

Blindsided by Risk:

Global Systemic Risks with Catastrophic Potential

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Based on Presentations to the

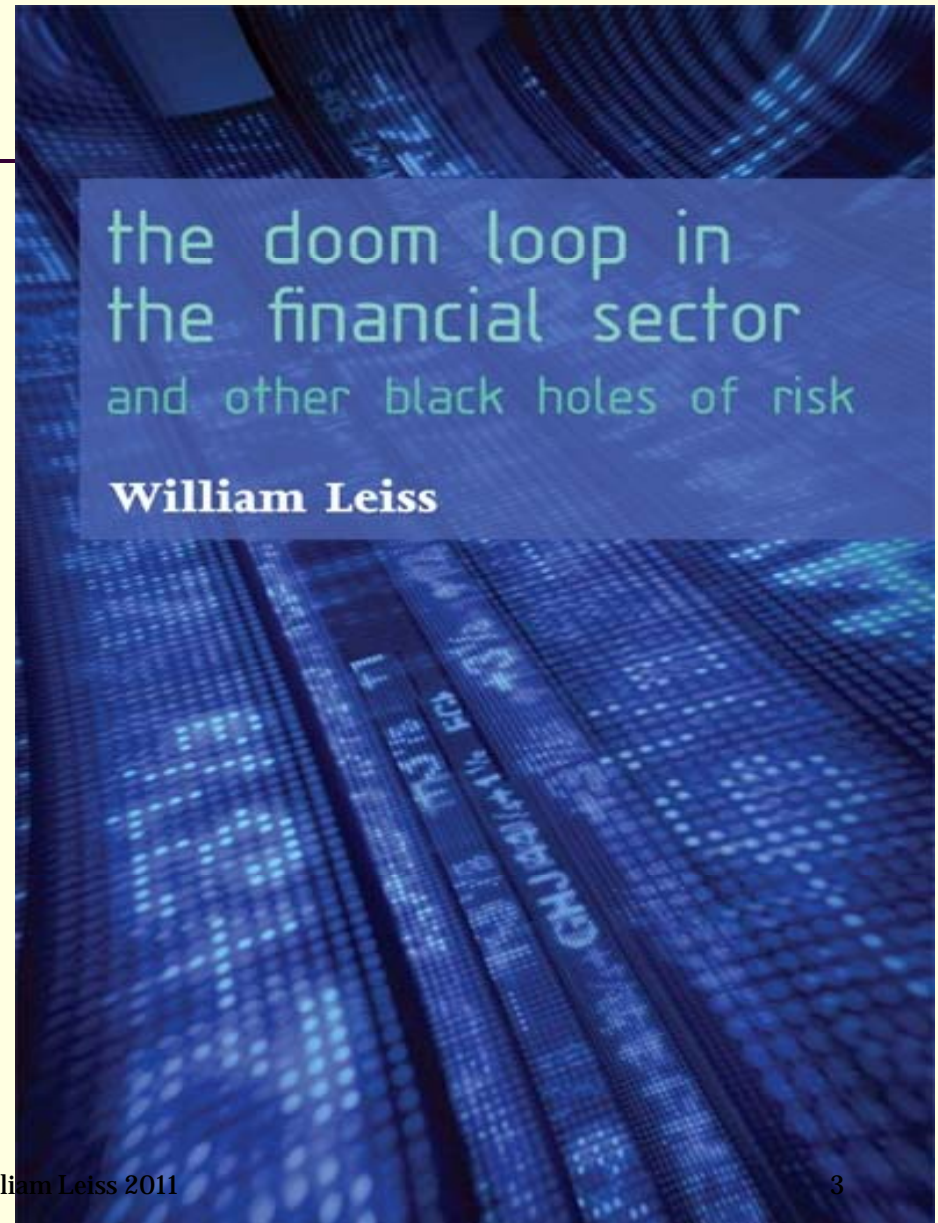
Intergovernmental Forum on Risk Management 2011
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Latest Book

- Published in November 2010 by The University of Ottawa Press
- Contents:
 1. Black Holes of Risk
 2. Systemic and Super-Systemic Risk in the Financial Sector
 3. Protecting the Downside
- The financial sector doom loop is a seemingly endless cycle of government bailouts for ever-larger amounts, piling up increases in sovereign debt until other crises (sovereign debt default, currency wars, etc.).



