Voice

of the Federal Reserve Bank of Dallas

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Honest Money

Remarks by

Henry C. Wallich, Member
Board of Governors of the Federal Reserve System
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at the

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As you prepare to arise from this seat of learning, the years of intake end, and the moment of output is at hand. You may well suspect that you will never know so much as you do now. For a while, you may feel like those great minds who forget more in a year than some learn in a lifetime. Education, after all, is what remains when all the detail has been forgotten. And if you find yourselves close to some leader of business or government, you may be contributing to great achievement. Nothing is impossible to the man with a competent assistant.

At this time, you are presumably looking at your future role in the world in the broadest possible sense, including a moral sense. Today I would like to talk to you about one aspect of your future that has a moral dimension, although it is technically an economic problem. I mean the breakdown in our standards of measuring economic values, as a consequence of inflation. Nothing that is stated about dollars and cents any longer means what it says. Inflation is like a country where nobody speaks the truth. Our failure to deal effectively with inflation results largely from our failure to regard it as a moral issue.

Inflation as deceit

Inflation introduces an element of deceit into most of our economic dealings. Everybody makes contracts knowing perfectly well that they will not be kept in terms of constant values. Everybody expects the value of the dollar to change over the period of a contract. But any specific allowance made for inflation in such a contract is bound to be a speculation. We do not know whether the most valuable part of the contract may not turn out to be the paper it is written on. This condition is hard to reconcile with simple honesty.

If our contracts were made in terms of unpredictably shifting measures of weight, time, or space as we buy food, sell our labor, or acquire real estate, we would probably regard that as cheating, and as intolerable. Yet the case is much the same when we are dealing with monetary values.

Nor are we dealing with small differences between promise and performance. At the going rate of inflation of about 8 percent, a year at a leading college that today costs $7,000 will cost $32,630 by the time your children approach college age. If you buy an average home, by the time your present life expectancy ends, your heirs could sell it for almost $2.5 million. Of course, the only sure thing about these calculations is that they will not ma-

terialize. Inflation is not stable, nor is it predictable. But I hope the illustrations make their point.

The moral issues posed by inflation go beyond what I consider deceit. Inflation is a means by which the strong can more effectively exploit the weak. The strategically positioned and well organized will gain at the expense of the unorganized and the aged. Because inflation is unpredictable, its effects also cannot be predicted and safeguarded against.

Inflation is a means by which debtors exploit creditors. The interest rate may contain an inflation premium, but when you consider that it is taxable to the creditor and tax deductible to the debtor, the scales obviously are ill-balanced. The small saver, moreover, by law is not even allowed to obtain an adequate inflation premium. Interest rate ceilings on savings deposits see to it that he will be a sufferer from inflation. The unpredictability of inflation, again, makes any inflation premium a speculation.

In the eyes of economists and of government, inflation becomes a means of exploiting labor's "money illusion," i.e., its supposed failure to anticipate inflation correctly. The device through which this mechanism operates is the well-known "Phillips Curve," i.e., the alleged trade-off between unemployment and inflation. It is believed that labor will respond to a seemingly large wage offer that subsequently is eroded by inflation. If labor fails to notice the trick, it will keep working for less than it really had demanded, and employment will be higher. A government pretending to serve a nation's interest by, say, misinforming the people about its military plans would be harshly taken to task. Why should trading on the people's money illusion be regarded any differently?

As it happens, the attempt to trade on money illusion has backfired because labor turned out not to be money blind. Mounting inflation was increasingly perceived and, as it came to be perceived, to accelerate. In consequence, we got both high inflation and high unemployment. Deceit revealed and rejected nevertheless remains deceit.

Business accounting is made deceptive by inflation. Inventory profits and profits due to a depreciation schedule that does not take adequate account of replacement costs grossly exaggerate true earnings. The government permits a remedy for the former—through LIFO—but not for the latter. The effects on profits of a firm's net debtor or creditor position are ignored. Taxes and dividends are paid from profits that may not exist or, if they can be shown to exist by appropriate accounting adjustments, are not backed up by cash flows. In addition to misleading the stockholder and the public, these conditions push firms into higher leveraging. Business thus becomes more speculative.

