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Interview with Eugene Fama

by John Cassidy

I met Eugene Fama in his office at the Booth School of Business. I began by pointing out that the efficient markets hypothesis, which he promulgated in the nineteen-sixties and nineteen-seventies, had come in for a lot of criticism since the financial crisis began in 1987, and I asked Fama how he thought the theory, which says prices of financial assets accurately reflect all of the available information about economic fundamentals, had fared.

Eugene Fama: I think it did quite well in this episode. Stock prices typically decline prior to and in a state of recession. This was a particularly severe recession. Prices started to decline in advance of when people recognized that it was a recession and then continued to decline. There was nothing unusual about that. That was exactly what you would expect if markets were efficient.

Many people would argue that, in this case, the inefficiency was primarily in the credit markets, not the stock market—that there was a credit bubble that inflated and ultimately burst.

I don't even know what that means. People who get credit have to get it from somewhere. Does a credit bubble mean that people save too much during that period? I don't know what a credit bubble means. I don't even know what a bubble means. These words have become popular. I don't think they have any meaning.

I guess most people would define a bubble as an extended period during which asset prices depart quite significantly from economic fundamentals.

That's what I would think it is, but that means that somebody must have made a lot of money betting on that, if you could identify it. It's easy to say prices went down, it must have been a bubble, after the fact. I think most bubbles are twenty-twenty hindsight. Now after the fact you always find people who said before the fact that prices are too high. People are always saying that prices are too high. When they turn out to be right, we anoint them. When they turn out to be wrong, we ignore them. They are typically right and wrong about half the time.

Are you saying that bubbles can't exist?

They have to be predictable phenomena. I don't think any of this was particularly predictable.

Is it not true that in the credit markets people were getting loans, especially home loans, which they shouldn't have been getting?

That was government policy; that was not a failure of the market. The government decided that it wanted to expand home ownership. Fannie Mae and Freddie Mac were instructed to buy lower grade mortgages.

But Fannie and Freddie's purchases of subprime mortgages were pretty small compared to the market as a whole, perhaps twenty or thirty per cent.

(Laughs) Well, what does it take?

Wasn't the subprime mortgage bond business overwhelmingly a private sector phenomenon involving Wall Street firms, other U.S. financial firms, and European banks?

Well, (it's easy) to say after the fact that things were wrong. But at the time those buying them didn't think they were wrong. It isn't as if they were naïve investors, or anything. They were all the big institutions—not just in the United States, but around the world. What they got wrong, and I don't know how they could have got it right, was that there was a decline in house prices around the world, not just in the U.S. You can blame subprime mortgages, but if you want to explain the decline in real estate prices you have to explain why they declined in places that didn't have subprime mortgages. It was a global phenomenon. Now, it took subprime down with it, but it took a lot of stuff down with it.

So what is your explanation of what happened?

What happened is we went through a big recession, people couldn't make their mortgage payments, and, of course, the ones with the riskiest mortgages were the most likely not to be able to do it. As a consequence, we had a so-called credit crisis. It wasn't really a credit crisis. It was an economic crisis.

But surely the start of the credit crisis predated the recession?

I don't think so. How could it? People don't walk away from their homes unless they can't make the payments. That's an indication that we are in a recession.

So you are saying the recession predated August 2007, when the subprime bond market froze up?

Yeah. It had to, to be showing up among people who had mortgages. Nobody who's doing mortgage research—we have lots of them here—disagrees with that.

So what caused the recession if it wasn't the financial crisis?

(Laughs) That's where economics has always broken down. We don't know what causes recessions. Now, I'm not a macroeconomist so I don't feel bad about that. (Laughs again.) We've never known. Debates go on to this day about what caused the Great Depression. Economics is not very good at explaining swings in economic activity.

Let me get this straight, because I don't want to misrepresent you. Your view is that in 2007 there was an economic recession coming on, for whatever reason, which was then reflected in the financial system in the form of lower asset prices?

Yeah. What was really unusual was the worldwide fall in real estate prices.

So, you get a recession, for whatever reason, that leads to a worldwide fall in house prices, and that leads to a financial collapse...

Of the mortgage market... What's the reality now? Everybody talks about a credit crisis. The variance of stock returns for the market as a whole went up to, like, sixty per cent a year—the Vix measure of volatility was running at about sixty per cent. What that implies is not a credit market crisis. It would be stupid for anybody to give credit in those circumstances, because the probability that any borrower is going to be gone within a year is pretty high. In an efficient market, you would expect that debt would shorten up. Any new debt would be very short-term until that volatility went down.