Overview

1. Key Messages and Introduction
2. Risk is Risk
3. Black Holes of Risk [Systemic/Super-Systemic Risk]
4. The “Standard Model” for Effective RM
5. Flying Blind in the Financial Sector
6. Dispersal of Risk
7. The Doom Loop
8. No More Margin for Error
9. Conclusions

General: Key Messages

- “Systematic & catastrophic risks” increasingly are key features of a globally-interconnected world (economies, environmental impacts, politics and conflict, information, etc.)
- We have developed highly-refined approaches to risk assessment and management.
- But too many of the really big risk issues elude our established risk control methods.
- We can still be “blindsided by risk,” as the ongoing global financial crisis shows best.

Two Things to Remember

- John Paulson:

- “Watch the downside, the upside will take care of itself.”

- Peter L. Bernstein:

- “Risk management deals with the consequences of being wrong.”

1. Themes: Introduction (A)

- All forms of risk-taking have this in common: They are *bets* on expected outcomes;
- Specifically, they are bets that benefits (the upside) will exceed losses (the downside) by a wide margin;
- The scope of the potential downside (losses) increases in proportion to the expected upside (gains): i.e., the *size* of the bet counts;
- Poor or non-existent precautionary modeling of outcomes means we can be blindsided by risks.

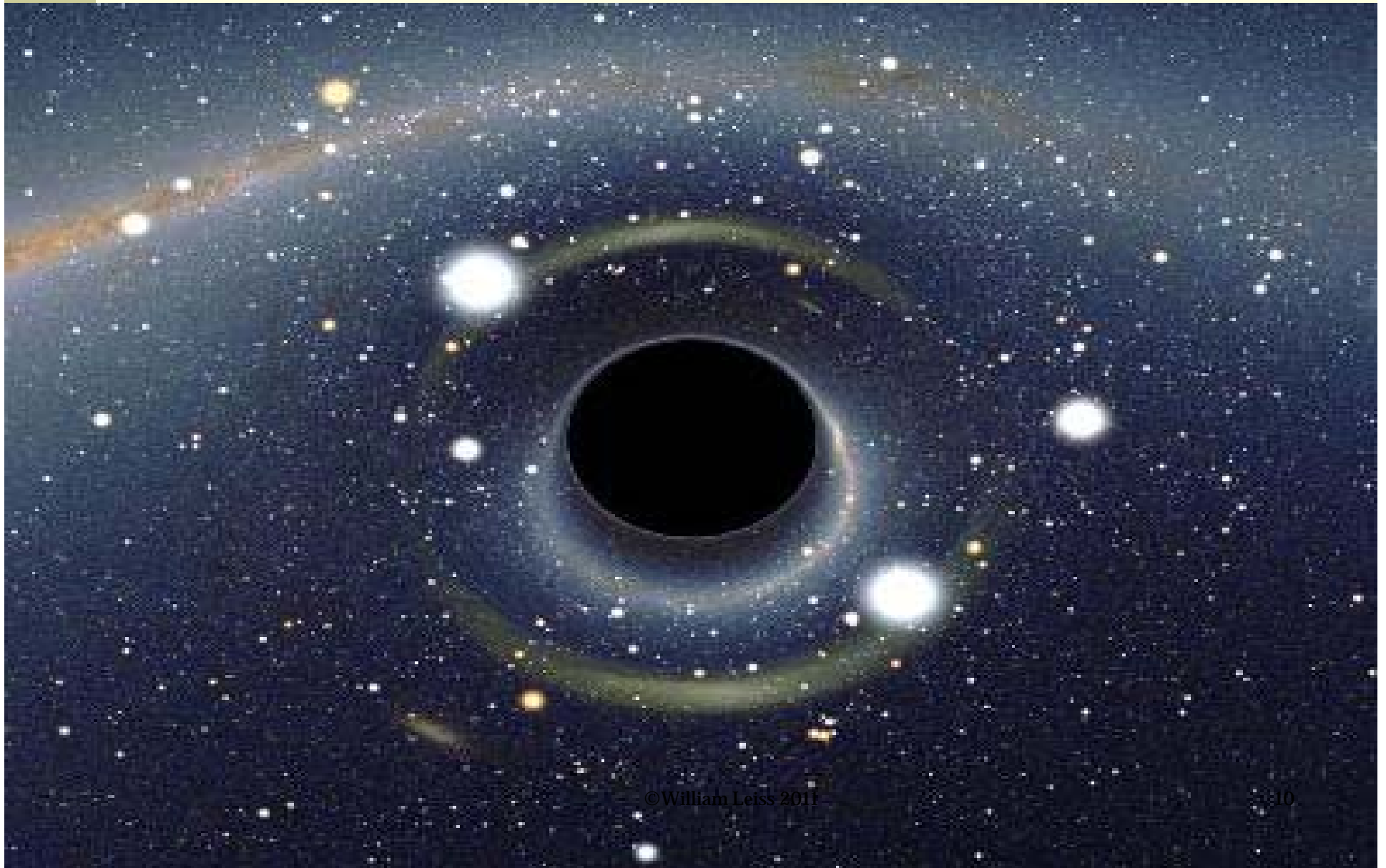
1. Themes (B)

