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Modeling the Liquidity Effect
of a Money Shock (p. 3)

Lawrence J. Christiano

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In This Issue

Back in 1981, when I was an economist with the U.S. Senate Budget Committee, I raised the Lucas critique with Alice Rivlin, then the director of the Congressional Budget Office. I complained, as Robert Lucas had, about the deficiencies of macroeconomic models for policy analysis and made his pitch for general equilibrium models. She replied that she had sympathy for the arguments, but where was there a quantitative, general equilibrium model she could use? She had a point.

Economists have been struggling with that challenge since the Lucas critique first appeared in 1976. One approach developed to meet it is called *real business cycle modeling*, an approach familiar to regular readers of the *Quarterly Review*. In "Modeling the Liquidity Effect of a Money Shock" (p. 3), Lawrence J. Christiano constructs monetary versions of real business cycle models and judges their ability to confront the data. Although his findings are not entirely positive, his work does record some successes and points a way to future research.

Since this issue of the *Quarterly Review* has only the one article, instead of the customary two, readers may want to read it twice to get their standard allotment. They can read it once as a how-to manual. The article describes how real business cycle models are constructed, empirically quantified, tested, and then revised. The methodology described reveals a constant interplay between theory and observations.

The other reading can be as a piece of original research. Christiano searches among versions of models to find one consistent with a common-wisdom relationship.

The primary relationship Christiano wants his model to produce is that interest rates immediately fall when the Federal Reserve injects money into the system. He notes that such a Fed action can have two opposite effects. One is to lower interest rates by putting more liquidity into the system. The other is to raise interest rates by raising inflationary expectations. For the common-wisdom relationship to hold, the liquidity effect must be quantitatively more important than the anticipated inflation effect.

Christiano attempts to produce this relationship among models which have a *cash-in-advance constraint*; economic agents in these models must use cash to make purchases. The variations among the models studied are variations in the amount of information agents have before they make decisions. Although Christiano finally is able to produce a model consistent with the common-

wisdom relationship, that model is not successful in confronting some other regularities in the data.

So, if a monetary policymaker were now to ask me Alice Rivlin's question, I'd feel less foolish. I would answer, "No, we still don't have a quantitative, general equilibrium model of money we can trust, but we're getting there."

Preston J. Miller
Editor