Herd mentality

AS EXPERTS EXAMINE THE FACTORS THAT LED TO THE WORLD'S FINANCIAL CRISIS, **RESEARCH OFFERS INTRIGUING INSIGHT INTO THE ROLE HUMAN BEHAVIOUR AND HORMONES MAY HAVE PLAYED.**

BY DR SHARON ORRMAN-ROSSITER AND DR KEVIN ORRMAN-ROSSITER

GREGORY ROBERTS

We are currently awash with theories and opinions about why the global financial crisis has occurred and what the regulators, policy advisers and politicians should be doing about it. But in all the debate about whether or how much ramped-up regulation of the banking and financial system should occur, some crucial questions don't appear to be on the agenda. They hinge on well-documented research that shows the impact that human behaviour – particularly irrational and stress-induced behaviour – can have, no matter what systems are in place.

If, for example, we were to ask whether male hormones may have played a part in the levels of financial risk-taking that are now the subject of debate, it would likely produce a chuckle. However, current scientific research suggests they have. Some other potential culprits are well-researched behaviours that manifest in all human beings such as "optimism bias", "confirmation bias" and "herd mentality".

Researchers at Harvard University and the Stockholm School of Economics carried out a study to examine the specific relationship between the male hormone, testosterone, and financial risk preferences. They measured male participants' risk preferences using an investment game with real monetary pay-offs. The results of this recent research showed that men with testosterone levels that were one standard deviation above the mean invested almost 12 per cent more of their portfolio in a risky financial game, compared to men with average testosterone levels. (A 2006 *New York Times* article on female traders gave the industry estimate that nine in 10 traders are male.) This builds on previous laboratory research, conducted at Utrecht University in the Netherlands, where testosterone administered to male subjects playing a gambling task led to them making irrational, risk/reward trade-offs.

More recent research by the University of Cambridge in the UK offers a study on male traders. The study sample was taken from a mid-sized London trading floor of approximately 260 traders, of which only four were female. Cambridge researchers John Coates and Joe Herbert said it was typical of most "in terms of physical set-up, the assets traded, and the age and sex income distribution of the traders".

The study showed that under real trading room conditions, there was a significant relationship between testosterone and producing financial returns. They also found a significant relationship between a rise in cortisol (a stress hormone) and a trader's ability to make rational choices. For example, a trader's morning testosterone level could be used to predict his day's profitability, and when traders in the study experienced acutely raised testosterone, they made higher profits.

"However, if testosterone continued to rise or became chronically elevated, it could begin to have the opposite effect, as it has also been found to lead to impulsivity, sensation seeking, and harmful risk-taking," the authors explained. They also found that testosterone and its metabolite, 3alpha-androstandiol, had rewarding and addictive properties. The result? "Testosterone may therefore contribute to a 'winner effect', with a trader's previous win in the markets leading to androgenic priming and increased (and eventually irrational) risk-taking in the next round of trading. This effect, even if confined to a small number of people, could cause financial markets to deviate from the predictions of rational choice theory," the authors contend.

"Testosterone … is likely to rise in a bubble and, by increasing risk-taking, to exaggerate the market's upward movement. These steroid feedback loops may help explain why people caught up in bubbles and crashes often find it difficult to make rational choices," Coates and Herbert say.

The study also found that a trader's cortisol rises with both the variance of his trading results and the volatility of the market, so that "… if the acutely elevated steroids we observed were to persist or increase as volatility rises, they may shift risk preferences or disturb the neural basis for rational choice, thus affecting a trader's ability to engage in rational choice".

Cortisol is known to have powerful cognitive and emotional effects and if elevated levels persist, those effects can be debilitating. These include feelings of anxiety and a tendency to find threat and risk where none exist. "These effects would tend to decrease a trader's risk-taking. A situation of chronically elevated cortisol might occur if financial market volatility were to rise for an extended period, something that normally happens when the economy receives an unwelcome shock, or enters a depression.

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"Cortisol is likely to rise in a market crash and, by increasing risk aversion, to exaggerate the market's downwards movement," Coates and Herbert say. A reviewer of the Cambridge research has suggested that this may help explain why market volatility tends to come in waves.

There is a host of other research, however, that clearly demonstrates a range of non-rational behaviours that further affect decision-making.

Take a testosterone-fuelled market bubble, high cortisol levels then add three known irrational behaviours – optimism bias, confirmation bias and herd mentality – and we have a potentially volatile mix. In highly charged circumstances, clear thinking goes out the window.

Optimism bias is one very well known type of non-rational behaviour that doesn't favour a specific gender and it is aptly described in research published last year in the journal *Nature* >

> *Neuroscience*: "Humans expect positive events in the future, even when there is no evidence to support such expectations ... people expect to live longer and be healthier than average, they underestimate their likelihood of getting a divorce and overestimate their prospects of success on the job market."

And as we have recently seen, they overextend themselves in their mortgages. A survey carried out in 2005 by Robert Shiller, Professor of Economics at Yale University, and Wellesley College economist Karl Case, found that new home buyers in San Francisco believed that their home values would increase by an average of 14 per cent a year (some said up to 50 per cent a year!) in the coming decade. Of course, the housing market went in the opposite direction. In June 2008, there was a 22.1 per cent drop in housing prices in the area compared to a year earlier, according to the S&P/Case-Shiller Index.

