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Policy Targets and Operating Procedures in 'the 1990s

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A presentation entitled ''Policy Targets and Operating Procedures in the 1990s'' could cover many topics. What this paper will not deal with is the ultimate targets of monetary policy. I take that target to be price stability. Along with others at the Federal Reserve, I believe that the price level is the only variable that over the long run is under the control of the central bank. Moreover, for a variety of reasons having to do with economic inefficiencies and with the unsustainability of other inflation goals, stability is the only sensible objective for the price level. Nor do I undertake the difficult task of laying out a path of interim objectives to get from the .currentstate of moderate inflation to price stability.

Rather, I want to focus on the narrower issue of how to keep policy on a path that leads to the achievement of the objectives the monetary authorities have set for themselves, how the process of adjusting policy to this end has evolved over the last decade or so, and what that evolution may mean for the success ,of policy in the 1990s.

An examination of policy targets and operating procedures inevitably entails consideration of the role of various intermediate targets and indicators. But I begin by examining the need for explicit intermediate indicators between central bank actions and their results

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for the price level. Then I will discuss the reasons for the changing status of money and credit measures in guiding policy adjustments, and the implications of relying, instead, on various signals from financial markets and the economy. I will conclude by treating the closely related issues of how the central bank reacts to new information and how it ensures consistency between its short-run policy actions and its long-run objectives.

Why intermediate indicators?

To some observers, debates about what central banks should be looking at to guide policy decisions are superfluous. The ultimate objective is stable prices, and these observers have advocated keying policy directly to new readings of broad measures of inflation. In their view, either the monetary base or the federal funds rate should be adjusted in direct response to information that the price level is deviating from a preset objective.

Suggestions of this sort have proliferated in recent years. They are motivated in some cases by frustration with alternative intermediate targets previously thought to be useful in accomplishing the same objective. In particular, this camp has attracted some former monetarists, who are now a little less certain of the relationship between money supply measures and spending or inflation. This greater uncertainty has resulted from the changes in markets for deposits and other financial assets wrought by innovation and deregulation in the 1980s. (The implications of these changes for the implementation of monetary policy in coming years is discussed below.)

Some academic advocates of adjusting the monetary base or the funds rate in response to the price level are reasoning from theories in which monetary policy affects the path of output only in trivial ways so that there is no reason not to pursue price stability directly. For policy to feed through reasonably directly into prices, prices and wages must adapt quickly to changing conditions in goods, labor, and financial markets. In the United States, at least, such flexibility very likely has increased in recent years. Deregulation of various industries, the shift away from an industrial base characterized by relatively few large firms and large unions toward a service-based economy, and the greater international integration of markets for

goods and services probably have heightened effective competition and hence the responsiveness of wages and prices to various influences.

But the perfectly flexible classical economy still seems some way off. For whatever reasons—long contracts, slowly changing expectations—the adjustments the central bank makes to the reserve base and to very short interest rates still affect real interest and exchange rates and, in turn, economic activity. We have seen this influence at work in recent years, when the more rapid expansion of 1987 and 1988 and the slowdown in 1989 have seemed traceable at least partly to the monetary policies that preceded them.

The lags between policy actions and price consequences appear to remain long and complex, with implications for the path of output. A single-track policy.response tied to inflation data alone probably will produce sizable swings in the economy. As a consequence, objectives for inflation are likely to have some side constraints having to do with real output. These side constraints may dictate policy reactions to incoming information on the course of the economy as well as on prices, leading to adjustments to the desired path for inflation.

If the linkages among policy, the economy, and prices were well enough understood, reasonably stable over time, and mostly free from noise, they might be captured by a reliable empirical model or perhaps by judgmental forecasts. Then the job of implementing policy might still be straightforward: Policy adjustments, though perhaps not adhering to transparent rules of thumb, could be calibrated from the model or judgmental forecast, taking into account the inflation objectives and output constraints of the authorities.

Inherently, all policy depends, at least implicitly, on projections that permit policymakers to assess the implications of a course of action. A reliance on intermediate indicators arises out of skepticism about forecasting exercises and out of a desire to identify and minimize deviations from objectives. Intermediate indicators are used partly in an attempt to shortcut or cross-check the projection process and possibly to discipline policy, through prompting adjustments before cumulative imbalances require more costly corrections. These indicators may even be elevated to targets if they are considered sufficiently reliable. As long as forecasts are subject to substantial error and real output paths are important, monetary policymakers are likely

to rely on indicators or targets intermediate between policy actions and price-level effects.

