Banks and Turtles

Christopher D. Carroll

Department of Economics Johns Hopkins University January 21, 2009

Pondering the role of the central bank in a modern economy, one cannot help but be reminded of the apocryphal story of the Western explorer who encounters an Eastern mystic teaching his disciples that the world rests on the back of a giant turtle. When the explorer challenges him, "and what does the turtle stand on?" the mystic, having anticipated the question, replies with a smug smile: "It's turtles all the way down!"

The interbank lending rate is somewhat the same. During the ongoing financial crisis, even National Public Radio's "Planet Money" has learned to obsess about the TED spread and other measures of the rate at which banks exchange funds with each other. After skyrocketing to unheard-of levels last fall, these measures have settled down recently as it has become clear that the bottom turtle (the Federal Reserve) really does stand ready to provide unlimited sums of money at the prevailing interest rate of zero.

The fundamental difficulty is that the Fed cannot fulfill such a "lender of last resort" role without implicitly or explicitly guaranteeing some of the dodgy loans that have been made in recent years. Hence all the machinations about "bad banks," "troubled assets," and other plans for triage of the financial system: The purpose is to make sure that the bad loans do not bring down the whole stack of turtles (and the world).

However, at least in the case of mortgage-backed securities, a real physical asset (not just a turtle) stands behind the piece of paper, and smart people (who should know) tell me that the market is currently placing absurdly low valuations (like, 10 or 20 cents on the dollar) on these securities. The question that has engaged the great financial brains of our day, from Hank Paulson to Larry Summers to Ben Bernanke, is why markets won't place a proper price on these assets.

Everyone seems to have reached the same conclusion: Any particular asset that a bank offers for sale is sure to be the one thing that the bank secretly knows is the worst piece of toxic waste on its balance sheet. Potential buyers know this, so banks do not even bother to try to put lipstick on a pig by offering to sell such items on a piecemeal basis (economists call this the "adverse selection" problem).

It is not a new problem. The United States has not had a banking crisis since the Great Depression, so the problem is not familiar to our policymakers or pundits. But other countries have had banking crises, and survived.

Several lessons seem clear from those experiences. First, one-off measures (like the rescue of this or that specific troubled institution) will not clear up the problem, unless the institution is so large that bailing it out is equivalent to bailing out the entire system.

Second, a wholesale nationalization of the banking industry causes a raft of political and economic problems; in particular, lending in a politicized system depends more on political connections than on creditworthiness.

So, we are left with the example of Sweden; in 1992, in a similar situation to our own, the Swedish government took a shareholder stake in the entire financial system, with explicit prohibitions on politicial meddling in banks' lending decisions. This is the wisdom that Henry Paulson belatedly understood when he abandoned his plan to buy toxic assets and instead focused on equity injections, in the form of preferred stock, in the banking system.

However, the injections so far have not been enough to fully recapitalize the system, and institutions are now lining up to receive further injections. Mostly, the people who object to this do not seem to understand about the turtles.

But perhaps they have a point: There may be a better way for the Fed to deal with part of the problem than by being the bottom turtle who backs up all the others.

The particular part that might be addressed differently consists of mortgagebacked securities that would be easy to price if one knew for sure what will happen to housing prices over the next few years. Part of the reason these assets are not trading is "Knightian" uncertainty (that is, uncertainty so extreme as to be incalculable) about future home prices.

If it is true that there are a lot of mortgage-backed securities being valued at prices that are unreasonably low, there is a better solution than having the taxpayer guarantee the repayment of bad loans which should never have been made in the first place: The Fed (or the Treasury) could offer insurance policies against the risk that, say, the Case-Shiller house price index will end the year 2010 at a level that is lower than its current value by 20 percent. If the Fed is serious about preventing deflation, then the event that would trigger a payout by the government will never actually occur. In that case government would therefore collect the insurance premiums (either explicitly, as an insurance fee payment from the 'bad bank' to the government, or implicitly, in the tacit sense that the government has a achieved its goal by attracting participation by private equity), and both markets and government would be better off.

More concretely, it might make sense to bundle all the mortgage-backed securities into a set of "bad banks" which could be sold to investors along with a government insurance policy against house price risk. If, for example, the portfolio of one of the "bad banks" consisted of a notional \$100 billion of properties (trading, now, at a valuation of, say, \$20 billion because of the adverse selection and "Knightian" uncertainty problems), then the government could pair with that bank an insurance policy that only pays off if the Case-Shiller index of housing prices falls, by the end of 2010, by more than 15 percent from its current value. Perhaps for every percentage point by which by which the Case-Shiller decline exceeds fifteen percent, the bank gets \$1 billion of payout from its policy. So, if the Case-Shiller index fell by, say, 20 percent, the government insurance would kick in to the tune of \$5 billion.

The government could require, say, participation in the scheme by all financial securities traded in the United States that contain any nonconforming mortgages meeting certain "subprime" criteria issued from 2005 to 2007. This scheme has the virtue of being immune from the adverse selection problem (assuming that all properties meeting the criteria are included), and addressing the problem of Knightian uncertainty about aggregate price houses head-on by saying the government insure it it away. In such a bargain, at least it would be clear what the stakes are for all parties concerned.

There are countless practical difficulties in implementing such a plan, starting with the question of how to guarantee participation by a large enough fraction of the troubled assets. But the offer of insurance might be enough to bring in some of the investors who have so far been hoarding their cash in Treasuries, in which case the plan will have worked, even if the government ends up having to pay out some money on the insurance policies.

At any rate, this plan has the virtue of not involving turtles.