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# Innovation and the Evolution of Financial Markets

**Aniket Bhushan**

Presented at

## **Policy Responses to Unfettered Finance**

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# Outline

- Dynamic relationship between financial innovation and regulation
- ‘Old Wine in New Bottles’ or ‘This Time it is Different’?
- ‘Fattening tails’: risk, risk-transfer and unknown unknowns
- Confidence crisis: pervasive conflict of interest and perverse incentive structures
- Summary: Key Issues and Questions



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# Innovation and Regulation

- Policy laxity and reversals
- Regulatory arbitrage
  - Basel I
  - “Shadow banking system” (off-balance-sheet SIVs; Hedge Funds; OTC derivatives) dominates regulated banking
- Regulatory capture
  - Basel II (de facto self-regulation)

Key Question: how can we balance desirable ‘financial innovation’ against necessary regulation? Is it possible to assess if new products/instruments are aimed at risk mitigation or merely regulatory arbitrage?



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## **‘Old Wine in New Bottles’ or ‘This Time it is Different’?**

- ‘Systemic crises are preceded by asset price bubbles, large capital inflows and credit booms, in rich and poor countries alike...eight centuries of financial crises have shown this to be the case’ (Reinhart and Rogoff, 2008)
- ‘The current crisis is nothing but yet another instance of an all too familiar boom and bust cycle. A type of crisis that repeats itself cannot easily be put down to particular or new and complex instruments, institutions, individuals or information. The fault lies in regulation, not greed or financial innovation’ (Crockett, Goodhart, Persaud, 2009)

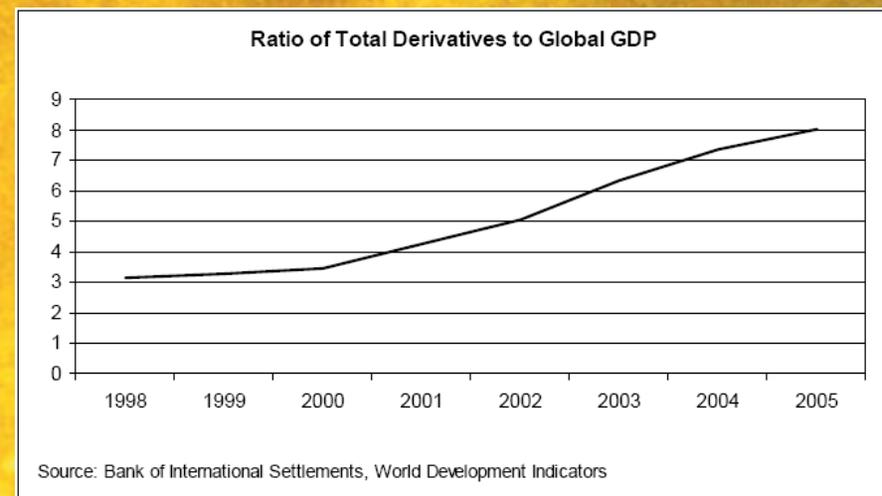
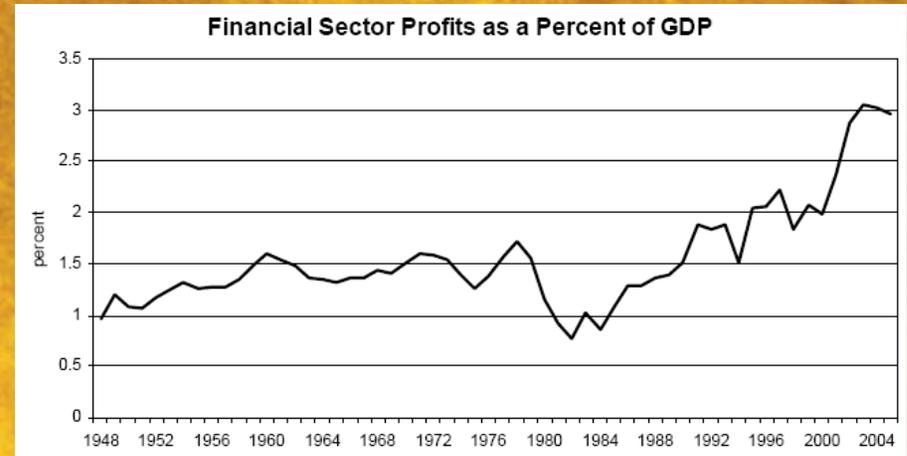
**What is so different this time? What role (if any) has financial innovation played (if not causal, then at least to exacerbate the impact?)**



