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measurement and policy

Measurement and Policy

Proper analysis of public-policy issues depends heavily on proper measurement of the economic quantities involved. This issue of the *Economic Review* demonstrates this obvious truth with examples taken from several widely different fields. One article analyzes the shift adjustments taken to improve the measurement of the monetary aggregates. A second article discusses ways of improving the measurement of "redlining" in bank lending practices. A third article proposes a change in the pricing mechanism for irrigation water, as a means of improving resource allocation in California's Central Valley.

Barbara Bennett argues that changes in the public's demand for various types of financial instruments have altered the meaning of the monetary aggregates, making observed growth in these aggregates harder to interpret. The growth in M1, in particular, has slowed considerably over the past few years. Yet with the proliferation of higher-yielding substitutes for the traditional M1-type transaction instruments, slower *observed* growth may not necessarily be associated with a slowdown in the economy.

The Federal Reserve has sought ways to minimize the effects of recent financial innovations and regulatory changes upon the meaning of the monetary aggregates and their relationship to economic activity. As Bennett notes, one part of the effort has centered around the redefinition of the monetary aggregates in 1980. In addition, the Federal Reserve has come to place greater emphasis in its policy deliberations on broader aggregates, whose growth rates and relationships to economic activity are affected less by shifts of funds among financial instruments. Again, the Federal Reserve has attempted to cope with the problem of measuring and interpreting money growth by adjusting observed growth rates of the aggregates to account for distortions caused by shifts of funds among financial instruments. The obvious case is the Fed's treatment of "other checkable deposit growth" that occurred after the nationwide introduction of NOW accounts at the end of 1980.

But Bennett continues, "We have not seen the last of the sweeping changes recently taking place in the U.S. financial system." Money-market funds continue to grow rapidly. Increasing numbers of brokerage firms and depository institutions are announcing deposit-sweeping services, while larger numbers of banks and thrift institutions are offering retail repurchase agreements and loophole accounts. In addition, the pressure to deregulate deposit-interest rates continues to mount, and regulatory authorities have met that pressure by creating short-term accounts designed to permit depository institutions to compete more effectively with money-market funds.

Because of these developments, Bennett argues, "Observed M1 growth may continue to give somewhat misleading policy signals." To the extent that distortions in M1 growth can be traced specifically to the growth in certain financial instruments, shift adjustments may be useful. But she cautions that many of these changes cannot be quantified with even the same degree of certainty as the NOW account shifts.

Alane Sullivan and Randall Pozdena consider the measurement problems involved in implementing anti-discriminatory housing credit policy under the Community Reinvestment Act (CRA). The act was designed to encourage financial institutions to "help meet the credit needs of the local communities in which they are chartered." To meet that policy goal, the CRA directs each supervisory agency to take into account a financial institution's CRA record when ruling on branch, merger or other applications. However, the affirmative orientation of the CRA represents a significant departure from standard bank-regulation procedures, which were designed primarily to insure the safety and soundness of the banking system.

The CRA has its origins in long-standing allegations by community groups that financial institutions discriminate against certain neighborhoods in credit decisions. The practice called neighborhood "redlining" allegedly contributes to, and even causes, the decline of inner-city neighborhoods. However, in view of analytical limitations, as well as Congressional intent, the authors believe the CRA's anti-redlining provisions should center on detection of *irrational* redlining, or arbitrary geographic discrimination that is contrary to sound business judgment.

With this in mind, Sullivan and Pozdena measured the usefulness of various analytical techniques and data sources in detecting the arbitrary use of property location in mortgage-lending decisions. They found that simple index techniques were unreliable, because they ignored the complexity of the economic decisions involved in the mortgage market. (These measures failed to account for the sound business reasons or demand factors which may be the cause of disparities in loan volumes among neighborhoods.) They also found problems with the "market model" approach used in more sophisticated studies, because of the difficulty of defining an individual lender's role in such a complex context. "The most reliable technique for evaluating charges of geographic discrimination appears to be loan applications analysis, which permits the scrutiny of a credit supplier's individual lending decisions."

The authors argue that effective CRA enforcement may require substantive changes in the methodology used by regulators in evaluating allegations of redlining. "In the absence of quantitative evaluation techniques, CRA assessments today largely depend on the judgment of CRA examiners. Since the detection of CRA violations is considered an important regulatory responsibility, decisions should be accurate and consistently applied, given their far-reaching consequences. The use of formal, objective methods of evaluation can make a positive contribution to both of these goals. Among the methods that probably should be considered are those which analyze loan application records.

Turning to the area of rural development, Yvonne Levy argues for a new approach to solving the potential shortfall of water supplies in Southern California. Most proposed solutions to the problem have called for an expansion of supplies for prospective water-short areas, primarily the construction of new dams and canals to bring more water from Northern to Southern California. But Levy argues for an alternative approach. "If water were priced higher, final users would have a greater incentive to conserve, the projected demand would be lower, and some or all of the proposed new water facilities would not be required."

Levy notes that, in practice, the U.S. Bureau of Reclamation charged on average about $5 per acre-foot of Central Valley Project (CVP) irrigation water in 1981. She argues, however, that this represented a substantial subsidy to California farmers because the Bureau's charge should have reflected costs that would have been incurred by an investor-owned utility.

With adjustments made for imputed property taxes, amortization, and interest cost, the Central Valley Project would have incurred an average unit cost of almost $24 per acre-foot of irrigation water in 1981, calculated on a historical accounting basis. The calculations would yield a $48 acre-foot charge if they took into account the replacement cost of the CVP capital plant. And if efficiency of resource allocation were the only criterion, the Bureau would price all irrigation water on the basis of long-run incremental cost—the cost of delivering an additional acre-foot of water from the next scheduled block of new capacity. This approach, indeed, would yield a $324 acre-foot charge for CVP irrigation water.

Levy argues that very high subsidies for Federal irrigation water have had major consequences. "The consumption of water and the size of the Federal irrigation system have expanded beyond the point where the net return to the last unit of water, in terms of agricultural revenue, is equal to the cost of supplying that extra unit. This suggests that more resources have been devoted to the construction of the Federal irrigation system in California than are warranted by agricultural benefits." She calls for increased emphasis on pricing reform to improve the efficiency of water usage, through the use of more efficient irrigation methods and shifts to less water-intensive crops. "Indeed, Congress logically should give more attention to the role of the price mechanism in reducing the projected growth of irrigation water demand not only in California, but throughout the West."