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REGULATION AND THE IMAGINATION

BY

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SPEECH
TO THE
U.S. REGULATORY COUNCIL
CONFERENCE ON INNOVATIVE REGULATORY
TECHNIQUES

WASHINGTON, D.C.
July 22, 1980
Regulation and the Imagination

More decades ago than I care to remember, I was so intrigued by the title of a book by Lancelot Hogben, *Mathematics and the Imagination*, that I bought the book. I now humbly admit that all I remember about it was its title: but I thought you deserved this explanation of the title I've chosen for my talk to you today.

I confess that lapse of memory also in order to take some of the arrogance out of my presumption in standing up here and preaching to you about developing innovative techniques of regulation.

The fact is that the President's instruction really is a challenge to your imagination -- in many ways the most challenging of all the facets of regulatory reform, because what it calls for is the introduction of a radically different psychological approach to the way in which you go about devising regulations. I don't want to exaggerate. But economic deregulation, in contrast -- the restoration of the healthy forces of competition, where it can be relied on to do the job -- demands extreme persistence, and a certain amount of animal cunning in circumventing the opposition of the people who like to be
protected; but not, once one decides to deregulate, much more than simply getting out of the way. Again, the demands of Executive Order 12044, with its insistence that regulators take costs into account and think about alternatives, calls for novel and often extremely difficult analytical efforts and judgments. But these instructions were initially directed primarily to the question of how much to regulate, and how stringent the requirements should be.

In contrast, our discussions today center not on questions of whether to regulate or how stringently, but on the President's challenge to us to devise, in each specific situation, innovative methods of achieving the regulatory goals.

Innovative in what ways? What is the new psychological attitude that the President is calling on us to adopt? The way to answer that question, I think, is to ask why it is we're being asked to stretch our imaginations in this way.

This audience needs no reminder that government regulation is under attack, fierce attack. That alone suggests the wisdom of reexamining our methods -- as well as each substantive policy -- if we are to preserve the values that it is our job to preserve, and that we believe in. And doing our utmost to satisfy the valid criticisms: we
have no choice but to believe that if we meet the valid ones, we will be in the best possible position to repel the invalid ones.

The complaints that have some substantial measure of validity, in some situations, can be summarized under two headings -- excessive cost, and excessive coercion.

I am not going to burden what is essentially an introduction to my topic with a lengthy discussion of the cost issue. There's no question that regulation uses up scarce economic resources, a lot of them. There's no question either that in an economy characterized by chronic inflation it is especially urgent to weigh those costs carefully against the benefits they bring, in order to decide whether the latter are sufficient to justify the former. And, finally, that the assessment will produce rational policy only if it is made on an incremental basis: efficiency -- and the minimization of inefficient inflationary pressures -- requires that the benefits of each proposed regulation, and of each proposed degree of regulation, justify the costs it imposes -- that is, that the marginal benefits exceed the marginal costs.

Economic cost is not the whole story, however. The revolt against regulation that we are experiencing is a revolt also against government compulsion and meddling.
This complaint can not simply be dismissed as either igno-
norant or misdirected sloganeering, although some corporate
opponents of regulation are not above wrapping their self-
interest in a cloak of individual liberty. *Laissez-faire*
does also serve real, important social and personal values.
The right to make one's own decisions, on one's own respon-
sibility, to take the risks one wants to take, to work
where one chooses to work -- yes, and to operate one's own
business as one chooses -- all within the framework of
rules to protect the rights and interests of others
that are as little coercive and intrusive as possible --
these are values we cherish in this country. If you listen
carefully to the criticisms of regulation, you will see
that much of it reduces to simple resentment of the govern-
ment telling people -- and business -- what to do.

These two, sometimes legitimate criticisms of
regulation suggest two corresponding guidelines for our
experimentation with novel regulatory techniques --
efficiency, and the minimization of coercion.

In my own suggestions for applying those guide-
lines, I will inevitably display the limitations of my
own imagination. I am an economist. I have a great re-
spect for the efficiency of even imperfectly competitive
markets -- precisely because they leave the pertinent
benefit/cost comparisons to the responsible parties,
because they rely on built-in incentives of the actors to make the choices efficiently, and because they minimize the need for governmental direction and compulsion. My own suggestions of innovative regulatory techniques are therefore going to be heavily influenced by that conception.

As we go about performing our essential regulatory functions, I am going to suggest we be constantly alert to ways of preserving as much as possible of the marketplace, of the built-in incentives to produce efficient results, with a minimum of detailed governmental prescription of what those results ought to be -- and in situations in which prescription of the results is the essence of the inescapable regulatory function, then with the fewest possible detailed prescriptions of the methods and routes by which those results are to be achieved. In situations in which Adam Smith's invisible hand is insufficient, it is important for us to curb the regulator's own high marginal propensity to meddle -- and do our best to keep the hand of government as invisible as possible, too.

I proceed to offer some examples, but with just one more caveat. Every regulatory problem is in important ways unique; the technique that works in case A may be totally inapplicable in case B. Remember Jack Point's admonition in Yeoman of the Guard:
"If you wish to succeed as a jester
You'll need to consider each person's
auricular;
What is all right for B might well
scandalize C,
For C is so very particular...."

And yet, while situations differ, there are also
some common threads. My hope, then, is that the following
examples, which have proved all right for B, may prove
illuminating to C as well.

Before I was actually confirmed as Chairman of
the CAB, I had the privilege of sitting among the public
and listening to a discussion by the Board on how to handle
the vexing problem of bumping by airlines.

The good lawyers at the bench and facing it
struggled mightily with alternative possible regulatory
prescriptions, which ran almost entirely in terms of deter-
mining orders of priority among potential bumpees. One
regulator suggested that the most equitable basis would
be the order in which reservations were received: first
come first served is certainly one principle of fairness.
Another observed that this might produce very unfair re-
sults, since often the most necessitous travellers -- the
ones for whom going out on the particular overbooked flight
is most important -- are the ones who have to make travel
plans at the very last moment -- responding, for example,
to the sudden illness of a parent. As a parent myself, I found this objection appealing. A third regulator suggested that people should have priority for the scarce seats in the order of their appearance at the check-in counter; a fourth protested that people might be delayed in arriving at a check-in counter by the lateness of a connecting flight, for which it would hardly be fair to hold them responsible. Since my own connecting flights seem to have a deplorable tendency to be late, I found this objection appealing. After some additional inconclusive discussion, which included suggestions that people be selected on the basis of their sex, height, or previous condition of servitude, and ended up demonstrating only that there are competing principles of fairness and efficiency, the Board decided to think about the matter some more.

At my first meeting on the subject, I suggested that the problem was not necessarily one of overbooking, with the consequent occasional necessity for bumping, but involuntary selection of the passengers to be bumped. Following the analogy of the free market and free contract, I suggested that there could not possibly be any objection if the bumpees were permitted to select themselves on the basis of economic incentives. Just the application of another principle of equity: a fair, free exchange is no robbery, and if it is truly uncoerced, it leaves both parties better off -- yes, and happier.
The airlines engage in overbooking for economic motives -- needless to say, I do not use the word "economic" as synonymous in any way with "reprehensible." They do it because it pays, despite the ill will bumping generates. In the circumstances, it makes abundant sense simply to require them to compensate people who have to be bumped -- and, since the evil is involuntary bumping, to make the necessary relinquishing of the scarce seats voluntary by requiring them to solicit volunteers on the basis of their willingness to accept whatever reward is necessary to induce the requisite number to offer up their places. Ordinary market incentives could be counted on in this way to subject both overbooking and bumping to efficient limits: the airlines could be expected to engage in the practice only up to the point at which the economic benefit to them of the fuller planes that overbooking assures is equalled or exceeded by the cost to them of securing the requisite number of voluntary bumpees.

A similar example of the use of market principles in regulation is the white market. It is now almost unanimously accepted that if we ever do have to have gasoline rationing, we should permit free purchase and sale of the ration coupons. Such a system has the critical virtue that under it every single gallon of gasoline purchased would have to be worth its marginal opportunity cost to the buyer, because he or she could choose instead to sell the
coupons for that amount of cash. In other words, the white
market would assure that every gallon of gasoline would go
to the use for which it has the greatest value, while
rationing the salable coupons would serve the putative
social purpose of distributing the entitlements to the
limited supplies on the basis of need rather than ability
to pay. Of course, there would still have to be regulatory
determination of how many ration coupons each person should
receive at the outset; but that is unavoidable once the de­
cision is made to ration. The white market sees to it that
every use of gasoline meets the proper economic test, and
no one goes without who is willing to pay the marginal
social cost -- which is what the gasoline is worth to some­
body else.

I wonder, however, whether we will ever be will­
ing to face up to the realization that we could achieve
the identical result without using ration tickets at all, simply by putting a tax on gasoline sufficient to bring
consumption down to the level of the available supplies,
and then distributing the revenues in any way we deem
socially desirable -- which is just what we do when we
hand out valuable ration tickets that can be sold for cash.

Once you think about it, you will see a whole
raft of regulatory problems that are basically the same as
the cases of bumping and allocating scarce supplies of gaso­
line: they involve regulators in choosing -- deciding who
gets to do something or gets something that is scarce --
choosing who gets a certificate to carry goods by truck between cities A and B, choosing who gets the right to land at a crowded airport, choosing who gets to use a specified portion of the radio spectrum that has itself been set aside for a particular service, choosing who will be allowed to commit a specified amount of environmental contamination.

In many of these situations -- perhaps most -- the regulators are spending time, effort and money to make those choices when in fact the marketplace could do it as well or better. In some, like deciding how many truckers a particular market can profitably employ and which ones can do it best, the market can do the entire job of choosing; in others, such as deciding on the distribution of gasoline ration coupons, or setting standards of safe operation of trucks, the regulators have to make the requisite social judgments: but they still don't have to make the ultimate allocations.

