The Current Financial Crisis and
Methodologies of Economic and Financial Analysis
Outline

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Theme: an intertwined analysis of the causes of the crisis and the debates about alternative approaches to analyzing financial markets

- Stimulated by George Soros' recent book where he attacks mainstream economics, arguing contributed importantly to the current crisis, and presents a case for his alternative paradigm of reflexivity which he claims can explain the crisis while standard economics cannot.

- It is argued that the correction of these claims depend on the characterizations given to both reflexivity and mainstream economics. His discussions include implicitly or explicitly many versions of both.

- Soros is quite critical of equilibrium economics and argues it is inconsistent with reflexivity. Both can be useful, however, if one accepts that the markets can behave differently at different times. Attacks on equilibrium analysis also come from complexity analysts, but many of these see both approaches as useful.

- Soros also attacks the concepts of efficient markets and full information rational expectation models. Here again an increasing number agree, certainly in the sense that there are limits to their applicability. Even within a rationalist framework on imperfect information economics, differences in mental models, principal-agent problems etc. highlight possibilities of duration from "ideal" efficiency.

- The rapidly expanding fields of behavioral and neuro economics and finance explore various limits to rationality and information process powers that may result in biases.

- To be relevant for aggregate market behavior not only must many agents display such biases but there must also be limits to arbitrage so that such behavior isn't offset by efficient speculators.

- In discussing whether markets are efficient, two different concepts are often confused:

    1. whether one can beat the market and
    2. whether market prices are sensible

- In the latest addition of *A Random Walk Down Wall Street*, Burt Malkiel still argues that the stock market is approximately efficient in the sense that it's very hard to beat, but also grants that we've had major bubbles.

- A key to believing in both is that risk arbitrage can be highly risky and one can lose a lot of money betting against bubbles that keep going on for a long time. Market incentive structures that put emphasis on short run results add to this problem.

Some Aspects of the Crisis to Analyze:

1. Causes of the US housing bubble

2. Why did the end of the housing bubble have such widespread effects in other markets (and countries)?

3. Why did the crisis worsen so much after the Lehman failure?

4. Could better regulation and oversight avoided or reduced the magnitude of the crisis even if regulators aren't as smart as the market players? (I think yes because you don't have to be a genius to worry about perverse incentive structures and adequate capital and liquidity ratios.)

Views on Causes of the Financial Crisis:

1. Excessively easy money

2. Financial innovation (Bhagwati's destructive creation), securitization of mortgages

2a. Globalization (Soros)

3. Excessive faith in risk models (and ratings agencies)

3a. Conflicts of interest for ratings agencies

4. Deregulation

5. Unregulation – excessive faith in market discipline by Greenspan and others

6. Irresponsible behavior in financial sector (argued by Greenspan) [Greed, fraud, etc. in housing financing]

7. Minsky credit cycle

7a. "Reflexivity" – George Soros

8. Endogenous liquidity (El-Erian), leverage, (capital inflows from US over spending and global savings glut)
9. Hubris, euphoria, and other psychological biases (behavioral and neuro finance)

9a. Beliefs in the Great Moderation and this time it's different

9b. Belief that housing prices never fall nation wide

10. Global under-pricing of risk (Greenspan)
11. Moral hazard - too big to fail
12. Government sponsored enterprises – Fannie and Freddie and housing legislation
13. Compensation schemes in the financial industry that rewards excessive risk taking (false alpha). Robert Frank – rewards based on relative performance
14. Incentives to undertake risk activities to avoid losing market share
15. Mainstream equilibrium economics – Soros argues "our current troubles can be largely attributed to the fact that current international financial system has been developed on the basis of their paradigm."
16. "We got away from the basics – from the fundamentals of prudent lending and borrowing." (Tom Friedman)
17. Black Swans
18. "Termites" (lack of good information rotted out the structure)

Reasons for the crisis worsening in the fall

1. Inept policy responses led to loss of confidence
2. Failure of Lehman stimulated increased fear of counter party risk
3. Growing recognition that there were serious solvency, not just liquidity problems

"Complexity, Reflexivity, Behavioral and Neuro Finance, George Soros' Analysis of the Current Financial Crisis, and the Methodology of Social Science"

Or What I Read This Summer

Tom Willett

1. Soros' Attack on the Equilibrium Approach of Traditional Economics

- "We need a new paradigm. The currently prevailing paradigm, namely that financial markets tend towards equilibrium is both false and misleading... our current troubles can be largely attributed to the fact that the current international financial system has been developed on the basis of this paradigm." George Soros, p. vii
- "When you hear 'new paradigm' head for the hills" Wall Street broker quoted in Financial Times, 6-13-08.
- Soros argues "The prevailing [Traditional Economics] paradigm cannot explain what is happening: the theory of reflexivity can." p. 102
- The correctness of this assertion depends in part by what is meant by traditional economics. Soros describes it in different ways throughout the book.
- His distrust of the view that markets are always efficient based on full information rational expectations models is actually shared by many mainstream economists including both these using rational analysis but assuming imperfect information and uncertainty about the correct mental models and those taking a behavioral or neuro economics approach stressing human limitations on rationality and cognitive abilities.

These approaches can still make use of equilibrium analysis.

- Soros' attack of this aspect of mainstream economics is shared by those doing complexity economics such as those associated with the Santa Fe Institute.

- The possibility that markets can behave in different ways at different times and under different conditions suggests that many different types of models may be useful while none will have complete explanatory power.
- Soros argues “If equilibrium theory is correct, reflexivity cannot exist.” (pp. 51-52) but he also notes “Even in financial markets demonstrably reflexive processes occur only intermittently.” (p. 29)
- This is similar to the conclusions of Kindleberger and Aliber that “Mob psychology or hysteria is well established as an occasional deviation from rational behavior (p.42) ... optimism increases and may become self-fulfilling until it wolves into a mania.” (p.43)
- There were a number of problems with the standard mathematical models used for risk management that assumed continuous liquid markets that were normally distributed.
- Soros’ anti-economics approach may be contrasted with Mohammed El-Erian in When Markets Collide. El Erian discusses “a framework for understanding the new reality.” (p.17) He uses a multi-disciplinary approach that draws on insights from traditional economics and finance, as well as the newer behavior disciplines and neuro science.” (p.65) He considers the “potential for damaging feedback loops” and “multiple equilibria.” (p.65)

Some other concepts El Erian uses:

- Market for Lemons
- Black Swans
- Taleb’s Triplet of Opacity
- “A natural tendency to over simplify current events, distort historical developments, and exaggerate the ability to interpret data.” (p.79)

Theory of Second Best

- And with John Rutledge in Lessons from a Road Warrior where he discusses his evolution from doing standard economics to using non-equilibrium thermodynamics, network theory, and neuroscience.

Soros' dislike for equilibrium analysis is shared by complexity analysts.

- "Statistics and equilibrium are illusions where as dynamics and out of equilibrium are the rules." Didier Sornette Why Stock Markets Crash
- Non linearity
- Extreme events in complex systems "The dynamics of confidence and contagion and decision making based on imperfect information are ... at the core of the book." (p.4)
- Sornette argues bubbles and contagion are both due to shifts in mood. He believes markets are "approximately efficient" but have "bursts of dependence" and "pockets of predictability."
- Complex evolutionary adoptive systems of bounded rational agents
- "The economy is not a closed equilibrium system; it is an open disequilibrium system ... a complex adaptive system." Eric Beinhocker, p.70. The Origin of Wealth
- "It's essentially meaningless to talk about a complex adaptive system being in equilibrium: the system can never get there." John Holland
- Brian Arthur's conception of the Santa Fe approach "instead of emphasizing decreasing returns, static equilibrium, and perfect rationality, as in the neoclassical view, the Santa Fe team would emphasize increasing returns, bounded rationality, and the dynamics of evolution and learning. Instead of basing their theory on assumptions that were

mathematically convenient, they would try to make models that were psychologically realistic." Complexity, p.252

- Unlike Soros, Arthur argued "It wasn't that the standard formation [of economics] was wrong... the Santa Fe style evolutionary economics... was another valid way to do economics... this new approach was complementary to the standard ones." Complexity, pp.326-327.
- Arthur believes "the complex approach is total Taoist." Complexity, p.330.

Efficiency

- "Financial markets are not efficient in the Traditional Economics sense of the word, but ... they are highly effective in an evolutionary sense." Beinhocker, p.387.
- "... market efficiency, defined as full information aggregation, depends on the complexity of the market... overreaction of people to trades that are uninformative may create self-generated information 'mirages', which may provide an explanation for the apparent excess volatility of asset prices." Sornette, p.86.

2. Neuroscience and Behavioral Economics

- "... Cognitive science has made great progress in explaining how the human brain functions... human consciousness is a relatively recent development and has been superimposed on the animal brain." Soros, p.27.
- "People have a very difficult time mentally processing systems with complex feedbacks and delays of varying lengths... The problem is not that people are stupid, rather it is just that our brains are not wired to think this way." Beinhocker, pp.113-114.

- “Because biological evolution is a slow process, and the modern world has emerged in an evolutionary eye-blink our present abilities are inherited from the past and remain functionally specialized to solving the particular problems facing the hunter gatherers of the past.” Sornette, p.106.
- This is also the theme of Terry Burnham’s Mean Markets and Lizard Brains. [In behavioral finance] the behavior of financial markets is thought to result from varying attitudes toward risk, the heterogeneity in the framing of information, cognition errors, self-control and lack thereof, regret in financial decision making, and the influence of mass psychology.” Sornette, p.91.
- “The dynamics of confidence and of contagion and decision making based on imperfect information are ... at the core of the book.” Sornette, p.4.
- Behavioral economics is “a research program to study the cooperative basis for common human errors in thinking and decision making.” Michael Shermer, The Mind of the Market, p.71.
- “from time to time, the markets and inviting public go barking mad” (p. xi)
- “Most of what we fondly call ‘human nature’ becomes a deadly question of maladaptive behavior when allowed to roam free in the investment arena.” (p. xii) William Bernstein, The Four Pillars of Investing.
- “Over confidence likely had some survival advantage in a state of nature, but not in the world of finance.” Bernstein, p.167.
- “We’re moving through the modern world with what is, by many measures a very primitive brain.” Jeffrey Kluger, Simplexity p. 192

- “The primary way we process information is through induction... essentially reasoning by pattern recognition.” Beinhocker, p. 126.
- “Pattern recognition and storytelling are so integral to our cognition that we will even find patterns and construct narratives out of perfectly random data.” Beinhocker, p. 127.
- “[There is] a close connection between the parts of our brain that make assessments of chance situations and those that handle ... our prime source of irrationality – our emotions.” pp.4-5. Leonard Mlodinow, The Drunkard’s Walk.
- “The human response to uncertainty is so complex that sometimes different structures within the brain come to different conclusions and apparently fight it out to determine which one will dominate.” Mlodinow, p.5
- “The human brain has evolved to be very efficient at pattern recognition, but as the confirmation bias shows, we are found on confirming patterns rather than minimizing our false conclusions.” Mlodinow, p.195
- “The workings of the human brain are more than a bit befuddling. How can we be so ingenious at some tasks and so clueless at others?” Richard Thaler and Cass Sunstein Nudge, p.19
- “There is no single underlying model in behavioral finance.” Andrei Shleifer, Inefficient Markets p.13

