Today, perhaps more so than ever before, widespread attention is being focused on the conduct of this nation's monetary policy. Regardless of whether they are primarily concerned with the threat of future inflation, the prospect for continued economic expansion, the outlook for financial markets or the direction of the dollar's movement in exchange markets, people generally agree that monetary policy is the key factor in determining what will actually happen. Consequently, it is not surprising that they devote considerable efforts to interpreting current monetary policy actions and predicting future ones. Nor is it surprising that monetary policymakers find their actions frequently "second guessed" and occasionally criticized by the public.

Perhaps the harshest public criticism has been directed specifically against the seemingly vagarious nature of monetary policy actions. People naturally find unexpected, oftentimes unexplained, policy actions and their associated unexpected economic consequences to be disconcerting. One common response to such criticism is that, by its very nature, monetary policy can't be "predictable": indeed, the slogan "monetary policy is an art, not a science" has been used by so many so often that it has now nearly achieved "gospel" status. Before we accept this view as gospel, however, it might be helpful to determine what it really means and whether, in fact, it is actually valid.
In the broadest sense, the "monetary policy as art versus science" debate reflects, once again, the age-old argument about the relative advantages of rules versus discretion. In the political arena, we all recognize that there is a specific combination of some rules and some discretion that we consider to be optimal at any time. The consequences of having too much discretion and too few rules are acknowledged to be as undesirable as those of having too little discretion and too many rules.

Of course, this same potential trade-off between rules and discretion exists when considering the monetary policy process. Put simply, the question is: should monetary policy decisions be made within the context of some rules or constraints that are known by the public or should policymakers have complete discretion? I believe that there should be some rules—self-imposed rules which can be changed by the central bank itself, but with the knowledge of the public. In fact, later I would like to suggest a type of rule that, in my opinion, has some merit. Before doing so, I first need to give you a conceptual overview of the monetary policymaking process. This includes a discussion of the goals of policy, the tools for implementing it and indicators or targets for relating policy actions to the goals.

The basic goals of monetary policy, in the U.S. and abroad, are clearly recognized and widely accepted. We know that, over longer time periods, the rate of inflation we observe results from sizable differences in the growth in money relative to the growth in the quantity of goods and services produced. We also know that, over longer periods of time, output growth is relatively stable. These two observations tell us that the rate of inflation is mainly a monetary phenomenon. Therefore, achieving one chief goal of policy—the desired long-run rate of
inflation—requires making sure that the long-run growth in the quantity of money is consistent with the inflation goal.

The second generally accepted goal of policy is to avoid destabilizing employment and output growth—in particular, to avoid inducing recessions. There is evidence that rapid and substantial changes in money growth can temporarily affect economic activity; rapid accelerations in money growth can produce temporary expansions, and severe decelerations in money growth can produce recessions. If we want to minimize the periods of economic over-heating and over-cooling that typically characterize business cycles, we must reduce the volatility of the growth in money. In other words, we must generate reasonably stable monetary growth.

While it may sound easy to accomplish these policy results, I want to assure you that it is not. Monetary policymakers must carefully assess the relationship between their tools and the desired policy actions. The tools of monetary policy in the United States consist of the Federal Reserve's ability to change reserve requirements, to change the discount rate, and to engage in open market operations. While increases and decreases in reserve requirements will affect the growth of the money stock, this "tool" is seldom used for policy purposes.

Increases and decreases in the discount rate make it more or less expensive for financial institutions to borrow additional reserves from the Fed. Thus, changes in the discount rate, theoretically at least, could provide a useful tool for policy actions designed to change the growth of money. Unfortunately, the precise effects of changes in the discount rate on borrowed reserves are not that closely predictable: financial institutions may not be borrowing from the Fed to begin with...
and, thus, the change in cost may be irrelevant. Moreover, even if they were borrowing, the change in price may be of little consequence. Thus, changes in the discount rate in the past have primarily served as policy "signals" or announcements by the Federal Reserve to the financial community; they have not generally been used as direct policy tool per se.

By simple process of elimination, we can see that open market operations—the buying and selling of government securities in financial markets—are the dominant tool of monetary policy. When the Federal Reserve buys securities, financial institutions, either directly or ultimately, end up with additional reserves; as a result, additional loans, deposits and money are created. In contrast, when the Fed sells securities, financial institutions lose an equivalent amount of reserves; as a result, they must contract their activities. Open market operations thus have a decided advantage over the other tools of monetary policy; precise amounts can be added to or subtracted from the reserves of financial institutions. The process is both swift and certain. And, unlike changes in the discount rate, it does not depend on actions or reactions of other players in the market. For the remainder of this discussion, I will consider open market operations as the tool of monetary policy.