Some of these examples illustrate yet another principle of regulatory reform that similarly serves the ends of efficiency and minimizing coercion. The principle is: make the rules or prescriptions as general as possible while still achieving the ultimate purpose. It tends to run against the regulatory grain. Complete regulators tend to be compulsively neat: there is a Freudian characterization of that trait. They want things to be done
the right way; they want to spell out all the steps, all the procedures.

In treating the case of airline bumping, we steeled ourselves to restraint. We didn't tell the companies how to handle the problem. All we did was prohibit involuntary bumping, and then merely suggested a number of ways in which the airlines might conceivably obtain volunteers. But we left it to them to decide how to do so at the lowest possible cost to themselves, considering both the monetary costs and the desirability of minimizing passenger ill will.

According to a recent article in the Wall Street Journal, this system has worked very well. The only problem seems to be that sometimes there is a surplus of volunteers. A complete regulator would be tempted to prescribe methods of solving this problem as well; but it seems to me the better part of wisdom to leave that selection process to the companies themselves: after all, it is not in their interest to precipitate fist fights among passengers vying for an excessively generous reward for getting off planes.

Let me give you another example from my current regulatory responsibilities at the Council on Wage and Price Stability. Whatever flaws there may be in the wage/price guidelines we administer, some consideration was given in their design to minimizing regulatory intrusion -- that is, to achieve the broad goal of restraining increases
in the general price level in a less intrusive and consequently less distorting manner than had been true under previous price control programs. Accordingly, we designed the standard in terms of the average of the prices charged by a company, rather than product by product. By permitting prices within a company to vary in relation to one another we avoided some of the shortages and gluts that the more rigid limits in the past had precipitated.

This prescription of only average results follows the same principle as EPA has followed in developing the bubble concept, for which it has so justly been praised. The prohibition or prescription need not and often should not apply to the most disaggregated regulated unit possible -- since doing that destroys the ability of the regulatees to make rational choices about how best to comply, is an inefficient way of producing the intended result, and violates the principle of meddling and coercing as little as possible.

A corollary of this principle of making regulatory prescriptions as general as possible is the preferability of performance standards over methodological ones -- prescribing ends rather than means. Let no one miss the import of OSHA now telling industry that fire extinguishers should be "accessible," rather than stipulating their precise height from the floor.
Another corollary is the desirability of seeking out alternatives to flat prohibition, except in extreme cases. Let's look one last time -- I promise -- at the bumping case. Many airline travellers insisted the proper answer was to forbid overbooking, period. The practice, they asserted, was simply immoral: wasn't it fraudulent to confirm more reservations on a flight than the available number of seats? But a flat prohibition would have precluded an economic assessment of the costs of such a prohibition against the costs imposed upon consumers by being bumped.

The issue was not moral but economic. So long as it is either infeasible or undesirable for airline companies to charge people for making reservations and then not showing up, they have strong economic incentives to overbook; and every once in a while, following the inexorable dictates of the laws of probability, that produces a larger number of people showing up than there are seats on the flight. What we did was provide a mechanism for automatically comparing the economic benefits of the practice to the carriers with the costs it imposed on travellers, by forcing the beneficiaries -- the carriers -- to pay the costs -- which are whatever proves necessary to induce passengers voluntarily to give up the requisite number of seats. We did not compare the benefits and costs ourselves, because we were not competent to do so. We never told the airlines that they could or could not overbook. Instead we put the costs where
they belonged — on the beneficiaries; and we left the price tag on those costs to be determined by the market. Airlines are now free to overbook practically as they please, and will presumably do so as long as the benefits to them exceed the costs — which they now have to bear. And that is as it should be.

After all, the generic case for regulation is that the market is not always organized to weigh all the social costs of this or that activity against all the benefits — the familiar problem of externalities, leading to market failures. Regulation becomes the instrument for internalizing the pertinent costs — this is by now familiar.

What is almost certainly less obvious to regulators is that they are now being accused of exactly the same kind of failure: of imposing on this or that economic activity costs that do not get adequately assessed in the marketplace, and get passed off on innocent third parties — labor, in reduced real wages; capital, in reduced returns; the consumer, in higher prices; all of us, in inflation.

One interesting regulatory innovation to remedy this kind of failure that is surely worth exploring is to look for situations in which the decision-making process can be modified so that all the costs as well as benefits get weighed by the same actors. Take the case of regulation
aimed at assuring safety on the job. One justification for this kind of intervention is that firms driven by competitive pressures may try to cut costs in ways that impose serious costs on their workers; and the labor market may not work well enough to put those costs back on the employers in the form of correspondingly higher wages. But regulation itself may not achieve full internalization: labor may press for improved safety requirements with inadequate attention to costs, if they feel those costs can simply be passed on in increased prices without serious threat to their jobs.

In the auto industry, this situation has at least momentarily changed. Workers have some reason to feel in the industry's current competitive situation that the costs of regulation cannot always be passed along in higher prices without further jeopardizing sales and their jobs. Accordingly, GM, the UAW and OSHA recently evidently worked successfully together to find a less costly but at the same time somewhat less convenient means of protecting the workers from dangerous exposure to lead and arsenic than had originally been proposed. The safety of the workers was not compromised, but the circumstances made this type of more economical regulatory solution possible because the cost-bearers and beneficiaries had in much greater measure and much more obviously come to be the same people, who therefore had a much clearer interest than before in weighing the respective costs and benefits of alternative methods of achieving the same goals -- the basic prerequisite for market-type transactions producing socially efficient results.
There are other alternatives to flat prohibitions and prescriptions that I know many of you have been exploring in various contexts. Prominent among these is the provision of the information necessary for informed judgments. The use of disclosure and labelling as an alternative to stricter regulation has, as you know, a long history, particularly in financial and capital markets. The concept is terribly attractive, of course, because it leaves the marketplace free to respond instead of having regulators specify what interest rates must be paid, who shall get capital and who not, what level of energy efficiency appliances must have, how crashworthy cars must be, and so on. In this case perhaps above all others, however, it seems desirable to underline the caveats: disclosure as a substitute for prescription is in some ways the most market-like of all these innovative techniques. It makes sense, therefore, only in those situations in which our general confidence in markets is justified.

These are trying times for us regulators. But they are also exciting times. I have every confidence that if we make an intense and imaginative effort to follow the principles we ourselves would espouse -- to regulate only when and where and to the extent the market itself produces seriously defective results; to avoid and reverse regulations whose principal purpose is to protect private parties from the socially beneficent pressures of competition; to recog-
nize that we have no right to impose costs on society except where they are justified by the benefits; and to use the minimum of prescription and compulsion to achieve legitimate regulatory ends -- I am confident that if we do these things, we can count on the support of the overwhelming majority of the American people. To the extent we fail to do so, we don't deserve it.
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With The Compliments
Of

Paul A. Volcker
Statement by

Paul A. Volcker

Chairman, Board of Governors of the Federal Reserve System

before the

Committee on Banking, Housing, and Urban Affairs

United States Senate

July 22, 1980
I am pleased to be here today to review the conduct of monetary policy and to report on the Federal Reserve's economic objectives for the year as a whole, as well as its tentative thinking on policy goals for 1981. Our so-called "Humphrey-Hawkins Report" has already been distributed to you. I would like simply to add some personal perspective this morning on the course of monetary policy, in the context of the economic prospects and choices facing us with respect to other policy instruments.

Seldom has the direction of economic activity changed so swiftly as in recent months. Today the country is faced simultaneously with acute problems of recession and inflation. There have been unprecedented changes in interest rates and the imposition and removal of extraordinary measures of credit restraint. The fiscal position of the Federal Government is changing rapidly.

In these circumstances, confusion and uncertainty can arise about our goals and policies, not just those of the Federal Reserve, but of economic policy generally. Therefore, I particularly welcome this opportunity to emphasize the underlying continuity in our approach in the Federal Reserve and its relationship to other economic policies, matters that are critical to public understanding, and expectations.

The Federal Reserve has been, and will continue to be, guided by the need to maintain financial discipline -- a discipline concretely reflected in reduced growth over time of the monetary and credit aggregates -- as part of the process of restoring price.
stability. As I see it, this continuing effort reflects not simply a concern about the need for greater monetary and price stability for its own sake -- critical as that is. The experience of the 1970's strongly suggests that the inflationary process undercuts efforts to achieve and maintain other goals, expressed in the Humphrey-Hawkins Act, of growth and employment.

As you know, our operating techniques since last October have placed more emphasis on maintaining reserve growth consistent with targeted ranges for the various Ms, with the implication interest rates might move over a wider range. Those targets were reduced this year as one step toward achieving monetary growth consistent with greater price stability. For several months after the new techniques were introduced in October, the various aggregates were remarkably close to the targeted ranges.

At that time, and for months earlier, you will recall widespread anticipations of recession. Nevertheless, reflecting a variety of developments at home and abroad -- including an enormous new increase in oil prices, Middle-Eastern political volatility, and interpretations of adverse budgetary developments -- there was a marked surge in the most widely disseminated price indices and in inflationary expectations in the early part of this year. Those expectations in the short run probably helped to support business activity for a time; in particular, consumer spending relative to income remained very high, with the consequence of
historically (and fundamentally unhealthy) low savings rates and high debt ratios. Speculation was rife in commodity markets.

Spending and speculative activities of that kind are ultimately unsustainable. But they carried the clear threat of feeding upon themselves for a time, contributing among other things to a further acceleration of wage rates and prices. In that way, inflation threatened to escalate still further in a kind of self-fulfilling prophecy, posing the clear risk that the subsequent economic adjustment would be still more difficult.