Quotes from Richard Petersen Inside the Investor’s Brain

- “Most investment decision making follows a rational process until, often at critical times, the process breaks down.” xv
- “How investors interpret news and events depends on their underlying emotional outlook.” p.4

- “Especially when under stress... the brain has a tendency to cope by means of self-discipline.” p.44
- “It is as if bubble investors have partial deactivation of their brain’s loss-avoidance system.” p.66
- “Currently... there is no single coherent psychological theory to counter the assumption of investor rationality.” p.67
- “Fear causes changes in how people think about and react to bad news.” p.120
- “Investors are biologically induced into short-run thinking, by the stress hormones released during episodes of acute fear.” p.121
- See also Jason Zweig Your Money and Your Brain

From Richard Thaler and Cass Sunstein “Human Frailty caused the Crisis”

FT 11/12/08, p.11

- “To prevent future catastrophes, regulators should focus explicitly on how to provide safeguards against two all-too-human frailties explored by decades of work in behavioral economics: bounded rationality and limited self-control.” “Regulators... need to help people manage complexity and resist temptation.”
- They argue that one approach to dealing with complexity is to require simplicity but they argue “a superior approach is to improve disclosure.” To fight temptation, they suggest requiring down payments, etc.

Shlomo Benartz "Profiting from the Psychology of Investors" FT 12/1/08, p. 6

- "Behavioral investing consists of three key ingredients – the first is simply that investors are human... people often use mental short cuts or 'heuristics' to solve complicated problems – one... is representativeness or simply stereotyping."
- "The second... is biases persist as it is not easy to stop stereotyping."
- "The third... is that arbitrages will eliminate some biases and mispricing but they won't eliminate all."
- "Investors should trade on biases that arbitragers cannot easily eliminate."
- In interviews during the tech bubble, Richard Thaler found that most portfolio managers believed the stocks were overvalued but would continue to rise over the next six months.
- "Markus Brunnermeier and Stefan Nagel ... documented that the average hedge fund profited from riding the bubble."

"When Fear Takes Over Our Brain" Gregory Berns, Director of the Center for Neuro Policy at Emory, NYT 12/7/08 BU2

- "While fear is a deep-seated and adaptive evolutionary drive for self preservation... when our brains sense pain, or an anticipation of loss, we tend to hold on to what we have. When everyone does this at once the result is a downward economic spiral."
- He describes the 'endowment effect' as "the innate tendency to value things you own more highly than everyone else does."

Aline Van Duyn “Who’s Afraid of Thinking for Themselves on Investments?” FT 12/19/08 p.20

- “The economic system is now plagued by a lack of independent or critical thinking and the role this absence has played in the global financial crisis is becoming clearer by the day.”
- “Herd behavior... highlights the lack of ... critical inquiry – which even experts paid to apply such analysis have succumbed to in a long boom.”
- Cambell Harvey of Duke worked with consultants who vet funds. He evaluated Madoff briefly and “rejected it out of hand.” The consistent returns didn’t make sense. “To me this looks like a basic failure of due diligence.”

3. Methodology: Both Soros and the Complexity Analysts attack Friedman’s prediction criteria.

- “Being able to predict things... is not at all the same thing as understanding them.” David Deutsch, The Fabric of Reality.
- “Prediction isn’t the essence of science. The essence is comprehension and explanation.” John Holland quoted in Complexity.
- “The purpose of scientific theories is not to make predictions, but to explain things – predictions are the tests of whether the theory is right.” Herbert Simon response to Friedman quoted in Beinhocker.
- “Complexity makes the economy, like the weather, unforeseeable overall but the very short run.” Beinhocker, p.109.

- "The theory [of reflexivity] emphatically does not qualify as scientific because it does not provide deterministic explanations and predictions. It is merely a conceptual framework for understanding events that have human participants." Soros, p.18.
- "Economics is not a science. History matters in trying to understand and apply it." Andrew Lo quoted in Peter Bernstein Capital Ideas Evolving, p. 16.
- Soros criticizes the doctrine of the unity of method for the natural and social sciences.
- "According to the new paradigm events in financial markets are best interpreted as a form of history." Soros, p.103.
- "In no field is a group of the past as fundamental to success as in finance." William Bernstein, The Four Pillars of Investing, p.129.
- "Social events become unpredictable whenever reflexivity makes its presence known. Accordingly we must reduce our expectations for the social sciences." Soros, p.75.
- Sornette, however, argues that he has found pockets of predictability that allow him to forecast stock market crashes with considerable accuracy. He uses a model with power law acceleration decorated with log periodicity and finds "oscillations with frequencies." p. 172

4. Reflexivity

- "There is a two-way reflexive connection between perception and reality which can give rise to initially self-reinforcing but eventually self-defeating boom-bust processes or bubbles." Soros, p.x
- "Our understanding of the world... is inherently imperfect because we are a part of the world we seek to understand."

- "Phenomena do not consist only of facts but also of intensions and expectations ..." [this] introduces an element of contingency or uncertainty into the course of events." p.4
- "Reflexive situations are characterized by a lack of correspondence between the participants' views and the actual state of affairs." p.5
- "It is the participants' biased views and misconceptions that introduce an element of uncertainty." p.8
- "Game theory teaches us that human beings create a complex jumble of uncertainties for one another." p. xv.
- "Human beings learn from experience… Evolution… is always at work." p. xv. Peter Bernstein, <u>Capital Ideas Evolving.</u>
- "In order to establish and protect the state of economics as a science, economists have gone to great lengths to eliminate reflexivity."
- "Reflexivity can be interpreted as a two-way feed back loop." Soros, p.10 "self reinforcing...processes"
- "[In reflexivity] market prices can influence the fundamentals" (p.57) Note that this can occur in equilibrium analysis as well.
- Robert Shiller in <u>The Subprime Solution</u> interprets the sub prime crisis as "a grim feedback loop." p.8
- "A self reinforcing cycle developed" Mark Zandi, <u>Financial Shock</u>, p.80.
- "As asset prices continued to march higher, those arguing that something was absent in global asset markets steadily lost credibility." Zandi, p.90.
- "Reflexive situations are characterized by a lack of correspondence between the participants' views and the actual state of affairs." Soros, p.5.

- “Biased views and misconceptions” Soros, p.8
- “The cardinal contention of the theory of reflexivity is that all human constraints are flawed.” Soros, p.92
- “The ratings agencies badly misjudged the risks” Mark Zandi, Financial Shocks, p.19
- “Credit creation by its nature is a reflexive process. It needs to be regulated in order to prevent excesses.” Soros, p.142.
- Soros acknowledges that “in retrospect it is clear that I was not precise enough in my formulations and tended to overstate my case.” (p.20) Unfortunately that is still the case in his new book.

From “Top Economists Press for Banking Regulation Shake-Up” FT 12/4/08, p.3

- At Trieste conference - Robert Solow said “international co-operation boundary issues on regulation were essential to avoid regulatory arbitrage.” Dennis Snower, Kiel Institute for the World Economy argued “The biggest challenge we have now is for governments to stand up to the vested interests of the big beasts of the financial system.” He suggested a new regulatory framework based on the US Food and Drug Administration that makes use of scientists and independent bodies.
- “It will need enough expertise and weight to take on the rocket scientists in the financial sector. The current system of financial regulation is at a fantastic disadvantage relative to the financial sector in terms of expertise and resources.”

“New Twist on ‘Mark-to-Market’ Stirs Debate” FTfm 12/1/08, p.9

- Avinash Persaud, Chairman of Intelligence Capital has proposed a ‘mark-to-funding’ approach. Currently there are some promises for avoiding M to M by declaring intentions to hold the asset to maturity. He argues instead this should be allowed “according to an institution’s capacity to hold them.”
- “Mr. Persaud says that this would help resolve some of the current market distractions.”

“‘Boring’ Canada’s Financial Tips for the World” James Flaherty, Finance Minister FT 12/13/08, p.11

1. “We need to regulate all pools of capital that rely on leverage.”
2. “Capital and liquidity buffers need to be large enough t handle large shocks.”
3. “It’s not enough for regulation to look at individual institutions. It needs to look at the system as a whole.”
4. “We need to make market infrastructure more transparent and resilient.”
5. “Strengthening international coordination, review, and surveillance.”

The Lex Column “Gearing Aid” FT 11/14/08, p.14

- “Bank leverage is far too high.”
- “analysis by Banca del Ceresio ... applying Basel II risk weightings to the assets of a standard directional portfolio suggest that hedge funds typically operate with more than three times the minimum regulatory capital required for banks.”

“Short-Selling Ban has Minimal Effect” FT 12/18/08, p.27

- “Bans on short selling around the world have had little impact on stock prices [but] have reduced volumes and liquidity according to research commissioned by the International Securities Lending Association [and other groups].” Introduced in US, UK, Germany, France and Italy

John Dizard “Put the Credit Default Swaps Market out of its Misery” FT 12/9/08, p.10

- “There are three possible defenses for treating the CDS market as a growing concern: its support for capital raising, its utility for price discovery, and its role as a risk management tool. All have melted [away].”
- He argues CDS prices have become a function of equity volatility and concludes “The CDS market has been preventing efficient price discovery... If the default rates implied in investment grade CDS spreads were to occur, the only activity would be court supervised reorganization.”

5. Increased Connectivity and Complexity

- Best discussion is in Bookstaber’s <u>A Demon of Our Own Design</u>
- El-Erian “Derivative products have ... enabled a far greater degree of linkage across markets.” (p.141) This necessitates “fundamental charges in mind sets and infrastructures.” p.141
- “Endogenous liquidity driven by charges in leverage makes things much more difficult for monetary policy... it implies the need for a change from using the Fed funds rate as the instrument of monetary policy.” El-Erian, p.248.

