



Unconventional Wisdom: An Interview with Robert Shiller

April 20, 2010

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Irrational and non-economic behavior can disrupt entire economies in the same way it disrupts financial markets, says Yale economist Robert Shiller. Ignoring that fact, he adds, has proven to be a recipe for disaster.

Editors' Note: *Few macroeconomic prognosticators have been as publicly right as Yale's Robert Shiller, whose first and second editions of the book *Irrational Exuberance* laid bare, with remarkable timing, the speculative bubbles forming first in the Internet-crazed stock market and next in residential real estate. Shiller, who is also the co-founder of investment firm MacroMarkets LLC, recently teamed with Nobel laureate George Akerlof to write *Animal Spirits: How Human Psychology Drives the Economy and Why It Matters for Global Capitalism*. In the following interview and excerpts from the book, Shiller describes the role of "animal spirits" in the economy, how their existence should inform the government response to the crisis, and what his latest views are on equity and housing prices.*

This interview was conducted on July 30, 2009.

Your new book was years in the making. What was the impetus for finishing it as the financial crisis started to unfold?



Robert Shiller

Our feeling is that classic economic orthodoxy, which seeks to minimize as much as possible departures from pure economic motivation and from rationality, does a poor job of explaining why speculative excesses form and is a key reason nearly everyone was caught off guard by the crisis. The public, the government, and most economists had been reassured by an economic theory that said we should trust markets and suggested to many that nothing dangerous could happen.

To understand why excesses build and then reverse you need also to consider the less rational – but no less important – drivers of economic activity, which Keynes described as “animal spirits.” We think that provides a much better explanation for how the economy works.

Why has that type of thinking been met with resistance among your peers?

There is a growing behavioral economics movement, but it has so far had limited impact. The resistance has to do with the kinds of people who are attracted to economics and what kind of work is seen as career-enhancing. Economists as a group are not fond of the softness and imprecision of psychology.

It's sort of common sense that individual and collective levels of confidence, for example, are important drivers of the economy. Newspapers and the evening news refer to it all the time. But if you go to an academic seminar, the word “confidence” never comes up. If you look at the index in a finance textbook for the word “bubble,” it's almost never there. These notions, rooted in individual behavior, are considered vaguely unprofessional and flaky for serious economists to pay attention to.

You write at length in the book about the importance of confidence in economic decision-making. Elaborate on that.

The basic point is that because the world is always evolving in ways that don't perfectly mirror the past, the future is fundamentally uncertain and no amount of probabilistic thinking can fully quantify what's the right thing to do next.

To make business or financial decisions, then, people have to rely as much on their intuitive sides as their quantitative sides to judge the future. How confident they are – which is both emotional and rational – plays a fundamental role in the decisions made.

Why does that necessarily lead to booms and busts?

Humans have a tendency toward overconfidence, which may be reinforced by the stories that are prevalent at any given time and by the fact that we tend to act on a biased information set to make decisions. The list of facts we retain in our consciousness very likely excludes other facts we either aren't observing or choose to ignore. That's a big reason people become overconfident, which plays a big role in bubbles forming.

Talk about the importance of stories in fueling animal spirits.

The human mind is built to think in terms of narratives, of sequences of events with an internal logic and dynamic that appear as a unified whole. Social psychologists have found that people's memories of essential facts are indexed in the brain around stories and that the facts that are most remembered are attached to stories. Much of individual motivation actually comes from living through the story we've created of our own lives.

The confidence of a nation, or of any large group, also tends to revolve around stories. The 1990s stock market boom was driven by a global story that was very motivating – capitalism triumphant, with communism on the run – coupled with how the invention and exploitation of the Internet was propelling the economy into a brand new era, with inspirational stories about new companies and their entrepreneurial founders who were changing the world and getting rich. Such new-era stories tend to accompany major booms in stock markets.

