Commentary: Monetary Policy and Asset Market Volatility

Rudiger Dornbusch

Bernanke and Gertler offer an excellent paper on guidelines for monetary policy. Much is to be learned, and when they get close to the key issue: "Should the Fed crash asset market bubbles?" Their firm "no"—model and simulation-based—offers great comfort to received wisdom. I have learned a lot from the paper and their broader research effort (see Clarida, Gali, and Gertler (1999) and the references given there) on a modern consensus about Taylor Rules as a systematic approach to monetary policy.

The Bernanke-Gertler setting and conclusions

The basic framework of Bernanke-Gertler is a world where policy-makers set their interest rate-oriented strategy in a forward-looking fashion and where markets, importantly, know and believe this strategy. The macroeconomic environment is "standard dynamic new Keynesian." That means enough special effects to have macroeconomic action, even though agents are fully forward-looking (except in the labor market where there is some inertia) and maximizing and market clearing is the rule (except in the credit market where information asymmetries yield risk premia though unlike in the real world no credit rationing). The financial sector, thus, is enriched by ingredients in the line of Fisher-Kyotaki-Moore but not quite the full range of effects as, say, Wojnilower (1980).

To address the question of monetary policy reaction to asset market disturbances, Bernanke-Gertler introduce an exogenous mechanical five-period bubble in asset prices, which affects, via credit premia, the cost of capital and investment and entrepreneurial consumption. Effects of the bubble on investment are related only to the credit cost and not to the stock price bubble per se. That is, surprisingly, bankers are fooled by the bubble; entrepreneur-investors are not. In this setting, once the model is calibrated and put to shock, these conclusions emerge:

— A Taylor Rule that "aggressively" targets inflation stabilizes output and inflation better than an "accommodating" one that maintains real interest rates near constant. This stabilization is very significant for inflation, but it is also important for output. Thus, accommodating policy is out and even more so, of course, when it comes to bubbles and tech shocks.

— A policy of aggressive inflation targeting, augmented by a reaction to bubbles, does more poorly both with respect to inflation and to output variability than one that just targets inflation. Bubble busting does *not* contribute to stability. True, the output stabilization is quite marginal (the difference in output variability is barely 3.2 percent). But, on the inflation side, it is a factor of 13.

The main point is scored, no bubble busting please. Accepting these results as demonstrated and plausible, there are still two questions where more detailed explanation would help us understand better the full workings of the underlying structure. One is why a policy of including bubble busting induces dramatically larger inflation variability, even though the output variability is only marginally different. The other question concerns the output effects of an anti-bubble policy. In the accommodating case, the authors note that "counter-intuitively" the emergence of a bubble leads to a fall in output—the reason is that with inflation, nominal rates are expected to rise and that depresses fundamentals valuations. But, at the same time, investment does not respond to the market price. Not at all counterintuitive, one is

led to say, but rather an implication of the strange result that investors do not respond to actual market prices. Why the same kind of issue does not arise when policy is aggressive, including asset busting is not really answered buy the authors use of "evidently."

We conclude then that asset bubbling, once we leave the red herring of a constant real interest rate strategy, is shown as inferior to plain inflation targeting predominantly on grounds of a far lower inflation variability but by channels and effects that are not altogether apparent. It would be interesting here to get a better sense why, in this forward-looking world, inflation is so variable. It would be interesting to know whether the results on the relative variability of output and inflation are significantly responsive to the extent of aggression (the value of the inflation coefficient β in the nominal rate equation, the extent of inertia in the labor market and the implementation lag on the supply side.) If it turned out that the inflation result was an artifact or at least not very robust, we would have to conclude that aggressive inflation targeting, including some bubble busting, does not deteriorate policy performance significantly. For the time being, though, it is prudent to share Bernanke-Gertler's suspicion of asset bubble busting for their reasons and for all the other good reasons, including how to tell a bubble when you meet one.

Before leaving the model and simulation part of the discussion, the credit market channels of monetary policy focus not just on the risk premia. It is worth noting that the Bernanke-Gertler structure is surprising in this respect: much discussion of them went for capital based on asymmetric information and collateral but specifically on credit rationing. Credit rationing would, of course, go much in the same direction as their risk premium—rationing eases and premia fall. But on the way down they have rather different effects. As bankers say, it is not speed that kills but the sudden stop. That has far more to do with fierce rationing and recalls than with credit coast movements. It is, of course, amplified by bankruptcy issues that have a natural place in the contest of bubbles.

Further issues

There are a few issues that are really not addressed in the paper, even though the title might invite a look in that direction. One problem is clearly the predicament posed by the big asymmetry between the way up and the way down. Like the Grand Tetons, asset prices rise smoothly, though possibility fast. But when they fall, they often crash precipitously. Should there be very different responses on the way up and down? In the same line of questioning, should the monetary authority take a very different view of equity and credit markets—for example, benign neglect toward the former and great activism toward the latter?