- He refers to the need to better understand increasingly complex financial markets." p.258
- To the "too big too fast" problem this crisis has added the "too interconnected to fail" problem. AIG was and Lehman wasn't in the view of the policymakers. They found out it was more interconnected than they thought.
- "As an example of complexity, it now seems clear that US authorities were mistaken in allowing Lehman Brothers to go under. The effect has been that of a breakage of a fast-running piece of precision machinery, with metal flying off in all directions... the system has become too complex to control." Tony Jackson, FT 10/06/08

6. Negative Feedbacks and Contagion

- "Every investor fears other investors will pull their money and so they worry they'll be at the back of the line if they don't pull their money." Marc Freed of Lyster Watson, FT 10/16/08, p.1
- "Each bank knows the games it has played in valuing assets – or at least could have played – and is loath to believe the balance sheets of other banks. That suspicion has chilled the inter bank lending market" Floyd Norris, NYT 10/10/08 B1
- "There is no such thing as a safe bank now. They are only as safe as the authorities make them." Willem Buiter
- "This liquidity crisis is the result of coordination failure... The liquidity crisis is pulling down asset prices in an indiscriminate way, thereby transforming the liquidity crisis into a solvency problem." Paul DeGrauwe, FT 10/10/08
- "The world changed when... the US authorities allowed Lehman Brothers to slide into bankruptcy. At the time, their actions were praised as necessary against moral hazard...

What was unforeseen was that the shock of the Lehman bankruptcy started a run on the world's banks... Lehman was much more connected to the rest of the world than had been thought. There has never been a better example of what economists call 'path dependence'." Chris Giles "A Treacherous Traverse for All Economies," FT 10/9/08, p.2

- The core problem is that the smart people are realizing that the banking system is broken. Nobody knows who is holding the tainted assets, how much they have and how it's affecting their balance sheets. So nobody is willing to believe that anybody else isn't solvent, until it's proven otherwise." Carl B. Weinberg, High Frequency Economics
- "Pricing deals in current markets like playing Russian roulette." Lex Column, FT 10/14/08, p.16
- "In the last few weeks... banks froze up in fear that every piece of paper was tainted. As a result they refused to enter into the most routine kinds of transactions with one another." Peter Bernstein, NYT 9/28/08 Bu.1
- Like the Asian crisis problems in financial sectors were widespread, so the initial crisis, Thailand in Asia and sub prime mortgages in the current crisis generated a wakeup call and widespread reevaluation. Many actors had been "asleep" or at least quite lazy before each crisis. For the current crisis as Zandi argues "assets of all types were overvalued" or as Greenspan puts it "the fundamental problem had been the under-pricing of risk worldwide, an anomaly that built slowly to near historic levels over the preceding few years." (p.507) As Zandi goes on to argue "the sub prime meltdown began a top-to-bottom reevaluation of the risk inherent in financial markets, and thus a re-pricing of all investments of stocks to insurance." (p.4) "Global investors suddenly saw the U.S. and mortgage market in a new light... (p.177) Investors began to look critically at their other

holdings such as corporate bonds...” (p.178) “The new attitude toward risk rolled through other global markets.” (p.180)

- “Lack of trust has become a self-fulfilling prophecy.” Shiller p.102

Soros’ View of the Causes of the Crisis

- “All boom-bust processes contain an element of misunderstanding and misconception” (p.164)
- “The prevailing trend in the super-bubble is the same as in the housing bubble – ever more sophisticated methods of credit creation – but the misconception is different. It consists of an excessive reliance on the market mechanism.” p. 92
- Soros argues that the super-bubble combines three major trends:
  1. increasing credit expansion
  2. globalization of financial markets
  3. removal of financial regulations and financial innovation
- “The prevailing paradigm cannot explain what is happening; the theory of reflexivity can.” p.102
- “According to the new paradigm, events in financial markets are best interpreted as a form of history.” p.103
- Risks were spread more widely, but “unfortunately, the risk were passed on from those who were supposed to know them to others who were less familiar with them.” p.116
- “The regulatory authorities lost the ability to calculate the risks involved. They came to depend on the risk control methods developed by the institution themselves.” p.117

- “The risk models of the banks were based on the assumption that the system itself is stable.” p.117
- He argues that most important lesson from the current crisis is that monitoring authorities need to be concerned with credit creation, not just the money supply.

Soros’ 8 stage boom-bust model

“It starts with a prevailing bias and a prevailing trend.” p.65

1) Initially the trend isn’t recognized
2) A period of acceleration when it is recognized “the process approaches far-from-equilibrium territory” p. 66
3) Period of testing
4) If the bias and trend survive they emerge stronger than ever. “the normal rules no longer apply.” p. 66
5) Eventually a moment of truth “when reality can no longer sustain the exaggerated expectation.” p.66
6) Twilight period “the people continue to play the game although they no longer believe in it.” p. 66
7) Crossover point “the trend turns down and the bias is reversed.” p.66
8) The crash “a catastrophic downward acceleration.” p. 66

It has an asymmetric shape. “It tends to start slowly, accelerate gradually and then fall steeper than it has risen.” p. 66

The Greenspan Factor

- From Peter Goodman “Taking Hard New Look at a Greenspan” NYT 10/9/08 A1

- Greenspan argues "a lack of integrity spawned the crisis."
- "Mr. Greenspan banked on the good will of Wall Street to self-regulate as he fended off restrictions."
- Greenspan argued, "In a market system based on trust, reputation has a significant economic value. I am therefore distressed at how far we have let concern for reputation slip in recent years."
- "A professed libertarian... [Greenspan] showed a resolute faith that those participating in financial markets would act responsibly... he tethered the health of a nation's economy to that faith."
- Greenspan argued "Risks in financial markets... are being regulated by private parties." "There is nothing involved in federal regulation per se which makes it superior to market regulation."
- "Mr. Greenspan's authority and grasp of global consistently persuaded less financially sophisticated lawmakers to follow his lead."
- "If Mr. Greenspan had acted differently... many economists say the current crisis might have been averted or muted."
- "The notion that Greenspan could have generated a totally different outcome is naïve." Robert Hall, Stanford
- "Mr. Greenspan said he had been wrong to think banks' ability to assess risk and their self-interest would protect them from excesses. But [he] said no one could have the collapse of the housing boom and the financial disaster that followed."

- "Mr. Greenspan said he made 'a mistake' in his hands-off regulatory philosophy... He conceded that he has found a flaw 'in his ideology'... Yet Mr. Greenspan maintained that no regulator was smart enough to foresee the 'once-in-a-century credit tsunami'."
- He said "I did not forecast a significant decline [in house prices] because we had never had a significant decline in prices." From "Greenspan Admits Errors to Hostile House Panel" WSJ, 10/24/08 A1

Quotes from Alan Greenspan *The Age of Turbulence* "Epilogue" June 2008 on Causes of the Crisis

- "Large losses suffered on securitized American sub-prime mortgages triggered the crisis, of course. But if they had not been the culprit, problems with some other financial product or market would have done so. The fundamental problem had been the under pricing of risk worldwide." p.507
- "In their quest for slightly higher returns, investors had come to accept very much greater risk." p.508
- "Eventually, as is always the case, the markets swing virtually overnight from euphoria to fear." p.520
- "Much of the dubious financial-market behavior that emerges during the expansion phase is not the result of ignorance that risk is badly under priced, but of the concern that unless firms participate in a current euphoria, they will irretrievably lose market share." p.521
- "The incontrovertible evidence an under pricing of risk did not prod private sector risk management to tighten the reins... Instead they gambled that they could keep adding to their risky position and still sell them off before the deluge. Most were wrong." p.523

- "But I am increasingly persuaded that governments and central banks could not have importantly altered the course of the boom." p.523 [He argues that it would require economic contraction too severe to be acceptable in modern democracies.]
- "Periodic surges of euphoria and fear are manifestations of deep-seated aspects of human nature, and realistically there is little that governments or central banks have been able to do to divert or defuse them." p.523

Stefan Wagstyl "Crunch Time for Eastern Europe" FT Insight, 12/16/08, p.7

- "Having escaped the worst of the credit crash that started in mid-2007, central and eastern Europe felt the full force of the worsening crisis from September onwards."
- EBRD has estimated growth will fall from 6.3% in 08 to 3% in 09.
- "Only central Europe – with the exception of Hungary – claims to be a haven of stability."
- "The region is suffering principally because of its reliance on foreign finance." About ½ of the recent flow of funds to EM's went there, most if debt.
- They rely heavily on international banks that "were expected to cushion their local subsidiaries from the shock. But the crisis has become so severe that there are concerns that even the internal flow of funds within banks will be hit."

FTfm Emerging Markets 12/1/08, p.16

- "Dragged into stormy waters by west's crisis."
- "These markets have been caught up in a bout of global risk aversion, forced de-leveraging and repatriation of funds... Such has been the violence of the sell-off that emerging markets

have fallen further then they did between July 1997 and September 1998 at the time of the Asian and Russian market crises."

- "For a while it seemed as if emerging markets had decoupled. When western markets first seriously wobbled in July and August of 2007, emerging markets continued powering ahead."
- The fall of commodity prices and export dependence on the West have had large effects. "What is extraordinary is how quickly the inflation scare that was hurting emerging market assets as recently as the summer has turned into a sell off driven by fear of a long and deep global recession, deflation, and a collapse in earnings."
- "What is shocking is how different markets have sold off for different reasons. Russia has been hit because of the collapse of the oil prices, the rise of political risk after its conflict with Georgia and huge foreign borrowings by its companies and banks... Turkey, because it has a large current account deficit."
- Emerging Portfolio Fund Research estimates $48 billion was pulled out of EM equity funds between January 1 and November 19. Total inflows between 2003 and 2007 were $94.8 billion.
- "Forced deleveraging by hedge funds."

John Pender "The Unkind Reality about Emerging Economies" FT 11/12/08, p.24

7. "As the credit crisis rumbles on, the echoes of the Asian financial crisis of 1997-1998 grow louder."
8. "In Hungary and Romania, among other countries, substantial foreign currency borrowing has wrought the same damage it did in Asia. The new twist is that in Europe it was

households that did much of the borrowing, relying on euros, Swiss francs, and even yen for home loans."

9. Despite Russia's huge accumulation of reserve "from 1999 Russian banks and companies increased their international borrowing by $460bn ... Western markets were serving as a financial intermediary between this cash-rich Russian state and its own private sector."
10. "With a huge current account deficit and a collapsing currency, the UK has an emerging-market-style problem on its hands."

Lucian Bebchuk (Harvard) and Italy Goldstein (Wharton) FT 12/19/08, p.7

- "Why does credit fail to flow despite the infusion of so much additional capital into the financial sector? The Treasury has been arguing that banks still lack confidence and we just need to give them time to adjust. The chair of the congressional oversight panel has suggested that 'banks' reluctance to lend reflects their rational assessment of borrowers' bleak prospects. But there is a third explanation: banks may not be lending because of their self-fulfilling expectations that other banks will not lend."
- "The government... can take on itself some of the credit risks involved in extending substantial new lending to businesses."

The Lex Column: "All Fall Down" FT 12/27-28/08, p.18

- "This year everything happened simultaneously. Correlations converged on one."
- "The proximate reason was diversification itself – often into hedge funds. While these assets were heterogeneous the owners were not."
- "Money markets...froze... That is why asset prices collapsed so fast afterwards."