More recently, the stories that captured people's attention were about smart real estate speculators, and these stories reinforced the notion that home prices everywhere could only go up. The conventional wisdom became that because there is only so much land, population pressures and economic growth should inevitably push real estate prices strongly upward. Those arguments were demonstrably false, but it didn't matter because people wanted to believe. That tends to happen during boom times, making them last much longer than they should.

You argue that a greater recognition of the non-economic drivers of economic behavior could have helped mitigate the damage of the credit crisis. How?

The biggest problem was that the government and regulators didn't at all see the crisis coming. That all-knowing markets would self correct before anything got out of hand was taken as received wisdom, and it proved to be wrong. The Fed could have tightened credit, the issuance of new mortgages could have been moderated, regulators of credit cards and auto loans could have tightened capital requirements. It didn't have to play out the way it did.

How effective do you think the government response has been?

In many ways, it's too early to say. In terms of fiscal policy, the stimulus spending certainly hasn't been as prompt as I believe the situation warrants. Compared to the magnitude of the problem – the housing market alone has seen something like \$5 trillion in lost value – the response so far has been fairly muted.

In terms of monetary policy, the Fed has been quite aggressive and creative in trying to restore stability

to the financial system – without that, we'd be much worse off. And while the housing market is still weak, without the bailout of Fannie Mae and Freddie Mac, it would also be in much worse condition.

A clear positive has been the big increase in consumer confidence since last year as measured by various indexes. I've been surprised by that and I'm trying to decide if that will turn out to be real. The savings rate is still very high, which seems to contradict the confidence data.

One factor working toward renewed confidence seems to be the general perception that recessions since WWII have always come to an end in relatively short order and this one is already relatively long in the tooth. On the other hand, we haven't seen a financial crisis this severe since the Great Depression, so that recession model may be misleading. Even if we come out of the recession, the probability is high we may be in for a long, slow period of recovery.

Do you support the administration's new plan for financial regulatory oversight?

Each of the past three economic contractions in the U.S. was accompanied by significant corruption – the S&L scandals in the early 1990s, the accounting debacles in 2001 and the mortgage-lending and Wall Street malfeasance of the past few years. As we describe in the book, tendencies toward corruption and bad faith are animal spirits that rise and fall and have an impact on economic behavior. Boom times tend to foster bad behavior, and busts are exacerbated by the fear and loathing its exposure engenders.

The regulatory system needs to enforce rules meant to insure that people are fairly and honestly treated. Important elements of that are to streamline who is responsible for enforcing what rules, and to make sure there is an oversight entity that is focused on big-picture, systemic risks to the system. The President's proposal is moving in the right direction on both those fronts.

You've made some impressive macro calls this decade on asset prices. Can you generalize about what's involved in doing that well?

It starts with having the best and longest-time-series data you can find. You may have to take some risks in terms of the quality of data sources, but it amazes me how people are often more willing to act based on little or no data than to use data that is a challenge to assemble.

I created a time series of home prices back to 1890, which showed how anomalous the recent bubble was – the biggest over that entire history. People were interpreting recent home-price increases as the way it's always been and they were just wrong about that. The idea that housing was such a wonderful investment is a relatively new idea, which has only gained credence in the last 20 years or so.

In 1996 when my colleague John Campbell and I testified before the Federal Reserve Board about equity prices, we looked as far back as we could at how well current equity prices relative to 10-year-average historical earnings predicted stock market returns 10 years forward. We found that it was quite a reliable predictor – what goes up too far tends to come down – even though it wasn't very precise on timing.

Part of the problem with the stress tests, value-at-risk tests and portfolio allocation studies at financial institutions was that they weren't adequately informed by long history. There was a sense that we've arrived at more modern times and everything that happened 30 or more years ago was irrelevant, leading to an inordinate sense of complacency.

What's harder to generalize about is how to incorporate into forecasts all the behavioral inputs that factor into the setting of asset prices. We've always complemented our work with detailed surveys of consumers and market participants and tried to look at that data over time as well. That helps inform whether something truly is different this time or not.

