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**Business Cycles:
Real Facts
and a Monetary Myth (p. 3)**

Finn E. Kydland
Edward C. Prescott

**Vector Autoregression
Evidence on Monetarism:
Another Look at
the Robustness Debate (p. 19)**

Richard M. Todd

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In This Issue

“Just the Facts, Ma’am”

First come the facts; then come the theories to explain them—so argue Finn E. Kydland and Edward C. Prescott in “Business Cycles: Real Facts and a Monetary Myth” (p. 3). They claim that the economics profession took a wrong turn back in the late 1940s, when simple reporting of business cycle facts fell into disfavor. Because of this mistake, the development of business cycle theories suffered. Kydland and Prescott note that this mistake is now being corrected: reporting business cycle facts and developing business cycle theories have once again become respectable.

Kydland and Prescott illustrate the value of their approach to reporting business cycle facts. They first provide a formal definition of such facts: the comovements of the deviations from trend in different economic time series. (Here *trend* is given an operational meaning.) Using this definition, they then report what they see as some facts and a myth. An advantage of this approach is that it can yield observations that run counter to the common wisdom. For instance, their study shows that since the early 1950s, the U.S. price level has been *countercyclical*; it has tended to be low relative to trend when output has been high relative to trend. One interpretation of this finding is that, in the United States, shocks to technology, rather than to preferences or budget and monetary policies, have been the important force driving postwar business cycles.

“Don’t Have a Cow, Man”

A touted benefit of time series models known as VARs (vector autoregressions) is that they are able to uncover important relationships in the economic data. These relationships can then be used to test economic theories: if a theory is good, the relationships it implies should be close to those found in the data. But some skeptical researchers have strongly objected to this use of VARs, as Richard M. Todd reports in “Vector Autoregression Evidence on Monetarism: Another Look at the Robustness Debate” (p. 19). These researchers have pointed out that small, arbitrary changes to a VAR’s structure can lead to large changes in its results—the relationships can disappear, for example, or reverse signs. In short, the skeptics say, the results of VARs are not *robust*. Thus, they claim, for testing economic theories, VARs are useless.

Todd examines this methodological issue by conducting a careful, systematic case study. First he describes the work of

Christopher A. Sims, who in 1980 found that relationships generated by a small VAR were inconsistent with those implied by a simple form of monetarist theory. Then Todd describes the work of some researchers who attacked Sims' work and the response Sims made to those attacks. Finally, Todd makes hundreds of small, arbitrary changes to Sims' VAR model and examines the results.

The skeptics shouldn't have had a cow. Todd finds that they were right, to a degree: the small, arbitrary changes in structure sometimes do lead to large changes in results. Yet he finds that the skeptics went too far when they claimed that, for testing theories, VARs are useless: the changes in results are not large enough to overturn Sims' conclusion that a simple form of monetarist theory is inconsistent with relationships found in the data. Todd concludes that economists need not abandon the use of VARs to test theories. But they do need to carefully check the robustness of any relationships uncovered by a VAR.

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