Credit markets reflected these developments and attitudes. Bond prices fell precipitously. Long-term money -- including mortgages -- became difficult to raise. Partly as a consequence, short-term demands for credit ballooned in the face of sharply rising interest rates, at the expense in some instances of further weakening business balance sheets. That heavy borrowing also was reflected in acceleration in the money and credit aggregates during the winter.

An attempt to stabilize interest rates by the provision of large amounts of bank reserves through open market operations to support even more rapid growth in money would probably have been doomed to futility even in the short-run, for it could only have fed the expectations of more inflation. It would certainly have been counter-productive in terms of the overriding long-term need to combat inflation and inflationary anticipations. Instead, consistent with our basic policy approaches and techniques, the
Federal Reserve resisted accommodating the excessive money and credit growth.

During this period of rising inflation and interest rates, the Administration and the Congress also appropriately and intensively reviewed their own budget planning. Coordinated with the announcement of the results of that broad governmental effort and the decision of the President to invoke the Credit Control Act of 1969, the Federal Reserve announced on March 14 a series of exceptional, temporary measures to restrain credit growth, reinforcing and supplementing our more traditional and basic instruments of policy.

The demand for money and credit dropped abruptly in subsequent weeks, reflecting the combined cumulative effects of the tightening of market conditions, the announcement of the new actions, and the rather sudden weakening of economic activity. In response, interest rates within a few weeks fell about as fast -- in some instances faster and further -- than they had risen in earlier months. Growth in the aggregates slowed, and for some weeks M-1A and M-1B turned sharply negative.

There is no doubt in my mind that these lower levels of interest rates can play a constructive role in the process of restoring a better economic equilibrium and fostering recovery. Indeed, there is already evidence -- if still tentative -- that homebuilding and other sectors of the economy sensitive to credit costs and availability are benefitting. Meanwhile, progress is being made toward reducing consumer indebtedness relative to
income and toward restructuring corporate balance sheets as bond financing has resumed at a very high level. The sharp improvement in credit market conditions has been accompanied by slower rates of increase in consumer and producer prices, helping to quiet earlier fears of many of an explosive increase in inflation.

The suddenness of the change in market conditions has, however, raised questions in some minds as to whether the interest rate declines were in some manner "contrived" or "forced" by the Federal Reserve -- whether, to put it bluntly, the performance of the markets (together with the phased removal of the special credit restraints) reflects some weakening of our basic commitment to disciplined monetary policy and the priority of the fight on inflation. These perceptions are not irrelevant, for they could affect both expectations and behavior, most immediately in the financial and foreign exchange markets, but also among businessmen and consumers.

The facts seem to me quite otherwise.

Growth in money and credit since March has certainly not exceeded our targets; the M-1 measures have in fact been running below our target ranges. Bank credit has declined in recent months; while the decline in commercial loans of banks can be explained in part by exceptionally heavy bond and commercial paper issuance by corporations, there is simply no evidence of excessive rates of credit expansion currently. In these circumstances, it is apparent that interest rates have responded -- and have been
permitted to respond -- not to any profligate and potentially inflationary increase in the supply of money, but to changes in credit demands, and (so far as long-term interest rates are concerned) to reduced inflationary expectations.

It is in that context -- with credit demands reduced and growth of credit running well within our expectations and targets -- that the special credit restraint programs simply served no further purpose. Those measures were invoked to achieve greater assurance that credit growth would in fact slow, and that appropriate caution would be observed in credit usage. The special restraints are inevitably cumbersome and arbitrary in specific application. They involve the kind of arbitrary intrusion into private decision-making and competitive markets that should not be part of the continuing armory of monetary policy; their use was justified only by highly exceptional circumstances -- circumstances that no longer exist. Our normal and traditional tools of control (which in fact have been solidified by the Monetary Control Act passed earlier this year) are intact and fully adequate to deal with foreseeable needs.

Neither the decline in interest rates nor the removal of the special restraints should be interpreted as an invitation to consumers or businessmen to undertake incautious or imprudent borrowing commitments, or as lack of concern should excessive growth in money or credit reappear. That is not happening now.
But markets (and the public at large) remain understandably extremely sensitive to developments that might aggravate inflationary forces. As we saw only a few months ago, consumers and businessmen will react quickly in their lending and borrowing behavior to that threat.

While the recent easing of financial pressures helps provide an environment conducive to growth, we should not be misled. A resurgence of inflationary pressures, or policies that would seem to lead to that result, would not be consistent with maintenance of present -- much less lower -- interest rates, receptive bond markets, and improving mortgage availability. We in the Federal Reserve believe the kind of commitment we have made to reduce monetary growth over time is a key element in providing assurance that the inflationary process will be wound down.

I noted earlier the money stock actually dropped sharply during the early spring. In a technical sense, working on the supply side, we provided substantial reserves through open market operations during that period, but commercial banks, finding demands for credit and interest rates dropping rapidly, repaid discount window borrowings as their reserve needs diminished. In general terms, it seems clear that, at least for a time, the demand for money subsided (much more than can be explained on the basis of established relationships to business activity and interest rates) apparently because consumers and others hastened debt repayment at the expense of cash balances and because the earlier interest rate peaks had induced individuals to draw on
cash to place the funds in investment outlets available in the market.

As the Report illustrates, M-1 growth has clearly resumed, and the broader aggregate M-2 is now at or above the mid-point of its range. In the judgment of the Federal Open Market Committee, forcing reserves on to the market in recent weeks simply to achieve the fastest possible return to, say, the mid-point of the M-1 ranges may well have required early reversal of that approach, have been inconsistent with the close-to-target performance of the broader aggregates, and therefore led to unwarranted interpretations and confusion about our continuing objectives. Depending on the performance of the broader aggregates and our continuing analysis of general economic developments, the FOMC is in fact prepared to contemplate that M-1 measures may fall significantly short of the mid-point of their specified ranges for the year.

I have emphasized the Committee's intention to work toward the lower levels of monetary expansion over time. In reviewing the situation this month, the Committee felt that, on balance, it would be unwise to translate that intention into specific numerical targets for 1981 for the various Ms at this time. That view was strongly reinforced by certain important technical uncertainties related to the introduction of NOW accounts nationwide next January, as well as by the need to assess whether the apparent shift in demand for cash in the spring persists.

At the same time, the general nature of the potential problems and dilemmas for 1981 and beyond is clear enough; these are important questions, not just for monetary policy but for the full armory of public policy.
The targets for the monetary aggregates are designed to be consistent with, and to encourage, progress toward price stability without stifling sustainable growth. But in the short-run, the demand for money (at any given level of interest rates) tends to be related not to prices or real output alone, but to the combined effects of both — the nominal GNP. If recovery and expansion are accompanied by inflation at current rates or higher, pressures on interest rates could develop to the point that consistency of strong economic expansion with reduced monetary growth would be questionable.

Obviously, a satisfactory answer cannot lie in the direction of indefinitely continued high levels of unemployment and poor economic performance. But ratifying strong price pressures by increases in the money supply offers no solution; that approach could only prolong and intensify the inflationary process and in the end undermine the expansion. The insidious pattern of rising rates of inflation and unemployment in succeeding cycles needs to be broken; with today's markets so much more sensitized to the dangers of inflation, economic performance would likely be still less satisfactory if that pattern emerges again. The only satisfactory approach must lie in a different direction — a credible effort to reduce inflation further in the period ahead, and policies that hold out the clear prospect of further gains over time, even as recovery takes hold.

We are now in the process of seeing the inflation rate, as recorded in the consumer and producer price indices, drop to or
even below what can be thought of as the underlying or core rate of inflation of 9 to 10 percent. That core rate is roughly determined by trends in wages and productivity. We can take some satisfaction in the observed drop of inflation, and the damping of inflationary expectations. But the hardest part of this job lies ahead, for we now need to make progress in improving productivity or reducing underlying cost and wage trends -- as a practical matter both -- to sustain the progress.

The larger the productivity gain, the smoother will be the road to price stability -- partly because that is the only way of achieving and sustaining growth in real incomes needed to satisfy the aspirations of workers. Put in that light, the importance of a concerted set of policies to reconcile our goals -- not simply relying on monetary policy alone -- is apparent. While those other policies clearly extend beyond the purview of the Federal Reserve, they obviously will bear upon the performance of financial markets and the economy as the Federal Reserve moves toward reducing over time the rate of growth in money and credit.

In that connection, I recognize the strong conceptual case that can be made for action to reduce taxes. Federal taxes already account for an historically large proportion of income. With inflation steadily pushing income tax payers into higher brackets and with another large payroll tax increase to finance social security scheduled for 1981, the ratio will go higher still. The thesis that this overall tax burden -- and the way our tax structure impinges on savings and investment,
costs and incentives -- damages growth and productivity seems to me valid. Moreover, depending on levels of spending and the business outlook next year, the point can be made that the implicit and explicit tax increases in store for next year will drain too much purchasing power from the economy, unduly affecting prospects for recovery.

But I must also emphasize there are potentially adverse consequences that cannot be escaped -- to ignore them would be to jeopardize any benefits from tax reduction, and risk further damage to the economy.

Whatever the favorable effects of tax reduction on incentives for production and productivity over time, the more immediate consequences for the size of the Federal deficit, and potentially for interest rates and for sectors of the economy sensitively dependent on credit markets, need to be considered.

Many of the most beneficial effects of a tax reduction depend upon a conviction that it will have some permanence, which in turn raises questions of an adequate commitment to complementary spending policies and appropriate timing. We are not dealing with a notion of a "quick fix" over the next few months for a recession of uncertain duration, but of tax action for 1981 and beyond at a time when Federal spending levels, even for fiscal 1981, appear to be a matter of considerable uncertainty, with the direction of movement higher.