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# 'Old Wine in New Bottles' or 'This Time it is Different'?

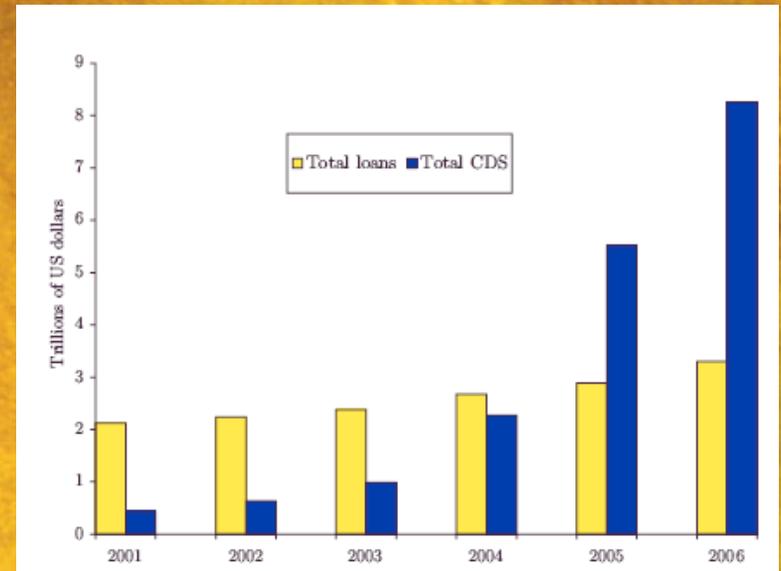
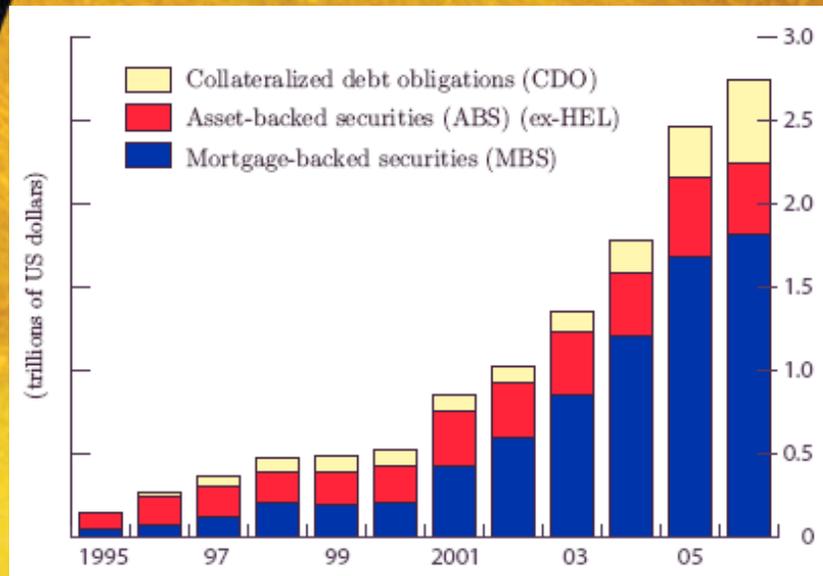
- **Sharp growth in financial sector profitability**
  - (Curious in context of high competition)
- **Explosive growth in derivatives markets**
  - (Nothing wrong per se, but high opacity, breeding many unknown unknowns)





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# 'Old Wine in New Bottles' or 'This Time it is Different'?



