

WEBPONDO INTERVIEW WITH ROBERT SHILLER¹

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WP: The volatility of housing construction in the U.S. has been reduced over the last 50 years and many researchers attribute this to an improvement in the monetary policy, which became more responsive to changes in inflation and real GDP. These higher and more predictable responses have helped supposedly to tame inflation and have kept it steadier reducing the boom-bust cycle and the resulting large swings in interest rates that caused the volatile housing in the past. During 2003-2006, Fed Funds rate was below that which experience would have predicted. Many have argued that these low interest rates helped foster the extraordinary demand for housing. Is this argument correct in your view?

Robert Shiller: I think there is something to it, and it is part of the story, it is also especially true because in the United States, at that time, adjustable rate mortgages were somewhat more important than what they had been in the past. And that meant that we had a lot of adjustable rate mortgages issued, especially to low credit borrowers at a time when the short rate between 2002 and 2004 was kept down at 1%, so that is practically 0. And so it created a sense that one could borrow from nothing at adjustable rate mortgages, and it was used by some unscrupulous lenders to draw in people to mortgages that they really could not afford by telling that they had to pay very little at first, and they could possibly sell their property when prices were higher, and get rid of the mortgage. So in that sense the liquidity seems to have a definite effect. So, yes, it is true that monetary authorities developed the idea that they could avoid recessions by reacting preemptively and cutting rates aggressively at the first sign of a recession. And so that is what they did in 2001, they started cutting rates even before anyone had a clear picture of a recession, and they cut them quite aggressively. But, yes, that did cause, that did seed the housing boom. On the other hand, it is not the unique explanation of the housing boom because the housing boom was already well under way in 2001, and if you look at a plot of it, it is not obvious that there was any interruption or any major changes in the boom caused by the cut in interest rates. So I think that it is a complicated story. Monetary policy is part of it, but it is not, it is not the whole story.

WP: Is there any way to cure the illness? Or put differently, what do you think that the Fed should do? These people say “let the money loose and fix it” or do you say “let the prices adjust downward”, or do you want to slow down the housing crisis (possibly with monetary policy) and then let there be a slow down in the economy and then let prices in the housing market adjust slowly. Let us say if you could do anything you wanted, what would you do?

RS: Yes, well I think that we do not want everyone to be bailed out; that would be a

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mistake. That sets a very bad precedent because then people who are responsible and did not make these business mistakes are being treated unfairly. On the other hand, we have a crisis and the crisis has systemic effects and a lot of the people who are unable to pay on their mortgages were victimized in a way. In an important sense they were people who trusted the regular credit authorities in the United States, thinking that this product must be safe if here it is being offered by a reputable company to everyone, so they were trusting. And to take the attitude that we have to let them go down with their ships as a lesson, that does not ring entirely true either. So it seems that some kind of helping has to be done. But, I do not think it will be. I think that what the government will do will be limited. So there will be help for some extreme cases, but they will allow the foreclosure rate to go way up, and home prices to fall as they must. And in the future, I would like mortgages petitions re-thought. I think that the system had defects. Notably if bail outs are going to happen whenever there is a downturn in home prices we might as well build that into the mortgage contract to start with, and this is a proposal that I have made over the years, and no one seems very interested in it. Now is the time, I think, to start thinking about alternative mortgages petitions that work better in managing risks of major real estate price movements.

WP: So you are saying something like, build into the mortgage an insurance, say, against the Case-Shiller index?

RS: Absolutely, yes.

WP: Ok, great, that is nice.

RS: One reason why we, you know we worked with the Chicago Mercantile Exchange to launch a home equity, a home price futures market starting May 2006. One reason we did is that we wanted to work on developing an infrastructure that would allow home equity insurance or new mortgage products to be issued by companies that could then use the derivatives markets to hedge the risk that they incur, by writing such contracts.

WP: Ok, so that is related to the fact that you have all sorts of derivatives for financial assets, but no derivatives for home assets, for homes, the values of which are about the same size as the stock market? So do you think that if a big financial crisis like Russia's or the one induced by Mexico came around, there would be any difference between a developed world financial crisis and a developing world financial crisis, induced by the developing world or by the developed world? Would there be any difference?

RS: I think that in the developed world, you know the Asian financial crisis in the late 1990s was caused by a sudden withdrawal of foreign investment, and I suppose the Argentine crisis in 2002 had similar origins. The U.S. is different in that it is a much more established economy and you would think that foreign investors are less flighty. On the other hand, there is a talk these days of foreign investors wanting to pull their money out of the U.S., especially with the decline of the dollar. I do not think that they will be as flighty. The U.S. is not, there really is no rational reason to pull out, and I do not think

they will.