Experience is replete with examples of stimulation, undertaken with the best motives in the world, that has turned out in retrospect to have been ill-timed and excessive. Given
the demonstrable frailty of our economic forecasting, it takes a brave man indeed to project with confidence the precise nature of the budgetary and economic situation that will face the nation around the end of this year. Moreover, an intelligent decision on the revenue side of the budget implies knowledge of the spending priorities of an Administration and a Congress, a matter that by the nature of things can only be fully clarified after the election.

For all the developing consensus on the need for "supply side" tax reduction -- and I share in that consensus -- some time seems to me necessary to explore the implications of the competing proposals and to reduce them to an explicit detailed program for action. I have emphasized the need to achieve not only productivity improvement but also a lower trend of costs and wages; despite its importance, I have seen relatively little discussion in the current context of how tax reduction plans might be brought to bear more directly on the question of wage and price increases.

The continuing sensitivity of financial markets, domestic and international, to inflationary fears is a fact of life. It adds point and force to these observations and questions. Tax and budgetary programs leading to the anticipation of excessive deficits and more inflation can be virtually as damaging as the reality in driving interest rates higher at home and the dollar lower abroad.

I believe it is obvious from these remarks that a convincing case for tax reduction can be made only when crucial
questions are resolved -- questions that are not resolved today. The appropriate time for decision seems to me late this year or early 1981. Fiscal 1982 as well as fiscal 1981 spending plans can be clarified. We will know if recovery of business is firmly underway. There will have been time to develop and debate the most effective way of maximizing the cost-cutting and incentive efforts of tax reduction, and to see whether a tax program can contribute to a consensus -- a consensus that has been elusive in the past -- on wage and pricing policies consistent with progress toward price stability. To go ahead prematurely would surely risk dissipating the potential benefits of tax reduction amid the fears and actuality of releasing fresh inflationary forces.

I have spoken before with this Committee and others about the need for changes in other areas of economic policy to support our economic goals. Paramount is the need to reduce our dependence on foreign oil -- a matter not unrelated to tax policy. We need to attack those elements in the burgeoning regulatory structure that impede competition or add unnecessarily to costs. And I believe it would be a serious mistake to seek relief from our present problems by retreat to protectionism, at the plain risk of weakening the forces of competition, the pressures on American industry to innovate, and undermining the attack on inflation.

We are now at the critical point in our efforts to reduce inflation while putting the economy back on the path to sustainable growth in the 1980's.
I sense the essential objectives are widely understood and agreed -- the need to wind down inflation even as recovery proceeds; the importance of restoring productivity and increasing incentives for production and investment; the maintenance of open, competitive markets; a substantial reduction in our dependence on foreign energy.

You know as well as I how much remains to be done to convert glittering generalities into practical action: to achieve and maintain the necessary fiscal discipline, to make responsible tax reduction and reform a reality, to conserve energy and increase domestic sources, to tackle the regulatory maze. But I also know there is no escape from facing up to the many difficulties. Our policies must be coherently directed toward the longer-range needs. In that connection, I believe that economic policies, public and private, should recognize that the need for discipline and moderation in the growth of money and credit provides the framework for decision-making in the Federal Reserve.
Midyear Monetary Policy Report to Congress
Pursuant to the
Full Employment and Balanced Growth Act of 1978

July 22, 1980
Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., July 22, 1980

THE PRESIDENT OF THE SENATE
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

The Board of Governors is pleased to submit its Midyear Monetary Policy Report to the Congress pursuant to the Full Employment and Balanced Growth Act of 1978.

Sincerely,
Paul A. Volcker, Chairman
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CHAPTER 1

THE OUTLOOK FOR THE ECONOMY AND MONETARY POLICY OBJECTIVES
SECTION 1. THE OUTLOOK FOR THE ECONOMY

The economy moved into recession in the first half of this year. A cyclical downturn had been widely anticipated for some time, but the decline in spending, output, and employment, once under way, has been steeper than most analysts had foreseen. The second quarter decrease in real gross national product, at an annual rate of about 9 percent according to the Commerce Department's preliminary estimate, was considerably sharper than in the initial quarters of other postwar recessions.

The slump in activity has been most pronounced in the housing and auto industries—the latter sector being adversely affected by structural problems as well as by general cyclical pressures. But the decline has not been limited to these sectors. Retail sales excluding autos have dropped considerably since January, and business outlays for equipment and new construction also have fallen.

The very sharp curtailment of spending on houses and consumer goods and services in the current downturn probably is attributable in large part to the cumulative effect of inflation on consumers' financial well-being. Real disposable personal income was virtually flat in 1979 and has declined appreciably this year. Earlier, consumers had reduced their rate of saving in the face of shortfalls in real income in an effort to maintain consumption standards and in anticipation of inflation. This was accomplished by further rapid growth in installment and mortgage credit in the late stages of the recent expansion, but with the result that debt service burdens—which already were at high levels historically—continued to climb. Sharply higher interest rates and generally more stringent credit terms in late 1979 and early 1980 acted as additional deterrents to spending, encouraging households in their efforts to reduce debt and to rebuild savings.
The falloff in final sales has caused businessmen to spend more cautiously. This tendency has been reinforced by financial factors as well. The liquidity position of businesses had deteriorated appreciably during the expansion, particularly in the latter stages when there was a surge in short-term borrowing; many firms now are making strong efforts to restructure balance sheets.

The unexpected rapidity of the current downturn thus far has led analysts to reassess their view of the prospects for economic activity in the period ahead. Significant disagreement has arisen with regard to whether recovery will be prompt and strong, with the recent relaxation of credit market conditions encouraging a resumption of normal spending patterns, or whether the cyclical adjustment will be prolonged and the subsequent upturn possibly sluggish. The experience of the past year or so has demonstrated the hazards of forecasting, and the uncertainties at the present time clearly are substantial. Much will depend, for example, on the perceptions of businessmen about the longer-range prospects for demand and the attractiveness of investment, the response of consumers to the 1981 model-year automobiles, and the strength of the rebound in housing that may develop in the wake of the recent easing in mortgage market conditions.

There are signs that the contraction in some sectors may be nearing an end, but these are far from conclusive. Retail sales in June turned up slightly after four months of sharp decline; in the first ten days of July auto sales were at the strongest pace in three months. Housing starts and sales of new homes strengthened in the most recent months for which data are available.
In reflection of the prevailing uncertainties, there is a considerable range of views among the members of the Federal Open Market Committee regarding the movement of major economic variables over the remainder of the year. Most of the members believe that the recession probably will persist into the fourth quarter, with a cumulative net drop in real GNP less than that in the downslide of 1973-75. Although the decline should slow in the months ahead, employment may be cut back further, and the unemployment rate could rise beyond 8-1/2 percent by year-end. The increasing slack in labor markets and in industrial capacity utilization should at the same time help to moderate inflationary pressures.

The table below presents ranges for key economic variables that generally encompass the judgments of the individual FOMC members about the probable performance of the economy this year and in 1981.

<table>
<thead>
<tr>
<th>Change from fourth quarter to fourth quarter, percent</th>
<th>Actual 1979</th>
<th>Projected 1980</th>
<th>Projected 1981</th>
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<tbody>
<tr>
<td>Nominal GNP</td>
<td>9.9</td>
<td>5 to 7-1/2</td>
<td>8-1/2 to 11-1/2</td>
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<tr>
<td>Real GNP</td>
<td>1.0</td>
<td>-5 to -2-1/2</td>
<td>1/2 to 3</td>
</tr>
<tr>
<td>Implicit GNP deflator</td>
<td>8.9</td>
<td>9 to 10</td>
<td>7-3/4 to 9-1/2</td>
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</table>

Average level in fourth quarter

<table>
<thead>
<tr>
<th>Unemployment Rate (percent)</th>
<th>Actual 1979</th>
<th>Projected 1980</th>
<th>Projected 1981</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.9</td>
<td>8-1/2 to 9-1/4</td>
<td>8 to 9-1/4</td>
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</table>

The outlook for 1981 is especially uncertain at the current time. Economic and financial developments over the next six months should lay the groundwork for the recovery anticipated in 1981. But, in addition, any
actions taken in the fiscal arena would have an impact on the path of recovery. The projections presented in the table, which do not assume a tax cut in the next year, indicate a turnaround in economic activity—although there is a considerable range of views concerning the potential strength of the recovery. On balance, the forecast is for a moderate rebound in real GNP, accompanied by some further slackening in the pace of inflation. Unemployment, however, is likely to remain high throughout the year.

Should there be a tax cut in 1981, the impact on economic performance will, of course, depend on its timing and composition. There is the distinct—and very troubling—possibility that a poorly designed tax reduction, or one not coupled with adequate restraint on the expenditure side, might give rise to added inflationary and financial pressures that would in time dissipate the beneficial short-term effects of the fiscal stimulus. Any indication that the Congress and the Administration were moving away from a commitment to rigorous fiscal discipline would run the risk of revigorating the inflationary expectations that have played such a major role in the economy's difficulties. The Committee thus feels it important that the question of a tax cut be approached cautiously; if a tax cut ultimately is enacted, it should be carefully structured to enhance the productive potential of our economy and to yield the greatest relief from cost and price pressures over the longer run.
SECTION 2. MONETARY POLICY OBJECTIVES

The task for monetary policy—and for stabilization policy generally—in the current circumstances obviously is a difficult one. Recession naturally summons forth calls for stimulus to aggregate demand. The prevailing high level of unemployment, and the exceptional weakness apparent in particular industries and sectors of our economy, certainly must be given careful consideration in the formulation of public policy. But caution must be exercised in the application of any broad countercyclical stimulus, especially in the present environment of persistent inflationary pressures. Indeed, there is no clearer lesson from the experience of the past decade and a half than that excessive stimulus is detrimental to the objective of achieving and sustaining noninflationary, balanced growth.