Meanwhile, planning ahead becomes more difficult for business. Investment lags, because long-term commitments involve risks that inflation makes incalculable. The need to guard against these unknowable risks compels both parties to any transaction, buyer and seller, employer and employee, lender and borrower, to introduce a risk premium into their pricing. Each must demand a little more or offer a little less than he would under noninflationary conditions. That reduces the range of possible bargains and the level of economic activity. Fewer jobs, less output, in the private sector are the results.

Inflation also undermines the honesty of our public policies. It allows the politician to make promises that cannot be met in real terms, because as the government overspends trying to keep those promises, the value of the benefits it delivers shrinks. A permissive attitude toward inflation, allowing the government to validate its promises by money creation, encourages deceitful promises in politics.

Inflation threatens the market system, property, and democracy

Finally, inflation becomes a means of promoting changes in our economic, social, and poltical institutions that circumvents the democratic process. Such changes could be forced upon a reluctant nation because inflation may end up making the existing system unviable. One instance is the diminishing ability of households to provide privately for their future. Personal savings, insurance, pension funds—all become inadequate. Money set aside in any of these forms for old age, for sickness, for education could be wiped out by accelerating inflation. One may indeed ask whether it is not an essential attribute of a civilized society to be able to make that kind of provision for the future. But that is not the point I want to stress. Rather, I want to emphasize that the increasing uncertainty in providing privately for the future pushes people seeking security toward the government.

Today, the best hedge against inflation is to be retired from the Federal Government. That guarantees a reliably indexed pension which may outgrow the pay of the job itself. Social security is the

next best thing, although at a much lower level. Every other form of pension, even if indexed, is exposed to the risk that the employer, or the private sector as a whole, may not be able to perform. A government pension is riskless, short of a strike at the Bureau of Engraving and Printing.

A similar trend toward bigger government threatens at the level of productive enterprise. Inflation, as I have noted, distorts corporate accounting and cash flows. It creates liquidity and profitability problems. Strong firms become less strong; less strong firms become marginal. Dependence upon and eventually absorption by government may be the ultimate outcome. Countries like Italy and Great Britain are already on their way to this solution.

In the United States we have not yet reached that condition, though the increasing passage of the railroads into government hands is a danger signal. But the role of government nevertheless has expanded as the private sector has retreated before the impact of inflation. Mounting regulation, tax burdens, and other impediments, of course, have also contributed their part.

Not long ago it was taken for granted that at full employment the private sector should be strong enough to produce a surplus in the Federal budget. It was expected, in other words, that the inherent impulses of private consumption and especially investment would generate a level of aggregate demand sufficient to absorb capacity output. Today this has become very doubtful. Capital formation is too weak, consumption too low, to generate enough demand to sustain the economy at full employment without the crutches of a Federal deficit.

We might be able to change this by appropriate tax reform that would stimulate investment. We could adopt policies that would cut down our enormous trade deficit that is sucking purchasing power out of the country. But inflation is an obstacle on either of these courses. Tax reform is unlikely to call forth large-scale business investment so long as inflation beclouds the outlook. Policies to improve the trade balance will avail little if inflation reduces our competitiveness.

Thus, by one route or another, inflation creates a vacuum in the private sector into which the government moves. By making the performance of the economy inadequate, inflation is likely to induce expanded government activity. The same result may follow if inflation leads to the imposition of wage and price controls. Indeed, if enduring controls were imposed, which I do not expect, our market economy would be on the way out. Of the three great dimensions of our society—private rather than public ownership, decision making by the market rather than by central planning, and democracy rather than authoritarianism—private ownership and market decision making will then be in retreat. No one can say how long, under such conditions, a shift also in the third dimension, away from democracy and toward authoritarianism, can be avoided.

The sources of inflation

What can be done? Before we look for remedies, we must examine the causes. Inflation is like cancer: many substances are carcinogenic, and many activities generate inflation. The sources of inflation can be diagnosed at several levels. The familiar debate about the sources of violence provides an analogy. Do guns kill people? Do people kill people? Does society kill people? Some assert that money, and nothing but money, causes inflation—the "guns kill people" proposition. Some assert that the entire gamut of government policies, from deficit spending to protectionism to minimum wage to farm price supports to environmental and safety regulations, causes inflation—the "people kill people" proposition. Some argue, finally, that it is social pressures, competition for the national product, a revolution of aspirations, which are at the root—the "society kills people" proposition. The first view holds primarily responsible for inflation the central bank, the second the government in general, the third the people that elect and instruct the government.

