

GUY CARPENTER



MARSH MERCER KROLL
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Subprime: Glorious Role of Risk Management for Betterment of Humankind

Don Mango

CARe 2008



Capital Ideas. **GUY CARPENTER**

MMC MARSH MERCER KROLL
GUY CARPENTER · OLIVER WYMAN

YOU ARE INVITED!

Join Guy Carpenter's InStrat specialists for an evening of fun on the Cambridge waterfront during the 2008 Seminar on Reinsurance.

Monday, May 19, 2008, 9:00 pm to 12:00 am

Restaurant Dante (outdoor patio) *Voted Bon Appetite's "Hot 10" new U.S. restaurants*

Located in the Royal Sonesta Hotel

40 Edwin Land Boulevard, Cambridge, Massachusetts

Opening Statement

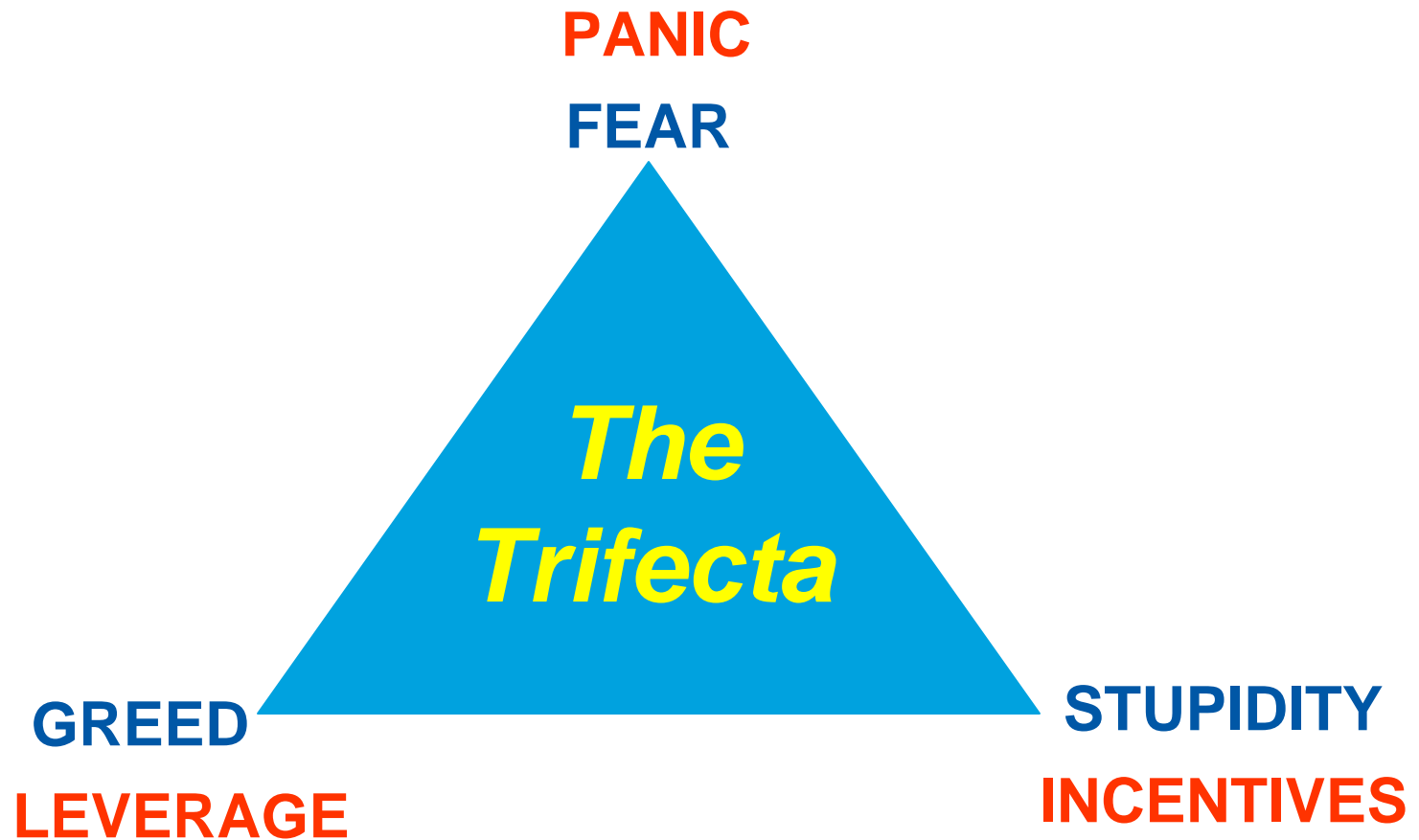
“When the music stops, in terms of liquidity, things will be complicated. But as long as the music is playing, you’ve got to get up and dancing.”

