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THE ROLE OF INCENTIVES IN THE WORLD FINANCIAL CRISIS

By

ROBERT J. AUMANN

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CENTER FOR THE STUDY OF RATIONALITY

Feldman Building, Givat-Ram, 91904 Jerusalem, Israel
PHONE: [972]-2-6584135 FAX: [972]-2-6513681
E-MAIL: ratio@math.huji.ac.il
URL: http://www.ratio.huji.ac.il/

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Abstract:

A lecture explaining the causes of the 2008-9 world financial crisis in terms of ordinary economic processes. The lecture was delivered at the 39th St. Gallen Symposium, University of St. Gallen, Switzerland, 8 May 2009.

We are from the centre not for rationality but for the study of rationality. There is a difference.

In the Centre for the Study of Rationality we have some highly practical people, and I am not one of them. I am a theoretician and I do not understand very well how the real world works.

Let me tell you a little story: The Chairman here mentioned that I got this prize, the Nobel Prize in economics, a few years ago. Right after this prize was announced, they called a press conference in the building of the Centre for the Study of Rationality. The Swedish ambassador was there, the president of the university, your humble servant and a whole lot of reporters, journalists. One of the journalists asked me, “Professor Aumann, how is it that the Israeli economy is doing so poorly?” So I said, “Well, I do not really know very much about economics, but my friends who are economists tell me that the Israeli economy is actually booming, is doing very well, so I do not really understand your question.” The response of course to my saying that I do not know much about economics was exactly the response that I got over here: A peal of laughter. But it is true, I am sorry to say. It is true.

So what I am going to tell you now is the result of conversations I had over several months with my colleagues at the Centre for the Study of Rationality, who do know quite a bit about economics. I listened to them and what they said seemed to make sense and I am going to deliver it to you.

I would like to talk about the causes of the financial crisis, what brought it about. There will not be time to talk about the remedies and there will not be time to talk about the prognosis, but seriously, the message I want to get across is that there has been all kinds of talk about the causes; saying that the market economy has gone bankrupt, let us go back to socialism, communism, government running of the economy, or it really proves that people do not behave rationally and let us abandon perhaps not the market economy, but let us abandon economics and economic theory and go to behavioural economics and so on and so forth.

All of that is not the case. People were responding entirely to their incentives. They were acting in a classical economic way. They were motivated to do these things and everything went according to incentives, according to the way that classical economic theory and game theory would have predicted.

The problem is that the process is a complicated process. What brought about the crisis was sub-prime lending. This was a wonderful idea, but it was a new idea. It was a new idea and new ideas sometimes have quirks and little angles which are not entirely seen through when they are first devised.

These things happen. One has a brilliant new idea for revising a system, but it has unforeseen consequences. That is not to say that the consequences *could* not have been foreseen. A proper analysis, as you will see, says, “Hey, this is something that had to happen, only we did not think it through properly.”

So it was a mistake. It was a mistake in reasoning. It was not that people did not respond to their incentives. Everybody acted in accordance with his incentives. The only thing was that the process that this set off was a little too complex to foresee in the first place. Now we understand it and you are going to understand it in ten minutes. I understand it already and you will understand it in ten minutes. It is not that complex, but it was too complex to be foreseen beforehand. This happens with new ideas.

We had a change in the electoral process in Israel about 15 years ago and it had unforeseen consequences, although they should have been foreseen. And then we changed back after one election. Not because the results were not good, but the powers that be did not like them and they had not foreseen them.

The immediate cause of the crisis was sub-prime lending. What happened in the sub-prime lending fiasco? What happened was that first of all somebody had a great idea. It used to be that if you wanted to buy a house and did not have enough money to pay for it in your bank account, you went to a bank and said, “Listen, mate: Lend me some money, I will buy the house and if I do not repay the money, you will take the house back." That's what a mortgage is: a classical mortgage. Then the Bank would say, "Very well, Mr. Aumann, we will be glad to do that. You pay us some interest and we will be glad to do that. But who are you? We understand that you have a job, but will you be able to repay? We do not like defaults.” And I convinced them that I would be able to repay and I had a nice job and had a steady income and the schedule of payments was okay for me. So they lent me the money.

Somebody else was not able to convince the bank; it was not likely that he would default, but there was a larger probability than was acceptable to the bank that he would default. So they said, “We are very sorry, Mr. Baumann, but we will not be able to make the loan.” And that was the end of the story.

Then somebody came up with this bright idea: We should be able to do something even for the Baumanns, who have a higher probability of defaulting. That is, we take all the Baumanns and we bundle them together and we say, “Some of these people are going to default, but most of them are not going to default, so we have made a pool out of all those loans and we will charge more interest than to the prime borrowers. And that larger amount of interest will cover the losses that we take because of the defaults.”

