When Herds Get Overconfident, Run for Cover

By Editor Test *Wed, Mar 30, 2011*

Steve Utkus of the Vanguard Retirement Research Center proposes a four-part model to explain the psychological dynamics behind the most recent financial bubble, and similar bubbles.

There are about as many explanations for the financial crisis as for the Kennedy assassinations. Fear and greed undoubtedly played their usual parts, along with faulty economic models, moral hazard, and bad monetary policy.

That's just for starters. Misplaced incentives, ineffective corporate governance, lax regulation, and, if you're conspiratorially minded, fraud and political corruption may also have acted in supporting roles.

What about plain old human psychology? A new whitepaper by Steve Utkus of the Vanguard Retirement Research Center proposes a model that describes the life cycle of a typical financial bubble. He also uses a term that seems to be coming into wider usage: "representativeness heuristic."

Utkus' paper, "Market bubbles and investor psychology," divides a financial bubble's life into four stages.

1. Initial errors in statistical inference caused by the representativeness heuristic.
2. The emergence of skewed forecasts because of overconfidence and excessive extrapolation.
3. The amplification of these views through a "risky shift" or group polarization process across the financial system.
4. The resetting of forecasts to an excessively cautious view.

1. Initial errors in statistical inference caused by the representativeness heuristic.

In the final seconds of a tie basketball game, whom should the coach choose for the last shot: the player with a hot hand tonight or the player with the highest shooting percentage for the season?

Tough call, right? If you choose the hot hand, you might be blinded by the representativeness heuristic. To illustrate this phenomenon, Utkus uses the analogy of a carnival game:

In the game, people are asked to estimate the proportion of black and red balls in a container based on two sample withdrawals. Person A draws out 20 balls, 12 of which are black. Person B draws out five balls, four of which are black.

Experiments show that people put greater weight on the smaller sample with the stronger pattern. "Player B is the person we most believe in because of the strength of his apparently nonrandom outcome," Utkus writes. "He has what we call a 'hot streak' in sports or a 'hot hand' in cards—winning four of five games, as it were."

This type of illusion encourages return chasing, where investors follow the hottest mutual fund managers.

It also tends to make people over-optimistic at the beginning of a bubble.

“Applying the representativeness heuristic to the mortgage problem is straightforward,” Utkus writes. Consider “a mortgage analyst estimating default rates on mortgage securities. By analogy, the container is the housing market and mortgage finance system. Player A is the long-term track record of prime mortgages. Player B is the recent short-term track record of subprime or exotic (such as interest-only or negative amortizing) mortgages.

“The mortgage analyst tends to assign to the subprime and exotic mortgages some of the general characteristics of prime mortgages, which dominate the container. In addition, the analyst overlooks the fact that the sample size of subprime and exotic mortgages is consistently smaller and so may not have the statistical validity of a larger, longer-term series.”

2. The emergence of skewed forecasts because of overconfidence and excessive extrapolation.

Over-confidence is endemic, inside and outside the financial system, especially among males, Utkus says. Just as a strong majority of Frenchmen regard themselves as above average lovers, most CEOs regard themselves as above-average among their peers. This leads to overconfidence and straight-line forecasting based on a recent positive returns.

“Our mortgage analyst may start with a forecast default rate on mortgages modeled by a normal distribution with an expected value of 5%. Based on recent mortgage data showing below-average default rates, the forecast begins to shift to the right, with now 5% the maximum expected default rate.

With additional short-term positive information, the forecast becomes centered on

a 0% default rate, with only a low probability of any modest level of defaults. It is through such a dynamic that forecasts of future asset values—whether mortgages or Internet stocks or other financial instruments—become increasingly skewed to the positive.”

3. The amplification of these views through a “risky shift” or group polarization process across the financial system.

The phenomenon of herding, where market participates go lemming-like over a cliff together, is typical of bubbles, Utkus writes. Herding is related to “group think,” which leads to a still-sketchy phenomenon he calls “group polarization.” It’s characterized by a “collective shift to riskier behavior in the system as a whole.” Mobs, in other words, are capable of acts that no individual or small group would commit.

4. The resetting of forecasts to an excessively cautious view.

While pessimism turns to optimism very slowly after a bear market, over-optimism during a bubble can turn into over-pessimism with all the speed and force of a sailboat’s boom during an unanticipated jibe.

“The recalibration phase is the reassertion of more rationally grounded expectations for the future. Market

participants come to recognize that their forecasts of the future were unduly positive and revise their expectations accordingly. Depending on how overly optimistic the assumptions had become, the size of this change could be substantial," Utkus writes.

What can be done to prevent bubbles, or at least to avoid being sucked into believing in one? Experience, expert advice, disinterested perspectives, and especially a focus on long-term investment performance rather than short-term volatility, are ways to avoid a roller coaster ride in the markets, he suggests.

While analyzing bubbles through a psychological prism, Utkus acknowledges that lots of factors can help inflate them. His list of suspects for the recent crisis: "excessive profit-seeking by mortgage originators, bankers, and rating agencies; a lack of institutional investor or homeowner foresight in evaluating the risks of mortgage instruments; differences in sophistication or experience between mortgage originators and homeowners, or between underwriters and investors; misaligned incentives for government-sponsored mortgage agencies; and alleged fraud and deception by various parties in the mortgage process."