Where Was The Risk Management?

then-CEO of Citigroup

July 10, 2007

Our True Enemies
In Credit or Reinsurance



Layup on the Similarities

We Are Lenders With The Signs Reversed

- Spread approaching and surpassing ROL's
 - MBIA surplus notes at 1126bp above LIBOR
 - RMBS CDO's pricing at implied discount rates of **25%**
PAGING LEIGH HALLIWELL
- Underwriting = evaluation of counterparty for ability to fulfill obligations, with referrals (credit officers)
- Portfolio pricing = bad (good) experience leads to higher (lower) prices for all borrowers, with hard and soft markets
- Difficult to value “units sold” due to soft factors (terms and conditions) – covenants, spreads
- Aggregated classification rating by third-parties
- Third party vendor models for portfolio
- Proprietary analyses looking for subcategories to exploit (market over-pricing)
- The system has memory (credit history), because customers have ongoing need to borrow
- Portfolio accumulation management = stress tests, VaR thresholds

Layup on the Similarities *With ERM Dressing on the Side*

Failure to assess correlation

Model Risk

Contagion

Model Risk

Loss of focus on core competencies,
including (credit) risk assessment

Operational Risk

Moral hazard

Operational Risk

Over-reliance on leverage and hedging

Operational Risk

Softening of underwriting standards

Operational Risk

Expansion of exposure, terms and conditions

Operational Risk

Herding effects

Strategic Risk

Liquidity crisis

Strategic Risk

This Was No Black Swan

Failure to Recognize?

Time to Make the Donuts

Risk Management as Laughing Stock?



- “We were seeing things that were **25-standard deviation** moves, several days in a row. There have been issues in some of the other quantitative spaces. But nothing like what we saw last week.”
 - David Viniar, Goldman Sachs CFO, explaining 27% ytd drop in value of Goldman’s flagship Global Alpha fund,
 - Financial Times, August 13, 2007
 - Recipient, 2001 CFO Excellence Award for Risk Management

Failure to Recognize...?

Loss Retention Equates to Toxic Waste

- Actual capital market term for **the equity tranche**
- Darrell Duffie, Stanford
- *“...Loans that are sold or syndicated tend to have better covenant packages. [Credit risk transfer] is nevertheless likely to lead to a reduction in the efforts of banks and other loan servicers to mitigate default risk. Retention by lenders of portions of loans and of **CLO toxic waste** improve incentives in this regard.”*



“Innovations in Credit Risk Transfer: Implications for Financial Stability,” July 2007 Working Paper

Failure to Recognize or Act? *Do We Understand Correlation?*

- More Darrell Duffie
- *“Even specialists in collateralized debt obligations (CDOs) are currently ill equipped to measure the risks and fair valuation of tranches that are **sensitive to default correlation**. This is currently the **weakest link in [credit risk transfer] markets**, which could suffer a dramatic loss of liquidity in the event of a sudden failure of a large specialty investor or a surprise cluster of corporate defaults.”*



“Innovations in Credit Risk Transfer: Implications for Financial Stability,” July 2007 Working Paper

Di-Worsification © Shaun Wang
Jeffrey Immelt of GE



- "...our financial-services businesses were challenged by a **slowing U.S. economy and difficult capital markets.**" Immelt blamed 5¢ per share of the shortfall on "extraordinary disruption in the capital markets in March."...

- ...GE's com... company
found it dif... instances
executives b... general
pullback fro...
...Disturbing... **ee its**
problems coming. On Mar. 15, Immelt expressed strong
confidence in the firm's financial targets. Either Immelt was doing a
poor job of keeping **on top of his sprawling conglomerate** or
conditions got a lot worse in March, when financial markets were
rocked by the collapse of investment bank Bear Stearns (BSC)."

