

Opinion **FT Magazine**

Beware the inner reptile

Periods of acute stress in the markets offer intriguing examples of how our brains work

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Back in the days of the “last” market crisis in 2008, a senior official at an interdealer broker – one of the firms that trade securities – observed an interesting pattern. Until then, he, like most traders, had assumed that finance was becoming an increasingly global, computerised game. In a world ruled by the internet, it was easier than ever before to trade with anyone, anywhere. In an era of 21st-century cybermoney – if not Star Trek – finance, bankers had evolved to control space and time.

But when [Lehman Brothers collapsed](#), evolutionary “progress” crumbled. Suddenly, traders started placing orders by telephone, rather than computer, dealing only with people they knew personally. They were also refusing to take long-term decisions. Sometimes there were entirely rational explanations for this shift, but mostly the reaction was instinctive. “It was almost primeval,” my friend quips.

I have been pondering this comment during the last week, amid the [latest market shock](#). Periods of acute stress in the markets are always fascinating to observe, since they can reveal much about how financial and political systems operate. They can also offer intriguing examples of how our brains, or cognitive maps, work,

giving a subtle twist to the age-old concepts of human “fear” and “greed” – or rational self-interest, as the economic profession would argue.

Take a look, for example, at some fascinating research by Andrew Lo, a finance professor at MIT. Lo trained initially as an economist, but he has also spent part of his career trying to knit together the work of psychologists, neuroscientists, biologists and economists. In particular, he is fascinated by the idea that the evolution of the human species has left our brains with three parts. He identifies those parts as a central, “reptilian” core, which was the first to evolve, functions most rapidly and controls reflexive behaviour (by shutting down bodily functions that are in shock, say, to improve chances of survival); a “mammalian” layer that controls social desires and emotions (intuition, sexual urges and so on); and then the outer, “hominid” layer, which developed last and controls rational, sophisticated thought.

In normal circumstances, our hominid brain predominates. However, the mammalian (or emotional) brain never disappears, and reptilian instincts come to the fore in a crisis. And this has an important implication for finance: while “rational” economic theories can explain markets when our “hominid” brains are predominant (ie, most of the time), they are inadequate when our emotional, mammalian or instinctive, reptilian brains predominate.

Lo does not consider this a malfunction, but part of the adaptive techniques that have allowed humans to react to our environment and learn from mistakes over millennia. Thus it is no good arguing endlessly (as academics have done in recent years) about whether the efficient market hypothesis really works – it works when we are “hominid”, but not when we all turn “emotional” and fight for survival.

Unsurprisingly, many traditional economists hate Lo’s ideas. The problem with this theory – like most forms of behavioural finance – is that it is hard to turn into a tangible investment strategy. Well, not unless somebody finds a way to post a sign above bankers’ desks that reads: “Watch out, a reptile moment approaches!” But perhaps the real value of Lo’s idea is that it illustrates a point that we all instinctively know, but which economists and bankers sometimes forget: namely, that humans do not behave consistently, all the time.

Even our own perceptions of time can shift. Peter Atwater, a JPMorgan banker-turned-consultant, has recently been advising investment firms on strategy – and

this has left him convinced of the importance of looking at “horizon preferences”. In times of calm markets, when people are confident, they plan for the long term, deal with strangers and reflect on the world as a whole. They trust cyber finance.

At times of stress, though, time, social and geographical horizons collapse – and not only in moments of extreme tension. Atwater believes that the present slow-burn sense of insecurity is fostering a wider, longer-term shift towards “narrow” horizons, and this is influencing how finance and politics evolves. Cognitive maps change in ways we do not always notice.

None of this will be of much comfort to those traders who have just endured a brutal, rollercoaster week (even though people such as Atwater insist that analysing horizon preferences can enable you to be much smarter about your portfolio).

But, personally, after several decades in which finance has been dominated by theories influenced by Newtonian physics, I find it very cheering that researchers such as Lo are trying to hop across other academic silos. The longer the crisis lasts, the more likely the field of behavioural finance will be boosted. Calling a banker a “rodent” or “snake”, in other words, may no longer be just a term of abuse. Right now, it may be a form of analysis too, and one we would be foolish to ignore.

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