Robert W. Kolb ed Lessons from the Financial Crisis Hoboken, NJ John Wiley 2010

2 Heinsohn and Decker The violation of Bagehot's principles
"Neither bare greed nor market failure are at the bottom of the global financial crisis, but the altruistic belief by the world's two largest central banks that interest rates close to zero would benefit businesses and workers struggling after a crisis" p9

3 Ashok Bardhan - UC Berkeley B School
"subprimes are a symptom of deeper structural and political economic problems of present-day globalized capitalism, rather than the primary cause of the crisis" p17

4 Roger Congleton "The Political Economy of the Financial Crisis ~~of 2008~~" Public Choice 2009, 287-317
He stresses the role of government housing policies
"Competition favored firms with optimistic assessments of risk and the growth of loanable funds, because they could loan at lower rates than firms with more prudent assessments" p 25

K2

This led to an MBS bubble on top of the housing bubble

5 Friedman and Friedman

"It is a value meltdown more than anything else" p 35

"Models rely on interpretation by people. If those interpreting the model are afraid of losing their jobs, they will construe the models in a way that pleases top management" p 35

6 Galbraith

"the roots of the crisis lie in a failure to act in prudent recognition of the ~~fact~~ fact that the system might be unstable" 37

7 Lipson "Enron Reruns"

"[The credit crisis] was entirely foreseeable, and was foreshadowed by the most infamous financial failure of recent years - Enron" p43

transactional complexity stealth guarantees

10 Schwarcz

conflicts, complacency, and complexity

He distinguishes cognitive complexity and temporal complexity - tight coupling

He advocates a market liquidity provider of last resort to deal with the latter

He recommends setting up an advisory group to provide "fresh, unbiased ideas" 73

K3

11 Baily, Litan, and Johnson
Basel legitimized SIVs and gave risk weights to RMBSs
"What is especially shocking is how market participants along each link of the securitization chain failed so grossly to perform adequate risk assessment..." p 82.
asymmetric information and mis alignment of incentives
"securitization actually concentrated risks" since the banks end up holding much of the MBSs p 83
Rajan (2005) problem of compensation schemes 1) "encourages traders to bet on tail risks, or buy assets that might blow up a few years from now..." 83
2 judging relative to peers encouraged herding
"The overarching reason for such market failure... was that everyone was simply caught up in a bubble that enveloped the entire system." 83
The perception of risk went down and the tolerance for it went up

K 4

"what made the crisis so uniquely destabilizing were the financial innovations that allowed the financial sector to accumulate such a massive amount of leverage under the nose of regulators" 89

15 Gerardi et al from Fed system
"the problem had largely to do with house price expectations" 118
They studied reports from investment banks, media reports, etc.
"Virtually everyone agreed in 2005 that the record HPA pace was unlikely to last. However, many believed that price growth would simply revert to its long run average..." 118

16 Pezzutto
"It appears that the financial crisis stemmed largely from the underestimated complexity of innovative financial engineering products and their trading in unregulated markets" 122

19 "the global financial crisis of 2007-2009 has multiple subsets of causes, all contributing to an overall complex system..."
"the formation of asset bubbles is a critical component..." 139
"An asset bubble is the phenomenon of an upward price movement over an extended period of time that then crashes swiftly" 140

K 5

25 Reiss "the leadership at the rating agencies set an ethos that clearly distorted the mission of these firms. The ratings agencies did not properly monitor their employees to ensure that they avoided even the most obvious conflicts of interest" 193

26 Martin
credit enhancements including tranching, letters of credit and purchase of credit insurance from the ~~[illegible]~~ monolines (formed in 70s)
The view that all the risk was passed along is too simple
They had warehousing and residual interest risk servicing rights

27 Kolb
"in many instances, investment managers succumbed to the temptation to stretch for yield and buy securities that seemed too good to be true ..." 215

28 Keys et al "Did Securitization Lead to Lax Screening?" They found borrowers were screened more rigorously at 620- FICO than 620+
"The benefits of securitization are limited by information loss" 223

K6

29 Jacobs

"Sophisticated, highly complex financial instruments and mechanisms were devised to shift risk from one part of the financial system to another... As in a shell game, the risk seemed to disappear in the shuffling. But the underlying systemic risk remained, and, magnified by leverage, blew up the very foundations of the financial system." 229-30.

32 Hosp CRAs

the ratings provide cover for investment managers

"in a market bubble environment... many institutional investors disregard proper due ~~dilig~~ ~~to~~ diligence and instead demand securities with the highest credit rating..." 25'

In a 2007 investigation the SEC concluded that the CRAs issued inadequate ratings and knew their formulas were inadequate... The CRAs promised to stop and were given no penalties

He proposes having the SEC handicap the CRAs based on their performance.