On the way up, the monetary authority is both politically and economically in a poor position to crash bubbles. Who knows just where along the way, between Chairman Greenspan's first warning of "irrational exuberance" and the ultimate peak, true value of stocks lie? Surely, there is high-pressure economy and valuation hysteresis, too. The Fed's experimentation in disregarding Phillips curves and placing great confidence in their better understanding of the New Economy is a key part both in high fundamental values in the extra bubble part. Surely, too, their willingness to see or suspect increased productivity—in part, quite possibly, in response to high valuation of assets and their effect on investment and innovation and, hence, on the supply side—makes what otherwise would be a bubble possibly more nearly fundamental value. But even if that is not the case, safeguarding the political independence of the Fed makes it a terrible idea to go out crashing markets on the mere suspicion or judgment that prices are out of line with reality. (See the discussion in Cogley [1998]) Any wider political economy model of the Fed must include that consideration, including the risk of policy error. Issing has made this point: (See Gertler et al. (1998, p. 21).

"Gearing monetary policy to asset price movements might jeopardize a central bank's credibility. One reason is that there is the problem of an asymmetric perception of asset price movements. In short, increases are fine, while declines or downward movements are considered destroying wealth and, therefore, bad."

Hence, on the way up, the Fed should widen its concern for credit risk and be vigilant in enforcing quality control, along, of course, with inflation targeting. But once markets crash, the Fed needs to pay all attention to maintaining or restoring both *confidence* and *liquidity*. On the way up, liquidity means that credit is slushing around indiscriminately. On the way down, the word means that markets plain stop in terms of flows and rollovers and, thus, within a short period, risk inducing pervasive default. Here, big rate cuts and housing markets with cheap credit, not many questions asked are essential. The presumption that this happens creates its own moral hazard problem, but never mind, better moral hazard than the Great Depression.

Thus, when it comes to monetary policy and asset price volatility, the interesting issue is not the gentle part of the trip but rather when it crashes and both credit liquidity dries up on the way up credit quality, on the way down liquidity. Neither of these considerations has a place in the Bernanke-Gertler model, which is just price based and lacks rationing and liquidity. Yet, this was one of the lessons of the Great Depression as brought out, for example, by McKean (See McKean [1949]). The Fed has fortunately taken the wider view and has shown this both in 1987 and again during the LTCM crisis. Aggressive, flexible monetary targeting hardly captures these key policy interventions. And yet, they are among the most significant, in addition to the New Economy-experimentation still under way, in the past 15 years. Of course, they also show as the outliers in their simulation of the flexible aggressive monetary rule in the U.S. case.

Emerging market issues

In their informal discussion, Bernanke-Gertler take their model beyond the borders to highlight its relevance to some emerging market issues—namely, the financial crises of the recent past as well as the issue of monetary standards. The notion that emerging markets had balance sheet problems was, of course, understood within a period of the collapse (See Dornbusch [1997]) and the references given there and many since. Importantly, again, when credit rationing disappears, the Bernanke-Gertler model tells only a small part of the story and the lessons to be drawn.

I am more concerned about the discussion of monetary standards and the confident assertion that flexible exchange rates are appropriate for emerging markets. Most emerging markets dream of having New York or Frankfurt interest rates. Surely, the easiest way to get there is to close their central banks and eliminate the costly option of debasing the currency by devaluation surprises. After enough bad experience, the good equilibrium is the commitment to not having a central bank, something far easier to understand and believe than the nth commitment for the central bank to be good, this time. In emerging markets, the share of capital in cost is high and, therefore, great attention should be focused on low and stable capital costs. Full monetary integration is likely to promote just that and, along with it, a far better credit culture. In countries where money has been debased beyond belief, e.g. Argentina, the issue is not one of strategy but of an anchor so heavy and visible that nobody can possibly try and hijack it. Arguing for flexible rates and central bank discretion is just about the worst idea in these extreme cases in most others. In other cases, there is the issue of convergence to moderate inflation. Is such a transition enhanced by flexible rates or is a deep regime change more appropriate? The fact that capital markets today are deeply integrated and command formidable experience and leverage relative to the lone central bank and its poorly equipped staff goes even further to highlight the desirability of putting aside the exchange rate. (See Dornbusch (1998 and Dornbusch and Giavazzi [1998]).

References

Clarida, R., Gali, J. and M. Gertler (1999) "The Science of Monetary Policy: A New Keynesian Perspective," *Journal of Economic Literature*, forthcoming.

Cogley, T. (1999) "Should the Fed Take Deliberate Steps to Deflate Asset Prices?" Federal Reserve Bank of San Francisco, *Economic Review*, No. 1.

Dornbusch, R. (1997) "Lessons from the Asian Crisis," in the author's website: http://web.mit.edu/rudi/www.

————————- (1998) " The Relevance of the Euro for Latin America," in the author's website: http://web.mit.edu/rudi/www.

Dornbusch, R. and F. Giavazzi (1998) "Sound Credit and Hard Money," in the website http://web.mit.edu/rudi/www

Gertler, M. et al. (1998) *Asset Prices and Monetary Policy: Four Views*, CEPR and Bank for International Settlements.

McKean, R.(1949) "Liquidity and the National Balance Sheet." in L. Metzler and L. Mintz Readings in Monetary Theory. Irwin.

Wojnilowr, A. (1980) "The Central Role of Credit Crunches," *Brookings Papers on Economic Activity*, No.2/.