In addition, time preference—the social discount rate—enters into the equation. Inflation usually is the final link in a chain of well-meant actions. The benefits of a tax cut, of increased public spending, are felt within a few weeks or quarters. The penalty, in terms of inflation, may not come until after a couple of years or even later. Inflation is the long-run consequence of short-run expediencies. Life, to be sure, is a succession of short runs, but every moment is also the long run of some short-run expediency of long ago. We are now experiencing the long-run consequences of the short-run policies of the past. These consequences are as unacceptable as rain on weekends, and just as easy to change. If we continue to meet current problems with new short-run devices, the bill will keep mounting.

We will not defeat inflation if we always take the short view. We will then always find that the

cost of fighting inflation is always too high, the short-run loss of output and employment too great. We shall find ourselves ignoring inflation, in the hope that it will somehow not grow worse. That is pure self-deception. Cancer ignored does not become stationary, and neither does inflation. Inflation ignored accelerates.

A plan for action

A long view is needed on inflation. It is a view very different from that of the politician, who is under enormous pressure to do quickly something that looks good. Harold Wilson said that in politics one week was a long time. More charitably, the pressure is until the next election. If the people will not instruct their elected representatives to do the things that are needed to end inflation, if they turn them out of office because the remedies take time and are temporarily painful, we will keep getting a little more employment and output now at the expense of much more unemployment and loss of output later. And we will get more inflation all along the way, down to its ultimate consequences.

We need to make the ending of inflation our first priority. That must be our overall policy. In the current circumstances, to implement it, we need to take a number of steps, some of which I shall list here.

(1) We need to recognize that we are currently very close to full employment and accordingly must slow down the growth of the economy, gradually but firmly, to its long-term rate of $3^1/_4$ to $3^1/_2$ percent.

(2) We must limit the pending tax cut to what is needed to offset the effect of inflation on income brackets, perhaps of the order of $10 billion.

(3) We must work to bring the budget deficit for 1980 below $40 billion.

(4) Monetary policy must prevent increases in money growth that would fuel inflation and must gradually bring the growth of the monetary aggregates down to levels commensurate with the real growth rate of the economy.

(5) We must stop adding to inflation by government actions such as protectionism, regulation, farm price supports, minimum wage increases, and high government construction costs.

(6) We must promote competition, through antitrust action, and productivity, through tax changes that stimulate investment.

(7) We must maintain as strong a dollar internationally as our balance of payments will permit.

(8) We would be wise to adopt an incomes policy that employs the tax system and the market mechanism, free from the taint of wage and price controls, commonly referred to as TIP.

The President's program of voluntary de-escalation of price and wage increases deserves everybody's support. But in our highly competitive environment, voluntary sacrifices on the part of labor and business have their limitations. We should view the program as a supplement to, not a substitute for, a comprehensive anti-inflation program.

If inflation is a moral problem, we require a moral solution; that is, a recognition that public policies have led to serious inequities affecting people in different and unequal ways and a commitment to new policies that will correct the cumulative distortions and contribute to desired economic progress. The policies I have proposed require taking a long-run view of inflation. Nothing will stop inflation overnight, and in the short run the gains will always seem dearly won. But without such a long-run approach, the damage will mount and the ultimate costs will escalate.

You, as you assume your roles in the productive sector of our nation, are in a better position than anyone to take such a long-run view. You have nothing to gain from the expedients of the past. You have a lifetime interest in the honest, noninflationary, productive performance of the American economy.

Community Reinvestment Act Implementing Rules Drafted by Federal Agencies

Regulations implementing the Community Reinvestment Act have been published for comment by the Comptroller of the Currency, the Federal Deposit Insurance Corporation, the Federal Home Loan Bank Board, and the Federal Reserve Board. The proposed regulations, which are designed to prevent discriminatory lending practices, will require that financial institutions disclose publicly the areas where they are willing to make loans and that they specify the types of credit they are prepared to extend.