7. Other views on the crisis

- "What went wrong?" First and foremost, the risks inherent in mortgage lending become so widely dispersed that no one was forced to worry about any single loan... At every point in the financial system, there was a belief that someone – someone else – would catch mistakes and preserve the integrity of the process." Mark Zandi, Financial Shock, p.3
- "The sub prime meltdown began a top to bottom re-evaluation of the risks inherent in financial markets and thus a repricing of all investments from stocks to insurance." p.4
- He also notes "deregulatory zeal" and concludes "The final essential ingredient was hubris."
- "Starved for greater returns, investors began using an old fashioned trick for turning small profits into large ones: leverage" Zandi, p.13

El-Erian When Markets Collide

- "Some investors were hesitant to accept the lower expected returns associated with the generalized decline in risk premiums. Accordingly, they tried hard to squeeze out additional returns. Leverage served as the best way to do so." El-Erian, p. 21.
- "The sub prime crisis ... is at its core, the result of a speculative bubble in the housing market." p.1
- El-Erian also blames endogenous liquidity

Shiller The Sub prime Solution

- “An epidemic of irrational public enthusiasm for housing investments was the core of the problem.” Robert Shiller, The Subprime Solution
- He also talks of a “contagion of ideas” and “the social contagion of boom thinking.” p.41
- Hyman Minsky’s theory of financial crisis is used heavily by Kindleberger and Aliber Manias, Panics, and Crashes: A History of Financial Crises, Revised edition. It is based on two factors:
  1) A displacement such as a new technology and
  2) Accommodating credit.
- To these William Bernstein adds
  3) “investors need to have forgotten the last speculative craze” p. 136
  4) “rational investors ... must have been supplanted by those whose only requirement for purchase is a plausible story.” p. 136
- “The features of these manias are never identified and yet there is a similar pattern... anointed with euphoria.”
- “The cycle of manias and panics results from pro cyclical changes in the supply of credit.” Kindleberger and Aliber, p.12
- “In an attempt to increase home ownership, particularly by minorities and the less affluent, virtually every branch of the government undertook an attack on underwriting standards in the early 1990s... helping to lead to a housing price bubble.” Summary “Increased foreclosures occurred at the same time and with virtually the same intensity for both the prime and sub prime mortgage markets.... The increase in foreclosures caught the banking and finance industries by surprise.” p.4 “Mortgage seemed to require virtually no down payment, which is the main key to the problem.” Stan J. Liebowitz

"Anatomy of a Train Wreck: Causes of the Mortgage Meltdown," Independent Policy Report, 10/03/08

- "It is not tenable to suggest that Community Reinvestment Act which was enacted more than 30 years ago suddenly caused an explosion in bad sub prime loans from 2002 to 2007." Michael Barr and Gene Sperling, "Poor Homeowners, Good Loans" NYT 10/18/08
- When the liberals talk about deregulation they most often point to the Gramm-Leach-Biley Act of 1999, which tore down the last remaining wall between commercial and investment banks. But there is little evidence to tie much of the problem to that law... Most of the walls...had already been breached over many years, with the approval of regulation."
- "It might be more appropriate to describe the problem as un-regulation." Floyd Norris, NYT 9/29/08 C1
- "The real concern that we have is that we have got... in this country, a very serious 'too big to fail' problem... we've just recognized now in the current situation, how severe it is." Ben Bernanke talk to the Economic Club of New York reported in NYT 10/16/08 A23
- "Policy innovations ahead been racing ahead of comprehension. The securitization of mortgages was an innovation that led unwillingly to what Wall Street calls 'betting the company' with financial innovations, the downside can be lethal – its 'destructive creation'." Jagdish Bhagwati, FT 10/17/08, p.11
- "Perhaps the most important cause of the crisis [was the] belief in so called rocket scientists and their computer models... It was that faith that led ratings agencies to give

top grade classifications to securities that were in fact very risky... and led regulators to defer to the banks own risk models in determining how much capital they needed." Floyd Norris, NYT 9/29/08 C1

- "The idiosyncrasy of the instruments with the overlay of technology allowed the traders to live in denial." David Carr, NYT 9/29/08 C1
- "In the United States, loose monetary policy... encouraged the misplaced optimism while in Europe there were guidelines from the benefits of economic integration." Tyler Cowen "Three Trends and a Train Wreck," NYT 10/19/08 B6
- "Our financial bubble, like all bubbles, has many complex strands feeding into it... but at heart it's really very simple. We got away from the basics – from the fundamentals of prudent lending and borrowing." Tom Friedman "Why How Matters," NYT 10/15/08 A35
- "The current crisis, while undoubtedly global in nature, did not arise from a failure in coordination. It arose because regulators and policymakers in a variety of countries made similar mistakes." FT Editorial "Grand Claims, But Only Tired Ideas." 10/17/08, p.10
- "The sub prime boom was led by investment banks and mortgage brokers, not by government sponsored enterprises. Fannie and Freddie became unhinged in the middle of the decade when they tried to play catch up."

Notes on George Cooper The Origin of Financial Crises, Vintage Books, 2008

- The major purpose of the book is to argue against the Efficient Market Hypothesis favor of the Minsky Financial Instability Hypothesis based on "the existence of destabilizing positive feedback processes within credit and asset markets" p.109. He suggests that

biases discussed in behavioral finance can add to problems but the systems would be unstable any way.

- He argues "the key message of the Efficient Market Hypothesis is that asset prices are always and everywhere at the correct price." P.9 This is quite different from Malkiel's interpretation. He also argues that "the Efficient Market Hypothesis dismisses the idea that an economy can generate an excessive level of credit creation." (p.87) Most economists certainly believe that central banks can.
- He argues that the "process of collateralized lending [combined with market-to-market accounting generates on of the key destabilizing forces in financial markets."
- He mentions briefly and favorably Soros' theory of reflexivity and argues that "financial markets can generate their own internal forces." P.13
- He argues that a standard slight of hand of economists is to show that goods markets are efficient and then just assume that financial markets operate the same way. "We are first persuaded that the markets for goods are efficient, and then beguiled into believing this to be a general principle applicable to all markets." (p.6) He argues instead a la Minsky and Soros that "our financial system is inherently unstable, has no steady state equilibrium, and is habitually prone to the formation of damaging boom-bust cycles."
- He also puts blame on the Fed, suggesting "The US Federal Reserve does not appear to believe that there can be an excessive level of money growth, credit creation, or asset inflation." P.24
- He argues that "avoiding the financial tsunamis comes at the price of permitting... a greater number of smaller credit cycles... and requiring control back to occasionally halt credit expansion... [and] prick asset price bubbles." P.3

- In risk analysis, he argues that individual sales won't have much effect on market prices while large scale sales will. There's an important "fallacy of composition" problem. "The careful analysis of individual balance sheets is intended to improve the quality of lending and investment decisions. At the micro level... this works. At the macro level of the entire economy balance sheet analysis becomes a destabilizing force, leading to excessive lending and financial instability. Balance sheet variables... do not just fail to inform investors of impending economic problems, they may actively mislead them into believing conditions are safer than they really are." Pp. 115-116.
- Adding this to his observation that "The existence of bank runs have been well understood in finance for hundreds of years, yet their presence in entirely ignored in financial theory, and, therefore by financial risk systems" (p.18) leads him to conclude that "our risk system may be inherently designed to work only when they are not required." P.18
- "Saudi Arabia's top cleric has used his annual sermon to pilgrims [to say] that global economies caught in crisis were suffering the result of using interest as bedrock of their financial systems." Abeer Allam, "Senior Saudi Cleric Cites Crisis to Press for Sharia Finance." FT 12/8/08, p.3
- "By the time the GSE began its most significant investments in riskier loans in 2005, the roots of the present crisis had long taken hold." Franklin Raines, former head of Fannie.
- "Fundamentally, they were following the market, not leading it." Henry Waxman.
- "The four former chief executives of the two government-sponsored entities defended their decision yesterday, at times pointing to the difficulties of balancing their multiple

mandates.” From Joanna Chung “Fannie and Freddie Chiefs Accused of Ignoring Warnings on ‘Reckless Bets.” FT 12/10/08, p.2

Martin Wolf “Asia’s Revenge: Roots of the Crisis” FT 10/9/08, p.9

- “The west’s traumas stem not just from cheap money, gung-ho bankers and tax regulation but from sustained capital inflows.”
- “[The crisis has] roots in the way the global economy has operated in the era of financial deregulation. Any country that receives a huge and sustained inflow of foreign lending runs the risk of a subsequent financial crisis, because external and domestic financial fragility will grow.”
- “The big global macroeconomic story of this decade was... the emergence of the US and a number of other high income countries as spenders and borrowers of last resort [which] offset the savings glut in EM countries.”
- In the early 2000s the government budget deficit was the main offset to the US current account deficit but in the middle years the household sector took over as the biggest offset.
- “Among the most important tasks ahead is to create a system of global finance that allows a more balanced world economy... a part of the answer will be the development of local currency finance for emerging economies.”
- “The crisis demonstrates that the world has been unable to combine liberalized capital markets with a reasonable degree of financial stability. A particular problem has been the tendency of large net capital flows and associated current account and domestic financial balances to generate huge crises. Lessons must be learnt. But those should not be just

about the regulation of the financial sector. Nor should they only be about monetary policy. They must be about how liberalized finance can be made to support the global economy rather than destabilize it." "...It raises the deepest questions about the way forward for our integrated world economy."

Robert Shiller "How About a Stimulus for Financial Advice?" NYT 1/18/09 Bu 5

- "In evaluating the causes of the financial crisis, don't forget the countless fundamental mistakes made by millions of people who were caught up in the real estate bubble, taking on debt they could ill afford."
- "The theory of capitalism... assumes... that consumers are rational in their choices, and to a large they are. But in some areas, notably personal finance, it is important to recognize that a good share of Americans have difficulty figuring things out."

8. Misdiagnoses of the Crisis, Undermining of Credibility, and the International Blame Game

- "The people in charge of the financial system – in the banks, at the Fed and other central banks at the Treasury and other finance ministries – consistently underestimated the damage both to the financial system and the world economy. [Their reassuring words] destroyed a lot of credibility." Floyd Norris, NYT
- "The Fed has gone about as if the problem is a shortage of liquidity. That is not the basic problem. The basic problem for the market is that [uncertainty] that the balance sheets of financial firms are credible... [The securities] are toxic because you cannot sell them, you don't know what they're worth, your balance sheet is not credible, and the whole market

freezes up." Anna Schwartz in "Bernanke is Fighting the Last War" WSJ 10/18-19/08 A11 [She argues that the Great Depression was a liquidity crisis.]

