Challenging the notion volatility equals risk Financial Times, SEPTEMBER 5, 2010

For decades, financial players, regulators, and academics have equated risk with volatility. The practice can probably be traced back to Harry Markowitz’s fateful afternoon at the University of Chicago’s library some 60 years ago, when the future Nobel laureate came up with his famous mean-variance model of portfolio selection. This stated that the standard deviation of an asset’s returns (the statistical measure typically associated with volatility) is a pretty good indicator of its riskiness.

This idea has since become conventional wisdom in financial circles. Want to measure the “risks” of a market play? Open your Excel spreadsheet, collect some historical returns data, calculate the standard deviation and, voilà, that is the exposure you are facing. The more volatile an asset, so the argument goes, the higher the risk of investing in it. Or, put differently, the less volatile an asset the less we should worry about its future performance, thus entitling ourselves to accumulate tons of it without taking too many precautions. The recent crisis has consigned all that conventional wisdom to the wastebasket.

Volatility has been revealed as a pretty poor measure of true exposures. What had been regarded as placid and dormant in the recent past suddenly revealed itself as destructively toxic. Assets with low standard deviations suddenly lost all their value. The crux of the problem is that volatility can provide camouflage for lethal assets, thus acting as a Trojan Horse of the markets.

With volatility as your main tool, it can be quite easy to hide the true risks of a play. All you have to do is find a historical time series containing nothing but good news for your standard deviation number to be very modest. Going back three years does not yield a volatility figure tame enough? Just go back six years, since between year six and year three turbulence was negligible. Worried that the market meltdown of two years ago will categorise assets as wildly problematic? Just use the past 12 months, entirely dominated by rosy recovery. If you want to gorge on exotic high-yielding assets in a highly leveraged way, data-dependent volatility can help a lot: just scour the asset universe until you find a decently toxic family member that happens to have enjoyed a privileged past life; the risk estimates and the capital requirements will be minimal, excusing your enthusiastic forays into toxic-land.

Finding daring assets with a sunny record might not be that hard. Toxic securities tend to be binary: either they are doing quite well (as the bubble gains strength) or they are worth zero (as they inevitably collapse into nothingness). For these securities there cannot be “mildly bad” news: if the market turns sour, it means total destruction, not just a minor correction. It follows that, if they exist at all, their past performance must have been rosy. It is thus quite easy to use standard deviation to categorise problematic stuff as non-problematic.

In fact, a troubling paradox is allowed to take place: obviously sounder assets (say, US Treasuries) can be labelled riskier than obviously slipperier alternatives (say, subprime collateralised debt obligations) if the former happened to have gone through a temporary rough patch while the latter still rode the crest of the bubble wave.

Commonsensical analysis is turned on its head when volatility is mechanistically equated with risk. The collateral damage from all this can be quite unpleasant, as the latest malaise can attest. It is often told that fellow Chicago professor (and legendary economist) Milton Friedman had real hesitations when it came to rubber-stamping Mr Markowitz’s portfolio theory all those years ago. With all due respect for Mr Markowitz, perhaps it would have been better if the notion that volatility is risk had not, Trojan-horse style, infiltrated the markets.

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