But what is driving that volatility?

(Laughs) Again, its economic activity—the part we don't understand. So the fact we don't understand it means there's a lot of uncertainty about how bad it really is. That creates all kinds of volatility in financial prices, and bonds are no longer a viable form of financing.

And all that is consistent with market efficiency?

Yes. It is exactly how you would expect the market to work.

Taking a somewhat broader view, the usual defense of financial markets is that they facilitate investment, facilitate growth, help to allocate resources to their most productive uses, and so on. In this instance, it appears that the market produced an enormous amount of investment in real estate, much of which wasn't warranted...

After the fact...There was enormous investment across the board: it wasn't just housing. Corporate investment was very high. All forms of investment were very high. What you are really saying is that somewhere in the world people were saving a lot—the Chinese, for example. They were providing capital to the rest of the world. The U.S. was consuming capital like it was going out of sight.

Sure, but the traditional Chicago view has been that the financial markets do a good job of allocating that capital. In this case it, they didn't—or so it appears.

(Pauses) A lot of mortgages went bad. A lot of corporate debt went bad. A lot of debt of all sorts went bad. I don't see how this is a special case. This is a problem created by a general decline in asset prices. Whenever you get a recession, it turns out that you invested too much before that. But that was unpredictable at the time.

There were some people out there saying this was an unsustainable bubble...

Right. For example, (Robert) Shiller was saying that since 1996.

Yes, but he also said in 2004 and 2005 that this was a housing bubble.

O.K., right. Here's a question to turn it around. Can you have a bubble in all asset markets at the same time? Does that make any sense at all? Maybe it does in somebody's view of the world, but I have a real problem with that. Maybe you can convince me there can be bubbles in individual securities. It's a tougher story to tell me there's a bubble in a whole sector of the market, if there isn't something artificial going on. When you start telling me there's a bubble in all markets, I don't even know what that means. Now we are talking about saving equals investment. You are basically telling me people are saving too much, and I don't know what to make of that.

In the past, I think you have been quoted as saying that you don't even believe in the possibility of bubbles.

I never said that. I want people to use the term in a consistent way. For example, I didn't renew my subscription to *The Economist* because they use the word bubble three times on every page. Any time prices went up and down—I guess that is what they call a bubble. People have become entirely sloppy. People have jumped on the bandwagon of blaming financial markets. I can tell a story very easily in which the financial markets were a casualty of the recession, not a cause of it.

That's your view, correct?

Yeah.

I spoke to Richard Posner, whose view is diametrically opposed to yours. He says the financial crisis and recession presents a serious challenge to Chicago economics.

Er, he's not an economist. (Laughs) He's an expert on law and economics. We are talking macroeconomics and finance. That is not his area.

So you wouldn't take what he says seriously?

I take everything he says seriously, but I don't agree with him on this one. And I don't think the people here who are more attuned to these areas agree with him either.

His argument is that the financial system brought down the economy, and not vice versa.

Well then, you can say that about every recession. Even if you believe that, which I don't, I wonder how many economists would argue that the world wasn't made a much better place by the financial development that occurred from 1980 onwards. The expansion of worldwide wealth—in developed countries, in emerging countries—all of that was facilitated, in my view, to a large extent, by the development of international markets and the way they allow saving to flow to investments, in its most productive uses. Even if you blame this episode on financial innovation, or whatever you want to blame, would that wipe out the previous thirty years of development?

What about here in Chicago—has there been a lot of discussion about all this, the financial crisis, and what it means, and so on?

Lots of it. Typical research came to a halt. Everybody got involved.

Everybody's got a cure. I don't trust any of them. (Laughs.) Even the people I agree with generally. I don't think anybody has a cure. The cure is to a different problem. The cure is to a new problem that we face—the “too-big-to-fail” problem. We can't do without finance. But if it becomes the accepted norm that the government steps in every time things go bad, we've got a terrible adverse selection problem.

So what is the solution that problem?

The simple solution is to make sure these firms have a lot more equity capital—not a little more, but a lot more, so they are not playing with other people's money. There are other people here who think that leverage is an important part of the system. I am not sure I agree with them. You talk to Doug Diamond or Raghuram Rajan, and they have theories for why leverage in financial institutions has real uses. I just don't think that those effects are as important as they think they are.

Let's say the government did what you recommend, and forced banks to hold a lot more equity capital. Would it then also have to restructure the industry, say splitting up the big banks, as some other experts have recommended?