- "The biggest problem continues to be that no one in authority seems to be able to explain what is happening and why, so all this feverish government action is scaring everyone to death." WSJ Editorial, 10/9/08
- "A new global regulator is the answer to the wrong question." Ted Truman quoted in FT 10/17/08, p.3
- "Central banks' rate cuts fail to dispel the gloom." Headline from FT 10/9/08, p.28
- "There is a total loss of confidence in global policymakers to deal with this tsunami of a crisis. The reactions have been ad hoc and piecemeal." Stephen Roach, Morgan Stanley Asia in WSJ, 10/19/08 A3
- "The response to this downward spiral has been woefully inadequate." "The [Paulson] plan suffered from a fatal lack of clarity." "The consequences of Lehman's fall were apparent within days yet key policymakers have largely wasted the last four weeks." Paul Krugman "Moment of Truth" NYT, 10/10/08 A33
- "It's a safe banking system, a sound banking system. Our regulators are on top of it." Hank Paulson, July 20
- "The leading lights of finance, whether in Washington or Wall Street, have completely squandered any trust that taxpayers may have in them." Gretchen Morgenson, NYT 10/12/08, B1
- "One lesson of the last 18 months is that when the government promises aid to a financial institution, if needed, the pledge does more harm than good." Floyd Norris, NYT 9/26/08

The International Blame Game

- "This crisis was not born in Europe. This crisis was born in America." French President Sarkozy. British and Italian leaders made similar comments.
- "The American sub prime may have been the trigger, but dangers like too much leverage, too little oversight and an executive bonus culture that encouraged risk taking had been building for years in Europe, not just the United States... It's totally misplaced for European leaders to put the blame on the Americans." Arnoud Boot, University of Amsterdam quoted in NYT "U.S. Missteps are Evident, But Europe is Implicated," 10/13/08 B1
- "If the toxic securities and opaque credit swaps came with a made-in-the-US stamp, European banks were eager buyers." Philip Stephen "The Financial Crisis Marks Out a New Geopolitical Order" FT 10/10/08, p.9
- Phases 2 and 3 Lehman and the TARP U Turn

  "Some have chosen to scapegoat the Lehman failure as the cause of the deepening crisis in September, as opposed to a symptom. That is at best naïve and at worst disingenuous." Treasury Secretary Paulson quoted in NYT 11/21/08, p.A1 Paulson also argued that he had no legal authority to save Lehman.
- "investor confidence... was dealt a severe blow when the Treasury Department announced last week that it would not buy troubled assets" from "Stocks Drop Sharply and Credit Markets Seize Up" NYT 11/21/08, p.A1
- "[Paulson's] announcement... has eroded the little confidence financial markets had that there would be a way out... Forced selling began and continues... there were huge expectations somewhere in even the smartest investors' minds that someone else would

clean up the mess... there is only one helper in town – the U.S. government. “What has disturbed so many investors is... that Mr. Paulson argued passionately that his plan to buy toxic assets was essential, and then ditched the entire idea just weeks later.” Aline van Duyn, “Paulson’s U-Turn” FT 11/23-24/08, p.15

- “The current Treasury Secretary [Hank Paulson] for decades was a Wall street deal maker, accustomed to short-term, trigger quick decision – and reversals. Some say that accounts for the reserve program’s consistent evolution and its stop-and-start tendencies.” Mark Landler and Jackie Calmes, “Geithner, Veteran of the Rescue Team, Has Head Start in Seizing Reins” NYT 11/25/08, p.A21

“Washington’s Bailout is as Opaque as Madoff’s Black Box” Frank Rich “Who Wants to Kick a Millionaire?” NYT 12/21/08, WK10

- “It was China’s willingness to hold the dollar... it is hard earned from exporting to America that helped keep US interest rates low; giving the Americans the money they needed to keep buying... [and] US administrations tell[ing] Americans: ‘You can have gum and butter – sub prime mortgages... ever-higher consumption and two wars, without tax increases!’ It all worked – until it didn’t.” Thomas L. Friedman “China to the Rescue? Not” NYT 12/21/08, WK10.

Aline Van Duyn “Messy Question of Toxic Assets Still Needs an Urgent Answer” FT 1/9/09, p.70

- “Credit continues to put pressure on the wider financial system ... because those toxic assets [in the banking system] are still impossible to value. Indeed, despite the many

measures taken by governments and central banks to prevent catastrophic economic collapse, the core problem of toxic assets has not been addressed."

- The original Treasury description of the T.A.R.P. program stated that it was "intended to fundamentally and comprehensively address the root cause of our financial system's stresses by removing distressed assets from the financial system."
- "Mr. Paulson's U-turn... has left the system without a toxic removal plan."

- "I wish people would stop saying this is a crisis of confidence. The loss of confidence is just a symptom of bad credit and over leverage. The banks are not lending because they now their balance sheets are loaded with future losses and they don't' have enough capital." Steven Eisman, Front Point Partners.

9. Regulation

- "The supervising agencies... were ill equipped. They lacked the sophistication, tools, and the proper mind set." El Erian
- "Over confidence in a 'just-in-time' risk management paradigm" El-Erian, p. 53.
- The regulatory authorities were largely caught up in the same over optimism as the market.
- Greenspan and the Bush administration had excessive faith in the effectiveness of market discipline.
- "Banking ... is difficult to regulate." Kindleberger and Aliber, p.17.
- "The financial crisis was indeed a failure of regulation. The system was overwhelmed by innovation." Clive Crook, FT 10/13/08 p. 13

- "The worst damage caused by the banks this time came from successful circumventing of the rules... [To circumvent the Basle Accords] banks set about creating quasi-loans. Hence the explosion of credit derivatives off balance sheet vehicles and the rest."
- "Recall that throughout the credit bubble, shareholders made no attempt to restrain the banks in this headlong stampede for growth. But neither did governments." Tony Jackson, FT 10/13/08, p.27
- "It's hard to imagine a super regulator providing more oversight and supervision than German banking regulators, and yet they were surprised by the failure of their banks. Being smarter and better doesn't require a global finance cop." A senior Bush administration official quoted in WSJ 10/20/08, A4
- "It's because there were no regulations and controls, or not enough regulations and controls, that this situation was born. We must regulate, with great precision, financial institutions and markets." Dominique Strauss – Kahn, Managing Director, IMF
- "The single most important reform that is needed is the restoration of discipline in the measurement of risk within the banking system."
- "It was the... BASEL Committee rules for measuring bank risk and allocating capital to absorb that risk... that failed miserably." Charles W. Calomaris, "Most Pundits Are Wrong About the Bubble," WSJ 10/18-19/08 A13
- Greenspan on regulation: "Financial regulators, in my experience, know far less than private sector risk managers. Indeed, the open secret is that regulators take their cues from private sector practitioners... The system of private sector risk management needs to be repaired. We have no better alternative." p.524

- "Both government and markets failed miserably... The real problem is not some particular villain, but rather the very fact that we cannot help but put the evaluation of risk into all-to-human hands." Tyler Cowen, NYT 10/19/08 B6
- "No one appreciated how great the failure of risk management really was." Simon Johnson, former Director of Research IMF, NYT 10/18/08
- "The supervisory agencies... were ill equipped. They lacked the sophistication, tools, and the proper mindset." El-Erian
- "Rather than spread risk throughout the financial system, financial innovation enabled an excessive concentration of risk in some of the most sensitive parts of the system and in some of the most unstable balance sheets." EE p.51
- "Overconfidence in a 'just-in-time' risk management paradigm." EE p.53
- "The conventional approach [to risk management] assumes that... abnormalities will not create feedback loops that will further change risk and return patterns." EE p.63
- "Those [risk management] models assumed statistical independence. They would not work if everyone used them." P.6
- "The observations of safe sectors by risk models turned them into risky sectors, increasingly, overvalued, highly correlated and prone to volatility." P.7
- "History teaches us that the biggest market failure relates to market estimates of risk through the economic cycle."
- "The risk management practices of the UK's Northern Rock were landed by the financial markets less than six months before they were found to be wanting." P.8
- "A good bank is one that lends to borrowers that nobody else lends to because it has superior knowledge about them. For the same reason, it does not lend to borrowers that

others are lending to [because they replaced] grizzled credit risk officers with computer models."

- "Basel II is bad economics." P.9 from Avinash Persaud "Banking on the Right Path" *Finance and Development*
- "Lawmakers should... extend [fair lending laws] to cover the often fly-by-night mortgage lending companies that helped drive the sub prime crisis. Those companies saddled entire neighborhoods with risky high-priced loans that borrowers could never hope to pay back, sold these loans to Wall Street and then went out of business. Congress needs to keep in mind that many of those players are surely to be back in operation somewhere down the line. Some have already returned in the guise of offering to help homeowners avoid foreclosure."
- "Congress has no choice but to require lenders to report on all data that form the basis of lending decisions... no just on the borrower's creditworthiness, but on details on the terms and conditions of the loan itself."
- "... It's hard to say whether such reporting requirements would have forestalled the sub prime crisis. Certainly they would have given consumer advocates and regulators more information early on." NY Times editorial, "Mortgages and Minorities." 12/9/08, A34.
- "The mismanagement by the Bank of England and FSA of the Northern Roc crisis is not surprising when the institution which should have the individual bank specific information (the FSA) does not have the resources to act as LOLR and the institution which the resources (the Bank of England) does not have the individual bank-specific information." William Buiter, "Economics, Political and Institutional Prerequisites for Monetary Union among the Members of the Gulf Cooperation Council" p.11.

White House Philosophy Stoked Mortgage Bonfire – NYT 12/21/08, p.1

- "Mr. Bush paired his belief that Americans do best when they own their own house with his connection that markets do best when let alone." "the ownership society"
- "As early as 2006, top advisors to Mr. Bush dismissed warnings from people inside and outside the White House that housing prices were inflated and that a foreclosure crisis was looming."
- "No one wanted to stop that bubble. It would have conflicted with the president's own policies." Lawrence B. Lindsey.
- "Mr. Bush... cites corporate greed and market excesses faded by a flood of foreign cash... and the policies of past administrations."
- "Mr. Bush...pushed to allow first-time buyers to qualify for federally insured mortgages with no money down."
- He did push Congress unsuccessfully to toughen regulation on Fannie and Freddie.
- In February 2003 Mr. Falcon, the head of the Office of Federal Housing Enterprise Oversight warned of problems. "Today, the White House cites that report – and subsequent efforts to better regulate Fannie and Freddie – as evidence that it foresaw the crisis and tried to avert it." However, the White House pretty much buried the report and tried to fire Falcon.
- "The problem with those guys at the White House, they had all the answers and they didn't think they had to listen to anybody, including the Treasure Secretary..." ("They were driving the ideological train.") Michael G. Oxley, Ohio Republican former Chairman of the House Financial Services Committee.

- In 2007 “the prevailing view at the White House was that the problems in the housing market were limited to sub prime borrowers unable to make their payments as their adjustable mortgages reset to higher rates... That belief was shared by... Mr. Paulson.”
- Throughout the spring of 2007, Mr. Paulson declared that “the housing market is at or near the bottom with the problem ‘largely contained’.”