- The recent period has not been a good one for risk management:
 - The global financial crisis (still ongoing);
 - The BP oil spill in the Gulf;
 - The nuclear reactor disaster in Japan.
- We urgently need to do better!

2. Risk is Risk

- Risk-taking is either deliberate (business) or accidental (natural hazards).
- The chance of loss or harm represents the downside element of seeking net benefit in all deliberate risk-taking activity.
- Both financial risks, as well as environmental and health risks, have *exactly* the same “formal” characteristics (P and C).
- The three simple rules for managing risk effectively are: (1) Use Foresight; (2) Exercise Precaution; (3) Limit the size of the potential downside consequences of being wrong.

3. Catastrophic or “Black-Hole” Risks



Global Financial Crisis: Reckless Risk-taking on Wall Street



The Crisis

- “In October 2008, the entire global banking system came close to collapse. If it were not for the announcement of massive state-funded bail-out packages, it is probable that not just the financial markets but also our global trade system would have ceased to operate. In this globally interdependent world, the consequences of such a failure are unimaginable.”
- George Cooper, *The Origin of Financial Crises (2008)* [Cooper has worked for major commercial and private investment banks]

The Response

- “Since the early 1970s, the probability of systemic crises appears to have been rising. The costs of systemic crises have risen in parallel. The incidence and scale of systemic crises have risen to levels never previously seen in financial history.”
- In 2008-9 governments supplied \$14 *trillion* in credits to stabilize these markets [an indicator of the size of the black hole];
- Both from: Bank of England, Discussion Paper, November 2009

4. The “Standard Model” for Effective Risk Management

- Risk Management is decision-making under uncertainty.
- Risk Management [RM] is the effort to *anticipate* and prevent or mitigate harms that may be avoidable.
- To manage risk we need to know: (1) How likely is it that the bad thing will happen? (2) If it happens, just how bad could it be? Good RM puts numbers to the answers.

The downside risk is a product of the likelihood of exposure to harm, and its consequences



Risk Assessment



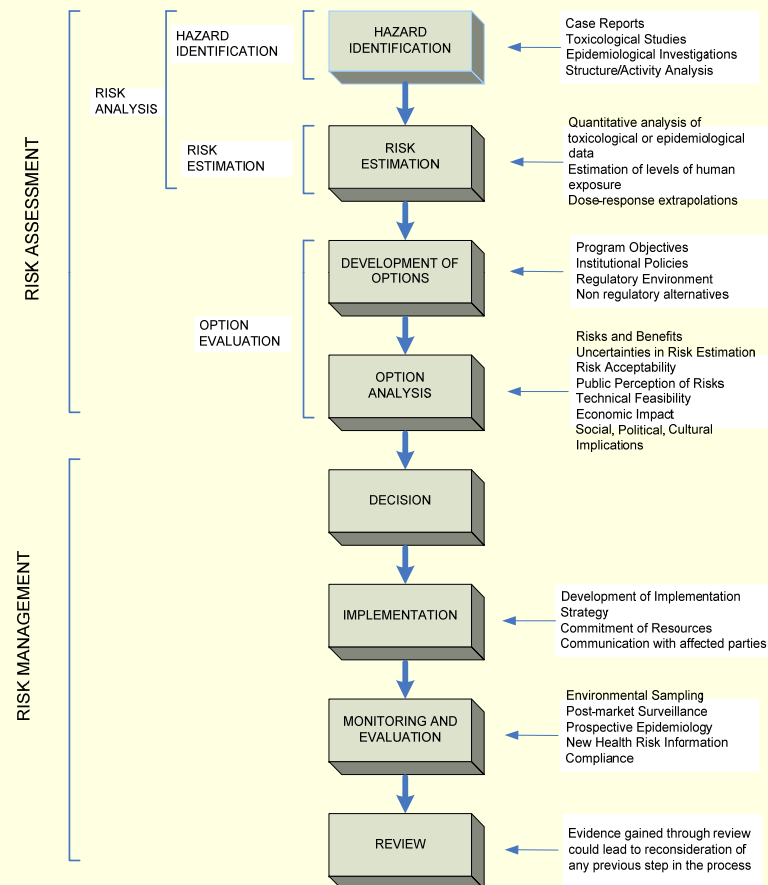
What is Risk Management?

