



May 18, 2009

The Honorable Paul Broun, M.D.
Ranking Member
Subcommittee on Investigations and Oversight
Committee on Science and Technology
U.S. House of Representatives

Dear Dr. Broun,

Thank you for the opportunity to submit these thoughts for the Subcommittee's hearing on "The Science of Insolvency." I am Alex Pollock, a Resident Fellow at the American Enterprise Institute, and these are my personal views. Before joining AEI on 2004, I spent 35 years in banking, including twelve years as President and CEO of the Federal Home Loan Bank of Chicago, and I have both experienced and studied numerous financial booms and busts.

Is Economics a Science?

As the charter for this hearing says, "Economics aspires to be a science." But in this it does not succeed—neither does finance.

Financial crises keep happening. My banking career started during the credit crunch of 1969, which was followed shortly afterward by the failure of the Penn Central railroad (doubtless a "systemically important" railroad) and panic in the commercial paper market. Skipping ahead a few crises, we find the financial crisis of 1989-91, with the final collapse of the regulated savings and loans, a terrific commercial real estate bust, and severe insolvency problems for regulated commercial banks, of which more than 1,400 failed in the decade ending in 1991.

Here's a familiar-sounding headline: "Banks Entering Era of Painful Change—More Bailouts, Bankruptcies, Layoffs Likely." The date? July 22, 1991.

Major regulatory reforms and reorganization marked the time, including three Acts of Congress: the Financial Institution Reform, Recovery and Enforcement Act of 1989; the FDIC Improvement Act of 1991; and the Housing Act of 1992. Such actions would insure, the then-Secretary of the Treasury said, “This will never happen again.”

But it did happen again.

Could it happen again if economics and finance were science? To paraphrase financial observer James Grant: science is progressive, finance is cyclical.

The transcendent scientific genius, Isaac Newton, having first made a lot and then lost even more of his own money in the collapse of the South Sea Bubble, wrote in disgust, “I can calculate the motions of the heavenly bodies, but not the madness of people.” You can apply math to finance, but that doesn’t make it science.

But why should this be? Don’t we learn from experience? Doesn’t economic knowledge increase? And how about having computers, vast amounts of data and information, new mathematical models to guide lending and investing decisions?

The former CEO of Household International, first bought by HSBC and then brought low by the subprime mortgage collapse, is said to have bragged that his operation had 150 Ph.D.s to model credit risk. The idea that improved knowledge will keep us out of trouble is not new. “Disraeli had asserted that the boom of 1825 would not turn to bust because the period was distinguished from previous ages by superior commercial knowledge,” but there was a big bust anyway.

Our 21st century housing bubble, now deflated, was inflated despite—indeed partially because of—amazing computer power, reams of data, and sophisticated models operated by exceptionally bright analysts informed by Nobel Prize-winning financial theories. These computerized models created a sense of security, just as did the “superior commercial knowledge” of 1825.

As the great investment guru, Benjamin Graham, wrote in his classic The Intelligent Investor:

“The concept of future prospects...invites the application of formulas out of higher mathematics to establish the present value of the favored issues. But the combination of precise formulas with highly imprecise assumptions can be used to establish, or rather to justify, practically any value one wishes.... Mathematics is ordinarily considered as producing precise and dependable results: but in the stock market [or in the subprime mortgage-backed securities market] the more elaborate and abstruse the mathematics, the more uncertain and speculative are the conclusions.”

Models and Recursiveness

Consider Moore's Law of Finance: "The model works until it doesn't." Perversely, the more everyone believes the model, and the more everyone uses the same model, the more likely it is to induce changes in the market that make it cease to work.

In this cycle the market and the regulators became enamored with the statistical treatments of risk, whereas the most important issue is always the human sources of risk. These human sources include short memories and the inclination to convince ourselves that we are experiencing "innovation" and "creativity," when all that is happening is a lowering of credit standards by new names.

For example, with the spread of "stated income" loans, the disastrous previous experiences with "no doc" and "low doc" loans seem to have been forgotten. Such loans are a notable temptation, or even invitation, to a little lying in order to facilitate the dream of buying the house whose price will always keep rising.

Human elements of risk also include optimism, gullibility, short-term focus, genuine belief in momentum or the extrapolation of so-far successful speculation, group psychology or the lemming effect, and inevitably fraud.

We should not be surprised that as optimism increases, so does credulity. As Walter Bagehot observed:

"The good times of too high price almost always engender much fraud. All people are most credulous when they are most happy. . . . Almost everything will be believed for a little while."

The subprime boom and bust cannot be discussed without considering securitization of subprime pools through tranching, senior-subordinated structures based on mathematical models. The lower tranches of subprime MBS were extremely highly leveraged to credit risk. They were often gathered into CDOs and further tranching, thus creating securities hyper-leveraged to credit risk.