It is in this area of intermediate indicators that policy implementation has undergone its greatest change in recent decades—an evolution that is likely to continue into the 1990s. Some indicators, such as interest rates and exchange rates, are elements in the transmission process, figuring directly in spending and saving decisions. To the extent the transmission of policy has changed, so too have the appropriate settings and weights for these types of indicators. Indicators in another class—including the money and credit aggregates—may have little independent standing as variables with direct influence on spending and production; they may, instead, be the surface manifestations of complex interactions among savers, spenders, and intermediaries. Changes in those interactions may call into question the reliability of the relationships between the indicators and ultimate policy objectives.

Money and credit aggregates

In the United States we have seen changes both in the monetary aggregate that is the preferred target or indicator and in the weight that is placed on money and credit measures in the conduct of policy. These shifts have reflected important underlying developments in financial markets: changes in the characteristics of existing financial instruments, the creation of new instruments, and the blurring of distinctions among financial instruments generally. Among the factors behind these developments have been the removal of regulations that enforced the distinctions among instruments and advances in technology that have reduced the transaction costs of issuing and buying a variety of financial claims. These forces not only have been at work on the financial instruments issued in a given country, but also have affected the relation of financial claims in one country to those in another.

The effects of these forces on previously distinct categories of assets are illustrated by a variety of developments in the seventies and eighties: Deregulation has blurred the distinction between deposits used for transactions and those used as a store of wealth; securitization has made loans much more like securities; in the wake of deregulation and brokering, retail deposits and managed liabilities

at depositories no longer are separate and distinct from one another; the junk bond market has blurred debt and equity; computers have permitted easy substitution between deposits and mutual funds; and the removal of controls on international capital movements has meant that investors can treat assets denominated in home currency and those denominated in foreign currency more interchangeably.

Moreover, as government regulation has become less confining, the decisions of suppliers of certain assets have become more important in determining the outstanding quantity of those assets. In the retail deposit markets, for example, decisions of depository institutions about the interest rates at which these instruments are offered affect the willingness of the public to hold them at given levels of income and market interest rates. Moreover, deposit-pricing strategies appear to have changed as institutions have adapted to deregulation, introducing substantial uncertainty, in the short run at least, into the relationship between the quantity of money and movements in market rates and income. And both supply and demand for individual financial assets can be quite sensitive to small changes in their own rates, relative to those on alternative assets, given the multiplicity of close substitutes. Internationally, the ability of capital to flow freely across borders has broadened the choices of borrowers and lenders. As a consequence spending on the goods and services produced by a particular country likely has become less dependent on the volume of claims originated or held in that country.

In these circumstances, the boundaries around specific collections of financial instruments have become increasingly arbitrary, and monetary or credit aggregates, however carefully delineated, are less likely to be stably related to spending or income. This certainly is the case for short-run relationships; and it may also pertain, if to a lesser extent, over the longer periods that are relevant to the business cycle.

The experience of the United States illustrates the erosion of the distinctions among various types of claims, and points up the implications of that erosion for the utility of traditional aggregations of these claims as policy indicators. In the 1960s, policymakers monitored bank credit closely, but this aggregate was deemphasized when open market paper became a closer substitute for bank loans as a source of funds for businesses. In the 1980s, M1 was dropped as a target when deregulation blurred the line between it and M2,

producing greater interest sensitivity in its components and more variability in its velocity. At the same time, the target range for M2 was widened as the supply behavior of banks and thrift institutions seemed to impart a substantial short-run interest elasticity to that aggregate as well. Moreover, substitution of debt for equity is one of the factors disturbing the established relation of the debt aggregate to income.

Deregulation and the proliferation of new, highly substitutable claims also have reduced the effect of credit rationing as a channel for monetary policy. Deposit intermediaries now can maintain access to funds for lending, and both borrowers and lenders need depend less on particular types of claims or intermediaries.