From Carmen Reinhart and Kenneth Rogoff “We Need an International Regulator” FT 11/19/08, p.11.

- “Finding ways to insulate financial regulation from political meddling is critical to creating a more robust global financial system in the future... the need for greater regulator independence is a compelling reason for establishing an international financial regulator.”
- “The lack of transparency, which the G20 leaders complain of so vehemently, also served as a convenient shield to keep politicians interference out of public view.”
- “The principal activities of an international regulator should be to monitor agreements and promote free capital flows in a market-based system, not to re-regulate the global economy as it was 40 years ago.”
- “Containing leverage has to be a focus of any revamp of the global financial system.”

10. Problems of Incentive Structures in the Financial Industry

- It has been argued that compensation schemes in the financial industry provide incentives for herding, excessive risk taking, and a short-run focus. It appears that returns are more strongly related to earnings than are risks. Robert Frank argues that there are fundamental problems.

Robert H. Frank “Pursuit of an Edge, In Steroids or Stocks” NYT 10/5/08 Bu8

- “The forces that produce the current crisis actually reflect the powerful dynamic that reflects all kinds of competitive endeavors.”
- “This particular market failure occurs when two conditions are met. First, people confront a gamble that offers a highly probable small gain with only a very small chance of a significant loss. Second, the rewards received by market participants depend on relative performance. These conditions have caused the invisible hand to break down in multiple domains.”
- “Managers’ pay depends on how much money a fund oversees... an investment fund’s success depends less on its absolute rate of return than on how that rate compares with those of rivals. One way to bolster a fund’s return is to invest in slightly riskier assets... once some fund managers started offering higher-paying-mortgage-backed securities, others felt growing pressure to follow, lest their customers desert them.”
- “The new mortgage-backed securities were catnip for investors.”
- “... Money managers... assumed that if things went wrong, there would be safety in numbers.”
- “Proponents of financial industry deregulation insisted that market forces would provide ample protection against excessive risk... The invisible hand breaks down, however, when rewards depend heavily on relative performance.”
- “More stringent disclosure rules would be good but would not prevent future crises. The only effective remedy is to change people’s incentives... To prevent such bubbles, we must limit the amounts that people can invest with borrowed money.”

- "In unregulated financial markets... easy credit terms almost always produce an asset bubble."
- "If one held a senior position in banking investment management or insurance... and held a view too far from the professional consensus, one would have been gradually pushed aside... The professionals who inhabit the financial services industry... have little defense against the 'madness of crowds'." David Harding, Managing Director of Winton Capital Management
- Morris Goldstein summarizing Ryan (2008) writes "What [Wall Street managers] get paid handsomely for is beating the market regularly... The problem is that the manager has an incentive to take on false alpha if he can get paid for it... he will appear to generate excess reliance but really he will be taking on hidden tail risks." p.10
- Example – the AAA tracker of CDOs. "The rub... is that true alpha can be measured only in the long run with the benefit of hindsight." Need a different compensation scheme.
- **"**In order to maximize the chances of being retained by the investors... It is better for the agent to position the portfolio or neutral or out performance (... relative to the index) even if this comes with a higher probability of realizing absolute losses on the capital." El-Erian p.276
- "Managers are evaluated based on the returns they bring relative to their peers, not over several years... but three short months. Life can be very lonely for a cautious investment manager in a runaway market." Zandi p.90
- "Lenders let their standards slip because if they didn't make a loan, their competitors would." Zandi p.91

- “since the 1980s, investment banks went through a fundamental change from being managed as integrated banking operations by the partners into “shop in shop” entities in the form of ‘desks’, run by highly mobile employees seeking immediate returns using share holder capital.” B.B. Simon, Managing Director, Invest One Financial Advisory, Letter to FT 10/28/09, p.12

From William D. Cohan “Our Risk, Wall Street Reward” NYT 11/16/08, wk 13

- “There is no question that compensation reform in the securities industry is desperately overdue.”
- “Once upon a time on Wall Street... firms were smaller, less capital intensive partnerships. The beauty of the partnership agreement was the collective liability clause it contained.”
- When partners messed up... the burden of the mistake was shared by all... The punishment for misadventure was ruthless... [the partners involved in Lazard’s mess up in municipal finance in the 1990s were fired and the department was closed]... the status of the firm was held very important.” But this quaint system began changing a generation ago when one venerable partnership after another decided to grab the riches available by selling shares to the public.”
- The result was calamitous. The collective liability clause honored by partners was replaced with a system where bankers and traders were encouraged to take short-term risks with shareholders’ money. Gone too was the idea of being held responsible for one’s actions (short of outright fraud).
- “Managers at publicly traded banks constantly exhorted traders to do bigger and bigger deals and to take increasing risks, and then rewarded them with millions in

compensation... Reputations were made not by turning down imprudent business but by seeing how much business could be done."

- "Despite repeated warnings from the official sector that financial stability could be compromised by the intense 'search for filed' private sector incentives continued to encourage further risk taking... Supervisors had insufficient information and clout to halt the proliferation of overpriced securities." P.2
- "In the stable financial environment with an abundance of liquidity, investors did not feel compelled to pay much attention to the risks involved in the complex structured products they purchased... They trusted ratings agencies to evaluate the risks appropriately." P.4 Laura Kodru "A Crisis of Confidence...and A Lot More" *Finance and Development, June 2008*

"Mixed Response to Credit Suisse's Innovative Pay Plan" FT 12/20-21/08

- "Plan to link the pay of its top investment bankers partly to the value of illiquid assets that many of them helped to accumulate."
- "Last month, UBS said it would spread a significant part of top bankers' variable pay over three years and return the right to clear back part."

Michael Schrage "How to Sharpen Banks' Corporate Governance" FT 12/18/08, p.13

- "Traditional corporate governance of financial institutions is dead... For better or worse, banks that are 'too big to fail'... will soon dominate global finance."
- "The global financial meltdown reflects in no small part the failure of meaningful board room scrutiny."

- "Companies trading hundreds of billions of dollars worth of credit investments had inadequate risk management systems that were neither understood, challenged, nor improved by boardroom review."
- "The most important governance reform in financial services would make risk management the explicit duty of the board."
- "Greater diversity in [risk management] methodology is required."
- He suggests the 'risk revelation' approach. "Observing the distribution of risk perceptions held by boards of financial institutions could prove exceptionally helpful in early occurrences of systemic risks."
- He recommends having several public representatives as observers at board meetings.

11. Risk Management and Model Hubris

- "Asset prices often undergo long swings... followed by 'corrections' because this is how market 'discover' a sensible range of prices. Such price reversals are a source of risk that is not recognized by standard risk – management methods." They criticize "abstruse, yet simplistic models that left out the imperfection of knowledge." Roman Frydman, Michael Goldberg, and Edmund Phelps "We Must Not Rely Solely on the Rosiest Ratings." FT 10/20/08, p.11
- "The financial crisis occurred because there was – and is – a lack of information... Market participants and even regulation relied on complex financial models that were used to calculate risk. They might have considered black swans but they did not consider termites. Everyone suspected that the structure was rotten but no one had any numbers to put into the models, so the risk that the numbers were bad was ignored." "The flaw in all

financial and mathematical analysis is that information is, and always will be, qualitative." William Gamble, Emerging Market Strategies letter to FT 10/03/08, p.12

- "Market participants first became aware of transformation through noise [and anomalies]." "Drivers of correlation" can change existing models and rules of thumb break down. "[Rather than trying] to better understand developments, too many investors went full steam ahead, taking on more risk and heavily engaging in new activities with backward looking approaches." "The amazing sense of calm and self-confidence that prevailed despite the abundance of things that could not be explained." El Erian, p.21
- "The risk management process should be governed by the macro risk parameters and anchored by a clear identification of risk-mitigating instruments." EE, p.243
- "Minimizing the left tail"
- "The idea is...to develop a mental time series that provides a 'feel' for now the portfolio reacts to different states of the world." EE, p.278
- "Since no two crises ever looked the same... it is important to think of its tail insurance program as using a basket approach to considering risk." EE, p.280
- It's important to be concerned about liquidity risk as well as economic disruption.
- "The term 'foreign investing'... is a relic of the past. Why should we identify firms by where their headquarters are located and ignore where they produce or sell their goods." Jeremy Siegel <u>The Failure for Investors</u>
- "Forecasters' concern should be whether human response is rational or irrational, only what is observable and systematic." Greenspan, p.522
- "Global investors took comfort in the new investments now available... Risk could be more easily hedged... Investors believed they could sign up for precisely as much risk as

they wanted... Feeling secure, their inclination was to magnify their returns through leverage." Zandi p.91

- "The essential problem is that our models- both risk models and economic models- as complex as they have become, are too simple to capture the full array of economic variables that govern economic reality." Greenspan p.520
- "The most credible explanation of why risk management based on state-of-the-art statistical models can perform so poorly is that the underlying data used to estimate a model's structure are usually drawn from periods of euphoria and periods of fear – that is, from regimes with significantly different structures." Greenspan p.521

From "Algorithmic Traders Produce 'Snowball' Effect on Volatility" FT 12/5/08, p.27

- "The growing use of new types of computer models that react more quickly to the latest moves in prices is exacerbating the historically high levels of volatility in equity markets, according to traders."
- The Volume Weighted Average Price algorithm based on a belief in mean reversion has been popular. This was relatively passive. Now more "aggressive" models are becoming popular. Use of algorithms account for about 15% of client's trade with Goldman Sachs.
- "At times of greatest volatility, algorithms tend to 'whiplash' and feed off one another." Mark Palmer, CEO of Streambase.

Nassim Nicholas Taleb and Pablo Triana "Bystanders to this Financial Crime were Many" FT 12/8/08, p.13

- "Almost everyone in risk management knew that quantitative methods-like those used to measure and forecast exposures, value complex derivatives, and assign credit ratings – did not work and could provide undue comfort by hiding risks.
- "[Despite the failure of the LTCM in 1998] Value at Risk continued to be widely used. It was this that was to blame for the crisis."
- "There is every indication that many top bankers did not understand the risks they were taking, and were stunned when the losses materialized." Floyd Norris, "Fury Builds Over Crisis at Banks." NY Times, 12/12/08, B1.
- "People were willfully blinded to the problems because they wanted to believe in his returns." Harry Markopolos quoted in "Fees, Even Returns and Auditor all Raised Flags." WSJ 12/13-14/08, A7. Markopolos raised concerns about Bernard Madoff's operations to the SEC in 1999.
- A number of investment managers decided not to invest with Madoff because of his unwillingness to provide information and warning signs like the steadiness of his returns in all types of markets.

From Jason Z. Weig "How Bernie Madoff Made Smart Folks Look Dumb" WSJ 12/13-14/08, B1

- Madoff had a smart strategy using high level contacts and making investors think it was a privilege to be allowed in. "This members-only feeling blinded many buyers of Mr. Madoff's funds to the numerous red flags around his operation."

