The complexity conundrum

Complexity is an inherent aspect of almost all human progress, but can also be a source of danger. In light of the global financial crisis, countering this danger understandably remains high on the policy agenda. Important as this is, David Rowe continues to argue that regulating new derivatives like new drugs would be a step too far

I have written several times in the past about the role and potential dangers of complexity. Recent years have seen it become one of the animating themes in the prudential regulation of derivatives. Early last year, Avinash Persaud offered an informed and well-balanced discussion of the issue in the annual Financial Stability Review from the Banque de France.

Persaud points out that too much of the public discussion of capital markets regulation reflects little or no appreciation of the social benefits these markets provide. He describes the popular view of the financial crisis as "caused by bankers, pulling out of their back pockets derivative instruments of mass destruction, throwing them into a crowd of bewildered consumers, grabbing the money and running away". He later points out that, far from running away, many of these institutions "ran towards them; trying to stuff as many of these instruments into their own pockets as possible".

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One serious consequence of this mistaken perception is the idea that overly complex instruments are at the heart of the problem. This leads to a view that only 'simple' instruments should be permitted and/or that more complex instruments should be vetted and approved by regulatory authorities.

Both the diagnosis and the proposed treatment are ill-conceived. Virtually every 'complex' instrument is an amalgam of relatively simple components. The complexity arises from the interaction of these components. But there are good reasons for the products to exist – end-users often face complex combinations of business risks for which only combinations of simple instruments act as a proper hedge. By crafting such combinations into customised single contracts, dealers can provide appropriate hedges at lower cost while also freeing clients from the need to manage the complex portfolio behaviour themselves.

I have long argued that complexity breeds opacity, which clearly is dangerous. We must recognise, however, that modern economies experiencing rapid technological advances and operating in highly interconnected global markets are inherently complex. Trying to eliminate complexity by government diktat is like King Canute supposedly commanding the sea to retreat. Modern historians now say Canute actually understood the futility of his gesture and just wanted to impress this on his advisors. It is not clear modern advocates of central regulation are equally wise.

Forcing financial innovations to undergo the equivalent of clinical drug trials would seriously hamper the development of valuable financial innovations that can enable improved risk management. Nevertheless, inevitable complexity does require a response from both private-sector risk managers and public-sector regulators.

Risk managers should view complexity through the lens of end-user needs. Market-makers will always find it tempting to use complexity purely to muddy the waters, confuse clients and thereby widen spreads. The gain, however, has consistently proven to be temporary. The abuse of comparatively unsophisticated clients by Bankers Trust in the early-1990s provided short-term gains, but led to reputational damage from which the bank never recovered. Long-term viability demands that dealers accept complexity only if it meets a client need. Absent any such rationale, it should be avoided.

Regulators can benefit from the same perspective, casting a critical eye on gratuitous complexity and publicising its dangers. They are rightly demanding disclosures that enhance transparency and put a brake on the operational risk that flows from unbridled development of ever-more-complex trades. The process of cooking up innovative trades on spreadsheets in the morning and then booking them in the afternoon must be a thing of the past. For one thing, it is prone to significant operational risk when a quant's spreadsheet becomes the system of record. It also hampers the ability of regulators to capture a firm's full derivatives book, which they require to conduct systemic risk analysis.

Fortunately, at least one part of the flood of new regulations since 2008 serves to address this issue. In the EU, US and a number of other jurisdictions, all over-the-counter derivatives are now required to be reported to swap data repositories – in theory, a huge step forward for the market. Among other things, mandatory reporting is an obstacle to the willy-nilly introduction of new products without the infrastructure to support them. Hopefully, regulators will recognise that the use of these repositories effectively avoids the need for a pre-authorisation regime that would prevent valuable future financial innovations. **R**

[1] Rowe, D, In *Defence of Exotics, Risk* September 2000; *The Dangers of Complexity, Risk* April 2005, www.risk.net/1497319; *Markets are Not Magic, Risk* June 2009, www.risk.net/1497639; and *Market-Driven Transparency, Risk* March 2011, www.risk.net/2030182.
[2] Persaud, Avinash, *Will the new regulatory regime for OTC markets impede financial innovation?*, Financial Stability Review, Banque de France, April 2013, pp 233-238.