It is a brilliant idea. It is totally sound, right? Yes, I think it is totally sound. It sounds totally sound. What happened? *Gesagt, gemacht*. They did this.

And sure enough, some of these people defaulted. But what happened before the people defaulted? Before the people defaulted, a lot of people who had not been able to buy houses before were now getting loans to buy houses. They were getting money to buy houses, so there was a big demand for housing and the contractors came in to meet that demand and they built more housing.

Now what happened? After a while, some people were paying and some people, as had been predicted and foreseen, indeed started to default. So the banks said, “Excellent! We will take the house back.” This had been perfectly foreseen. “We will take the house back.”

But what happened to those houses? They were not burnt down, the houses that were taken back. They did not bulldoze them. They were there on the market. What happens to the market now that there is a whole bunch of additional houses on the market? And what happens to the market when those houses that were repossessed come on the market? Well, the good old law of supply and demand also holds for the housing market. There was an excess supply of houses, and prices came down.

Now prices came down so much that people who were able to repay did not want to repay. Why? Because in the United States it is quite common to have fairly low down-payments. We will talk about that a little more a little later. Let us say you make a 10% down-payment on a house that is worth half a million dollars and then the price drops to USD 400,000 and you say, “Hey, I am paying off a loan of USD 450,000 …“ – you know that at the beginning nearly all you are repaying is interest, you are not repaying principle – “I am paying off a loan of USD 450,000 for a piece of property that is worth USD 400,000. I could pay it off, but I am not crazy. Why should I pay more than the property is worth?” And you go to the branch of the bank and you say, “Gentlemen, here are the keys to my house. Take them. I am going to buy another house. Rather than paying off this loan, I will take a different loan for USD 400,000. Take the keys.”

The bank took the keys and this created an even greater oversupply of houses and the price went down to USD 350,000. The whole thing spirals down and the bank is stuck with a whole lot of houses which it cannot sell. And what happens with the bank? It rupts: You have a “bank-rupt” situation.

Next, what are the underlying causes of this?

Let me get straight to one of the basic underlying causes and that is the incentives for bank managers. There were several ways that incentives for bank managers enhanced this process. One was entanglement. What happened was that whereas before this new development, banks had been more or less taking on their obligations by themselves, in the recent past they started insuring loans or doing these credit default swaps, which means that they were selling mortgages – or at least part of the mortgages – to other financial institutions.

There is something in insurance called “moral hazard”, which means that when you insure something, you are less careful about it. That is also what happened with these loans. So even on sub-prime lending, where everything was bundled together, you say, “Well, you know the probability of default is pretty low anyway. It is higher than for other loans, but it is pretty low. And anyway I do not care because I have insured the loan.”

AIG, the American Insurance Group, was mainly in the business of insuring these loans. So that is one thing that made bank managers and loan officers less careful about who to issue these loans to.

Another thing is that a loan officer is in business to make loans. That is how he makes a living. The more loans he makes, the faster he will get his promotion and his bonuses and whatever. Therefore the loan officers gradually started asking for less and less down-payment. This was one of the unforeseen things: That people would return their house even though they can pay off the loan, because the price had gone down too much.

If you make a down-payment that is 30% of the house or 50% of the house or something like that, that is one thing. But when you have a down-payment which is 10%, 5% of the house, sometimes no down-payment, sometimes negative down-payment – the bank would lend you more money than the house was worth – this is one of the things that drove the crisis.

Finally, we have the matter of the incentive compensation structure of the upper management – not the loan officers, but the upper management. Here I am not talking about the size of the compensation, but its structure. Unfortunately, we will not have time to talk about that.

Perhaps the most important factor is the entanglement. In addition to the moral hazard this created, it had an even more fundamental effect. “Entanglement” means that all these companies, all these financial institutions, were buying each other’s paper. Therefore when one goes down, they all go down.

You know what happened in New York? About ten or 15 years ago, there was a blackout. New York went dark for 12 hours. There was no electricity. The reason was that it was a hot summer’s day and in one area the transformer that supplied electricity to that area was overloaded and cut out. Now if one transformer cuts out, it is not the end of the world. That area has a problem and you go and fix the problem. But just like with insurance – credit default swaps – the electricity company had foreseen this. And they said, “If one transformer goes out, we are going to make automatic arrangements for other areas to come in and help it out.” But it was a hot summer’s day in the other areas too, so when another transformer in another area came in to help this one out, it also crashed. Then more transformers came in and everything crashed until the whole northeastern United States was dark.

That is what happened here. If one bank is in trouble because of subprime lending, that is okay. But if one after another comes in and they are all involved and they are all over-leveraged, everything goes dark. And that is what happened.