WP: But people are worried, that people are tightening their credit, right? At least if you read economists writing all over the place, a lot of people are worried that people are withdrawing their credit just because of lack of trust, let us say like a trust crisis that induces a real crisis. Do you know what I mean?

RS: Absolutely, well, we had actually gone to an extreme in the other direction. People were way too trusty. So they were willing to buy securities that were based on subprime mortgages and they were investing, and even fiduciaries were investing money market funds for other people thought that it was reasonable to put money market funds in such assets. So I that day I think is gone. We were way too trusty; investors were going too far in the other direction.

WP: The world's housing, oil, and stock markets have been plunged into turmoil in recent months. However, other indicators such as consumer confidence, capital expenditure, and employment are still sound. What does it mean? Is there a lag from financial to real considerations? Or is there no connection between these two? Or is it just that the worries of a recession are not so sound. You mentioned the wealth effect that the decline in home prices could bring or the subprime crisis extending that could bring an on owner recession, but still people are confident. So why is that?

RS: But there was, in the latest numbers, from the Conference Board, a sharp drop in confidence just reported a week or so ago.

WP: I missed that one.

RS: It is starting to happen, I think. But I think that the reason that it has been delayed is that the home price decline has actually only just begun. According to the S&P Case-Shiller indexes, home prices are only down about 5% from the peak. I think that that they will have a good chance of falling a lot more than that. And when that happens there will be much more of a bite. You know, if it is all 10 or 20% then we are going to see a substantial number of home owners who are underwater in the sense that they have negative equity in their homes, and that will have to have a bigger psychological impact when it comes The thing is that the sight of things, of other people foreclose, we may have millions of foreclosures and the prospect of watching your neighbors being kicked out of their houses is going to be scary, and I think that it might create a big psychological reaction

WP: Yes, I am sure that it will. It has never happened, right? So people get all worked up, correct?

RS: It happened during the 1930s; we had a lot of defaults and foreclosures then. Although at that time the government in the United States took a lot of actions to prevent a real disaster from happening and I guess we are seeing signs that the Treasury is

working in that direction. I think maybe not enough yet, but as the crisis worsens they will probably pick up their efforts to deal with it.

WP: With the success of your forecasting models in your book, *Irrational Exuberance*, has economics for good come up with a new way to predict cycles, or is it still more an art than a science?

RS: We are kind of making it more scientific, there has been a revolution in economics over the last ten or twenty years called behavioral economics, and we are getting more and more papers. I think that there is a unification of economics with other social sciences long overdue. The psychology profession is making impressive advances, now it is starting to become tied with neuropsychology and our understanding of the wiring of the human brain is starting to inform our judgments about how economies work. But it is a process and it is not something that is over quickly, so we do not still have a clear idea how to explain speculative price movements or movements in the economy that are related with change in confidence.

WP: Ok, but I worked with behavioral stuff and to me it really looks still like there is a lot of good models but they are quite *ad hoc* in many cases and so I guess the question was: of course you have to use good ideas of behavioral economics and put them into a model, but it seems to me, it sometimes really looks a lot more like art than science in some dimensions; at least relative to the traditional models that did not work, right? All based, let us say, on rational expectations and only the fundamentals of that. So I guess that the question was more pitched to that type of distinction, whether you still have to have an analyst who knows about the market to include certain aspects or not. I guess that was it.

RS: Well, I think that university departments are using a scientific method, and thus collecting data and evidence and building models. But you are right it is frustrating; often if you look at investment decisions, after all these theorizing people still use judgments to make these decisions. Because the world, it seems to complex and, you know, it seems to me that the problem with investing is that a lot of investment value is really ultimately affected by social and political, and other hard to pin down causes that no abstract model can perceive. So it is very judgmental. If you look at the path of the stock market you have that too, and if you are a long-term investor, you want to know the long-term path of the stock market; you have to understand many forces including the governments of the world, our own government and the governments of other countries and what they are going to do. You know, they can create policies that would benefit corporations or they can go the other way, and hence what you are pricing in the stock market is a residual. A stock is a claim on the profits of a company, which is their revenue after expenses and taxes. So, that is a very delicate thing to try to predict, and so it is inherently a judgmental art. I think investing is always going to be somewhat judgmental because there is no substitute for our own personal judgment about what political or social forces operating are.