33 Skreta and Veldkamp "Did Asset Complexity Trigger Ratings Bias? Yes
Even without deliberate bias
with more complexity there will be a greater range of honest estimates
"the ratings scandal" 262

35 Rizzi "Behavioral Basis of the Financial Crisis
"Our existing risk measures account for perhaps 95 per cent of what occurs. The major catastrophic risks lurk in the fat tails of the remaining 5 per cent. We tend to underestimate these improbable risks because of behavioral biases" 277
"Behavioral finance ... concentrates on perception and cognitive bias"
Overconfidence, statistical bias - 'selecting evidence in accordance with our expectations" 278 extrapolation bias
Herding "social aspects to decision making
Group think
" During a late-stage boom with high sentiment levels, behavioral risk factors will dominate and quantitative risk measures will be unreliable" 28[illegible]

K 8

In structured products liquidity risk premia were mistaken for alpha

36 Crouchy

"all of a sudden the market realized that ... were mispriced." ~~That~~ 283

Their generated information and liquidity problems that helped freeze markets and "models to fall apart" 283

"the nature of the risks involved in holding a Triple-A-rated super-senior tranche on a sub-prime CDO was completely missed by all the players." 285

Due to cliff effects, nonlinearities, they were like catastrophe bonds

Outcomes were likely to be binary

If one MBS BBB bond is wiped out, most of them are likely to be, ~~causing~~ wiping out ~~the~~ even the super-senior of the CDO

37 Gerding

"The risk models of individual institutions fail to capture the risk of homogeneity among the ~~models~~ models of multiple firms" 297

"Traders at financial institutions ... learned to game established models" 297

"stuff risk in the tail"

K9

Regulators should stop outsourcing risk regulation to the models

38 Sheedy "The Future of Risk Modeling"

Stress tests often assumed "that statistical relationships observed during tranquil periods would be maintained"

conditional models allow for volatility clustering

conditional models are superior but most of the industry seems used unconditional ones

39 Michael McAleer et al Erasmus Nat Chung Hsing "What Happened to Risk Management During the 2008-2009 Financial Crisis?

defines financial crises as "a significant fall in stock prices and a marked increase in uncertainty about the value of financial assets" 307

"The ~~old~~ amendment to the initial Basel Accord was designed to encourage and reward ~~credit~~ institutions with superior risk management systems" 308 If the models failed back testing the institution had to hold higher capital

"we define risk management as choosing sensibly from a variety of risk models" 308

They report VARs to regulators daily

E G ARGH

L responsible

Capital set at higher of previous days VAR
or (3 $^{+K}$) ave of previous 60 days
K violation penalty
VAR forecasts were relatively low and stable
from April to ~~Sept~~ Aug 08. In Oct increased
to 5x, fell to 2x in Nov & Dec
using combination of models
40 Varma Lessons 1 model fragility
from Goodhart's law "The simple leverage
ratio is a useful metric only when no
regulator is using it" 318
"Basle II was high sophisticated but it
was still fragile ... In contrast to the
banks, most derivatives exchanges
today use crude but robust managing
systems" 318
Chicago Merc used Standard Portfolio
Analysis of Risk based on scenario analysis
to set margin requirements
want less sophistication and more robustness
in risk management than valuation models
2 Regime switching or structural breaks
how long a data period to use
3 advances in risk management since
early 90s
1 replacement of VAR with Expected Shortfall
2 replace normal distribution with fatter tails
3 linear correlation replaced with
copula-based models of tail dependence

"we must today regard the risk management methodologies developed in the early 1990s as theoretically obsolete" 321

VAR loss on the best of the outlier days
ES is the ave of all of them

"any phenomenon that is the result of a large number of small causes obeys the normal distribution" 321

41 Borio

causes macro int imbalances + low;
micro incentives, risk measurement + reg
new view that low stable inflation can make fin systems more vulnerable because of irrational exuberance and bubbles

regulatory boundary problems - regulation failed to take them sufficiently into account
off balance sheet

42 George Kaufman + A. G. Malliaris
"The Financial Crisis of 2007-2009"

"many of the difficulties ... may be attributed to the reluctance of bank regulators to enforce the regulations that were in place" 337

3 definitions of systemic risk
1) big macro shock
2) chain reaction BIS spillover causation
3) commonalities in third party risk exposures

K12

"a strong case can be made that regulatory failure was much, if not more, to blame as market failure" 339

US "only major country that neither publishes a financial stability report ... nor participates in the IMF-World Bank Financial Sector Assessment Program ..." 340

"it was not a lack of regulation or regulatory authority ... It was primarily a lack of will" 340

"not a regulatory failure but a failure of regulators" 340

"poor corporate governance of the agencies and a serious principal-agent problem" 34

43 Northern Rock doubled in size from \$16 to \$32 bn between mid 05 + end 07 Indy Mac 16.8 March 05 32.5 Dec 07

PCA prompt corrective action - wasn't applied

OTS claimed that Indy Mac was well capitalized only days before it was taken over