Some of these tranches went to buyers who were greatly surprised by the vast losses. This must put us in mind of Stanton's Law:

"Risk migrates to the hands least competent to manage it."

This is because the more competent can manage their risk by passing it on to the less competent.

But there is another possibility: "when genius fails," the extremely clever may believe too much in their own models and cleverness, then find out they had much more risk and much less science than they thought—and so the fall of famous Wall Street firms.

Belief—For Example, Belief in House Prices

How should economics and finance deal in the surges of overoptimistic belief—of course followed by surges of overpessimistic fear?

We had a housing bubble and it was huge. (So did a number of other countries.) That is the indubitable fact: What is its theoretical explanation?

In the bubble, according to the Case-Shiller national house price index, U.S. average house prices increased by an enormous 90% from early 2000 to the peak in mid-2006. Since then, they have fallen about 30% from the peak, back to about the level of 2003.

We are now two and one-half years into the deflation of the housing bubble with accompanying defaults, foreclosures and massive losses to lenders, borrowers, home builders, investors and taxpayers. National average house prices have gotten about back to their longer-term trend line. As gravity pulls a thrown object back down, house prices are coming back to their trend: in retrospect, this hardly seems a surprise.

“But,” the earnest and rational voice of one of my colleagues insisted, “did they really believe house prices couldn’t go down?”

Indeed, how could anybody believe that the prices of houses don’t go both up and down? For that matter, how could anybody believe that the price of anything couldn’t go down as well as up? That is surely the nature of a price.

Perhaps here poetry is more useful than mathematics:

So subtly is the fume of life designed
To clarify the pulse and cloud the mind.

The speculative pulse is likely to speed up and the mind become especially clouded in crowds. James Grant, astute and acerbic chronicler of the foibles of financial markets, suggests that “in order to have a really big asset price bubble, a critical mass of human beings is all that’s required.”

But how about the professionals? Did the financial professionals of the mortgage originating and investing markets, or even more important, of the credit rating agencies who were rating mortgage-backed securities, believe house prices couldn’t go down? No, they didn’t.

They were well aware that in the last three decades there have been notable housing and mortgage busts, with house prices of formerly hot markets falling and then high defaults and losses on mortgage loans.

In fact, the severe “oil patch” default and loss experience became a key stress test the rating agencies used in rating mortgage pools. Note the irony that “stress tests” are now considered a key element of financial regulatory policy.

The professionals knew very well that painful housing and mortgage busts had occurred and assumed they would continue to happen-- on a regional basis.

But it was thought that this would not, and perhaps could not, happen on a national average basis. The U.S. is a truly big country, with an even bigger economy including a great variety of regions and economic characteristics. Oh, national average house prices could go sideways for a while, while general inflation reduced them in real terms, but not actually fall in nominal terms, it was commonly said. “History is definitive,” pronounced the American Banker, “the national average price of a home may remain flat for a number of years, but it doesn’t fall.”

Even the mortgage finance professionals, steeped in data and models, by and large thought that house prices would not fall on a national basis, let alone by 30%. But they did.

The belief that they couldn’t fall made it possible for them to do so—in the paradoxical and recursive way of financial markets.

Risk and Uncertainty

Correctly to forecast and moreover control the financial future is a literally impossible task. This is because of the exceptionally complex and very rapid recursiveness of financial markets and the resultant Uncertainty. This “Uncertainty,” with a capital “U,” means, remembering the classic definition of Frank Knight, that you not only do not know the odds of events, but you cannot know the odds.

It is in vain to think that it or anybody can or could foresee all future financial problems or prevent all future bubbles and busts. Everybody, no matter how intelligent and diligent, no matter how many economists and computers are employed, makes mistakes when it comes to predicting (let alone controlling!) the future.

Because uncertainty is fundamental, sometimes disastrous mistakes will continue to be made by entrepreneurs, by bankers, by borrowers, by central bankers, by government agencies, by politicians, and by the interaction of all of the above.

Knight wrote: “If the law of change is known, no [economic] profits can arise.”
Likewise: “If the law of change is known, no financial crises can arise.”

But in economics and finance, the law of change is never known.

So change reflecting uncertainty goes on, bringing booms and busts periodically, and Adam Smith's "progress of opulence" on the trend.

Professor George Kaufman observed: "Everybody knows Santayana's line that those who fail to study the past are condemned to repeat it. When it comes to financial history, those who do study it are condemned to recognize the patterns they see developing, and then repeat them anyway!"

Economics and finance might be science, if it weren't for people.

Thank you again for the chance to share these views.

Yours truly,

Alex J. Pollock