On the subject of forecasts, are you still pessimistic about housing prices?

The ratios of home prices relative to construction costs, rental rates and GDP levels have come down dramatically and are almost in line with historical averages. But we still have a huge inventory of unsold homes, we still have banks unable to lend in a normal way, and we still have commercial real estate in rapid decline. I wouldn't be surprised if home prices didn't recover for at least another five years.

My firm just launched two exchange-traded products that reflect the sale prices of single-family homes in ten major U.S. cities. One, MacroShares Major Metro Housing Up [UMM], allows you to go long housing prices five years out, and the other, Major Metro Housing Down [DMM], allows you to go short over the same time period. The market for UMM is currently predicting a further 8% drop in home prices over the next five years – a plausible scenario to my mind.

Do you think the stock market has gotten ahead of itself of late?

The P/E of the S&P 500 based on ten-year historical earnings is right around 15x, which would suggest that if historical precedent is a guide, from today's prices investors could expect something like 7% real annual returns. In that regard, now would seem a sensible time to invest. But I'd caution that uncertainty about the economy makes it a very risky time for investors. It's hard for me to see much cause for the markets' rebound beyond the "all recessions come to an end sooner or later" story, which isn't a particularly plausible driver of a dramatic recovery.

One thing people have stopped talking about but remains a significant threat to future growth is protectionism. Many things being done today in response to the crisis – like our bailouts of GM and Chrysler – are essentially protectionist. As those efforts play out in many different countries at the same time it could cause responses that end up worsening the crisis, just as happened during the Depression.

Can you translate your work on animal spirits into general advice for investors?

One key lesson is to acknowledge the complexity of the world and resist the impression that you easily understand it. People are too quick to accept conventional wisdom, because it sounds basically true and it tends to be reinforced by both their peers and opinion leaders, many of whom have never looked at whether the facts support the received wisdom. It's a basic fact of life that many things "everybody knows" turn out to be wrong.

How could an investor use that? The uncertainty involved in predicting complex events would argue for some level of diversification and a greater focus on hedging. At the same time, the fact that people tend toward overconfidence and follow conventional wisdom should provide opportunity for those taking contrarian positions against that. The trick, of course, is to have concrete justification for why the crowd is wrong.

Animal Spirits

*In these excerpts from **Animal Spirits: How Human Psychology Drives the Economy and Why It Matters for Global Capitalism**, Robert Shiller and George Akerlof explain how economic motivations veer from rationality, why confidence is the most crucial animal spirit, and why the government's role should be akin to that of a good parent.*

TRUMPING RATIONALITY

The thought experiment of Adam Smith correctly takes into account the fact that people rationally pursue their economic interests. Of course they do. But this thought experiment fails to take into account the extent to which people are also guided by noneconomic motivations. And it fails to take into account the extent to which they are irrational or misguided. It ignores the animal spirits.

In contrast, John Maynard Keynes sought to explain departures from full employment, and he emphasized the importance of animal spirits. He stressed their fundamental role in businessmen's calculations. "Our basis of knowledge for estimating the yield ten years hence of a railway, a copper mine, a textile factory, the goodwill of a patent medicine, an Atlantic liner, a building in the City of London amounts to little and sometimes to nothing," he wrote. If people are so uncertain, how are decisions made? They "can only be taken as a result of animal spirits." They are the result of "a spontaneous urge to action." They are not, as rational economic theory would dictate, "the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities."

In the original use of the term, in its ancient and medieval Latin form *spiritus animalis*, the word animal means "of the mind" or "animating." It refers to a basic mental energy and life force. But in modern economics animal spirits has acquired a somewhat different meaning; it is now an economic term, referring to a restless and inconsistent element in the economy. It refers to our peculiar relationship with ambiguity or uncertainty. Sometimes we are paralyzed by it. Yet at other times it refreshes and energizes us, overcoming our fears and indecisions.

