

Neuroscience and Investing—or Rats Versus Humans (possibly to sci-fi) ☺
By Gary Case

The human brain is a wonderful thing! The cognitive powers we possess allow us to solve problems and react thoughtfully to situations that confront us. Unfortunately, this cognitive power often works against us as investors. Studies show that there is a “herd mentality” present in the investing public. How else could one explain the record \$45 billion that went into stock mutual funds* in January of 2000, just weeks before the U.S. stock market experienced one of the steepest declines in history. Conversely, nearly the same amount of money came out of stock funds during June-September 2002, just prior to a very strong bull market. It is widely held that the stock market behaves in a random fashion, yet that unpredictability tempts humans to try to find patterns and guess at future results (generally prompting most investors to move to the wrong place at the wrong time).

Consider a study pitting rats against humans in a test that has application to investing behavior.** When humans are presented with two lights—green and red—and told that the green light will flash 80% of the time and the red light will flash 20% of the time, but that the flash pattern is random; humans attempt to discern a pattern (posit a causal hypothesis—for you neuroscientists), resulting in a 68% accuracy rate when predicting the next flash.

Rats can't be told, so the green light provides food while the red light gives an electric shock. The rats learn quickly to only predict that the green light will flash next, resulting in an 80% success rate in rat predictions. We humans would like to say that we'll just start pressing only the green light, too...but we don't (see paragraph 1). In fact, to this author's knowledge, no one has proven that they can consistently predict stock market movements.

Couple our tendencies to seek patterns in random events with the myriad investment choices available and it's no wonder investing sometimes seems hopelessly difficult. The best answer may be simply to consult your financial planner, who can help you determine an investment plan (including a written investment policy statement), and stick with your plan. This approach may sound boring and dull, but it can assist you in avoiding being driven to slaughter with the herd.

* Investment Company Institute

**Source: “The Left Hemisphere's Role in Hypothesis Formation,” by G. Wolford, M. Miller, and M. Gazzaniga. *The Journal of Neuroscience*. 2000, Vol. 20.

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