WP: Do you think that our understanding of why prices of assets are so much more

volatile than the fundamentals for, for example, profits would indicate? I am asking about your work with Grossman and whether you think that our understanding of why volatility in asset prices is so much larger than warranted, let us say, by the volatility of the returns of the asset.

RS: Well, yes, this is something I have been working on for over twenty years

WP: I know, that is why, I so the bottom line is: do you think that we understand exactly now why it is so volatile or there is still a residual on that?

RS: Well, first, what do you mean by understanding and also which agreement there is? There is actually not much agreement about what are the sources of volatility. That is the unfortunate fact about how our profession is and even if we did agree that the source was largely behavioral, that would not mean that we would know well how to forecast it. So I guess that volatility is somewhat forecastable, but more in terms of a mean reverting sense, right, in the sense that it has certain persistence and then declines. So it is not something that is well suited for economic theorizing. Volatility of the stock markets have picked up since the summer. What does that mean? Well there are statistical models of volatility that suggest that this volatility would probably continue. But I am thinking that maybe some look at the behavioral underpinnings of the present situation suggests that volatility may even pick up, but that is more judgmental.

WP: I read in *The Economist* a sort of review of the book by Goldberg and Roman Frydman the *Imperfect Knowledge Economics*. Have you read it?

RS: I have looked at it, I find it difficult. I want to read it some more actually. What were you going to say?

WP: No, I was just going to ask you, because this is like a personal mostly question, because I have not read it and the column was, “this is so great and whatever,” and I just wanted to know what your opinion was.

RS: I am glad that they got a good review, in *The Economist*?

WP: Yes, it was like a column that said something like “a new fashion to model” or something.

RS: Well, it was an interesting idea about an alternative to rational expectations, and it was difficult for me to read. I do not think it is a popular book, I think that it is a theory book that it may make an important point. I have not come to grips with it.

WP: Your basic argument about the crisis in the housing market is that the bubble ended on its own when expectations of future price rises slowed. Could you explain this for our readers? Which should be the role of the Fed in this housing crisis –if any— to cope with this like unpleasant situation?

RS: Yes, well I think that expectations are the fundamental driver of the housing bubble. The survey data that Case and I have been collecting shows that people in the United States, especially in the boom cities were expecting home prices to go up on the order of 10% a year over the next decade, and in fact given that in some cases much higher expectations than that in terms of mean. So that is extravagant, that is unrealistic expectations, and it led to a sense that this was a money machine: owning a house is the road to riches, 10% a year that doubles every seven years and so, especially if you buy a house and it leverages your money to buy a house. You might increase your money tenfold. So it sounds like a wonderful investment, as long as you believe it, and people really believed it. It was common to think that, well there could be a minor correction, but home prices have never fallen, at least not since the Depression, and so they cannot fall. So people thought that it was a sure thing to make money. That certainly may boost demand for housing. And it is harder to say, you were asking about the Fed. The Fed of course is the stabilizing force in our economy and they lean against any shock to the economy. They did not seem to see this coming, but now they see it happening, and they have started to cut rates, and that would help soften the impact. But I do not think that it have cured it and I do not think it will, the fundamental problem is that house prices have to come down and monetary policy is not going to change that.

WP: You mentioned the Case-Shiller index, and so I know more or less the story, but could you please tell us, for the readers. So it catches several parts of the question, first is can you please tell us why insuring housing values is so important? And is the value of homes like “large” in families’ wealth? And why weren’t there any instruments to insure housing values? And was it just like a “hidden action” or “principal agent” problem or was it something different and in that case what else was in there?

RS: Well, yes, housing is important because it is a huge asset class; it is comparable to the entire stock market in value in the United States. In some other countries I am sure it is substantially bigger than the whole stock market. Moreover, the holding index is dispersed through a wider segment of the population, so most of the population owns a house. And, in fact, it is typically the biggest single asset that people own, so that is what they have and that is what they are saving for retirement. So obviously if prices of homes are going to be volatile, it pays for people to try to protect themselves against fluctuations. Then the question you have is: why have not they developed? Well, of course that is always a question in any important topic: technological innovations are anticipated by some time before they actually become real. So, for example, Leonardo da Vinci predicted helicopters, but they did not come into being until other technology made it possible, that is not until the twentieth century. But I think it is similar with home equity, with home price derivatives, or insurance products. We have not had good home price indexes until quite recently. In the United States, where I worked, we launched our indexes, the Case-Shiller home price indexes in 1991. Before that, there were only fragmentary indexes. I think part of the reason is that we have seen the advance of electronic communications. Before, when we started it in the late 1980s producing indexes, we were just beginning to be able to get computer electronic data on large number of home sales, and that changed everything. So in a sense, I think that the

development of real estate derivatives is a product of the same information revolution that is driving a lot of things.

