



Animal Madness

**We like to think our investment decisions are rational—
but are they really driven by hormones?**

AS A PHYSICIAN conducting behavioral science research, I don't claim to understand the dizzying complexities of finance. But my profession does give me insight into one of the underlying causes of the economic crisis: human nature, the primitive biological wiring that has a surprising impact on investment decisions.

Consider a recent Harvard study conducted by economist Anna Dreber and anthropologist Coren Apicella. The two researchers gave college-aged men \$250 and invited them to risk any amount of that money on a coin toss, with a payoff of 2½ to 1. Those who invested \$250, in other words, had even odds of ending up with no money or going home with \$625.

Some men risked no money, and others bet only \$10 or \$20. But a risk-taking few were willing to gamble the majority or all of their \$250.

Who were the gamblers? The men with the highest testosterone levels in the study group. On average, the higher a man's testosterone level, the more money he invested. This furthered findings from a 2007 study published in the *Proceedings of the National Academy of Sciences* that suggested a correlation between elevated testosterone levels and individual traders' more profitable days in the market.

Most of us would like to think that our investment decisions are rational, that we take risks only when potential gains outweigh potential losses. But our primal instincts, our "baboon logic," are often more influential than our uniquely human logic.

Baboon logic is dangerous: Testosterone peaks can trigger disastrous losses as often as jackpots. But the finance world is dominated by alpha males biologically driven to take risks. Behavioral scientists have shown, in fact, that when men win competitions, they experience a testosterone surge. The effect triggers an ominous cycle: High testosterone promotes risky investing; those whose investments succeed experience an additional dose of this hormone, fueling even riskier investments.

That risk-taking can be irrationally contagious. When one firm takes on risky investments and, at least for a while, makes enormous profits (accompanied by jawdropping

bonuses), what is a competing beta male to do? Imitate that behavior.

The current economic crisis has led to widespread calls for stricter regulation of the financial industry. Regulators should make it harder for firms to become highly leveraged and prevent conflicts of interest from plaguing the credit rating agencies that gave A ratings to all those risky debt instruments.

But should we use regulations to rein in investors' animal instincts? It would be ridiculous for the SEC to monitor testosterone levels among investment bankers as if they were Olympic athletes. But we could create incentives for Wall Street firms to hire more women. Would their presence moderate men's behavior, acting as a check on risky, testosterone-induced investments?

Probably not. As it turns out, psychologists have recently discovered that women have their own dominance hormone—estrogen. Place women into competition, and those with a drive to win turn out to be those with higher estrogen levels. We shouldn't push Wall Street to hire more women in hopes of dampening competitive hormones—it might actually backfire.

Anyway, there's a better reason for Wall Street to hire more women. Social scientists have learned that diversity often improves group decision-making. When everyone around the table looks alike and thinks alike, groupthink can take over. What looks good to one person will look good to everyone else. A diverse group, on the other hand, will likely include more people ready to question majority assumptions.

To be healthy, baboon populations need genetic diversity. To regain their health, investment firms should also become more diverse—intellectually, culturally and psychologically. Not to do this could mean leaving our fate to the flip of an unreliable coin. ▣

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