In principle, then, monetary policy should be a simple operation: if inflation rises above some desired level, the Federal Reserve can sell securities in the market, reducing the growth of reserves immediately, the growth of money in some intermediate period, and, finally, the rate of inflation. On the other hand, if inflation falls below some desired level, the opposite policy action should correct the problem. In general, however, the appropriate monetary policy would be "steady as you go," the
purpose being to avoid the excessive open market operations and the associated excessive volatility in money growth that would precipitate undesirable fluctuations in output and employment. This, of course, is where the "rub" is, calculating precisely what "excessive" means.

Unfortunately, both for policymakers and for people in general, our economy is huge and unwieldy. As a matter of fact, these days we are dealing not only with our own economy, but in many respects with the economy of the world as a whole. Clearly, an injection of reserves into a financial system of that size does not produce instantaneous results, nor does it produce precise results. A banker who finds himself with excess reserves may or may not make new loans immediately. The recipient of the loan may or may not spend it immediately. And the rest of the public who ultimately receive the proceeds of this loan may postpone spending even longer. In other words, there are lags between when the injection of reserves takes place and when the ultimate impact on the economy occurs. These lags have been estimated to be as long as several years; moreover, they appear to vary in length over time depending on a variety of economic circumstances.

Meanwhile, as the economy grows, demands for money and credit grow along with it. Therefore, the appropriate quantity of reserves has to be supplied on a daily basis. But what rate of reserve growth is truly appropriate? The problem is really not much different from the one faced by any business. A firm wants to maximize its profits. Of course, between acquiring additional inputs (workers, machines, etc.) and actually achieving the associated profits, there is generally some time interval. The firm needs an indicator which is related, at least loosely, to changes
in its inputs and to its ultimate profits, and which is also readily observable. For a business firm, the level of output may be such an indicator. Monetary policy needs an indicator as well.

Such an indicator must perform three basic functions: it must reflect the effects of injection of reserves, it must reflect the movements of policy goals—economic activity, and it must be observable and measurable in a relatively short span of time. In other words, such an indicator must be controllable by the Fed, and it must accurately relate to GNP. When such an indicator exists, it becomes a target of monetary policy, in the sense that reserves are injected or drained on a daily basis in order to affect this target. Once such a variable becomes a target, it requires another feature: it must be observable and measurable by the public so that the public can predict or anticipate short-term actions of the Fed. A target, in effect, provides a rule which guides monetary policy decisions. Of course, the rule can be changed, just like laws can be changed; however, between changes, everybody should know the existing rule and play according to it.

Historically, we have tried a variety of targets for monetary policy purposes. Let me mention just a few of them. The price of gold was a monetary target for a number of decades in this century. As it turned out, however, the gold standard did not produce the desired results and was abandoned. Likewise, the modified gold standard-fixed exchange rate target system used after World War II produced undesirable fluctuations in GNP; it, too, was abandoned.

After that, we tried using interest rates as a monetary target. While, for a time, this approach seemed to function well for short-run purposes, both the controllability of interest rates and their relation to GNP eventually broke down.
In the mid-seventies and early eighties, we used publicly-announced money supply targets. Until the early eighties, they functioned well; they reflected economic activity with reasonable accuracy and they were fairly closely related to the reserves provided by the Fed. Announced monetary growth ranges provided the public with a guide of behavior on the part of monetary authorities; to the extent that these rules were known and followed reasonably closely, they produced a reduction in the public's uncertainty about what policy actions were likely to do to the economy.

The negative aspect of a money supply—or monetary aggregate—rule was the alleged increased volatility of interest rates in the short run. By the early 1980s, the money supply (that is, M1) was redefined to include all checkable deposits, including interest-bearing deposits; about the same time, its relationship to GNP began to change. While the Fed's ability to control M1 did not diminish, the money supply's value as an indicator of current and future GNP growth clearly declined. Thus, that rule was abandoned as well.

So what do we have left? There are many who believe that, at the present time, policymakers should "look at everything:" that, in essence, there should be multiple monetary policy targets. While I sympathize with those who are frustrated by the present lack of an acceptable single monetary policy target, I believe that the "look at everything" approach is likely to prove just as frustrating and potentially damaging as well.