- The murkiness of the world of hedge funds led many investors to look for "social proof."
- "[With this exclusive image] Mr. Madoff shifted investors' fears from the risk that they might lose money to the risk that they might lose out on making money."
- TW- This is a good example of the power of framing.
- "The biggest dirty secret of the 'sophisticated investor'." "Due diligence does not get done."
- During 2006 the SEC required additional reporting by hedge funds. William Goetzmann at Yale found that those who reported potential problems had lower subsequent performance, but the revelation of this information had no effect on the amount of money flowing into the funds.

"Predictive Models: Blown off Course by Butterflies" John Kay, FT 12/26/08, p.7

- "In the 1980s, it seemed that computers held the key to economic forecasting. The dream did not last long. We now understand that economies are complex, dynamic, non-linear systems."

"Risk Management" FT Special Report 11/18/08

- From Andrea Felsted "Weighing Perils is a Heavier Burden." P.1
- "With prior risk management at the heart of many aspects of the financial crisis, what counts as risk is being reassured."
- "Risk management is about continuous learning, because every time there is a crisis you discover new things... It is far more complicated to measure risk then we previously thought." Raj Singh, Chief Risk Officer Swiss Re.

- “There must be a re-thinking of risk management, not relying only on quantitative analysis, but also going back to the qualitative, which often people considered as too unsophisticated.” Werner Grub, partner of Richmond Par Capital, a merchant bank.
- “Charles Beach, a director in PWC’s risk and capital team, cautions that focus on the financial crisis could blend companies to risks in other areas.”
- “Standard and Poor’s ... is now taking risk management into account when it decides on a company’s rating.”

James Grant “Little Logic to Bond World amid Current Risk Phobias.” FT 12/5/08, p. 26

- “The truth is that no investment asset is inherently safe. Risk or safety is an attribute of price.”
- “In corporate debt and mortgages, anomalies and non sequiturs abound”
- He argues that with Treasuries having gone to almost zero “risk-free return has been replaced with ‘return free risk.’”

“How Efficient Markets Theory Gave Rise to Policy Mistakes” FT 2/17/08 p. 20

Sushil Wadhwani, former member of BoE Monetary Policy Committee

- He argues failure to recognize that commodity price increases were a bubble led monetary authorities to “significantly overestimate prospective inflationary pressures.”
- “[The] failure to incorporate the role of what Keynes described as ‘animal spirits’ might well have permitted the naïve belief that recapitalizing the banks would lead them to lend again. Once ‘confidence’ has evaporated banks will not lend however well capitalized they may be.”

Robert Jenkins, Chairman of the Investment Management Association, UK "Why Didn't Anyone Sound the Alarm?" FTfm 1/12/09, p.6

- "We need to be realistic about what investors can and cannot know about a company. In the case of the banks, it is now clear that many of the management teams within banks did not now what they were doing, much less the boards charged with their close supervisions... investment managers can sometimes see the wood for the trees in a way that management might not... but we... do not have crystal balls. We compensate for information gaps with diversification in portfolio construction."

12. November 15 G-20 Summit

- "The leaders will review progress being made to address the current financial crisis, advance a common understanding of its causes, and in order to avoid a reputation, agree on a common set of principles for reform of the regulatory and institutional regime for the world's financial sectors." Said White House officials, FT 10/23/08

13. Liquidity

- "It is useful to remember that the concept of 'liquidity' does not refer simply to the volume of many available, but also the way it moves how freely and quickly it can move between parties." Paul J. Davies "The Real Reason to Regulate Derivatives in Liquidity" FT 10/03/08, p. 26
- "The perceived abundance of liquidity was, in reality, merely an illusion created by high levels of debt and leverage as well as the structure of global capital flows." Satyajit Das, FT 10/22/08, p.24

14. Policy Responses and Progression of the Crisis

- “Highlighted volatility in daily Libor settings made it extremely difficult to trade a swap... One flow is a fixed rate that is priced off Treasury yields while the floating rate references three month Libor.”
- The almost zero interest rates volume and liquidity in the repo market are being hurt. “With rates this low there is little incentive for securities holders to lend their supply and we are likely to see fails start rising again.” Michael Cloherty, Bank of America Securities.
- Michael Mackenzie “Awaiting the Return of the Repo Market,” FT 12/17/08, p.21
- “ECB looks at radical solutions to unglue inter-bank lending.” FT, 12/17/08, p.21. The ECB is considering setting up “a central clearing house for inter-bank lending.”
- The spread between the 3 month Euribor and base interest rates around 120 bp is roughly double its level before Lehman. Such a clearing house was a major function of the first central banks in the 18th and 19th centuries.
- “Little cheer for US from Japanese experiment with easing.” FT, 12/18/08, p.2.
- “The massive increase in reserves was effective in maintaining financial system stability when the financial system was in a delicate and unstable situation, but was not that effective in boosting demand.” Masaaki Shirakawa, Governor of Bank of Japan.
- “John Richards, head of Asia Pacific research at Royal Bank of Scotland, says that quantitative easing which involved the BoJ in large scale purchasing of government debt – was to blame for a bubble in the bond market and its painful bursting in 2003.”

- “The collapse of investment banks this year highlighted the pivotal roles played by the two critical sources of short term funding that had long been taken for granted: the inter-bank deposit market and the government repurchase or ‘repo’ market.”
- “Since the end of October, the [Fed] has purchased more than $313 bn in commercial paper alone.”
- The freeze in lending was best tracked by watching a surge in floating money market rates [LIBOR] three month dollar rate which “rose to a peak of 4.82 percent in October.” By year end it had fallen well below 2.
- “Strong demand for recently issued bank debt that is backed by the FDIC has also helped easing funding strains.”
- “Lehman’s bankruptcy left investors questioning the creditworthiness of all bank and the repo market hit the wall.”
- “The breakdown in the repo market also unsettled the trading of interest rate swaps as dollars often hedge the derivative with government paper.”

“US Fed Slashes Rates to Near Zero” FT 12/17/08, p.1

- The Fed vowed “to use” all available tools to promote the resumption of sustainable growth to preserve price stability.
- “The aggression of the statement caught the market by surprise.” S+P rose 5.12.
- While some have called the Fed’s policy “quantitative easing” the Fed explained its approach is different from the Bank of Japan’s post bubble strategy since it targeted bank reserves while “The Fed policy is driven by its credit operations.”

What's Been Going on during the Crisis?

- "For now, an uneasy truce exists between most companies and their lenders. Some banks made tentative attempts in the autumn to pull out of loan agreements because their cost of financing had spiked so high. But they quickly backed down. In turn, banks are doing what they can to persuade corporate treasurers not to draw down credit facilities unless they have to."
- As the economic news worsens... more firms will be at risk of breaching covenants on standard measures such as the ratio of debt to earnings... a good deal of debt will fall due in the next few years." Reuters Loan Pricing Corporation, a data provider, estimates that more than $1 trillion of loans will need to be refinanced globally in each of the next three years, mainly in America and Europe... Auditors... want to be reassured about refinancing prospects well before maturity dates so they can sign off on companies ongoing concerns... facilities are likely to shrink as non-bank investors such as hedge funds drop out of loan syndicates." From "Corporate Lending: Waiving or Drowning?" The Economist, 12/6/08, pp.89-90.

John Authers "The Short View" FT 12/5/08, p.15.

- "The credit crisis is widely held to have begun in July [2007]. That was when the market for debt instruments backed by sub prime mortgages cracked, starting a chain of reaction that is still going on."
- But for investment grade non-financial companies, the true 'crisis' did not start until three months ago – after the Lehman bankruptcy... the extra yield investors need before they will lend to investment grade companies has gone from 2.7 to 5.9 percentage points in three months.

- “According to Duetsche Bank, current spreads imply a 50 percent default rate for high yield credits...” “Equities will not sustain a meaningful rally... until investors buy credit again.”

Floyd Norris “Foreign Investors Trade Safe for Safest” NYT 12/20/08, B3

- “In October overseas investors and governments were net sellers of $50 billion of agency securities. More foreign money came into Treasures – almost $9 billion – than in any previous month.”
- “Until the housing market began to show serious weakness in 2007, foreign flows into agency securities were running at almost $300 billion a year, and the flow stayed strong until the summer scare.”

Ricardo Hausmann “The Crisis Gives America New Financial Power” FT 12/16/08, p.11

  - “The US has become the only remaining super borrower... At the same time, fairly well behaved countries such as Brazil, Columbia, Mexico, Peru, South Africa and Turkey have essentially lost access to external finance.”
  - “If the US re-circulates financial resources, by on-lending to well behaved countries that have lost access because of the financial crisis, it... would make money for the US taxpayer [and] give the US enormous soft power in the world.”

“How India Avoided a Crisis” Joe Nocera, NYT 12/20/08 B1

- “Indian banks are not levered like American banks. Capital ratios are 12 and 13 percent, instead of 7 or 8 percent. All these exotic structures like C.D.O. and securitizations are a tiny part of our banking system.” Chandra Kochhar CFO of Icici.

- “Two years ago, the Indian real estate market - commercial and residential alike – were every bit as frothy as the American market.”
- “Part of the reason is cultural. Indians are just not as comfortable with credit as Americans.”
- “Perhaps the most important [factor] India had a bank regulator who was the anti-Greenspan [V.Y. Reddy]. 70% of India’s banking system is nationalized.”
- “Mr. Reddy saw his job as making sure Indian banks did not get too caught up in the bubble mentality.”
- “Our regulators, unlike theirs, just stood by and let it happen.”

“Zero Interest? Japan Discovered that Wasn’t Enough” Martin Fackler, NYT 12/20/08, B3

- “Economists and former Bank of Japan officials say the biggest lesson they learned was that cutting interest rates alone had almost no effect when the financial system has fallen into a crisis as deep as Japan... in the 1990s.”
- “Japanese banks simply refused to lend in an environment where borrowers could suddenly go bankrupt... credit only began to flow freely again only after 2003, when regulators adopted new policy of auditory banks and forcing weaker ones to raise new capital or accept a government takeover.”
- “Another lesson... was the importance of consistency.”

From FT’s World Economy 2008 10/10/08

- Up to July 2007, Libor spreads were close to zero; they spiked up in August then bounced around between50 and 100 bp for most of the time until September 08. When they shot up, the US over 250 and Euro to around 125.
- "Through the whole of the past two decades, an increasing reliance on the supremacy of secured or asset-based lending was developing – so much so that people forgot borrowers' ability to repay from cash flows." Paul J Davies "High Noon Chimes for Collateral with No Name" p.2
- "Giulio Tremonti, Italy's finance minister has been an outspoken critic of what he sees as unfettered globalization and deregulators – "He compared Faust's past with the devil to the 'diabolic past' between the US and Asia whereby US debt paid for low-cost Asian goods." "A Critic Demands a New Bretton Woods" FT 10/10/08, p.9

Oliver Hart and Luigi Zingales "Economists Have Abandoned Principle" WSJ 12/3/08 A17

- "This year will be remembered not just for one of the worst financial crises in American history, but also as the moment when economists abandoned their principles. There used to be a consensus that selective intervention in the economy was bad. In the last 12 months this belief has been shattered."
- "The lack of a coherent strategy has increased uncertainty and undermined the public's perception of the government's competence and trustworthiness."
- "[Government] should intervene only when there is a clearly identified market failure."
- "[Bankruptcy] is often viewed as a kind of death, but this is misleading. Bankruptcy is an opportunity... to make a fresh start."

