Financial innovation and the crisis



Barry Eichengreen

Joseph Schumpeter famously defined capitalism as "innovation financed by credit." It is interesting, therefore, to ask what he would have thought of the role of financial innovation in the current crisis.

Schumpeter was, of course, a firm believer in the merits of financial innovation and development. He insisted that many of the most important technological and commercial innovations of the 19th and 20th centuries would have been impossible without the joint-stock company and limited liability. But what would he have thought of collateralized debt obligations and credit default swaps? There is a spirited debate about whether recent financial innovations have had any positive social value whatever. On the one hand, there is the presumption that financial innovation has encouraged efficient risk-sharing and relaxed financing constraints. On the other, there is the view that its main purpose has been to facilitate regulatory arbitrage. It has been to shift risk to poorly informed investors and to investors who are confident of being bailed out if things go wrong.

Here, I would distinguish between financial innovation itself and how we have permitted it to be used. Many financial innovations, including complex financial instruments, are in principle good things: They can be used to shift risk to those best able to handle it. They can provide insurance for those with limited risk-bearing capacity. They can reduce financing costs for those engaged in production, investment, and innovation. But given the number of unsophisticated users in the marketplace and the asymmetry of the information available to them, nothing ensures that a specific innovation will have these desirable effects.

An obvious analogy is pharmaceuticals. Modern biological science holds out the promise of progress on difficult diseases. But, given the incentive of producers to rush to market products to consumers who have less than complete information, it can be abused. Consequently, pharmaceuticals are regulated; in many cases the individual must first get a prescription from

Barry Eichengreen is George C. Pardee and Helen N. Pardee Professor of Economics and Political Science at the University of California, Berkeley

a qualified professional. Because of the complexity of applications and how quickly the technology changes, the qualified professional works under restrictions laid down by a board of experts.

Given the complexity of modern financial instruments and the asymmetry of information about them, it seems obvious that we should do the same for financial products. The United States for one is moving in that direction: the House Banking Committee has voted out a bill that includes a provision to create a Consumer Financial Products Safety Commission.

This approach assumes, of course, that we do a good job of regulating, which has not been the case. How would Schumpeter have understood this failure? He would have emphasized the role of excessive confidence in the ability of social scientists to use mathematical tools to capture the uncertainties of economic life. Schumpeter spent his early life pursuing "an exact economics" in which problems could be specified in mathematical terms and analyzed using tools like the calculus. This ultimately quixotic effort on Schumpeter's part did not prevent others from taking the same road. It did not prevent financial engineers from embracing mathematical tools and applying them in the form of concepts like "value at risk." This gave them false confidence that they were capable of reducing economic and financial uncertainties to a series of mathematical formulae and of managing their consequences.

So long as things went well, those utilizing the technique were well compensated, so its applications were widely applied. More MBA students were trained in its use. Meanwhile, the fact that the structure of the market can change and that uncertainty, unlike risk, cannot be captured by a simple set of mathematical formulas was out of sight, out of mind. The older Schumpeter abandoned his quest for an exact economics in favor of a more sociological approach. The problem for financial stability, one supposes, is that there is always a new generation naively confident in the power of technique and less appreciative of the importance of the social context.

Schumpeter, who recognized this excessive confidence in the power of mathematization, would also have pointed up the role of ideology in shaping views of regulation. The idea that markets get it right and governments can only get it wrong became deeply ingrained in our intellectual discourse. The idea that banks can be relied on to manage their risks using internal models reflected this ideology. So did policies to starve the regulators of the financial and human resources needed to do their jobs.

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Schumpeter in his later years was sensitive to the role of ideology in scholarly and policy analysis. This was the theme of his 1948 presidential address to the American Economic Association. In it he emphasized that where you stand depends on where you sit — that an individual's outlook is fundamentally colored by his or her personal and cultural background. This is more of a

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problem in the social sciences than in mathematics and physics, Schumpeter concluded, where "all falling stones look alike."

Some natural scientists would dispute this. But they would not dispute Schumpeter's final point, that when ideological biases gain currency in scholarly and policy debate they become reinforcing. When in boom times other banks are making money originating collateralized debt obligations and using credit default swaps to insure them, the ideological bases for these practices provide further justification for the activity. When other banks are investing more of their funds in high-yielding investments and holding less capital because their models tell them that a small capital cushion will suffice, the argument that modern bankers have mastered the science of risk management and should go along with these practices becomes irresistible. Without that kind of self-justifying and self-reinforcing ideology, it is hard to imagine that the privatization of risk management and the excessive risk-taking that caused our current crisis could have proceeded as far as they did.

What was Schumpeter's solution? In *Science and Ideology* he saw as the way out an economics better informed by historical events and processes. It is not that economic historians are less subject to ideological biases — they have social origins, too — but that they are more aware that such biases exist because they are in the business of analyzing social origins and their consequences.

While the crisis has damaged the reputation of mainstream macroeconomics, it has burnished that of economic history. The case made in the wake of recent events is that policy makers and participants in financial markets should study more history so that they can look beyond recent events. Knowledge of financial history will serve as a caution that when an asset class is booming that boom will not last forever. History will remind them that what goes up can come down.

But the role of history is larger than just this. It also reminds us that modeling choices are not independent of the social milieu of the modelers. It reminds us that social processes, including economic and financial processes, are complex and nonlinear in ways that can render counterproductive efforts to reduce them to simple formulae that float in their own mathematical ether. Finally, it reminds us that it can be equally counterproductive and dangerous to make policy on that basis.