Of course, policymakers should look at all available information they can obtain concerning the present and future course of economic activity. However, to attempt to pursue policy using multiple targets means, in reality, having no policy rules at all. Suppose, for example,
that we have two targets, both controllable and both historically related to GNP. And suppose that, as has always happened for any pair of variables, one day their growth rates diverge substantially, either in direction or in magnitude. Which one should we pay attention to? Clearly we must decide which one is likely to be the more reliable.

This problem is compounded, of course, when many targets are being monitored. Thus, in one sense, whether we think we are looking at many targets or not, there can really be only one target that is used consistently. If we try, instead, to actually set policy by switching from one target to another, we will end up violating one of the required features of a target—the ability for the public to anticipate central bank actions. Thus, the notion that policymakers can effectively use multiple targets is, ultimately, more of a delusion than a real option.

Much of the reluctance to have a firm rule arises from an inherent conflict in almost all decision-making between short-term and long-term goals. A good example of such conflict is the alleged pressure on corporate managers in recent years to shift their focus from longer-run profits to immediate or very short-run gains, even if this shift reduces the firm's longer-run prospects. The rationale for this shift is to eliminate the poor stock market performance that attracts hostile take-over or merger activity.

In monetary policymaking, the potential conflict is just as real. Suppose that, in the immediate future, policymakers would like to reduce interest rates and, therefore, they make an open market purchase of securities to pump more reserves into the banking system. However, if enough reserves are injected, the economy will grow faster, inflation will rise, and so will interest rates. Which goal should we judge as
more important: lower interest rates now or less inflation and lower interest rates in the future? Unfortunately, the absence of a target or a rule makes it considerably easier to pursue short-term goals and overlook the future consequences for the economy. How can we, then, reconcile some of these conflicts?

One possibility might be some long-term constraint on short-term discretion. Let me explain how this could work. Suppose we agree that, on a daily or weekly basis, the financial sector of the economy is likely to be forever subject to a variety of shocks. These shocks may be major ones, like an unanticipated oil price increase or whatever produced the October 19th crash; these shocks may be minor ones, like an unanticipated movement in the unemployment rate or exchange rate. If open market operations to inject or withdraw reserves can alleviate or mitigate the repercussions of such shocks, the monetary authorities should have the discretion to react. In a sense, they should be able to use multiple targets in the short run and to pursue or abandon whatever targets they have established. But if their actions are unconstrained over long time periods, the inevitable result will be considerably greater financial uncertainties and more volatile inflation and output growth.

As I have discussed earlier, the monetary aggregates that we used as targets in the mid-1970s and early 1980s have gone astray in recent years, at least in terms of their quantitative precision. However, the general direction of their influence on spending and prices is still the same as it was before. If we inject reserves into the financial system, we may not be able to predict precisely how much inflation will accelerate; we can be sure, however, that it will rise. Thus, while a
specific narrow monetary aggregate target may not be feasible at the present time, a broad band that constrains the longer-run growth of a specific monetary aggregate could be both feasible and acceptable.

But what monetary aggregate is more likely to be successful? If we want to eliminate the risks that are associated with pure discretion, it must be one that can be easily and frequently observed, credibly controllable, and known to the public. This aggregate could actually be one of those directly controlled by the monetary authorities: specifically, either total reserves or the monetary base.

While a wide constraint may still imply substantial variation in the rate of inflation, at least it would set some limits on what inflation will be. That implies that it will set limits on fluctuations in long-term interest rates and also provide the financial community with a useful frame of reference for assessing the likely consequences of monetary policy actions.

What are the negative aspects of a constraint on the growth of total reserves or the monetary base? The only one I can think of is that there may be times when it will require sacrificing short-run goals once the constraint has been reached. For example, it may mean that the federal funds rate may be higher at times than it would be otherwise. But then, we can directly ask the question that is all too often ignored when policy actions are discussed: this question is "Do we benefit more from longer-run stability in interest rates and reduced long-run inflation risks or from temporary short-term stability in some interest rate?"

In my opinion, answering this question is the key to long-run successful policymaking. And, at the very least, the existence of a monetary aggregate constraint will require that we address this issue
explicitly and openly. Without some broad constraint, it becomes more likely that political pressures can become a significant ingredient in monetary policymaking and that long-run economic stability can be sacrificed for short-run gains.