Confirmation bias, a second type of non-rational behaviour, has lodged itself into our very language via oft-repeated sayings and adages such as "safe as houses", "house prices will always rise", "the sharemarket always rises in the long run". Confirmation bias is seeking or interpreting evidence in ways that support our pre-existing beliefs.

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This bias has been so well researched that in 1998, leading researcher on reasoning and critical thinking Raymond Nickerson provided a comprehensive 20-page review, which confirmed that: "People are prone to treat evidence in biased ways if the issue in question matters to them". And, when people are given evidence that is inconsistent with a theory they favour, they often "either fail to acknowledge discrepant evidence, or attend to it in a selective, distorting manner. Identical evidence was interpreted one way in relation to a favoured theory, and another way in relation to a theory that was not favoured," Nickerson noted. It is a phenomenon that is present in most human behaviours.

Clear thinking

During the recent market crash and the 1991 recession, the most important quality to harness is clarity of thought. In coaching business owners and high-flying executives from many sectors, we use the following simple steps, based on cognitive social neuroscience, to help provide clarity.

Change the situation: If you feel emotionally overwhelmed, lessen the immediate emotional burden by reducing your physical exposure to the cause and people caught up in it. Fear is contagious.

Gain perspective: Create distance by imagining the event or circumstances as a cartoon, as a movie, or as if it happened to someone else.

Reinterpret events: This is the most powerful way of controlling your emotions, even though it can be difficult. By reinterpreting events in a positive way, research shows that this effectively shuts down the amygdala, or fear centre, in the brain. Think about how you can capitalise on the situation or what positives can be created from it. Visualise the situation positively.

Typically, we observe confirmation bias in the way people gather information, such as reading reports and newspaper articles that confirm beliefs already held. As a result, they then discount contrary evidence and are unlikely to plan for what could happen if their beliefs are not realised. This was clearly illustrated by financial institutions not having alternative game plans when large numbers of mortgages defaulted. It may be controversial, but it is worth asking: How much of the internal risk rating within financial institutions, and the rating of securities by rating agencies, were prone to confirmation bias, where the organisations looked only for the upside in their analyses and not the downside?

A third behaviour that has contributed to the current circumstances is "herd mentality" – people being influenced by their peers to believe uncritically that something must be true. For example, almost entire neighbourhoods in the Los Angeles and Cleveland areas of the US overborrowed on their mortgages, lulled by community impetus into a false sense of security. Those neighbourhoods are disintegrating as mortgagees are now forced to foreclose.

And what about the blind acceptance of the mortgage-backed US financial securities by financial institutions, not just in the USA, but across Europe, Asia and Asia-Pacific? People make decisions based on the actions and opinions of others and simply follow the herd. Researchers from Leeds University have discovered that it only takes a minority of 5 per cent to influence a crowd's direction, and that the other 95 per cent follow without realising it. The unfolding waves of panic selling in sharemarkets across the globe could indicate that these irrational behaviours were at play when markets dived in 2008.

If proposed solutions to the current circumstances concentrate solely on rational technical responses, such as a tightening of regulations or creating new regulations, then we have to ask whether the impact of these driving irrational behaviours is being missed. Of course, it is not just the behaviour of male traders that is worthy of some thought. People of both sexes borrowed money to buy houses without the cash flow to support their mortgages. Lenders of both sexes lent to people who were bad risks. And these loans were then bundled into securitised mortgages and sold on to other institutions (risk associated with the mortgage-backed securities was also mispriced). But we are suggesting that perhaps it is time to think differently about how markets operate.

Media reports recently noted that the "Bank of International Settlements has found that the regulatory action of banks occurred in a 'mechanical function' away from the business areas of the banks, hence these business areas often believed that the analysis was not credible". It seems the regulations were in place, but because of the nature of how they were carried out, the risks were ignored.

Isn't there a risk that if more regulations are put in place, that they will also be treated in a "mechanical" way?

If research already shows that women, older men and men in committed relationships have lower testosterone levels, why not consider the possible roles that they might fill in trading rooms? Might these men and women tend to take a longer-term view and be less likely to fall into the trap of testosterone-fuelled bubbles?

In the wake of the global financial crisis, perhaps we need people who are prepared to challenge dearly held beliefs, people who think clearly and are independent and fearless in their advice on the way to move forward. And that may include taking our human foibles into account. ■

Dr Sharon Orrman-Rossiter is an expert in coaching for performance, a past chairman of Monash University's Centre for Biomedical Engineering and has a PhD in medicine. Dr Kevin Orrman-Rossiter is an executive coach, social researcher and futurist with a PhD in physics. and management and marketing qualifications. They are directors of Clarity Now, innovators in business coaching offering tailored solutions. Website: www.claritynow.com.au.

FURTHER READING

The following titles are provided by the CPA Library. They can be accessed via ProQuest, http://www.cpaaustralia.com.au/proquest. Contact the Library on 1300 73 73 73 or email cpalibrary@cpaaustralia.com.au.

"Gender effects on bias in complex financial decisions", by Megan Lee Endres, Sanjib K. Chowdhury and Intakhab Alam, *Journal of Managerial Issues*, volume 20, issue 2, 2008; **"New insights into advising female clients on investment decisions"**, by Celia Loibl and Tahira K. Hira, *Journal of Financial Planning*, March 2007; **"Testosterone levels predict city traders' profitability"**, by University of Cambridge, *Business & Finance Week*, April 2008.