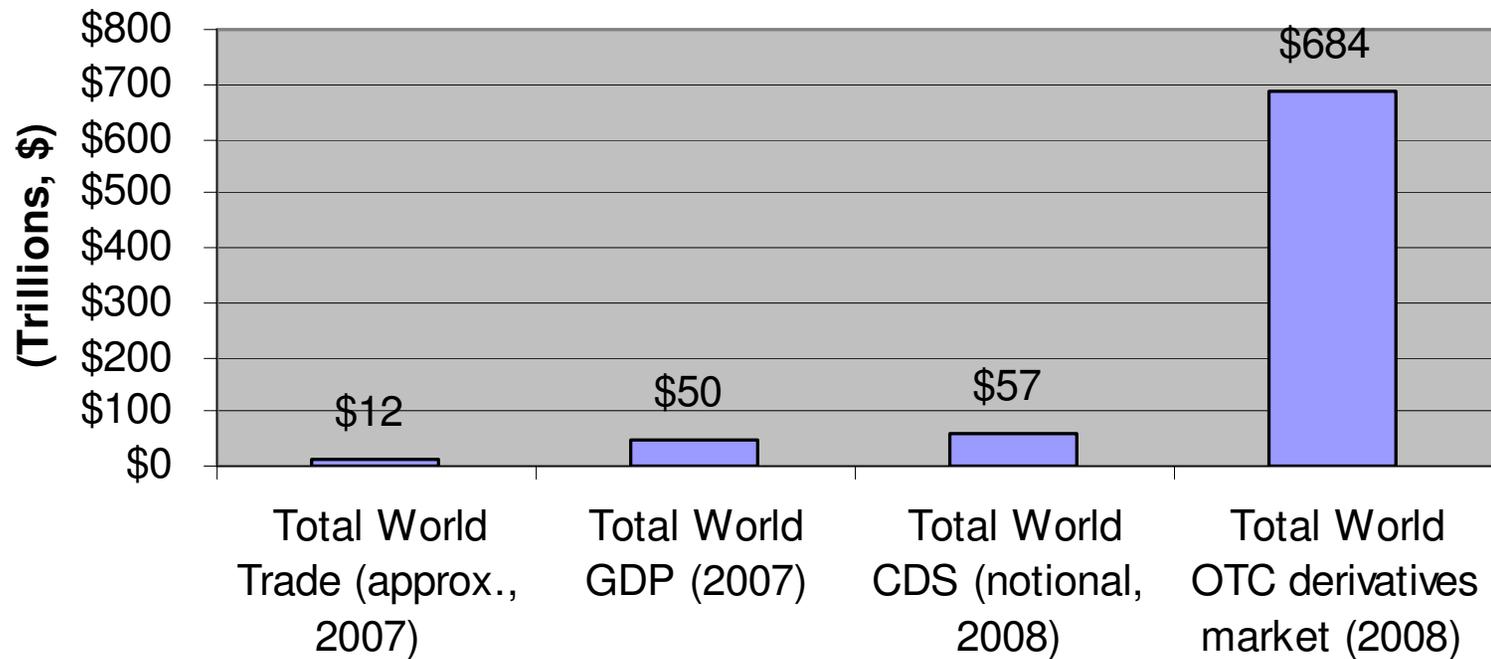
- Huge growth in US securitization
- Dramatic change in banking business model (US large banks)