At present, with the restructuring of the savings and loan industry, these hypotheses about the diminishing value of certain financial variables and reduced credit-rationing effects are undergoing an intriguing empirical test. The solutions to the problems of savings and loans are likely to entail fewer and smaller institutions, in what has been the country's key mortgage intermediary. Other mortgage lenders will have to fill the void left by this reduction in the industry's size. On the deposit side, restructuring will almost certainly restrain the expansion of M3, and perhaps M2 as well, depending on how successful the regulators are in beating down deposit offering rates and thereby raising the opportunity cost of holding M2.

Expectations about the effects of this restructuring offer an instructive contrast to the dislocations brought on by earlier episodes, when this industry shrank through disintermediation induced by Regulation Q. Although specific real estate markets may be affected in the current situation, confidence in the capital markets to rechannel funds appears to have allayed concerns about major overall effects on the housing market and on the macro economy. Spreads between mortgage interest rates and other rates have widened only a a bit, a development that suggests that the demands of other investors for mortgage instruments are elastic and that nonprice credit rationing is unlikely. Any damping of M2 and M3 in this process would reflect a shift in the level of velocity, and would not be a precursor of lower spending.

Although short-run variations in money and credit may be of limited value in keying policy adjustments in most circumstances, in certain situations they may portend a serious disturbance in financial and

goods markets, especially when interpreted together with interest rate developments. For example, the Federal Reserve kept especially careful track of the monetary aggregates in the wake of the stock market collapse in October 1987 to ascertain whether there were unusual demands for money and, if so, whether they might connote flight from other financial assets or from spending. In light of the current situation in the thrift industry, unexpected movements in credit flows or in deposits will also be examined carefully.

Over longer periods, the net result of market adaptations to supply and demand conditions for financial assets may well be a stable ratio of desired holdings of money to wealth or income. Such stability is all the more likely now that incentives to innovate around regulatory constraints have been removed, a removal that has enhanced the value of persistent movements in money supply as policy signals. In this regard, the recently published study relating M2 and prices—the so-called P* model—was encouraging. The study suggested that a reasonably robust long-run relationship between money and prices has persisted despite the changes in M2 in the 1980s. Since, as the cliché has it, the long run is a collection of short runs, even short-run variations in an aggregate may yield some information on the long-run thrust of policy, though one may be skeptical of the short-run inflation forecasts produced by a model as simplified as P*. Translating between the short and the long runs is unlikely to be simple, however, in part because of the short-run interest elasticity imparted by the supply behavior of depositories. For example, 2½ to 3 percent growth in M2 may be the steady state associated with price stability, but, in light of the complex interactions among money, interest rates, and spending, gradual reductions may be far from the best way to achieve this objective. Overall, money and credit aggregates probably will continue to play an important role in policy in the 1990s; but that role is more likely to be the supporting one of the late 1980s, keyed to sustained, appreciable deviations from long-term objectives, than the romantic lead of the late 1970s and early 1980s, when relatively small month-to-month movements were allowed to influence reserve markets.

Interest and exchange rates and economic and price data

As attention to the monetary aggregates has lessened, policy imple-

mentation has had to rely more on inferences from the price axis in the financial markets and signals directly from the economy and from prices. The difficulties with attention to interest rate levels as intermediate indicators of the effect of policy and the course of the economy are well known. They include differentiating nominal from real rates and distinguishing the effects on rates of shifting demands for money and credit in response to developments in the economy from those caused by bank actions. Particular levels of nominal interest rates can be consistent with either accelerating or decelerating inflation, depending on the relationship of the real rate to its equilibrium level. In the past, when short-term objectives for interest rates as the proximate targets for policy were combined with attention to the most recent economic data, which respond to policy actions only with a delay, too often the results were a policy that tended to lag developments, moving initially both too little and too late and ultimately overstaying.

That danger remains, though it is one policymakers are aware of. It may be reduced to an extent by the recent emphasis on a variety of financial market variables, such as yield curves and exchange rates, that incorporate market expectations about future levels of real interest rates and inflation. In particular, these variables are likely to send clear signals if policy is perceived to be deflationary or inflationary because it is seen as keeping real interest rates substantially above or below equilibrium levels. In this regard they help to address one of the serious deficiencies of emphasis on nominal rate levels.

