

The pseudo-science hurting markets

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Last August, The Wall Street Journal published a statement by one Matthew Rothman, financial economist, expressing his surprise that financial markets experienced a string of events that “would happen once in 10,000 years”. A portrait of Mr Rothman accompanying the article reveals that he is considerably younger than 10,000 years; it is therefore fair to assume he is not drawing his inference from his own empirical experience but from some theoretical model that produces the risk of rare events, or what he perceives to be rare events.

The theories Mr Rothman was using to produce his odds of these events were “Nobel-crowned” methods of the so-called modern portfolio theory designed to compute the risks of financial portfolios. MPT is the foundation of works in economics and finance that several times received the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel. The prize was created (and funded) by the Swedish central bank and has been progressively confused with the regular Nobel set up by Alfred Nobel; it is now mislabelled the “Nobel Prize for economics”.

MPT produces measures such as “sigmas”, “betas”, “Sharpe ratios”, “correlation”, “value at risk”, “optimal portfolios” and “capital asset pricing model” that are incompatible with the possibility of those consequential rare events I call “black swans” (owing to their rarity, as most swans are white). So my problem is that the prize is not just an insult to science; it has been putting the financial system at risk of blow-ups.

I was a trader and risk manager for almost 20 years (before experiencing battle fatigue). There is no way my and my colleagues’ accumulated knowledge of market risks can be passed on to the next generation. Business schools block the transmission of our practical know-how and empirical tricks and the knowledge dies with us. We learn from crisis that MPT has the empirical and scientific validity of astrology (without the aesthetics), yet the lessons are ignored in what is taught to 150,000 business school students worldwide.

Academic economists are no more self-serving than other professions. You should blame those in the real world who give them the means to be taken seriously: those awarding that “Nobel” prize.

In 1990 William Sharpe and Harry Markowitz won the prize three years after the stock market crash of 1987, an event that, if anything, completely demolished the laureates’ ideas on portfolio construction. Further, the crash of 1987 was no exception: the great mathematical scientist Benoît Mandelbrot showed in the 1960s that these wild variations play a cumulative role in markets – they are “unexpected” only by the fools of economic theories.

Then, in 1997, the Royal Swedish Academy of Sciences awarded the prize to Robert Merton and Myron Scholes for their option pricing formula. I (and many traders) find the prize offensive: many, such as the mathematician and trader Ed Thorp, used a more realistic approach to the formula years before. What Mr Merton and Mr Scholes did was to make it compatible with financial economic theory, by “re-deriving” it assuming “dynamic hedging”, a method of continuous adjustment of portfolios by buying and selling securities in response to price variations.

Dynamic hedging assumes no jumps – it fails miserably in all markets and did so catastrophically in 1987 (failures textbooks do not like to mention).

Later, Robert Engle received the prize for “Arch”, a complicated method of prediction of volatility that does not predict better than simple rules – it was “successful” academically, even though it underperformed simple volatility forecasts that my colleagues and I used to make a living.

The environment in financial economics is reminiscent of medieval medicine, which refused to incorporate

the observations and experiences of the plebeian barbers and surgeons. Medicine used to kill more patients than it saved – just as financial economics endangers the system by creating, not reducing, risk. But how did financial economics take on the appearance of a science? Not by experiments (perhaps the only true scientist who got the prize was Daniel Kahneman, who happens to be a psychologist, not an economist). It did so by drowning us in mathematics with abstract “theorems”. Prof Merton’s book *Continuous Time Finance* contains 339 mentions of the word “theorem” (or equivalent). An average physics book of the same length has 25 such mentions. Yet while economic models, it has been shown, work hardly better than random guesses or the intuition of cab drivers, physics can predict a wide range of phenomena with a tenth decimal precision.

Every time I have questioned these methods I have been abruptly countered with: “they have the Nobel”, which I have found impossible to argue with. There are even practitioner associations such as the International Association of Financial Engineers partaking of the cover-up and promoting this pseudo-science among financial institutions. The knowledge and risk awareness we are accumulating from the current subprime crisis and its aftermath will most certainly not make it to business schools. The previous dozen crises and experiences did not do so. It will be dying with us, unless we discredit that absurd Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel commonly called the “Nobel Prize”.

*The writer is author of *The Black Swan: The Impact of the Highly Improbable*, shortlisted for the FT/Goldman Sachs Business Book of the Year Award. The winner will be announced at a dinner in London tomorrow night*

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