A primary and continuing goal of monetary policy must be to curb the accelerating inflationary cycle. It now appears that some progress is beginning to be made in that direction. Price increases have slowed considerably from the pace of early in the year, in part reflecting some relief in the food and energy sectors, but also as a result of the drop in demand pressures. In addition, recent attitudinal surveys point to a reduction in inflationary expectations. The continuation of this trend in expectations will result in a greatly improved economic and financial environment, one more conducive to long-term growth. We already have witnessed one benefit of an easing of inflationary fears: a substantial decline in long-term interest rates from their highs earlier this year and a revitalization of the bond markets. The Federal Reserve's pursuit of a policy of monetary restraint—evidenced this year by a moderation of money growth—has been an important factor in this
turn in expectations; a sustained commitment to the attainment of noninflationary rates of money and credit growth is essential if this progress is to be extended.

Despite the improvement that has occurred, however, inflationary forces are far from subdued. The past years have left a legacy of adverse cost trends that will not be reversed quickly. Moreover, more extreme inflationary expectations easily could be reignited. In establishing its plans for growth in the monetary aggregates, the Federal Reserve will continue to place high priority on reducing inflation, believing that this is essential to fostering a sound and sustained recovery. Over the long term, a reduction in the underlying rate of inflation is essential for a strong U.S. economy, for encouraging the saving we will need to finance adequate capital investment, and for maintaining the position of the dollar in international markets.

But it is clear also that if inflation is to be restrained without undue disruption of economic activity we cannot rely solely on monetary policies. For example, fiscal discipline is essential to ensure that excessive pressure is not placed on the financial and real resources of the economy. The structure of our tax system should be examined with an eye to the incentives it provides for productivity-expanding research and capital formation. And the full range of governmental policies should be reviewed to ensure that they do not add needlessly to costs and do not stunt innovation and competition.
SECTION 3. MONEY AND CREDIT GROWTH IN 1980 AND 1981

In February the Federal Reserve reported to the Congress ranges of growth for the monetary aggregates in 1980 that it believed to be consistent with the continuing objective of reducing inflationary pressures over time while providing for sustainable growth in the nation's production of goods and services. These ranges anticipated a substantial deceleration in monetary growth in 1980 from the pace of the preceding year. Measured from the fourth quarter of 1979 to the fourth quarter of 1980, the ranges adopted were: for M-1A, 3-1/2 to 6 percent; for M-1B, 4 to 6-1/2 percent; for M-2, 6 to 9 percent; and for M-3, 6-1/2 to 9-1/2 percent. The associated range for bank credit expansion was 6 to 9 percent.

During the first half of 1980, growth of the monetary aggregates slowed considerably from the 1979 pace. The deceleration was particularly marked for the narrower aggregates, M-1A and M-1B, which grew at rates below the lower limits of their longer-run ranges--at annual rates of about 1/2 and 1-3/4 percent, respectively, from the fourth quarter of 1979 to the second quarter of 1980. (M-1A is currency and demand deposits held by the public, while M-1B includes checkable interest-bearing deposits as well.) At the same time, the broader aggregates, M-2 and M-3, grew at annual rates of 6-1/2 and 6-3/4 percent, respectively, which is somewhat above the lower limits of their ranges. In fact, by June, as the accompanying charts show, M-2--which includes money market fund shares and all deposits except large CDs at banks and thrift institutions--was around the midpoint of its longer-run range, and M-3 slightly below, while the narrower aggregates were moving back toward their ranges, following an unusually sharp drop in early spring.
Growth Ranges and Actual Monetary Growth

**M-1A**

- **Actual**
- **Range adopted by FOMC for 1979 Q4 to 1980 Q4**

**Annual Rate of Growth**

- 1978: 7.4 Percent
- 1979: 5.0 Percent
- 1980 H1: 0.4 Percent

**Billions of dollars**

- 1978: 380
- 1979: 390
- 1980: 410

**M-1B**

- **Actual**
- **Range adopted by FOMC for 1979 Q4 to 1980 Q4**

**Annual Rate of Growth**

- 1978: 8.2 Percent
- 1979: 7.6 Percent
- 1980 H1: 1.8 Percent

**Billions of dollars**

- 1978: 360
- 1979: 370
- 1980: 380
Growth Ranges and Actual Monetary Growth

**M-2**
- Actual
- Range adopted by FOMC for 1979 Q4 to 1980 Q4

**M-3**
- Actual
- Range adopted by FOMC for 1979 Q4 to 1980 Q4

**Annual Rate of Growth**
- 1978 8.4 Percent
- 1979 8.9 Percent
- 1980 H1 6.4 Percent

**Billions of dollars**

- 1979 Q4 to 1980 Q4

- 1979 Q4 to 1980 Q4
The contraction in the narrower aggregates during the second quarter was much greater than would be expected on the basis of the historical relationships among money, income, and interest rates. This unusual weakness may have reflected exceptional efforts by the public to pare cash balances, such as have characterized some other periods following a sharp upward adjustment in market interest rates to new record levels. There may also have been an impact from the surge in debt repayments, especially at banks, after the imposition of the credit control program in mid-March, with some of the funds apparently coming out of cash balances. In light of these special circumstances affecting the public's demand for transactions balances, and given the relative strength of the broader aggregates and the usual lags between changes in credit conditions and growth in the narrow aggregates, the FOMC believed it appropriate to foster a more gradual return of M-1 growth to the ranges established earlier.

In connection with reserve targeting procedures, System open market operations supplied a large volume of nonborrowed reserves over the course of the second quarter. Given the weak demand for money and bank credit, most of the added nonborrowed reserves were used by banks to repay borrowings from the Federal Reserve discount window. Borrowings fell from a high of $2.8 billion on average in March to minimal levels recently, and the easing of bank reserve positions was reflected in a sharp decline in the federal funds rate. From their peaks of late March or early April, short-term interest rates have declined 7 to 9 percentage points and long-term rates by roughly 2 to 3 percentage points.
Expansion in the broader aggregates over the first half of the year reflected the very rapid growth for much of the time in money market mutual fund shares, 6 month money market certificates, and 2-1/2 year small saver certificates, instruments that pay market rates of interest. Late in the period, as short-term market interest rates declined sharply, the contraction in savings deposits at banks and other depository institutions halted, and the outstanding amount of those deposits began to rise. For part of the period, growth in M-3 was sustained also by continued issuance of large time deposits by commercial banks and thrift institutions, which are included in M-3 but not in M-2; however, large time deposits began to contract in late spring as credit demands weakened substantially.

Bank credit growth greatly exceeded the FOMC's range in the first quarter of the year. The second quarter, however, saw a sharp contraction in this measure, and credit growth was well below the FOMC-specified range as of midyear. Demands for bank loans by households and businesses dropped abruptly in the second quarter, while the banks—concerned about the possible erosion of profit margins by high cost funds obtained earlier and seeking to conform to the guidelines of the March 14 special credit restraint program—pursued relatively tight lending policies. Businesses, meanwhile, have met a substantial portion of their credit needs through issuance of commercial paper (which serves as a close substitute for bank credit for many large firms), by borrowing in bond markets, and by reducing holdings of liquid assets. Over the half year, the total of credit advanced by banks and in the private short-term money markets rose at an annual rate of around 7-1/2 percent.
Growth Ranges and Actual Bank Credit Growth

Bank Credit

- Actual
- Range adopted by FOMC for 1979 Q4 to 1980 Q4

Annual Rate of Growth
1978 13.5 Percent
1979 12.3 Percent
1980 H1 4.6 Percent
At its meeting in July, the Federal Open Market Committee reassessed the ranges it had adopted for monetary growth in 1980 and formulated preliminary goals for 1981. The Committee elected to retain the previously established ranges for the aggregates over the remainder of 1980. This decision by the Committee took into consideration the recent behavior of the money stock measures as well as emerging economic conditions. In this regard it was recognized that, if the public continues to economize on cash balances to an unusual degree in the second half of the year, growth in the narrower aggregates would likely fall toward the lower end of the established ranges.

With respect to the broader aggregates, growth in the second half is likely to place them nearer the midpoints of their respective ranges, and in the case of M-2 quite possibly in the upper half of its range. Recent trends suggest that a continued substantial expansion in the interest-bearing nontransactions component of M-2 is likely. In the current cyclical environment, consumers have begun to reevaluate their financial positions and have reduced their borrowing and adjusted upward their rate of saving. Thus, if the recent lower level of interest rates persists, the outlook is for an augmented flow of funds to depository institutions along with continued, though slower, growth in money market mutual funds.

The Committee also noted that the recent sharp contraction in bank credit makes it quite likely that this measure will fall below the 6 to 9 percent growth range specified in February. A resumption of bank credit expansion during the second half is anticipated, but the strength of that move will depend to a considerable extent on patterns of corporate finance. The desire for balance sheet restructuring may well continue to mute business
loan demands, although weaker corporate cash flows and a narrowing of the spread of the prime rate over commercial paper rates likely will prompt some borrowing at banks. Mortgage loan demands also should begin to recover as the year progresses, and the runoff in consumer loans is expected to abate.

One factor that contributed to the recent weakness in bank lending was the Board's special credit restraint program. As announced earlier, the program is being phased out this month because there is now no evident need for extraordinary measures to hold bank lending within reasonable bounds. In removing the special controls, the Board has emphasized its intention to continue to maintain aggregate growth in money and credit at rates consistent with a reduction in inflationary pressures.