Developments in financial markets may have enhanced the usefulness of such indicators in recent years. The internationalization of financial flows and the increasing interdependence of national economies would of themselves naturally lend the exchange rate greater prominence in policy deliberations. But beyond this, the proliferation of financial instruments and the greater use of futures and options markets for risk shifting probably have reduced the influence of sector-specific supply and demand conditions on interest and exchange rates and have increased the response of asset prices to underlying fundamentals, including price expectations. These changes have taken place as economic analysis has placed greater emphasis on the influence of forward-looking expectations on economic decisions. As a consequence, policymakers have become increasingly sensitized to the importance of information that may be embedded

in interest and exchange rate relations.

Several caveats are in order. First, like nominal interest rates, yield curves and exchange rates reflect many influences besides judgments about the course of the economy and prices. For example, a yield curve that is downward-sloping, especially at the shorter maturities, may simply embody an expectation that the Federal Reserve is about to ease, not necessarily that such an easing will be stabilizing to the economy. And yield curves still may respond to changes in relative supplies of various kinds of paper as well as to shifting perceptions of liquidity risk. Likewise, the exchange rate is subject to developments abroad, as well as to short-run changes in expectations or perceptions that may have little to do with longer-run economic forces. More generally, many asset markets appear to exhibit more volatility than can be explained by changes in fundamental determinants of asset prices. Under these circumstances, adjusting monetary policy in response to short-run variations in individual interest rates or in their relative levels or in foreign exchange rates may in the end destabilize, rather than stabilize, the economy.

But the most serious deficiency of these indicators is that they provide little, if any, guidance for achieving specific inflation objectives. At best, the exchange rate would anchor the home inflation rate over time to those of major trading partners and competitors. Adjusting policy in accord with the market's interest rate expectations —that is, operating to flatten the yield curve—would tend only to lock in the expected rate of inflation built into that curve.

In theory, policymakers could achieve their inflation objectives by designing a course for the economy that would bring about the desired pressures on resources and on the rate of change of prices. In practice, doing that would require an accurate estimate of the economy's potential, a thorough understanding of the transmission and inflation processes, and reliable forecasts of the response of the economy to monetary policy and other forces. Such a policy would necessarily involve tolerating movements in exchange rates and changes in the slope of the yield curve in the transition period as output was adjusted relative to potential. In general, a central bank must take account of the real economic effects of its actions; but it is in both economic and political trouble when specific goals for the economy become the enduring focus of its attention. Among other things, the focus on the real economy in the context of an active discretionary policy

probably accentuates the well-known temptation to cheat on the side of a little more output.

In this sense, the monetarists are right: Policy reaction and implementation need something to keep these temptations at bay. Unfortunately, the monetary aggregates no longer seem to fulfill that requirement except in a long-term context, in which they may indeed check the worst mistakes and excesses. Moreover, as I indicated at the outset, simple reaction rules linked to broad price measures also seem to fall short in the face of uncertainties about lags and side constraints on output.

Commodity prices have been offered to fill this gap. Because they are unconstrained by long-term contracts, commodity prices are said to react more quickly to fundamental developments, short-circuiting some of the lags, and therefore the cyclical uncertainties, inherent in broad price measures. While commodity prices, too, contain valuable information for the policymaker, whether they belong at the center of policy implementation remains to be proven. There are the familiar issues of accounting for supply shocks, choosing the market basket, and assessing the reliability of such prices as forecasters of the aggregate price level. In addition, establishing a target level for the commodity basket is a problem. As the British discovered in the 1920s, this is not a trivial exercise—and it is the level that needs to be tied down. Movements in commodity prices cannot be interpreted without reference to an equilibrium level. Rising prices might suggest an easy policy if they were occurring above equilibrium. But they might suggest that policy was tight if commodity prices had been driven below their equilibrium level by that policy; in that case, increases in commodity prices would be needed to equalize returns with the high real rates on financial assets. Ultimately, one suspects, commodity prices will take their place in that eclectic mix of indicators that have keyed policy recently and that are likely to continue to do so in the 1990s.

Policy reactions and long-run objectives

As the 1990s open, then, policymakers are reacting to information from a wide variety of sources, making frequent adjustments of the stance of policy in reserve markets when the evidence sug-

gests that the existing posture is inconsistent with their longer-run objectives. No one indicator, nor any one small set of indicators, dominates this policy-adjustment process. Indeed, the whole intermediate indicator/target paradigm may not be very useful. Realistically, policy cannot afford to lose any information about the complex relationships in the economy. Signals from financial and foreign exchange markets, and from the domestic economy and foreign economies, all need to be filtered for clues about where the economy and the price level are headed relative to the objectives for policy. Casting the net wide is especially important when the underlying relationships among financial and economic variables seem to be evolving in ways that are not easy to predict.