1. Foresight
2. Precaution
3. Limit the Downside Risk

Risks can be managed by taking suitable precautions, such as effective regulation



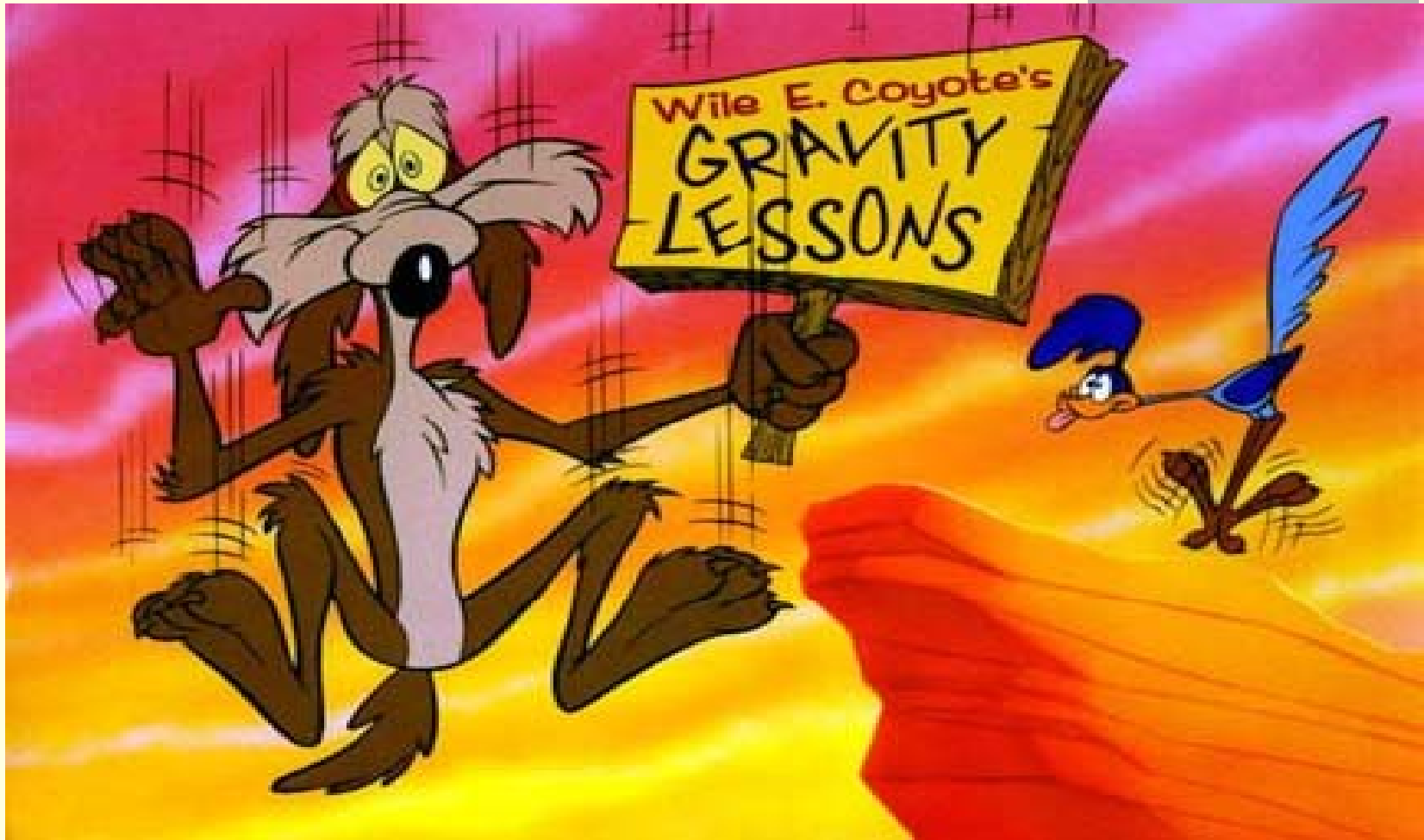
Typical Risk Management "Model"