With regard to monetary policy over the longer run, the FOMC reiterates its intent to seek reduced rates of monetary expansion over coming years, consistent with a return to price stability. While there is broad agreement in the Committee that it is appropriate to plan for some further progress in 1981 toward reduction of the targeted ranges, most members believe it would be premature at this time to set forth precise ranges for each monetary aggregate for next year, given the uncertainty of the economic outlook and institutional changes affecting the relationships among the aggregates. The extent and timing of adjustments in the targets will depend upon an appraisal of the outlook at the end of the year. The appropriate money growth in 1981 relative to 1980 of course will depend to some extent on the outcome in this year—that is, on exactly where in the present ranges the various aggregates fall at year-end.
In addition, the various measures of money will be affected in 1981 by shifts in the demand for different types of financial assets. The introduction of NOW accounts on a nationwide basis in January will accelerate the shift from regular demand deposits into interest-earning transactions balances, thereby depressing M-1A growth next year. On the other hand, M-1B probably will be boosted somewhat next year by shifts from savings deposits and other interest-bearing assets into NOW accounts. The range for M-1B thus may have to accommodate a period of abnormal growth as the public adjusts to the availability of a new instrument. The experience of the past year and a half with ATS accounts has indicated the difficulty of estimating in advance the public's demand for such balances. Although growth in M-2 and M-3 will not be affected by NOW account movements, these broader aggregates include other relatively new financial instruments, the demand for which is still subject to uncertainty. The behavior of these instruments in coming months will aid the FOMC in determining appropriate growth ranges for the broader aggregates in the 1981 period.
SECTION 4. THE ADMINISTRATION'S SHORT-TERM ECONOMIC GOALS AND THE RELATIONSHIP OF FEDERAL RESERVE OBJECTIVES TO THESE GOALS

The Administration, in association with its midyear budget review has updated its forecast of the behavior of major economic variables for 1980 and 1981. The revised figures are shown below.

The Administration's Forecast

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<thead>
<tr>
<th></th>
<th>1980</th>
<th>1981</th>
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<tbody>
<tr>
<td><strong>Change from fourth quarter</strong> to fourth quarter, percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal GNP</td>
<td>6-3/4</td>
<td>12-1/2</td>
</tr>
<tr>
<td>Real GNP</td>
<td>-3</td>
<td>2-1/2</td>
</tr>
<tr>
<td>Implicit price deflator</td>
<td>10</td>
<td>9-3/4</td>
</tr>
<tr>
<td><strong>Average level in fourth quarter</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment rate (percent)</td>
<td>8-1/2</td>
<td>8-1/2</td>
</tr>
</tbody>
</table>

These estimates, which the Administration has indicated should be viewed as forecasts rather than as goals, show a considerably greater decline in real activity in 1980 than had been anticipated in the January Economic Report of the President. The outlook for nominal GNP growth through year-end has been lowered by a smaller amount, owing to a somewhat higher anticipated rate of inflation for the four quarters of 1980. The Administration's projections for this year fall within the ranges expected by the members of the FOMC.
The Administration has projected a resumption of output growth next year that places real GNP near the upper end of the range encompassed by the forecasts of the members of the FOMC. At the same time, the Administration's estimates place the rate of inflation somewhat above the range of the FOMC members' expectations. (Like the FOMC members' projections, the Administration's forecast does not include a tax cut provision for 1981.)

As indicated in the preceding section, the Federal Reserve intends to set monetary growth ranges for 1981 that will help to restrain inflationary pressures in the recovery period. As experience this year illustrates, considerable uncertainty attaches to any analysis of the relationships over relatively short periods among money, interest rates, and nominal GNP. However, a substantial expansion in demands for goods and services, accompanied by a lack of progress on the inflation front—or worse, an actual increase in inflation or inflationary expectations—would raise the possibility of a considerable firming of conditions in financial markets. Large and prolonged federal deficits would increase that risk. This highlights the urgency of concerted effort by the public and private sectors to reduce the rate of advance in costs and prices and the need to focus any discussions of fiscal action on approaches that would serve to alleviate cost pressures and bolster productivity.
CHAPTER 2

A REVIEW OF RECENT ECONOMIC AND FINANCIAL DEVELOPMENTS
Economic activity turned down early this year following almost five years of expansion. Between January and June, industrial production fell 7-1/2 percent, employment declined by about 1-1/4 million, and the unemployment rate jumped 1-1/2 percentage points. Real gross national product is estimated to have fallen at an annual rate of 9.1 percent in the second quarter, with the decline in activity widespread among major sectors of the economy. Retail sales have decreased substantially since January, housing starts have dropped to near-record postwar lows, and business outlays for equipment and new construction have declined. Although businesses were cautious in building inventories during the expansion, the severity of the recent decline in final sales has led to some involuntary stock accumulation; as in past cycles, the resulting efforts to curb inventory growth have played a significant role in the weakening of orders and production.

Recent reductions in aggregate demand, coupled with a slower rise of energy prices, meanwhile have brought some moderation in the overall pace of inflation. The producer and consumer price indexes have risen at much less rapid rates in the past few months than they did earlier in the year. Moreover, there are indications from consumer surveys that inflationary expectations have been lowered. Nevertheless, inflation still possesses a strong momentum, with unit labor costs continuing on a steep upward trend.

Personal Consumption Expenditures

Personal consumption expenditures fell sharply in real terms during the first half. A number of adverse trends had characterized household finances for some time prior to the beginning of 1980. Real disposable income had stagnated after 1978, household liquidity positions had weakened as liabilities
Current Indicators of Economic Activity

Real GNP and Final Sales
Billions of 1972 dollars

Industrial Production
Index, 1967=100

Unemployment Rate
Percent

Capacity Utilization in Manufacturing
Percent
increased faster than financial assets after late 1976, and a near-record proportion of disposable income had been committed to the servicing of debt. Moreover, consumer confidence, as measured by opinion surveys, had deteriorated to levels last seen in the 1973-75 recession. In the light of these trends, a downward adjustment of consumer outlays might have been expected last year; the fact that it did not occur appears attributable in part to growing expectations of inflation that fostered a buy-in-advance psychology.

Between January and May, retail sales fell 6-1/2 percent in nominal terms and more than 9-1/2 percent in real terms—the sharpest four-month drop in the postwar period. Preliminary estimates for June, however, indicate that sales moved up somewhat. As in past recessions, large decreases in sales this year have occurred for the relatively discretionary items of consumer expenditure. Automobile sales in June averaged only 7.6 million units at an annual rate, close to the May pace, which was the slowest since late 1974. Furniture and appliance sales also are down sharply this year, in part because of the fall in housing sales. But weakness in consumer outlays has not been confined to the durable goods sector. Purchases of nondurables in real terms also have been falling since late last year, with sizable declines recorded for clothing and general merchandise.

Since January, real disposable income has decreased substantially as employment and hours worked have fallen and prices have continued upward at a rapid pace; nonetheless, the retrenchment by consumers has lifted the saving rate somewhat above the extraordinarily low level of the fourth quarter of last year. It still remains low by historical standards, however, and uncertainty
Real Personal Consumption Expenditures and Real Disposable Personal Income

Housing Starts

Auto Sales
about job and income prospects may well prompt households to enlarge precau-
tionary savings, thereby contributing further to the weakness in personal 
consumption expenditures.

Residential Construction

Homebuilding activity has experienced a severe decline. Housing 
starts, which averaged nearly 1-3/4 million units at an annual rate during 
the first nine months of 1979, began to fall sharply last autumn. By December, 
starts were at a 1-1/2 million unit pace, and by May they had declined almost 
to a 900,000 rate. June saw a pickup in starts to a 1-1/4 million annual rate.

In the single-family sector, starts dropped 45 percent between the 
third quarter of 1979 and the second quarter of this year. Although demo-
graphic factors remained quite favorable during this period, the demand for 
such dwellings was curtailed by the increased cost of homeownership associated 
with higher house prices and the rapid rise in mortgage interest rates. The 
monthly cost of interest and principal on an average-priced new home financed 
with a conventional mortgage rose to $700 in May—a third higher than six 
months earlier and 50 percent above the same month of 1979. Households prob-
ably were increasingly reluctant to undertake such heavy financial obligations, 
especially as income and employment conditions weakened this year.

Home sales have dropped almost 40 percent from the pace of last 
summer. Although production adjustments have reduced the number of unsold 
new single-family dwellings on the market, these unsold units bulk larger rela-
tive to the recent slower rate of sales. At the May sales pace, which was up 
sharply from April, there was almost a nine-month supply of unsold new single-
family units on the market. The pickup in sales in May is perhaps a sign of
some increased interest on the part of homebuyers, prompted by the recent easing in financial markets; however, the still large overhang of unsold homes is likely to discourage a quick resumption of building in many localities.

Multifamily housing starts began declining sharply late last year and in the second quarter were off about 35 percent from the already-reduced pace of the third quarter of 1979. The decline in this sector has been less severe than in the 1973-75 period, as low vacancy rates in many areas and an acceleration in rent increases beginning in late 1979 have given builders an incentive to sustain a significant level of apartment construction in the face of high construction costs and tight financial conditions. In addition, demands for condominiums—a lower-cost alternative to single-family homeownership—have provided support to multiunit activity.

Business Spending

Business spending on plant and equipment has slowed in recent months as firms have sought to avoid expanding capacity at the onset of a recession. Spending on nonresidential structures, which accounted for much of the gain in investment during 1979, peaked in January and declined substantially in the following months. Business purchases of trucks and automobiles also have been falling since early this year, as have outlays for other capital equipment.