The Community Reinvestment Act, signed into law last year, requires the four Federal regulatory agencies to encourage the institutions they regulate to help meet the credit needs of their communities, including low- and moderate-income neighborhoods, consistent with safe and sound lending practices. The act requires the four agencies to have regulations implementing these requirements in effect by November 6, 1978.

When examining an institution within its jurisdiction, the regulator must assess the institution's record of meeting the credit needs of its community. That record must be taken into account by the regulator when considering applications by the institution for branches, mergers, charters, deposit insurance, holding company acquisitions, and office relocations.

The proposed regulations require the board of directors of each regulated lender to adopt a CRA statement defining the "entire community" the lender serves and specifying the types of credit the lender is prepared to extend to the community. A lender would be required to give notice in the public area of its offices that the CRA statement is available for inspection and that persons may submit comments on the statement to the institution or to its supervisory agency. Public comments are to be kept by the lender for two years and would be reviewed, along with the CRA statement, by the lender's supervisory agency during regular examinations.

In making their proposals, the agencies said:

"It is more likely that community credit needs, which can be met on a safe and sound basis, will be met when members of the community are aware of the availability of credit, the lending institutions are well informed about community credit needs, and such institutions make a sincere effort to meet those needs.

"Institutions are encouraged to offer the types of credit and credit-related services that will meet the credit needs of their communities. The regulators, however, would not require institutions to offer particular kinds or amounts of credit. It is the purpose of the proposed regulations to encourage each institution to help meet the credit needs of its entire community while preserving to every institution the flexibility necessary to operate in a safe and sound manner, and to serve the convenience and needs of its community effectively and imaginatively."

Several public hearings were held across the country last spring to solicit ideas on how to implement the Community Reinvestment Act. One such hearing was held at the Federal Reserve Bank of Dallas on March 27, 1978. Many of the ideas and suggestions presented at these hearings were incorporated into the proposed regulations. One such comment included in the regulations was to allow the lenders to define for themselves the term "entire community." Under guidelines prepared by the agencies, the factors to be considered in defining the community a lender serves should include the following: the size of the lending institution, geographic factors, and economic forces. The agencies suggested that a lender might use standard metropolitan statistical areas (SMSA's), counties, or its "effective lending territory" in defining its community.

"Fed Quotes"

Brief Excerpts from Recent Federal Reserve Speeches, Statements, Publications, Etc.

Inflation is our most serious problem

"Inflation is now our most serious domestic problem."

"If inflation should be permitted to continue at the present annual rate—expected to be seven per cent or more this year—then when today's college graduates reach normal retirement age, the dollar they now hold will be worth less than a dime."

G. William Miller, Chairman, Board of Governors of the Federal Reserve System "New Directions" (Remarks before the Bay Area Council, San Francisco, California, June 27, 1978)

"There are many arguments for and against central bank independence. They turn on the degree to which monetary policy follows the democratic process, the degree of coordination with fiscal and other policies, the need for the Executive—or the Congress—to have adequate control of all policy instruments. But fundamentally there is only one issue. It is inflation. The founding fathers of the Federal Reserve System knew very well that for politicians the power to print money represents a temptation difficult to resist. It was clear to them that more Executive or Congressional control over the printing press would mean more inflation. Independence of the central bank would mean less inflation. That was the basis on which the legislators who designed the Federal Reserve Act made their choice. It remains to be seen whether their successors will abide by that choice."

Henry C. Wallich, Member, Board of Governors of the Federal Reserve System "A Committee Member Looks at the Outlook" (Remarks to the National Association of Business Economists' Seminar on Money Markets, St. Louis, Missouri, April 26, 1978)

"The general objective of monetary policy suggested by rational expectations ought to be elimination or reduction of uncertainty about the future general price level—to make it as predictable and dependable as possible around some low average rate of growth. That course, rationalists argue, would do more than any alternative macro policy posture to contribute to long-term steady economic growth and high employment rates."