Just as families sometimes cohere and at other times argue, are sometimes happy and at other times depressed, are sometimes successful and at other times in disarray, so too do whole economies go through good and bad times. The social fabric changes. Our level of trust in one another varies. And our willingness to undertake effort and engage in self-sacrifice is by no means constant.

The idea that economic crises, like the current financial and housing crisis, are mainly caused by changing thought patterns goes against standard economic thinking. But the current crisis bears witness to the role of such changes in thinking. It was caused precisely by our changing confidence, temptations, envy, resentment, and illusions – and especially by changing stories about the nature of

the economy.

These intangibles were the reason why people paid small fortunes for houses in cornfields; why others financed those purchases; why the Dow Jones average peaked above 14,000 and a little more than a year later fell below 7,500; why the U.S. unemployment rate has risen by 2.5 percentage points in the past twenty-four months, with the end of this rise not yet in sight; why Bear Stearns, one of the world's leading investment banks, was only (and barely) saved by a Federal Reserve bailout, and why later in the year Lehman Brothers collapsed outright; why a large fraction of the world's banks are underfunded; and why, as we write, some of them are still tottering on the brink, even after a bailout, and may yet be the next to go. And we know not what is yet to come.

CONFIDENCE

Economists have a particular interpretation of the meaning of the term confidence. Many phenomena are characterized by two (or possibly more) equilibria. For example, if no one rebuilds his house in New Orleans after Hurricane Katrina, no one else will want to rebuild. Who would want to live in desolation, with no neighbors and no stores? But if many people rebuild in New Orleans, others will also want to. Thus there may be a good-rebuilding-equilibrium, in which case we say that there is confidence. And there may also be a bad-non-rebuilding-equilibrium, with no confidence. In this view there is nothing more to confidence than a prediction, in this case regarding whether or not others build. A confident prediction is one that projects the future to be rosy; an unconfident prediction projects the future as bleak.

But if we look up confidence in the dictionary, we see that it is more than a prediction. The dictionary says that it means "trust" or "full belief." The word comes from the Latin *fido*, meaning "I trust." The confidence crisis that we are in at the time of this writing is also called a credit crisis. The word credit derives from the Latin *credo*, meaning "I believe."

Given these additional shades of meaning, economists' point of view, based on dual equilibria or rosy versus bleak predictions, seems to miss something. Economists have only partly captured what is meant by trust or belief. Their view suggests that confidence is rational: people use the information at hand to make rational predictions; they then make a rational decision based on those rational predictions. Certainly people often do make decisions, confidently, in this way. But there is more to the notion of confidence. The very meaning of trust is that we go beyond the rational. Indeed the truly trusting person often discards or discounts certain information. She may not even process the information that is available to her rationally; even if she has processed it rationally, she still may not act on it rationally. She acts according to what she trusts to be true.

If this is what we mean by confidence, then we see immediately why, if it varies over time, it should play a major role in the business cycle. Why? In good times, people trust. They make decisions spontaneously. They know instinctively that they will be successful. They suspend their suspicions. Asset values will be high and perhaps also increasing. As long as people remain trusting, their impulsiveness will not be evident. But then, when the confidence disappears, the tide goes out. The nakedness of their decisions stands revealed.

The very term confidence – implying behavior that goes beyond a rational approach to decision making – indicates why it plays a major role in macroeconomics. When people are confident they go out and buy; when they are unconfident they withdraw, and they sell. Economic history is full of such cycles of confidence followed by withdrawal. Who has not taken a hike and come across a long-abandoned railway line – someone’s past dream of a path to riches and wealth? Who has not heard of the Great Tulip Bubble of the seventeenth-century Netherlands – a country famous, we might add, for its stalwart Rembrandt burghers and often caricatured as the home of the world’s most cautious people. Who does not know that even Isaac Newton – the father of modern physics and of the calculus – lost a fortune in the South Sea bubble of the eighteenth century?