It seems likely that operations by the monetary authority will continue to involve frequent policy adjustments in response to new information. Such adjustments need not connote unsteadiness of purpose, or an excessively activist hand on the wheel, or an attempt to "fine tune" the economy in the sense of trying to achieve an outcome with unrealistic precision. Instead, they may be rational responses to changing indications about economic trends contained in the new data, which prompt small but frequent adjustments in instrument variables to keep the economy and prices on a track consistent with ultimate objectives.

This type of operating system does involve difficulties, among which is filtering signal from noise. Given the difficulties of interpreting new data and the possibility of later revisions, unnecessary policy adjustments likely will be made. As long as policy remains flexible and mistakes are quickly recognized and corrected, unnecessary adjustments should remain a minor problem. Deviations from the optimal policy path that are kept small and short-lived will have little effect on the ultimate outcome.

The greater danger of a policy that relies on frequent adjustments of nominal interest rates to incoming data is insufficient attention to long-run policy objectives. I have already noted the tendency in the past for policy that involves this type of procedure to react too little and too late. But that tendency has not always been symmetrical. Emphasis on the level of nominal interest rates in connection with information on the real economy has at times tended to impart an inflationary bias to policy. Given the lag between policy and the price level, such a focus in the context of an active discretionary policy

may lead to attempts to achieve higher output levels than are consistent with stable prices.

In that regard, recent experience is mildly encouraging. Though inflation remains well above the long-term objective of price stability, it has accelerated only a little even as the U.S. economy has enjoyed an unprecedented peacetime expansion. Many factors account for this performance, including good fortune and greater flexibility in price and wage setting.

But monetary policy may also have played a role. Leaning fairly hard against the wind and being willing to shift policy promptly when the wind shifts appear to have forestalled the buildup of excesses and imbalances, so that the economy has remained in the neighborhood of its potential and inflation has stayed within a fairly narrow range. And to the extent that this outcome has reinforced the credibility of the Federal Reserve's anti-inflation policy, it may, by restraining inflation expectations, by itself have contributed to price performance that has been better than expected. The factors underlying this behavior by the Federal Reserve include a number of the elements previously discussed, no one of which seems adequate to the task of exerting longer-term discipline within the current policy regime.

First is some attention to movements in price indexes, despite the inherently backward-looking nature of these indexes. The monetary authority has clearly stated its intention to achieve price stability and has emphasized the importance it places on this objective. Although it has neither set a timetable nor established an automatic disciplining device, it has created for itself the burden of explaining sustained deviations from intentions. Such deviations would raise questions about its true intentions that would put an authority concerned about its reputation on the defensive.

The second factor underlying Federal Reserve policy that imposes discipline is the heightened sensitivity of expectations-driven variables, including yield curves, exchange rates, and commodity prices. At a minimum, these variables help the policymaker judge when market participants consider that conditions are ripe for significant movements in inflation rates. Thus, from these indicators policymakers may be able to infer the credibility that the markets accord their anti-inflation objectives.

The last such factor is the continued attention to the monetary aggregates. Although they may not be good guides to short-run policy,

the aggregates appear to maintain their longer-run relationships to spending and inflation. Sustained very rapid or very slow growth in the aggregates has continued to play a role in keying policy adjustments.

Taken together, these factors have tended to limit the distance and the duration of deviations of monetary policy from actions consistent with, at the least, its not straying far from its long-run objective. They have imposed some discipline on the task of adjusting reserve conditions and nominal short-term interest rates.

As the 1990s begin, the challenge to policy is to strengthen the elements that supply long-run discipline, without sacrificing the flexibility to adapt policy to changing conditions and to consider the consequences of policy actions for output and employment. Sufficient attention to reputation, to market expectations of inflation, and to trend money growth should help to ensure progress toward price stability in coming years. We should make certain that in 10 years, were we to consider monetary policy in the new century, we would be able to report that the decade of the 1990s, like the 1980s, ended with inflation lower than when it began.