"Rational Expectations—Fresh Ideas That Challenge Some Established Views of Policy Making" (1977 Annual Report, Federal Reserve Bank of Minneapolis)

New Directions for a better economy

"Perhaps it is time for us to take *new directions* to help shape a stronger America and a better world."

"The New Directions for economic policy should include specific strategies and quantitative targets to give all of us a clear picture of where we are going. With such a blueprint, it would be possible to evaluate all proposed policies and actions as to their contribution toward achieving the established goals."

"First, a balanced budget with full employment. . . . a reduction to less than $40 billion for FY 1980, to less than $20 billion in 1981 and to a balanced budget in 1982.

"Second, the percentage of Federal expenditures should be reduced gradually over a five to seven year period from 22 per cent of GNP to 20 per cent."

"Third, there should be a policy to achieve a substantial increase in business fixed investment."

"The goal should be over the five or seven year period to increase capital spending from 9 per cent to 12 per cent of GNP.

"Fourth, we should have an active policy with respect to housing. . . . In the next five years, it would be appropriate to see housing production increase each year by 75,000 to 100,000 units until we reach a level consistent with our housing needs."

"Fifth, there should be a vigorous program to expand exports, with a definite goal over the next five to seven years to increase our exports from 7 per cent of GNP to 10 per cent."

"Sixth, as the program progresses, and as the capacity to shift resources to the private sector emerges, there would be opportunities for additional tax reductions."

"Seventh, high priority should be given to a serious and sustained effort of regulatory reform to reduce the unnecessary, costly and inflationary burden of government on people and on businesses."

"And eighth, there should be a definite commitment to reduce inflation on a steady basis, at the rate of one-half to three-quarters of a per cent per year until we reach our goal of price stability, full employment and a sound dollar."

G. William Miller, Chairman, Board of Governors of the Federal Reserve System "New Directions" (Remarks before the Bay Area Council, San Francisco, California, June 27, 1978)

Structural reforms required as well

"Another essential element of a long-term strategy aimed at a high-growth, low-inflation economy is extensive reform of Federal regulatory activities. A critical look at price-regulating Government programs should be undertaken; a painstaking examination of all existing and proposed regulatory activities in the environmental and health safety areas is also necessary."

G. William Miller, Chairman, Board of Governors of the Federal Reserve System (Statement before the Joint Economic Committee, June 29, 1978)

"Whether you agree or not, the general public thinks that the banking industry is generally anticompetitive. They see the restraints on geographical activity and the restrictive chartering as being primarily protective of your interests as bankers, not the public's interests."

"The result is that banks are, to a certain extent, protected from the freedom to fail as well as the freedom to compete and succeed."

"Banks, like all other business organizations in our country, should have the freedom to open up shop where the needs are greatest and the opportunities strongest."

Philip C. Jackson, Jr., Member, Board of Governors of the Federal Reserve System (Remarks before the Alabama Bankers Association, Mobile, Alabama, May 11, 1978)

"The Federal Reserve's legislative recommendations on foreign banks have consistently been grounded on the principle of national treatment or nondiscrimination. That principle has a long and respected history in the affairs of this nation. It provides for fair and equitable treatment for all. Currently, by contrast, foreign banks have certain advantages over our indigenous institutions. The Federal Reserve continues to believe that the foreign banking community should be incorporated into the U.S. banking system on an equal footing with domestic banks."

G. William Miller, Chairman, Board of Governors of the Federal Reserve System (Statement before the Subcommittee on Financial Institutions of the Committee on Banking, Housing and Urban Affairs, U.S. Senate, June 21, 1978)

Seasonally Adjusted Numbers: Are They Any Good?

By *Wallace H. Duncan*

"For everything there is a season, and a time for every matter under heaven" (Eccles. 3:1).

Just as corn, wheat, calves, and pigs have their most favored seasons, so also does the nation's money show spurts of growth during certain seasons while languishing in others. And just as the vagaries of seasonal rains and temperatures cause anxieties for the farmer and rancher, so also do the vagaries of seasonal patterns in money stock growth cause headaches and stress for policymakers. In recent years the headaches have approached migraine proportions for the Federal Reserve, the overseer of the nation's stock of money.