No. If you think about it...I'm a student of Merton Miller, after all. In the Modigliani-Miller view of the world, it's only the assets that count. The way you finance them doesn't matter. If you decide that this type of activity should be financed more with equity than debt, that doesn't particularly have adverse effects on the level of activity in that sector. It is just splitting the risk differently.

Some people might say one of the big lessons of the crisis is that the Modigliani-Miller theory doesn't hold. In this case, the way that things were financed did matter. People and firms had too much debt.

Well, in the Modigliani-Miller world there are zero transaction costs. But big bankruptcies have big transaction costs, whereas if you've got a less levered capital structure you don't go into bankruptcy. Leverage is a problem...

The experiment we never ran is, suppose the government stepped aside and let these institutions fail. How long would it have taken to have unscrambled everything and figured everything out? My guess is that we are talking a week or two. But the problems that were generated by the government stepping in—those are going to be with us for the foreseeable future. Now, maybe it would have been horrendous if the government didn't step in, but we'll never know. I think we could have figured it out in a week or two.

So you would have just let them...

Let them all fail. (Laughs) We let Lehman fail. We let Washington Mutual fail. These were big financial institutions. Some we didn't let fail. To me, it looks like there was not much rhyme or reason to it.

What about Ben Bernanke and Hank Paulson's argument that if they hadn't taken action to save the banks the whole financial system would have come crashing down?

Maybe it would have—for a week or two. But it pretty much stopped for a week or two anyway. The credit markets stopped for more than a week or two. But I think that was really a function of increased uncertainty about the future.

Did you think this at the time—that the government should let the banks fail?

Yeah—let 'em, let 'em. Because the failures of, like, Washington Mutual and Wachovia—other banks came swooping in to pick up their deposits and their other good assets. Of, course, they didn't want their bad assets, but that's the nature of bankruptcy. The activities that these banks were engaged in would have continued.

Why do you think the government didn't just step back and let it happen? Was the government in hock to Wall Street, as many have claimed?

No. I think the government, Bernanke...Bob Lucas, I shouldn't quote Bob Lucas, but what he says is "not on my watch." That, basically, there is just a high degree of risk aversion on the part of people currently in government. They don't want to be blamed for bad outcomes, so they are willing to do bad things to avoid them. I think Bernanke has been the best of the performers.

Back to Chicago economics. Is there still anything distinctive about Chicago, or have the rest of the world and Chicago largely converged, which is what Richard Posner thinks?

The rest of the world got converted to the notion that markets are pretty good at allocating resources. The more extreme of the left-leaning economists got blown away by the collapse of the Eastern bloc. Socialism had its sixty years, and it failed miserably. In that way, Chicago theory prospered. Milton Friedman and George Stigler were fighting that battle pretty much alone in the old days. Now it is pretty general. An experience like we've had rehabilitates the remnants of the old socialist gang. (Laughs) Unfortunately, they seem to be in control of the government, at this point.

In the old days, a person like (Richard) Thaler would have had trouble getting a job here. But that was a period of time when Chicago economics was basically under attack the world over. There was a kind of a bunker mentality. But now we've become more confident. Now, our only criterion is we want the best people who do whatever they do. As long as they are honest about it, and they respect other people's work, and we respect their work, great.

I know the business school has a lot of diversity, but is that also true of the university economics department?

Sure. John List is over there. He's a behavioral economist. Steve Levitt is a very unusual type of economist. His brand of economics, which is an extension of Gary's is taking over microeconomics.

I spoke to Becker. His view is that what remains distinctive about Chicago is its degree of skepticism toward the government.

Right—that's true even of Dick (Thaler). I think that is just rational behavior. (Laughs) It took people a long time to realize that government officials are self-interested individuals, and that government involvement in economic activity is especially pernicious because the government can't fail. Revenues have to cover costs—the government is not subject to that constraint.

So you don't accept the view, which Paul Krugman, Larry Summers, and others have put forward, that what has happened represents a rehabilitation of government action—that the government prevented a catastrophe?

Krugman wants to be the czar of the world. There are no economists that he likes. (Laughs)

And Larry Summers?

What other position could he take and still have a job? And he likes the job.

What is your view on regulating Wall Street? Do we need more of it?

I think it is inevitable, if you accept the view that the government will bail out the biggest firms if they get into trouble. But I don't think it will work. Private companies are very good at inventing ways around the regulations. They will find ways to do things that are in the letter of the regulations but not in the spirit. You are not going to be able to attract the best people to be regulators.

That sounds like an old-fashioned Chicago argument—skepticism about regulation.