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# Brave New World

## Finance in Perspective





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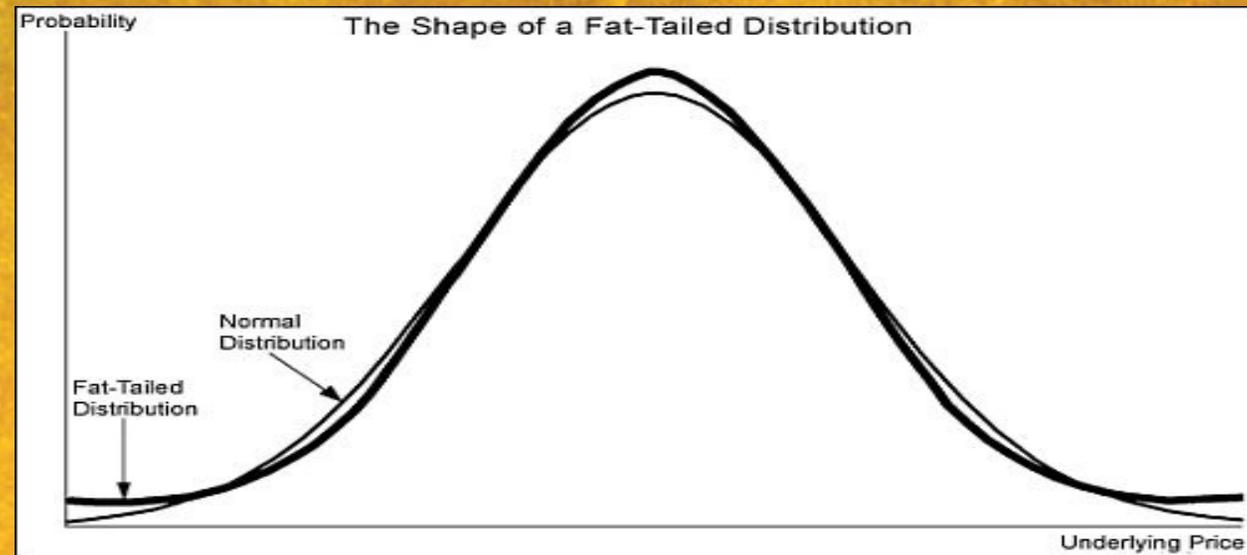
# Fattening Tails

- Value at Risk (VaR): what is it? Does it work? What are its shortcomings?
  - Assumes 'bell curve'; models 'worst case scenarios' (debatable); for specific confidence level and estimates losses
- Does it work? Best we can do?



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# Fattening Tails



- Shortcomings
  - Tail risk
  - Cannot reflect new risks (e.g. liquidity)
  - Did not a/c for leverage via options
  - Excessively short-term
  - Most important: can be “gamed”



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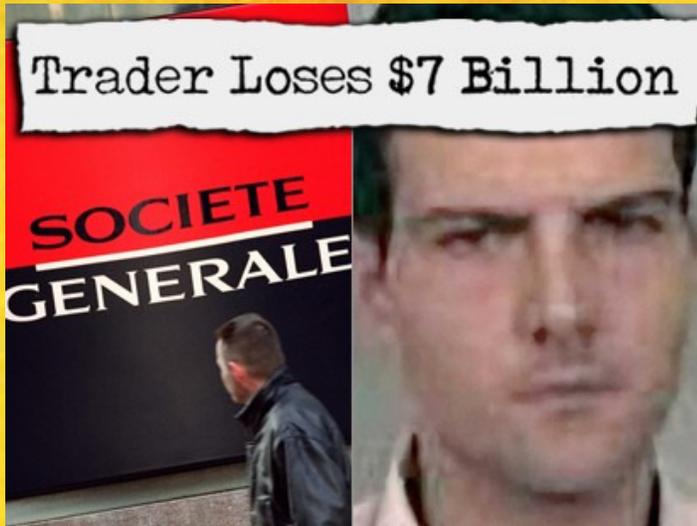
# Confidence Crisis



**STANDARD  
& POOR'S**



*Moody's Investors Service*





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# Key Issues and Questions

- Endogenous risk
- New and heightened risks
- Herding, hypersensitivity, reflexivity
- Perverse incentive system and confidence crisis
  
- **How can we create an incentive system that encourages desirable financial innovation, with benefits beyond financial markets?**
- **How can regulation stay a step ahead (or at least in step with) innovation, what changes in policy and mindset of regulators are needed?**
- **Are there limits to what regulation and policy reform can achieve? What are they?**
- **What is the relationship between innovation and leverage? Is there an appropriate/knowable level of leverage?**
- **Banking sector business models are changing again; how can/should regulation respond?**