Weakness in capital spending in the first half of the year—as well as in forward-looking indicators of investment activity such as surveys, construction contracts, and equipment orders—probably reflected businessmen's anticipations that sales may remain sluggish for a while. In addition, corporate cash flows are diminishing, and with liquidity positions already
Contracts and Orders for Plant and Equipment

Annual rate of change, percent*

Inventories Relative to Sales

*Annual changes are from Q4 to Q4; semi-annual change is from Q4 to the April-May average.
strained in many instances, there may be a reluctance to undertake additional projects requiring external financing. Although interest rates have fallen dramatically from the high levels reached earlier this year, growing excess plant capacity suggests the likelihood of further decreases in real outlays, while firms take advantage of lower long-term rates to restructure their balance sheets.

Despite sizable cutbacks in production, some involuntary inventory accumulation appears to have occurred this spring as a consequence of the steep fall in sales. The stock-sales ratio for all manufacturing and trade in real terms rose only moderately during the first quarter, but climbed appreciably in April and May to near the level of late 1974. Since the start of the year, substantial increases in the ratio have been registered in most major industries with especially large rises for primary metals manufacturers, furniture and appliance retailers, and the motor vehicle industry. Auto sales incentive programs and production adjustments in the first quarter of 1980 largely eliminated excessive stocks that had resulted from last summer's gasoline shortages. However, beginning in mid-April, automobile sales plummeted and, despite further curtailments of production, some overhang of stocks at dealers reappeared.

**Government**

Spending at all levels of government has been restrained in recent months. Total federal expenditures, which grew rapidly in the early months of the year, moderated in the second quarter largely as a result of the March budget cuts. Growth in receipts fell off much more, however, as weakness in
Public Sector Expenditures and Receipts

Federal Government

NIA Basis

- Expenditures
- Receipts

Annual rate of change, percent*


State and Local Governments

NIA Basis

- Expenditures
- Receipts

Annual rate of change, percent*


*Annual changes are from Q4 to Q4; semi-annual changes are from Q4 to Q2.

Data for 1980 H1 are partially estimated by the Federal Reserve.
personal income and profits offset the impact of additional revenue from the windfall profits tax on oil producers. As a result, the federal deficit on a national income accounts basis probably deepened by about $30 billion, at an annual rate, between the fourth quarter of 1979 and the second quarter of 1980. However, the high-employment budget, a better indicator of the thrust of discretionary fiscal policy, showed a movement toward restraint during this period.

State and local government spending fell in real terms during the first half of 1980, as governmental units curtailed outlays in response to the slower growth of revenues caused by tax cuts enacted in 1979, the weakening economy, and the March reductions of federal grants-in-aid. The reduced pace of spending was most pronounced for construction activity because federal funding was cut back and municipal bond issuance was constrained in the first quarter by high interest rates. Despite the downward adjustments of outlays, the aggregate operating deficit of the state and local government sector apparently widened considerably in the spring.

International Trade and Payments

Real exports of goods and services continued to grow rapidly in the first quarter of 1980, but the rise appears to have slowed somewhat in the second quarter. The deceleration largely reflected the slowing of economic expansion abroad and the fading of the impact of the 1977-78 real depreciation of the dollar. All of the growth in the first half was concentrated in nonagricultural exports; agricultural shipments were reduced, partly because of the
Exports and Imports of Goods and Services

Seasonally adjusted, annual rate, billions of 1972 dollars

NIA Basis

Exports
Imports


Trade and Current Account Balances

Seasonally adjusted, annual rate, billions of dollars

Surplus
Current Account
Merchandise Trade
Deficit


Data for 1980 Q2 Merchandise Trade Balance are partially estimated.
embargo on additional grain sales to the Soviet Union imposed by the President in January.

The volume of imports, meanwhile, began to fall off as U.S. economic activity slackened and as higher prices and greater fuel efficiency acted to restrain oil imports. The volume of non-oil imports rose slightly on balance in the first half of 1980, but all of the increase was in the first quarter. The quantity of oil imports fell, apparently reaching its lowest rate in four years in the second quarter. Despite a declining volume of oil imports in the first quarter, higher OPEC prices resulted in a continuation of the rapid growth in the dollar value of oil imports. The oil import bill nearly doubled between the fourth quarter of 1978 and the first quarter of 1980; in the second quarter the value of oil imports changed little as lower volume offset a further rise in import prices.

The U.S. merchandise trade deficit increased about $6-1/2 billion, at an annual rate, in the first quarter of this year from the rate in the last quarter of 1979. The current account moved from a deficit of about $7 billion at an annual rate in the fourth quarter, and near balance for the year 1979, to a deficit of about $10 billion in the first quarter of 1980. Higher foreign earnings of U.S. oil companies offset part of the rise in the merchandise trade deficit. Partial data indicate that the trade and current-account deficits narrowed in the second quarter.
SECTION 2. LABOR MARKETS AND CAPACITY UTILIZATION

Labor demand was relatively well-maintained early in the year, but it fell off steeply in the spring as firms responded to the sharp declines in sales by cutting their work forces and shortening workweeks. Between January and June, the number of workers on the payrolls of nonfarm establishments fell almost 950,000; total employment, as measured by the household survey, fell more than 1-1/4 million. With layoffs rising, the nation's jobless rate jumped from 6-1/4 percent in January to 7-3/4 percent in May and June.

Much of the cutback in employment occurred in the construction sector and in durable goods manufacturing, especially motor vehicle and related industries. By June, the number of auto workers on indefinite layoff was nearly 250,000 (about 30 percent of total hourly workers in the industry), and substantial layoffs had occurred in the steel and tire industries as well. Construction employment began to drop early in the year, and subsequently suppliers of building materials also reduced their payrolls. During the spring, however, weakness in labor demand began to spread throughout the economy; employment at trade establishments dropped 190,000 over the second quarter, and in June payrolls in the service-producing sector registered the first monthly decline since 1975.

In addition to trimming payrolls, employers have curtailed work schedules in light of the weakening of sales. Since January, the average workweek at manufacturing establishments has been shortened almost 1-1/4 hours. More generally, the number of workers on part-time schedules for
Nonfarm Payroll Employment

Annual rate of change, millions of persons *

Manufacturing Employment

Annual rate of change, millions of persons *

Unemployment Rates

Adult Female

Adult Male

*Annual changes are from Q4 to Q4; semi-annual changes are from Q4 to Q2.
economic reasons rose sharply in the second quarter, with former full-time jobholders accounting for most of the increase.

The rise in joblessness has been widespread among demographic and occupational groups, with especially large increases reported among adult males. Since December, the jobless rate among men has climbed almost 2-1/2 percentage points, compared with an increase of 3/4 percentage point for adult women, and June marked the first time in two decades that the rate for men was higher than that for women. Unemployment among blue-collar workers rose sharply to an 11-1/2 percent rate in June, the highest since September 1975. In contrast, unemployment rates among white-collar workers have increased only marginally since the end of 1979.

The adjustments in output by firms, especially in the second quarter, were reflected in a sharp decline in the index of industrial production. Between January and June, industrial production fell nearly 7-1/2 percent. Production declines in auto-related industries and in industries supplying construction materials began early in the year, but by late spring cutbacks were occurring in most other industries as well. Among manufacturing firms, capacity utilization in June dropped to 76 percent, almost 11 percentage points below its 1979 peak.
SECTION 3. PRICES, WAGES AND PRODUCTIVITY

After exploding upward in the early months of the year, rates of price increase moderated significantly in the second quarter. The improvement resulted primarily from a stabilizing of energy prices and from declines in the prices of nonferrous metals, after a flurry of speculative activity earlier in the year. Increases in the prices of construction materials and components also slowed noticeably in the second quarter with the decline in activity in the housing sector.

In the energy area, retail prices surged in January and February, in large part the result of the hike in OPEC prices that occurred in late 1979, but the pace of increase then slowed noticeably in the spring, as inventories reached near-record levels and demand continued to drop. The increase in energy prices also moderated at the producer level. Nonetheless, indirect effects of earlier increases in the prices of fuels and petroleum feedstocks were still evident through the end of June in items such as plastics and rubber products, industrial chemicals, and household supplies. Moreover, a number of factors—including the latest increases in OPEC prices, the curtailment of gasoline production, and the progressive decontrol of crude oil prices—suggest that further relief in the energy area is not to be expected.

Food prices generally have exerted a moderating influence on aggregate price measures since the beginning of the year. At the producer level, finished food prices fell at about a 4-1/2 percent annual rate between December and June. Steep drops in wholesale prices through May—particularly for livestock—alleviated cost pressures at the retail level, contributing to relatively
Prices and Labor Costs

Change from year earlier, annual rate, percent

Consumer Price Index

Gross Domestic Product
Fixed Weight Deflator

CPI Food

CPI Energy

Unit Labor Costs

stable retail food prices since the end of last year. However, recent developments in the markets for livestock and fresh produce indicate that food prices also are likely to rise more rapidly in the second half of the year.

Inflationary pressures have persisted in sectors outside food and energy since the beginning of the year. In the consumer price index, increases in the homeownership component have been particularly large, as the measures of mortgage rates and home purchase prices both advanced rapidly in the first half of this year; the recent easing of mortgage rates will likely hold down increases in the CPI during the next few months. In the producer price index, prices of capital equipment accelerated in the first half of 1980 from the already rapid pace of 1979.

