In December 1996, just as the financial world began making value-at-risk a core component of its risk management practice, Nassim Taleb gave a scathing critique of VAR and its defenders. His interview, which was subsequently published on our web site, has probably captured more hits than any other derivatives page. In a debate in our April 1997 issue with Philippe Jorion, a professor of finance at the University of California at Irvine and author of *Value at Risk*, Taleb refined his position. It was clear at the time that Taleb was directing his fiercest criticism at Long-Term Capital Management, then viewed as the ultimate advanced statistical trading firm.

Last year, Taleb started Empirica Capital in what he calls "the woods of the back country of Greenwich." He is also a fellow and adjunct professor of mathematics in finance at New York University's Courant Institute, where he teaches a class on model failure.

"When people ask me what alternative to VAR I have to offer, my answer is smaller leverage, less naive diversification, less reliance on dynamic hedging."
- December 1996, "The World According to Nassim Taleb"

"I believe that the VAR is the alibi bankers will give shareholders (and the bailing-out taxpayer) to show documented due diligence and will express that their blow-up came from truly unforeseeable circumstances and events with low probability--not from taking large risks they did not understand."
- April 1997, "Against VAR"

"The general adoption of value-at-risk by investors will lead to a generalized breakdown of correlations. There are two enemies we have in the financial market. One is excessive leverage based on measurement, even if it's initially the right measurement. The second one is the feedback effect that leads to what I call illusory diversification. Out activities may invalidate our measurements. All markets go down together."
- April 1998, Roundtable: "The Limits of VAR"
What surprised me is that I got no, or little, public recognition after the events. So many people who criticized me before the summer of 1998 were later discussing Long-Term Capital Management as a clearly predictable thing. I was angry and irritated by that. instead of being diverted by idle debates with academics, semi-academics, regulators and risk system peddlers. I cannot possibly change their minds. I no longer want to wake up all excited, hoping to get a tap on my shoulder. There are a lot of people listening to the likes of [Philippe] Jorion out there and which gives us a huge reservoir of trades.

DS: Is VAR growing in popularity?

NT: It was Keynes who said that much of economic policy is caused by the ideas of some dead economist, since it takes a couple of decades for their students to get to power. Likewise, people who studied Markowitz's modern portfolio theory are now getting senior positions and installing these tools in the workplace. Quantitative risk management is being taught everywhere. Look at the impact of the book Against the Gods, which sold 500,000 copies. Written by Peter Bernstein, a modern finance apologist, it convinced more and more people that odds in the market are computable just like a game of chance.

You still hear people in banks who use VAR telling you that it works most of the time, as if one should ride a plane that doesn't crash most of the time.

DS: What do you have against Markowitz and modern finance?

NT: Markowitz wrote a summary of his ideas that starts with the following: "if you know E and V…"--that is, the expected return and its variance (what later became the VAR). Given that we may not have a convincing way to know this E and his V, his entire work might be misplaced. Everything in modern finance relies on your ability to know and compute the properties of the returns. From where? Visibly not from the past. It would be so simple if we could measure future properties, but then life would be great if we could read into the future.

DS: In a word, what bothers you about LTCM?

NT: It is the excuse they gave after the fact, and their attitude that their science is above observation. Meriwether wrote a letter to his investors as they were blowing up asking for more money and explaining that "the trades will converge," rather than saying "may converge if we have the right model." Obviously he had (and probably still has) the wrong model. Such

The research break did help me in that I picked up techniques that make our trading clinical research than, say, bank trading. Consider Empirica more of a research trading firm, except that the research is only for our own consumption. We have created a link between our research and our trading, something that would be impossible to do in a bank. Banks have difficulty integrating research into their trading. You have the researchers in basement C writing papers on the exact pricing of American puts (under idealized normal distribution) while traders on the 32nd floor trade on pure hunches.

Finally, I am surrounded by people like me, who have both an obsessive deference to dynamics and some respect for science. Mark Spitznagel, the Empirica senior trader, is both a former pit trader (in the bond future pit, no less) and a Courant graduate student in mathematics. If you find one of those hybrids, please tell us your way.

DS: How is it going for Empirica so far?

NT: Well, distributions seem to have than ever before. We had this year an extremely volatile three-month period (February through April), followed by extremely unvolatile three months (June through August), followed by an even more volatile October. These are very rare by any historical norm, as traders went bust on both the short and the long side of volatility. Volatility is becoming more and more unpredictable and we like that. Correlation matrices are even more unusable than ever before. Everything people were taught about markets seems to be disputed events.

DS: How can you do quantitative research yet be so critical of quantitative finance?

NT: I called my company Empirica in deference to the philosopher of science Karl Popper,
blindness also manifests itself with their econometrician saying it was a 10-sigma event. 10 sigma is supposed to occur so infrequently that the probability of having the wrong model is far, far greater. Every time you hear “10 sigma,” beware the pseudoscience.

I am also annoyed with LTCM because when I introduce myself as a quantitative trader based in Greenwich, Conn., people think I am just like LTCM, when in fact I do diametrically opposite trades. I crisis-hunt.

DS: Crising hunting? So you are back to trading full time? How does it feel? Did your break help you?

NT: I returned in late 1997 after a two-year study sabbatical. I find trading far more pleasurable than writing and debating. In trading you can repeat the same trade with impunity; you get better as you become more familiar with it. In writing you feel somewhat that you may be uttering too many platitudes. People get tired of your ideas, even though it does not make you less right. Remember Derivatives Strategy got an angry letter in August 1998 by one Eric Falkenstein who said that I was getting tiresome? It was great timing!

because we focus principally on what we know. We start every day telling ourselves we have the wrong model, but that we should make the best of it without getting in harm’s way. Our risk management is entirely qualitative, but our strategies are quantitative. This is opposite of what financial engineers currently do. They use quantitative methods to measure the risks, on the back of a trading that is largely unrigorous and

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