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A Model for risk assessment and risk management

5. Flying Blind in the Financial Sector



No Management without Anticipation

- Risk Management is the effort to *anticipate* and prevent or mitigate harms that may be avoidable
- Is it true that we cannot look ahead in order to head off the catastrophic risk? If so, then all we can do is to clean up the mess afterwards.
- I don't believe it.

6. Dispersal of Risk (a)

- In many speeches in the early 2000s, Alan Greenspan argued that this was his primary risk management strategy: spreading risk to a larger class of risk-takers (as derivatives do).
- The logic seems clear: A fixed quantity of *anything* gets “diluted” if it is distributed throughout a larger, rather than smaller, volume of any medium.
- But in order to make this strategy work, one has to know *precisely* what the “substance” is that one is distributing though any larger system.

Dispersal of Risk (b)

- But what if you are dispersing, not risk, but *uncertainty*?
- If so, that is a recipe for disaster.
- And this is exactly the case, as the new credit-market system based on derivatives lacked all transparency about the nature of the underlying assets, who the counterparties were (there was no registration system), and what security there was behind the credit-default swaps (the answer: almost none).
[The \$32b Canadian crisis: ABCP]

7. This is a Doom Loop

Too big to fail:

“This is a repeated game. State support stokes future risk-taking incentives, as owners of banks adapt their strategies to maximize expected profits... . [These strategies seek], whether by accident or design, to game the state. For the authorities, it poses a dilemma. Ex ante, they may well say ‘never again.’ But the ex-post cost of crisis means such a statement lacks credibility. Knowing this, the rational response by market participants is to double their bets. This adds to the cost of future crises. And the larger these costs, the lower the credibility of ‘never again’ announcements. This is a doom loop.”

Piergiorgio Alessandri and Andrew G. Haldane (Bank of England, 2009)

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Reminder: What is risk-taking?

- All forms of risk-taking have this in common: They are *bets* on expected outcomes;
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Some current bets (A).

1. That new financial instruments (technologies) in global banking can be deployed safely;
2. That global climate change is a “hoax” (USA);
3. That expanding nuclear energy technologies is a good response to the climate change threat;
4. That carbon capture and storage will be a good way to deal with expanding GHG emissions;

Some current bets (B).

5. That we can address climate change “later” by deploying geo-engineering techniques;
6. That drilling for hydrocarbons in extreme environments can be done safely;
6. That nanotechnology applications can be regulated effectively;
7. That human (especially brain) enhancement techniques can be deployed advantageously.

8. No More Margin for Error: The Sovereign Debt Crisis

- IMF: In the single year 2009 the industrial economies of the West added 20% to their cumulative debt-to-GDP ratios.
- For the largest Western economies these ratios are approaching 100% [in Japan, 225%] and could be at 140% by 2015 (IMF).
- Economic growth is increasingly constrained at levels above 90%.
- Reinhart and Rogoff, *This Time is Different: Eight Centuries of Financial Folly* (2009)

9. Conclusions

- We *do* know how to manage risks effectively, across countless types of environmental and health risks (we do it every day, in fact).
- Risk is risk ($P \times C$). Financial risk is not in itself any different from other types.
- If we do not act to anticipate and prevent another global financial crisis, that is a choice, not an unavoidable fact of nature.
- If we do not try to do this, the next one may be the last one, for a long time.
- See the notes to this slide for further reading.

The Last Word, 1 (August 2010):
“This is no garden-variety recession”



The Last Word (October 2010), 2: “Who caused the currency wars?”



The Last Word (October 2010), 3: “Make Wall Street risk it all”



William Leiss: Earlier books on risk

From McGill-Queen's University Press:

1. *Risk and Responsibility*, 1994
2. *Mad Cows and Mother's Milk*, 1997, 2nd enlarged edition 2004
3. *In the Chamber of Risks*, 2001

From The University of Ottawa Press:

Hera, or Empathy (2006) and *The Priesthood of Science* (2008), the first two volumes of a planned trilogy in utopian fiction