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Proposal: 1421 - Guidance on Stress Testing for Banking Organizations

Subject: Stress Testing Guidance

Comments:

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Proposal: Proposed Guidance on Stress Testing for Banking Organizations with more than $10 Billion in Total Consolidated Assets
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Comments:
In "Proposed Guidance The text of the proposed guidance is as follows: Office of the Comptroller of the Currency Federal Reserve System Federal Deposit Insurance Corporation Guidance on Stress Testing for Banking Organizations With Total Consolidated Assets of More Than $10 Billion" the proposal is all about process so that the OCC, FDIC, and FRB can't be held accountable if the process fails. This is a failure on the part of the OCC, FDIC, and FRB. I would suggest that you read Models Behaving Badly: Why Confusing Illusion with Reality Can Lead to Disaster on Wall Street and in Life. Emanuel Derman wrote, Physicists, brought up on a diet of astounding theories and successful models have the ability to distinguish a theory from a model and a good model from a bad one. Economists for the most part have never seen a genuine theory, and so discrimination is harder. The simple models they work with fail to reflect the complex reality of the world around them. That lack of success is not the fault of economists, for people have proved difficult to theorize about, and we still await and understanding of Spinoza's adequate causes for their behavior. But it is the economists' fault that they take their simple models so seriously. The Proposed Guidance does not specify a limit beyond which the modeling is too erroneous, should not be trusted and thrown out.
Recommendation 1. Put in a specific maximum error limit that can't be exceeded when comparing the model output to actual results. Also, Derman wrote, After twenty years on Wall Street I'm a disbeliever. The similarity of physics and finance lies more in their syntax than their semantics. In physics you're playing against God, and He doesn't change His laws very often. In finance you're playing against God's creatures, agents who value assets based on their ephemeral opinions. The truth therefore is that there is no grand unified theory of everything in finance. There are only models of specific things. Often,
economist fit the data to the model rather than fit the model to the data.
Recommendation 2. When using statistics, the model should fit the data.
Recommendation 3. Disallow models, that fit the data to the model. See http:/ /ww w. math.columbia.edu/~woit/wordpress/?p=4140 Richard Bookstaber in his Blog "Physics Envy" concludes, Lo and Mueller conclude their paper by considering that "the study of economics may be closer to disciplines such as evolutionary biology, ecology, and meteorology". And indeed, an increasingly popular alternative to borrowing from the tools of physics is to push finance into a biological model. The argument is that in the biological sphere, there is the interaction and feedback that physics lacks. Evolution is the result of this

dynamic, of one species changing over time to best another species, just as one trader will change strategies to best another trader. But this model also does not fit. Evolution is not a conscious process. It is a winnowing out of the poorly designed and emergence of the better designed on the basis of the process of natural selection. In contrast, in finance the process is conscious and intelligent. A better analogy than physics or biology is a military one. The point is that there is a strategy of intelligent reaction to any action, an arms race to leapfrog one another in information gathering and technology, to know what others are doing, and to react in a way that they will not anticipate. This is the point where I could pull out quotes from The Art War about seeing into the mind of the enemy, attacking when your opponent believes you will retreat, and the like. That is not physics. See http:/ /rick.bookstaber.com/2010/08/physics-envy-in-finance.html Recommendation 4. While game theory is closer to the art of war, game theoretic models should be the preferred risk models. We should note that simulations of agent based models of trading can generate large tail events. Even when the agents follow simple trading
rules, the model found, No longer is the pattern a simple periodic oscillation; rather, the pattern is much more random and is driven by a complex set of interactions among all the agents. The cash flows shift again. Although the market might be getting more efficient, it is certainly not getting less volatile. Strategies that had been unprofitable when the seasonal players were dominating may now become profitable and begin to accumulate wealth. This scenario happens in the absence of noisy inputs. The simulation is completely deterministic. The statistical properties of prices continue to change, even tens of thousands of iterations later, as the feeding relationships of who is exploiting whom shift around. There is a rich and slowly evolving ecology of agents, with shifting interactions. Market efficiency takes a long time to happen. See http:/ /tuvalu.santafe.edu/~jdf/papers/aimr.pdf Further, Mandelbrot argues that statistical series follow power laws. See htp://books.google.com/books/about/Misbehavior_of_markets.html?id=9w15j-Ka0vgC Recommendation 5. The stress testing should include the interactions among the firms to offset risks and identify whether such risk management strategies interactions create further volatility. Recommendation 6. The stress testing should include series that generate the required tail events. There has been criticism of the use of numerical scoring schemes such as the CAMELS rating. Further, it is known that peoples judgment and decision making is flawed. We have known biases in thinking including: cognitive dissonance, confirmation bias, anchoring, ambiguity aversion, availability bias, contextual definitions, framing, and dynamic prospect theory. See The Failure of Risk Management http:/ /howtofixriskmgt.com/ and http:/ /ww w. cambridge.org/gb/knowledge/isbn/item2705734/?site_locale=en_GB Recommendation 7. The persons performing the model validation should have training in judgment and decision making biases
and methods to reduce them. Recommendation 8. The staff should calculate the conditional probability of a failure of the stress testing given a successful series of stress tests. I sugget that you start over.