[Which] takes us back to Keynes’ passage about animal spirits. When people make significant investment decisions, they must depend on confidence. Standard economic theory suggests otherwise. It describes a formal process for making rational decisions: People consider all the options available to them. They consider the outcomes of all these options and how advantageous each outcome would be. They consider the probabilities of each of these options. And then they make a decision.

But can we really do that? Do we really have a way to define what those probabilities and outcomes are? Or, on the contrary, are not business decisions – and even many of our own personal decisions about which assets to buy and hold – made much more on the basis of whether or not we have confidence? Do they not involve decision-making processes that are closer to what we do when we flip a pancake or hit a golf ball? Many of the decisions we make – including some of the most important ones in our lives – are made because they “feel right.” John F. “Jack” Welch, the long-time CEO of General Electric and one of the world’s most successful executives, claims that such decisions are made “straight from the gut.”

But at the level of the macroeconomy, in the aggregate, confidence comes and goes. Sometimes it is justified. Sometimes it is not. It is not just a rational prediction. It is the first and most crucial of our animal spirits.

ROLE OF GOVERNMENT

Keynes’ claim about how animal spirits drive the economy brings us to the role of government. His view of the government’s role in the economy was very much like what we are told in the parenting advice books. On the one hand, they warn us not to be too authoritarian. The children will be superficially obedient, but when they become teenagers they will rebel. On the other hand, these books tell us not to be too permissive. In this case they have not been taught to set proper limits for themselves. The advice books then tell us that appropriate child rearing involves a middle road between these two extremes. The proper role of the parent is to set the limits so that the child does not overindulge her animal spirits. But those limits should also allow the child the independence to learn and to be creative. The role of the parent is to create a happy home, which gives the child freedom but also protects him from his animal spirits.

This happy home corresponds exactly to Keynes’ position (and also our own) regarding the proper role of government. Capitalist societies, as correctly seen by the old economics, can be tremendously creative. Government should interfere as little as possible with that creativity. On the other hand, left to their own devices, capitalist economies will pursue excess, as current times bear witness. There will be

manias. The manias will be followed by panics. There will be joblessness. People will consume too much and save too little. Minorities will be mistreated and will suffer. House prices, stock prices, and even the price of oil will boom and then bust. The proper role of the government, like the proper role of the advice-book parent, is to set the stage. The stage should give full rein to the creativity of capitalism. But it should also countervail the excesses that occur because of our animal spirits.

[W]e are currently not really in a crisis for capitalism. We must merely recognize that capitalism must live within certain rules. Indeed our whole view of the economy, with all of those animal spirits, indicates why the government must set those rules. It may be true that in the classical model there is full employment. But in our view the waves of optimism and pessimism cause large-scale changes in aggregate demand. Since wages are determined largely by considerations of fairness, these changes in demand translate not into shifts in wages and prices but into shifts in employment. When demand goes down, unemployment rises. It is the role of the government to mute those changes.

And, to emphasize what we have said previously, in our view capitalism does not just sell people what they really want; it also sells them what they think they want. Especially in financial markets, this leads to excesses, and to bankruptcies that cause failure in the economy more generally. All of these processes are driven by stories. The stories that people tell to themselves, about themselves, about how others behave, and even about how the economy as a whole behaves all influence what they do. These stories are not stable but vary over time.

There is then a fundamental reason why we differ from those who think that the economy should just be a free-for-all, that the least government is the best government, and that the government should play only the most minimal role in setting the rules. We differ because we have a different vision of the economy. Indeed if we thought that people were totally rational, and that they acted almost entirely out of economic motives, we too would believe that government should play little role in the regulation of financial markets, and perhaps even in determining the level of aggregate demand.

But, on the contrary, all of those animal spirits tend to drive the economy sometimes one way and sometimes another. Without intervention by the government the economy will suffer massive swings in employment. And financial markets will, from time to time, fall into chaos.

Excerpted from Animal Spirits by George A. Akerlof and Robert J. Shiller, ©2009 Princeton University Press