Kolb cor

K13

48 Michael Taylor and Douglas Arner "Global Regulation for Global Markets?
"The global financial crisis was caused more by deficiencies in national regulatory systems than .. to any shortcomings in the current international arrangements for regulation" 383

FSB all G-20 + Spain + EC

nations remain responsible for the costs of failure and thus limits the extent to which regulation can be international

49 Emilios Avgouleas "Financial Regulation, Behavioral Finance, and the Global Financial Crisis

over confidence and bounded rationality with the growing complexity of products and influenced by the availability and representativeness heuristics investors gave over reliance to credit ratings

"market actors' cognitive limitations and focus on short-term profit meant that sophisticated investors chose to ignore the warning signs" 393

principal-agent problems contribute to herding

As a result of behavioral factors more radical reforms are needed

He calls for institutional segregation along business lines

K14

53 "The Financial Crisis and the Systemic Failure of Academic Economics"
David Colander et al
"~~misc~~ misallocation of research effort in economics" 427
Cogley and Sargent 08 argue that consumers and investors are too risk averse because of memories of the Great Depression
The definition of economics as the allocation of scarce resources is too narrow
leads to disregard of coordination issues
"financial economists gave little warning to the public about the fragility of their models" 422
Co integrated VAR models to distinguish pushing and pulling factors
Hendrey 2009 general to specific approach for exploratory data analysis

58 Marc D Hayford & A.G. Malliaris
"The Risk Management Approach to Monetary Policy" Greenspan 04
Fed policy on several occasions deviated from normal policy because of concerns about possibility of low probability but high impact events
examples of Knightian uncertainty
98 Russian crisis, bursting of internet bubble in 2000 & 9-11.

62 "The Transmission of Liquidity Shocks During the Crisis" N Frank et al
new transmission mechanisms
role of SIVs started with credit shock from sub prime summer 07 spread
asymmetric info + structured products
ABS declines liquidity in secondary markets evaporated The ABCP of the SIVs were hit
banks came under pressure to rescue them
flight to transparency
funding liquidity pressure forced rapid deleveraging depressing asset prices concerns with solvency appeared
liquidity spreads multidirectionally
Dynamic Conditional Correlation GARCH
sharply increased interaction between market and funding liquidity

63 credit contagion + clustering of default correlations - counter party (Jorion + Zhang)
contagion likely to be rare but costly
The financial system is a network
You need to know not just your counter party but theirs as well
They look at 81 companies. Those with exposure to Lehman had an ave. = 7.4% of equity and stock returns -6.4% over 3 days - Other no effect

K16

G4 Luci Ellis "Only in America?"

The US appeared to The Economist and the IMF as having less of a housing bubble than a number of other countries
However the US was especially vulnerable to a bust - larger overhang of supply, greater easing of credit standards and the household sector was more sensitive to house prices

More construction in US relative to pop growth
In US mortage delinquency rates began rising rapidly in Q3 '06 Case-Shiller had its first quarterly fall then also Unlike normal U hadn't risen

US building boom highly concentrated Az, Nev, CA
In most other boom countries mortage interest isn't tax deductable US also has more refinancing

Government housing policies
Structured finance products were concentrated in US assets

BIS WP 259 (2008) "The Housing Meltdown

64 Iceland T. Herbertsson K 17

Int reserves 1/2 of Y, bank balance sheet 10Y
cost to taxpayer of collapse ≈ 85% of Y
collapse Sept & Oct 08
late 05 warnings came from ~~a~~ bank research report
By early 08 effectively lost wholesale funding
Sept 29 Glitnir 3rd largest
Iceland guaranteed only depositors
Nordics in 90s did creditors also
"Too much focus was placed on measures of capital adequacy and other formalities, rather than systemic risk and funding"
In 2001 went from pegged rate to float + inflation targeting 548-9
~~Can~~ In a small open economy the inflation targeting framework can have non linear effects when the domestic policy rate moves substantially away from the world ave. Then the carry trade sets in
appreciation increased demand through illusion of wealth effects current account deficit to -25% of GDP

68 Iceland Hine and Ashman
"a general consensus that if the subprime liquidity crisis had not delivered the coup de grâce, the quality of the banks' balance sheets certainly would have".

K 18

69

better on the ~~colloteral~~ collateral rather than the borrower

Widely thought not necessary to supervise NBFIs, but they played a big role in the Asian crisis

72 Fiscal Policy for the Crisis

2 IMF

uncertainty about fiscal multiplier provides a strong argument for policy diversification

Consumers 3 factors reducing C

W↓, + Uncertainty ↑ ⇒ low MPC

credit constraints ⇒ high "

target those most likely to be liquidity constrained

Firms taking wait & see attitude so cuts in tax rates not likely to have much effect

Sustainability concerns

75 "The Shadow Bankruptcy System"

hedge funds, private equity etc

78 CDSs in June 08 max possible loss est to be 5.5% of notional value or 3.2T

With Lehman payed 7.2% of notional value $5.2b

legally labeled as security based swaps SEC oversees