- "Instead of bailing out AIG and its creditors, it would have been better for the government to guarantee AIG's obligation to ... those who bought insurance from AIG. [This] would have nipped the contagion in the bud."
- "Past mistakes do not constitute a market failure... it makes no sense for the government to support house prices..."
- "Where there is arguably a market failure is in mortgage renegotiation [because] lenders are disposed and cannot easily alter the terms of the mortgage."

Henry Kaufman "How the Credit Crisis Will Change the Way America Does Business" WSJ 12/6-7/08, A11

- "There have been more than a dozen financial crises since the end of World War II. The aftermath of each was transitory... The current crisis will be different. It will usher in profound and lasting structural, behavioral, and regulatory changes."
    - International portfolio diversification has been undermined.
    - Risk modeling will lose popularity.
    - Financial concentration will gain even greater momentum and influence.
    - The end of an era of ballooning non financial debt.
    - US government borrowing will continue to swell, at least for a few years.
    - Americans will begin to save again.
    - Regulatory reform of financial markets will carry high stakes.

Stephen Roach "Uncomfortable Truth about Our World after the Bubble" FT 12/3/08, p.24

- "While the US certainly made its fair share of mistakes, the rest of the world was more than happy to go along for the ride. That's especially the case in Asia. China and other producers upped the ante on their export led impetus to growth. By 2007 the export share of developing Asia's gross domestic product exceeded 45 percent – fully 10 percent points higher [than before the Asia crisis]."
- "Do not analyze a post-bubble recession as a normal business cycle... on the demand side focus on the American consumer... on the supply side focus on China."
- He predicts the recession will last throughout 2009 with "an anemic recovery at best in 2010."

"A New Language for Investors" FT Interview with Chris Flanagan, Head of Asset Back Research at JP Morgan, 12/1/08

- "Prices on triple A securities are down to 30, 40, 50 cents on the dollar."
- Aline Van Duyn "There are very few, maybe no buyers, of many of these securities and lots of people, banks, and hedge funds... who want to see them."
- CF "A large, large portion of the asset-backed investor base, anywhere from 65 to 75 percent... is gone... It's going to be gone for a very, very long time."

Nouriel Roubini "How to Avoid the Horrors of 'Stagflation'" FT 12/3/08, p.13

- "Traditionally, central banks are the lenders of last resort but they are becoming the lenders of first and only resort..."
- "Deals worth $103 bn may be under threat."
- JP Morgan estimates there are about $757 bn outstanding. Citigroup estimates $584 bn.

- “The private nature of the CDO industry makes estimating even the size of the market difficult.”
- “From the experience of Japan, the financial crisis will go through three phases, each requiring a different measure. The first... is mainly a liquidity crisis. ... The second phase... comes mainly from working out bad assets... The third ... is massive corporate failures.”
- “The US must call for help from the rest of the world to set up a credit line to the order of $5,000 billion... to provide liquidity for troubled financial institutions.”

Kenneth Ohmae “America Must Seek Aid for a Global Credit Line” FT 10/1/08 p.13

- “Deleveraging and economic slowdown are distinct yet inter-related factors... the two together imply negative feedback loops that lead to valuation overshoots. As a result, expect additional institutional failures and consolidation in the weeks ahead... expect policymakers to continue to face complex policy challenges for which there are no ‘first best’ solutions.” Mohammed El Erian “Pipes are Unclogged but the All-Clear is a Long Way Off” FT 11/4/08, p.28

Burton Malkiel “Finding a Way to Regain Trust in the Battered Financial System” FT 11/13/08 p. 26

- “There... is a popular view that the government should regulate complex derivatives out of existence and impose stringent limitations on executive compensation.”
- He argues both have caused problems but thinks the market will provide a better solution than regulation. He argues that “under present arrangements, executives of our financial

institutions are often paid extremely large cash bonuses based on their attainment of annual profit goals. Such incentives tend to encourage excessive risk taking and short-term behavior. If the risks succeed manager's benefit, if the risks are unsuccessful, the enterprise as a whole suffers."

- "The best option is for boards of directors to require that all executive incentive compensation be paid in restricted stock. With minor exceptions, executives would be required to hold the stock not only through out their tenure with the company but for several years after."
- "The market itself can provide the institutional arrangements that preserve the advantages of CDS, while avoiding the counterparty and system risks seen in the current crisis."
- What we need is a shift from the current over-the-counter bilateral CDS market to an exchange-traded market. Countries should be more 'plain vanilla' and standardized. They should be fully collateralized and traded on a central exchange.

Krishna Gisha "Fed's New Strategy to Cut Cost of Borrowing" FT 2/18/08, p.2

- "The Fed's new strategy... is primarily focused on risk spreads... The Fed does not know what exact combination of factors explains today's high risk spreads. If factors other than liquidity risk explain a large path of the risk spreads, then the Fed operations may not reduce spreads as much as it hopes."

Mohamed El-Erian "Only New Thinking will Save the Global Economy" FT 12/4/08, p.5

- "The way Lehman failed disrupted payments and settlements. Around the world, market participants stepped back in was from what up to then were standardized, routine predictable transactions."
- "The situation will get worse before it gets better and it will only get better if there is a shift in thinking in both the private and public sectors away from comforting yet unrealistic notions of a return to 'business as usual' and towards the more nasty reality of a volatile joining to a different destination."
- He foresees "more market accidents."

David Roche "Interventions Will Only Prolong the Credit Crisis" FT 12/11/08, p.21

- "The underlying cause of the great global credit crunch is the ingrained societal behavior of the US and many other economies over the past two decades: instant gratification... This did away with the economic virtue of thrift and encouraged excessive consumption."
- "Any attempt to prolong the credit party will simply prolong the disease."
- "In the US, about 90 percent of all the measures to deal with the credit crisis aim to prevent asset prices falling to market levels, at which they would clear."
- "What the world economy needs is reduced leverage."

15. Treasury Auction

- **"**Treasury has no expertise in this ridiculous new venture." Vernon Smith WSJ 10/9/08
- **"**I am not aware that the Treasury Department presented any evidence on auctions that have been successful when they are used for assets that are heterogeneous." William Poole quoted in NYT 10/12/08

“Credit Markets Get Ugly as Tarp Turns it Back on Toxic Assets” FT 11/20/08, p.25

- “Bankers and analysts... say that the renewed gloom in US asset-backed bonds has knocked both European markets and general inter-bank liquidity.”
- The price on AAA US MBS dropped from around 40 to 32 cents with few buyers.
- “Banks back mandatory CDS clearing” in order to hand off proposals that all CDSs be traded on an exchange.

Frank Partnoy “Prepare to Bury the Fatally Wounded Big Banks” FT 1/19/09, p.7

- [Citigroup and Bank of America’s] fate was sealed in early 2007, when the value of derivatives linked to sub prime mortgages collapsed.
- “Although sophisticated investors recognized early on that this crisis was about solvency, not liquidity, and that the liquidity crunch arose from fear that banks could not repay their obligations, other came to this view more slowly. The last, as usual, were the credit rating agencies.”
- “Government intervention... can prolong the inevitable, but only for so long... The massive government intervention of recent months merely provides a financial hospice to give in time to say goodbye.”

The Lex Column: “Beggar thy Lender” FT 1/19/09 p.12

- “The flight to safety that recently sent US Treasury note yields to a 55 year low given a false impression that there is perpetually excess demand for such ‘risk free’ bonds assuaging concerns about a projected record $1300 billion budget deficit.”

- “Luckily for Washington’s policymakers foreigners can still be counted on, voluntarily or not... Times like these are when having the global reserve currency comes in handy.”

Simon Johnson (MIT) quoted in NYT 1/17/09 A14

- “It’s not rocket science. When you do a recap, you need overkill. But then, you also need to take the bad assets off the books.”

“Thomas Friedman” Time for (Self) Shock Therapy” NYT 1/18/09 WK 13

- “No amount of stimulus will work without a healthy banking system.” – Tom Friedman
- “Obama needs to inject some truth serum into the banking system. No one trusts the bank, and even the bankers don’t trust each other.” David Smick, author of *The World Is Curved.*
- “The Treasury needs to be doing its own brutal, burn-down analysis of every major bank’s balance sheets – and then act accordingly.” Tom Friedman

Gretchen Morgenson “The End of Banking as We Know It” NYT 1/18/09 Bu1

- “Citigroup, it turned out, was too big to manage, too unwieldy to succeed and too gigantic to sell t one buyer.”

From Paul Krugman “Wall Street Voodoo” NYT 1/19/09 A23

- “I suspect... that policymakers – possibly without realizing it – are gearing up to attempt a bait and switch: a policy that looks like the clean up of the savings and loans, but in

practice amounts to huge gifts to bank shareholders at taxpayers expense, disguised as ‘fair value’ purchases of toxic assets.”

- “why go through these contortions? The answer seems to be that Washington remains deathly afraid of the N-word – nationalization.”

From “Better Off in 4 years? Unlikely” Peter Gosselin LAT 1/19/09, p.1

- “We’re in a post-bubble global recession and post-bubble recessions are lethal for growth.”
- “China and other Asian economies were driven by export bubbles, which, in turn were a play on the US consumption bubble.” Stephen S. Roach, Chairman of Morgan Stanley Asia.
- “With the bubble now burst, the US and Asia are dragging each other down.”
- “Much of the Asian boom appears to have sprung from a sort of financial engineering that served as a matched set to that in the US. By keeping their currencies undervalued, they kept export prices low and encouraged others- especially Americans - to keep buying.” Gosselin.

16. Miscellaneous

From Carmen M. Reinhart and Kenneth S. Rogoff “Is the 2007 Sub-Prime Financial Crisis No Different?” NBER WP 13761, January 2008

- “First came rationalizations... next comes reality.” “The United States looks like the archetypical crisis country, only more so.” p.7

- “The run-up in U.S. equity and housing prices that Graciela Kaminsky and Carmen Reinhart (1999) find to be the best leading indicators of crisis in countries experiencing large capital inflows closely tracks the average of the previous eighteen post World War II banking crisis in industrial countries.” p.2
- “The average drop in (real per capita) output growth is over 2 percent, and it typically takes two years to return to trend.” pp.2-3