WP: How large is the subprime market in the overall market for mortgages? And if it is such a small portion of the total, that I think it is, why has it had such a large impact? Is it because people have stopped lending because they fear that “nothing is what it seems” (because rating agencies have failed to do their jobs). Why does the sub-prime market have such a large impact?

RS: Well, I can check my numbers, but as I recall, in the peak year of 2006, 20% of new mortgages issues were subprime. However the stock of subprime mortgages is lower, it seems to me that it is around 7%, but I can check that.

WP: The number that I know is like 4 on the stock, so I know the flow was big at the end, but my number was like 4, maybe 7, yes

RS: And then, of course, it is not just sub primes, there are other categories that are also risky, which would add to that figure and so. But still, it is a minority of mortgages that are in that category. But I think that it was, it has had a differential impact on certain financial institutions that got themselves overexposed to it. But in truth, it is a small part of our financial markets. And if you look at all the losses that were recently reported by financial institutions who invested in sub primes, they are still small relative to the total national wealth. So it is a drop in the bucket, you are right. On the other hand, to some extent I see it as a harbinger of things to come. Because it is not just subprime mortgages that are vulnerable, if home prices continue to fall, even prime mortgages will start to default. And there is no reason why not, if home prices fall, so that they are underwater, in other words, people, home mortgages have negative equity in them, then they may default also. They may also default if a recession comes in. And I think that even a relatively small subprime effect has helped bring a recession because of the psychological impact of a large number of foreclosures. Also just a falling housing market can help bring out a recession, because there is a wealth effect, and the loss of wealth that we have already have, in connection with real estate drops is already enormous. I think that it is less than a trillion dollars, but it is close to that. And then there is the potential to affect spending and the construction industry is of course in trouble. So I think that subprime is like the tip of the iceberg, it is something that is very visible and has been talked about a lot. But the more fundamental problem is just the correction of an asset bubble in the housing market. We may have also had something of an asset bubble in the stock market and we could see corrections there too, that is obvious.

WP: I had a question related to that. Could this overflation or like big asset prices be the consequence of a lot of printing or a lot of liquidity around in developed countries?

RS: Yes.

WP: Ok, so yes. And could there be still an effect of your irrational exuberance

times, let us say like not complete adjustment from that time, or this is like a new story.

RS: Well, I have actually a paper on that, which you can find on my website, on low long-term interest rates and high asset prices. It is true that long-term interest rates have been declining around the world until around 2003. In fact, index bond yields for a number of different countries have been declining as well, so real long-term interest rates have been declining. Again, they bottomed out some time ago 2005-2006, and they have been rising. But the decline in real interest rates is a candidate for a partial explanation for the boom of asset prices that we see in so many different places around the world. It is only tenuously connected to monetary policy though. Because central banks control short rates not long rates, certainly not long-term real rates. And so, I think that it is something of a mystery why long-term real rates have shown a tendency to fall all around the world. And, even so, I do not think that this fall in real rates match up closely to the pattern of home price increases in many different countries. We have seen a boom in home prices, in the early years of 2000, in so many different places and it seems to be tied up with investors' psychology. I do not think that people are watching these index bond markets so much. So I think that there is more to it than just the liquidity effect.

WP: Rating agencies have done a bad job recently and they also did a bad job in the Enron crisis and so on. So do you think that the government will tackle, should tackle that, or that the market somehow should correct itself and stop trusting on the agencies that are now wrong and start trusting another agency that does the job well or something?

RS: It is a little bit hard for the government to guarantee ratings of agencies. It is a very complex task and governments are usually not considered qualified to tell us which securities are good. The security rating agency business was invented by Mr. John Moody around 1910. He had the idea of setting up a company that puts letter grades to securities. You know, AAA, etcetera, and while he was in charge he developed a reputation as a man of great moral authority, who was trusted, and it was a personal thing for him to be sure that his ratings would be honest, scrupulously honest. There is a problem, that after he died some of the agencies may have drifted a little bit, and starting around 1970 the credit rating agencies started to accept money from the firms that they rated, and they started making a lot of profits in doing that. So there was a lot of incentives for the rating agencies to do that. But I think that it had the effect of diluting the honesty of their judgments, and so we have seen some ratings that were questionable, recently.