Labor cost pressures remained intense in the first half of 1980, as compensation increases were substantial while productivity declined further. Output per hour in the private nonfarm business sector dropped at about a 1-1/2 percent annual rate in the first quarter, after falling 2 percent over the preceding year. At the same time, hourly compensation accelerated to a 10-1/4 percent annual rate, so that the unit labor costs of nonfarm businesses rose at about an 11-3/4 percent rate in the first quarter. Preliminary data for the second quarter suggest that unit labor costs continued to rise rapidly, as productivity contracted further. Although cyclical reductions in overtime and the changing employment mix may restrain the growth in total compensation somewhat in coming months, wage demands are likely to remain strong, especially in light of past increases in consumer prices. Thus, upward pressures on unit labor costs will probably remain substantial over the near term.
SECTION 4. FINANCIAL DEVELOPMENTS DURING THE FIRST HALF OF 1980

Interest Rates

Market rates of interest moved sharply higher in the early months of 1980, exceeding previous record levels and peaking around the end of the first quarter. These increases were largely reversed in the second quarter amid a substantial downslide in economic activity and contracting demands for money and credit. The upward pressure on yields at the turn of the year resulted from a combination of factors, including a deterioration in inflationary expectations as actual price increases accelerated in January and February, the failure of incoming data to confirm the long-anticipated downturn in activity, and international political developments that raised the likelihood of an increase in federal deficit spending. In February, moreover, growth in money and credit surged, creating demands for bank reserves well in excess of the provision of nonborrowed reserves consistent with the Federal Reserve's target ranges for growth in the monetary aggregates. In the Treasury bill market, in particular, the resulting rise in short-term interest rates was reinforced by large sales of securities by foreign institutions to finance intervention in foreign exchange markets.

On March 14, the Board of Governors took actions of a temporary nature designed to reinforce the effectiveness of the measures announced in October 1979 and thus to provide greater assurance that the monetary goals reported to the Congress in February would be met. These actions, some of which were taken under the authority of the Credit Control Act as part of a broad government effort aimed at reducing inflationary pressures, included:
Interest Rates

Short-term

Prime Rate

4-6 Month Prime Commercial Paper

3-Month Treasury Bill


Long-term

Home Mortgage Rates

Aaa Utility Bond New Issues

Municipal Bond

Percent


Percent

(1) a special credit restraint program directed toward limiting the growth in loans to U.S. customers by commercial banks and finance companies to ranges consistent with the monetary and credit objectives of the Federal Reserve; (2) a special deposit requirement for all types of lenders on increases in certain categories of consumer credit; (3) an increase in the marginal reserve requirement on managed liabilities of large member banks and U.S. branches and agencies of large foreign banks; (4) a special deposit requirement on increases in managed liabilities of large nonmember banks; (5) a special deposit requirement on increases in total assets of money market mutual funds; (6) a surcharge of 3 percentage points on frequent borrowing by large member banks from Federal Reserve Banks.

These measures hastened the movement toward reduced credit availability already in train at many lenders, and apparently increased the resolve of consumers to curtail their use of credit. In subsequent weeks, incoming data revealed a substantial slackening in money and credit growth to well within the Federal Reserve's objectives. In light of these developments, the Board amended the special credit program: on May 6 the 3 percentage point surcharge on discount borrowing by large banks was eliminated, and on May 22 special deposit requirements were reduced by half and the special credit restraint guidelines were modified. On July 3 the final phase-out of the program was announced.

The rise in most interest rates came to a halt in late March and early April, and yields began to move down as demands for money and credit dropped abruptly in response to developing slack in the economy. Most private short-term rates fell 7 to 9 percentage points, to their lowest levels since
the spring of 1978. In long-term securities markets, bond yields retraced most or all of the increases recorded earlier in the year, as market participants appear to have lowered their expectations of inflation. The restraining posture of monetary and fiscal policy, as well as moderating rates of price increase in the cyclical downturn, has contributed to this improved outlook for price changes.

**Foreign Exchange Markets and the Dollar**

Movements in U.S. interest rates greatly influenced fluctuations in the foreign exchange value of the dollar over the first half of 1980. The dollar was in strong demand early in the year when U.S. interest rates rose sharply. The growing perception by market participants of accelerating inflation and worsening payments deficits abroad gave added impetus to the dollar's rise over this period, as did the announcement of credit control measures on March 14. Authorities in a number of foreign countries also moved to tighten monetary conditions, but the resulting increase in foreign interest rates lagged well behind that of U.S. rates. The strengthening in the foreign exchange value of the dollar in February and March was moderated somewhat by substantial intervention activities by U.S. and foreign monetary authorities.

The peaking and subsequent steep decline in U.S. interest rates in early April triggered heavy selling pressure on the dollar in international markets, and its foreign exchange value fell in the April to June period. Foreign and U.S. monetary authorities intervened to moderate this decline by making net purchases of dollars. Even so, by the end of June earlier gains were entirely erased, and the weighted-average exchange value of the dollar at mid-year was little changed from its value at the beginning of the year.
Weighted Average Exchange Value of U.S. Dollar*

March 1973 = 100


3-Month Interest Rates

Percent


U.S. CDs

Weighted Average of Foreign Interbank Rates*

*Weighted average against or of G-10 countries plus Switzerland using total 1972-76 average trade of these countries.
Domestic Credit Flows

Net funds raised in credit markets by domestic nonfinancial sectors of the U.S. economy totaled a sizable $391 billion at an annual rate in the first quarter of 1980, but contracted sharply to an estimated $193 billion in the second period. This exceptionally large decline in borrowing reflected in large part the recent sudden weakening in production and sales activity; in addition, monetary restraint, supplemented by the special policy actions of mid-March, contributed to tauter credit terms and reduced availability of funds at many lenders.

In the private sector, the volume of funds raised in the first quarter was greatly enlarged by a surge in borrowing on the part of nonfinancial business firms. Some of this increased borrowing reflected needs to finance growth in inventories and fixed capital outlays, as the gap between such expenditures and internally generated funds of nonfinancial corporations widened. But fears that unchecked inflation would lead to the imposition of credit controls and a consequent reduction in credit availability apparently led to a burst of anticipatory borrowing by firms as well. As a result, corporations added substantially to their holdings of liquid assets in the first quarter and appear to have drawn down these holdings in subsequent months.

As interest rates moved up rapidly early in the year, businesses concentrated their credit demands in short- and intermediate-term markets, with borrowing at banks and in the commercial paper markets especially heavy. Corporate bond financing remained relatively low as businesses, especially industrial firms, were reluctant to issue long-term debt at historically high
Net Funds Raised in Credit Markets
By Domestic Nonfinancial Sectors

Seasonally adjusted annual rate, billions of dollars

Source: Federal Reserve Board Flow of Funds Accounts. Data for 1980 Q2 are partially estimated.
yields. This pattern of corporate financing shifted dramatically, however, when interest rates dropped rapidly in the spring. Public offerings of longer-term corporate bonds accelerated to unprecedented levels, with the proceeds from many of these issues being used to pay down bank debt.

After March, commercial banks—concerned both about pressures on their earnings margins as interest rates dropped and about meeting the loan growth guidelines of the voluntary special credit restraint program—tended to discourage business borrowers. In particular, adjustments in the bank prime lending rate lagged substantially behind downward movements in other market rates, greatly increasing the relative cost of this source of financing. As a result of the relatively high cost of bank credit, coupled with a desire of businesses to adjust their balance sheets following the heavy reliance on short-term debt in previous months, business loans at banks contracted markedly in the second quarter. Although commercial paper issuance by firms remained very large, total short- and intermediate-term business credit demands in the second quarter moderated appreciably from the first-quarter pace. Late in the second quarter, the prime rate began to move down, narrowing the gap with market rates somewhat; survey data, furthermore, suggest that banks in May were making a large share of short-term business loans at below-prime interest rates.

In the household sector, consumers greatly reduced their use of installment credit during the first half. The large growth of consumer installment and mortgage debt in 1979—both in absolute terms and in relation to disposable income—had produced a marked deterioration in household liquidity. The combination of resulting heavy debt burdens, high interest rates, and, in some states, restrictive usury ceilings acted to slow growth of installment
credit in late 1979 and the first quarter of 1980. The volume of outstanding installment credit contracted in the second quarter as consumers curtailed expenditures and repaid debt against a backdrop of rapidly declining real incomes and rising unemployment. Credit-tightening measures by lenders after the announcement of the credit-control package on March 14 and uncertainty on the part of consumers about the effects of those controls contributed further to the reduction in credit use.

Household borrowing in mortgage markets also slowed considerably in the first half. Reduced deposit flows and pressures on earnings margins from rising costs of funds constrained the lending activity of thrift institutions and pushed mortgage rates to record levels in March. Many would-be homebuyers were deterred by the high cost of mortgage credit. More recently, lower market interest rates have helped to reduce cost pressures for thrift institutions and have contributed to a pickup in deposit flows. Sharp drops in mortgage rates since early April and reports of some easing in nonrate terms suggest that lending institutions have become more active in seeking mortgage loans since early June. But mortgage rates remain high by historical standards, while demands for housing and housing credit continue to be damped by a weak economy and by the liquidity concerns of households; consequently, mortgage commitment activity apparently has remained relatively sluggish.

The Treasury borrowed heavily in credit markets in the first half to finance the combined deficits of the federal government and off-budget agencies. Normal seasonal patterns in federal cash flows associated with the timing of tax receipts led to a concentration of the Treasury's borrowing in the first three months of the year. Although the first-quarter deficit was
further deepened this year by unusually large tax refunds associated with over-
withholding in 1979, the Treasury was able to even out its borrowing pattern
somewhat by permitting its cash balance to drop over the first quarter and
then rebuilding it in the second.

In contrast to the federal sector, net borrowing by state and local
governments dropped off in the first quarter but accelerated appreciably in the
second. Many municipal governments postponed or canceled scheduled bond issues
early in the year because of high interest rates; for some governmental units,
these actions were necessitated by the rise of interest rates above statutory
limitations. But the volume of tax-exempt financing picked up considerably in
the second quarter when interest rates fell and many previously postponed bond
issues were brought to market. The financing needs of state and local units
generally increased over the first half in response to slower growth of revenues
and a consequent widening of their operating deficits. In addition, the volume
of tax-exempt securities issued continued to be boosted by offerings of mortgage
revenue bonds, designed to finance single-family housing.