Yes. We have Ragu (Rajan), Doug Diamond—they are as good banking people as there are in the world. I have been listening to them for six months, and I would not trust them to write the regulations. In the end, there is so much uncertainty, and so much depends on how people will react to certain things that nobody knows what good regulation would be at this point. That is what is scary about government bailouts of big institutions.

So what should we do? If the President called you tomorrow and said, “Gene, I don’t think our way is working. What should we do?” How would you respond?

I don't know if these are even the big issues of the time. I think that what is going on in health care could end up being more important. I don't think we are going down the right road there. Insurance is not the solution: it's the problem. Making the problem more widespread is not going to solve it.

When all this (the financial crisis) started, I joined the debate. Then I stepped back and said, I'm really not comfortable with my insights into what the best way of proceeding is. Let me sit back and listen to people. So I listened to all the experts, local and otherwise. After a while, I came to the conclusion that I don't know what the best thing to do it, and I don't think they do either. (Laughs) I don't think there is a good prescription. So I went back and started doing my own research.

Couldn't we just ban further bailouts, passing a constitutional amendment if necessary? That would be in line with your views, wouldn't it?

Right, but is that credible? It's very difficult to explain how A.I.G. issued all the credit default swaps it issued if people didn't think the government was going to step in and bail them out. Government pledged, in any case, have little credibility. But that one—I think it's pretty sure that we they couldn't live up to it.

What will be financial crisis's legacy for the subject of economics? Will there be big changes?

I don't see any. Which way is it going to go? If I could have predicted that, that's the stuff I would have been working on. I don't see it. (Laughs) I'd love to know more about what causes business cycles.

What lessons have you learned from what happened?

Well, I think the big sobering thing is that maybe economists, like the population as a whole, got lulled into thinking that events this large couldn't happen any more—that a recession this big couldn't happen any more. There'll be a lot of work trying to figure out what happened and why it happened, but we've been doing that with the Great Depression since it happened, and we haven't really got to the bottom of that. So I don't intend to pursue that. I used to do macroeconomics, but I gave (it) up long ago.

Back to the efficient markets hypothesis. You said earlier that it comes out of this episode pretty well. Others say the market may be good at pricing in a relative sense—one stock versus another—but it is very bad at setting absolute prices, the level of the market as a whole. What do you say to that?

People say that. I don't know what the basis of it is. If they know, they should be rich men. What better way to make money than to know exactly about the absolute level of prices.

So you still think that the market is highly efficient at the overall level too?

Yes. And if it isn't, it's going to be impossible to tell.

For the layman, people who don't know much about economic theory, is that the fundamental insight of the efficient market hypothesis—that you can't beat the market?

Right—that's the practical insight. No matter what research gets done, that one always looks good.

What about the findings that long periods of high returns are followed by long periods of low returns?

Now, there is no evidence of that...The expected return on stocks is just a price—the price people require to bear the market risk. Like any price, it should vary from time to time, and maybe it should vary in predictable ways. I've done a lot of work purporting to show there's a little bit of predictability in overall market returns, but that branch of the literature has so many statistical problems there's not a lot of agreement.

The problem is that, almost surely, expected returns vary through time because of risk aversion—wealth, everything else varies through time. But measuring that requires that you have a good variable for tracking (risk aversion) or good models for tracking it. We don't have that. The way that people do it, including me, is by using kind of ad hoc variables to pick it up. All the argument centers on whether what's picked up by these variables is really what's there, or whether it is just kind of a statistical fluke. There's a whole issue of the *Review of Financial Studies* with people arguing very vociferously on both sides of that. When that happens, you know that none of the results are very reliable.

Do you and Dick Thaler discuss this stuff when you are playing golf?

Sure. We don't want to discuss his golf game, that's for sure.

Has the advance of all this behavioral stuff, behavioral finance, made you rethink anything?

Yes, sure. I've always said they are very good at describing how individual behavior departs from rationality. That branch of it has been incredibly useful. It's the leap from there to what it implies about market pricing where the claims are not so well-documented in terms of empirical evidence. That line of research has survived the market test. More people are getting into it.

But you are skeptical about the claims about how irrationality affects market prices?

It's a leap. I'm not saying you couldn't do it, but I'm an empiricist. It's got to be shown.

Thanks very much. Finally, before I go, what about Paul Krugman's recent piece in the New York Times Magazine, in which he attacked Chicago economics and the efficient markets hypothesis. What did you think of it?

(Laughs) My attitude is this: if you are getting attacked by Krugman, you must be doing something right.