News Flash: GE Exposed to Every Known Risk Factor

BusinessWeek, April 11, 2008

Failure to Act

Failure to Recognize or Act? *Stress Testing that Matters*

- “Here’s a scary story...” = cell phones cause brain cancer
- **Taking Action** pre-crisis, we face behavioral finance and psychology...
 - Do we believe the scenario “**enough**”?

**Goldman Started Shorting
the Mortgage Market in 2005**
10/04/05

- Will underwriting be curtailed?
- Do we have the discipline to forgo consumption?



Try This Stress Test Scenario



Henry Clay Frick among its members

Johnstown Flood 1889

***This Is An
Outrage...How Did It
Happen?***

...miles by the flood



Cleanup workers among the debris near downtown.

Johnstown Flood Just Not Recognizing

- “The club did engage in periodic maintenance of the [earthen] dam, but made some **harmful modifications** to it.

- They *gam* **A Prize-Winning Very Light Gray Swan...** *e expensive*

- ...W **d keeping** *the spillwa*

- **They also possible fo was only a** *der to make it e time, so the dam vay.*

- The club **no could be dr** *so that the reservoir*



www.jaha.org/FloodMuseum/clubanddam.html

**Is There a Deeper Lesson?
YES**

Sparks and Prairie Fires

Timur Kuran, USC



- Social scientist writing about revolutions
 - Revolutions have proven difficult to predict
 - France 1789, Russia 1917, Iran 1978-79 all caught the world, their country, and the revolutionary leaders themselves by surprise
 - Ex-Post explanations read like rationalizations – assigning far more knowledge and coordination to participants,
- Kuran proposes that people have
 - An inner belief about a situation
and
 - An external believe expressed through actions
- ...and the two need not be, in fact often are not, consistent

<http://www-rcf.usc.edu/~kuran/>



Sparks and Prairie Fires

Timur Kuran, USC

- In an oppressive regime, people keep their opposition hidden
 - If there are either benefits to be gained, or punishment to be avoided, from professing the “party line”
 - And the opposition movement appears weak in comparison to the existing regime
 - Members of the same party provide benefits to each other
- Conditions for revolution arise when the collective gradient between perceived and professed grows too large, and a shock is introduced
- Kuran:
 - *“A suitable shock would put in motion a bandwagon process that exposes a panoply of social conflicts, until then largely hidden.”*

Sparks and Prairie Fires *Subprime Style*

- Private belief
 - *A la Chuck Prince → we know what we are doing*
- Regime (music is playing)
 - *What choice do we have?*
 - *Act as if these tranches are AAA, I will keep trading if you will...*
- Spark
 - *Bear Stearns hedge funds declared valueless*
- Sweeping revolution = **Liquidity crisis**
 - *Dramatic, overnight change in public opinion...*
 - *...clearly stated by unwillingness to trade in anything credit related*

Sparks and Prairie Fires *Reinsurance Style*

- Private belief
 - *Technical pricing, failure to act*
 - *How many defunct reinsurers had stellar actuarial staffs?*
- Regime (music is playing)
 - *Put that capital to work*
- Spark = *industry “event,” excuse, tide turning*
- Sweeping revolution = **market turn**
 - *Dramatic, overnight change in public opinion...*
 - *...clearly stated by unwillingness to trade without large price increases*



The Last Word on Risk Management



Swing for the Fences *What the Hell*

- The only beneficiaries of following a sinking market are the senior employees benefiting from flawed incentives (**GREED and STUPIDITY**)
- The organization follows “the Plan” to grow profitably in a down market (**FEAR of losing your job**)
- Companies report fictional gains which in a few years turn into real losses many times as large as the gains (**Ownership proposition**)
- How many owners understand appropriate risk-adjusted return on **risk-exposed capital?**

Idle Capacity and Franchise Value

Drastic Measures

- There is value in stability and persistence, and maybe in having buffer capacity that is “unused” or idle
- Leveraged, opaque, “receive-then-maybe-pay” proposition structure
- Susceptible to over-commitment and “blowing up”
- Franchise investment is intellectual
- Franchise can disappear in a “jump”
 - Ask Quanta, PXRE, Kemper, Converium US, etc.
- “Extra” capital buffer
 - Has a carry cost but may result in more future scenarios where franchise survives
- Legitimate rationales for keeping the powder dry
- Read Todd Bault and John Major



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