not So Good, At Home

- There is nothing new under the sun (all)
- Beware concentration risk (insurer)
- Align risks and incentives (rating agency)
- Sensitivity Testing is not optional (all)
- Expect from yourself what you expect from others (rating agency)
- If you don't have enough knowledge to expand beyond your knitting, just stay a knitter (bond insurer)
- Better risk controls and processes are part of the solution & alignment of compensation with risk and effective elevation protocols help. However, as you manage risk, do not forsake the application of intuition and common sense and the taking into account of normal human behaviour. (all)



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## Issues Relating to Regulations: *Coincidence of factors*

Jeffrey Brown  
Managing Director, Promontory Financial

- Factors Contributing to the Crisis
- The Upshot

## Bank Supervisory Approach

- Bank regulators (in the U.S.) have traditionally had vast and discretionary powers to, for example,
  - Close banks
  - Require additional capital
  - Levy fines
  - Remove officers
- But bank (U.S.) bank regulators have been purposefully judicious in their use of those powers
  - Price-based measures of risk increase (decrease) as prices fall (rise)
- Largely, within broad boundaries, the regulators accepted the banks' tolerance for risk taking, as long as the banks demonstrated good management.

# Acceptance of the Efficacy of Risk Management



What's Going On? There's More to It Than It Seems

- Banks and regulators coalesced in their views that bank risk management was fundamentally effective,
  - Large banks in particular were viewed as being sophisticated risk managers
- The advent of 'financial technological' advances supported that view
  - Hedging
  - Credit derivatives
- The Basel II capital reform effort was the culmination of that view

# Cult of Consumption



What's Going On? There's More to It Than It Seems

- For years before the crisis, there were widespread expressions of concern about the unsustainability of growing household leverage and the fragility of the household sector
- Despite widespread concern over the rising leverage of U.S. consumers, there was no resolve to do anything about it
  - Indeed, lending to consumers was the primary avenue of growth for U.S. banks, either directly, or through structured finance
- The housing bubble was recognized as a systematic risk, but the problem was so diffused that it was resistance to single, quick, decisive actions

# Functional Regulation



- It has been commonplace to lament the inability of the regulators to understand the complex activities of modern banks
- However, the problem has not been the complexity of the activities, but rather the complexity of the banks,
  - The regulators actually do as good a job as anyone of figuring out how individual pieces work—securitization, for example
  - Bank enterprises are too complex to understand in simple ways
- In the U.S. banks have been supervised on a functional basis, with different regulators responsible for the different banking ‘functions’
  - Functional regulation might make sense conceptually, but it did not work on a practical level—too many cracks for things to fall through
- The natural imperative for regulators to want to supervise important enterprises meant that there was no strong imperative to limit the size of, let alone break up, big banks

# Models as Enablers



- Complex financial models have been criticized in various ways as contributing to the crisis, for example
  - “The models did not forecast these problems,”
  - “The models were too complex”
  - “The models were too simple”
- The simple criticisms largely stem from misunderstandings of the roles and uses of models
  - Risk models are a necessary but imperfect tool, prone to error and frequently misunderstood
- However, it seems likely that the mere existence of risk models played at least one role in the crisis—the creation of a false sense of comfort in general in our ability to measure risk

# Upshot

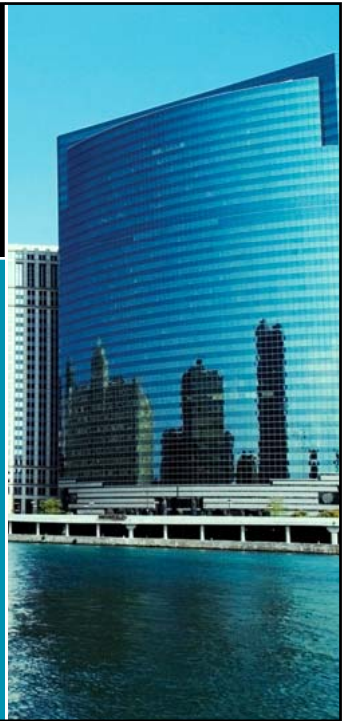


What's Going On? What's Next? How do we do it?

- Massive extension of bank regulation
  - Higher capital requirements
  - Less trading activity
  - More direct supervision
  - Greater costs imposed on systemically important institutions



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## Liquidity Risk Management: *Communication and Influence*

Melissa Van Hees  
Chief Risk Officer, Ore Hill Partners

- Definition
- Challenge
- Approach

## Liquidity Risk

- Universal in world of finance
  - Corporations
  - Hedge funds
  - Pension funds
  - Households
  - Governments
- It has traditionally received the least focus, but has the capacity to do the most damage because of the relationship to systemic risk (herd mentality)
  - Price-based measures of risk increase (decrease) as prices fall (rise)
- Best crisis quote:

*"If money isn't loosened up, this sucker could go down"*  
George W. Bush Oct 2008

# Liquidity versus Solvency



What's Going On? There's More to It Than It Seems

- Liquidity
  - Ability to convert assets into timely money
- Solvency
  - Ability to pay off or dissolve outstanding liabilities
- The good news: A liquidity crisis can almost always be resolved
- The bad news: A solvency crisis is more serious and requires some irrevocable loss of economic value
- Can be difficult to differentiate

# The challenge



What's Going On? There's More to It Than It Seems

- Optimism is a huge part of American culture and the global financial system
- Once people experience success, it's natural for them to assume it will continue
- Managers want approval, admiration, and want people who work for them to have a “winning attitude”
- Hesitating or spending too long on a decision has been condemned as overanalyzing or over intellectualizing <sup>1</sup>
- People who have large bank accounts often have equally large egos

<sup>1</sup> *Bright Sided: How the Relentless Promotion of Positive Thinking Has Undermined America* by Barbara Ehrenreich

# Herd Mentality



What's Going On? There's More to It Than It Seems!



*Who can resist when everyone is having so much fun?*

# "Black Sheep" Risk Manager



What's Going On? There's More to It Than It Seems!



# Hedge Fund Liquidity Crisis



What's Going On? There's More to It Than It Seems



## Fund Liquidity Risk (hedge fund)



What's Going On? There's More to It Than It Seems

- Borrowing Terms
  - Leverage Measurements (gross, derivatives, cost of short positions)
  - Financing terms (haircuts, margin terms, committed versus uncommitted)
- Rollover Risk
  - NAV triggers
  - Over-Collateralization test
- Redemption Risk
  - Fund underperformance
  - Investor returns elsewhere

## Approaches



What Counts (Up) More Than Anything Else in Finance

- Analytical, data-oriented approach
- Reject notion of positive thinking
- ALM: identify whether the focus is on assets or liabilities and then redirect and emphasize the other
- Emphasize profits rather than minimizing loss
- Mandate via regulation, governance or intimidation
- Enlist others for support