Since money is an aid to the conduct of commerce and an important catalyst for economic growth and is virtually costless to produce, one might wonder why the Federal Reserve places any limits at all on the supply. The best evidence suggests that excessive money growth leads to an unsustainable boom in economic activity, followed by worsening inflation. On the other hand, too little money growth tends to cause a recession, with a subsequent decline in the rate of inflation.

Periodic spurts and declines in the stock of money, in response to seasonal influences, complicate the task of identifying whether money growth is deviating from what it should be. Seasonal changes in the money stock tend to obscure movements that are related to the business cycle and to the rate of inflation. Therefore, adjustments need to be made in the money stock data to purge them of these seasonal influences and thereby better identify the cyclical and longer-run trends in the growth rate of money—trends that have important effects on business activity and on inflation.

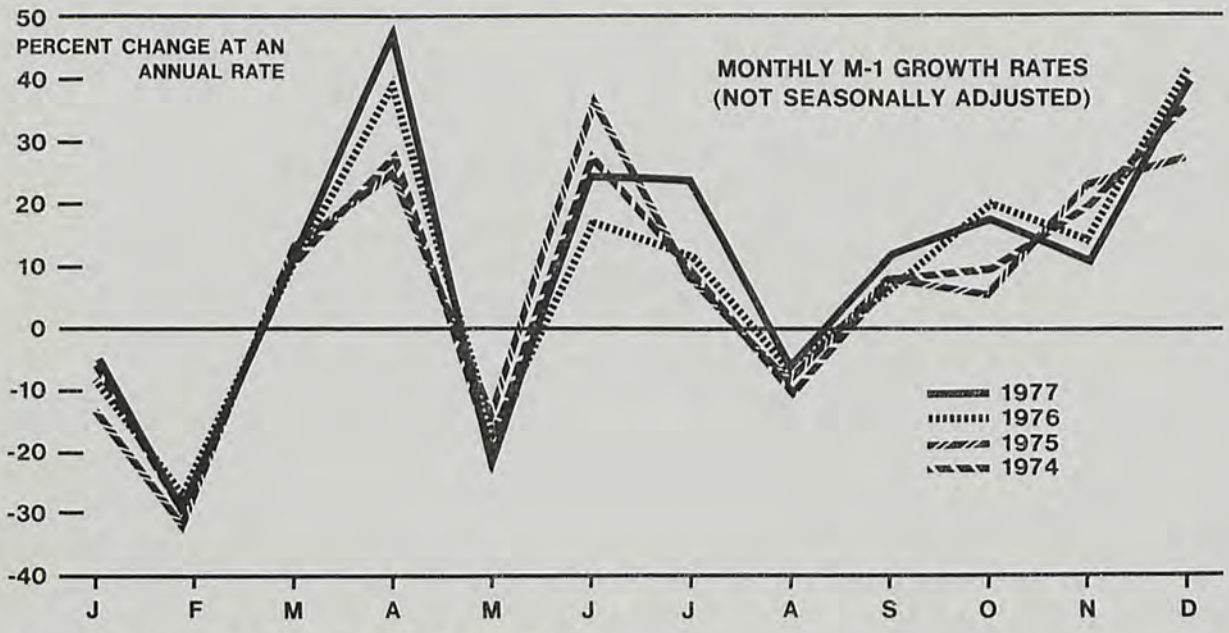
Unfortunately, the seasonal pattern of money growth is quite pronounced. It is normal for the stock of money to decline sharply in February and to reach peak growth rates in April, June, and December. These movements are associated with the midwinter lull in economic activity, the Easter season and income-tax-filing deadline, the onset of the summer vacation period, and the Christmas buying season, respectively. The sharp seasonal swing from February to April tends to completely dominate underlying monetary changes at that time.

The identification of correct policy response in the present is hampered by the unknown distorting effects that past policy decisions have on the seasonal pattern of money growth.

Two aspects of seasonal adjustment are prime sources of frustration. First, the seasonal pattern is not stable but changes over the years as changes occur in our institutions and habits. And it is not possible to identify and quantify these changes as they occur.

The second is that observed seasonal patterns and past policy decisions are so intertwined that it becomes virtually impossible to accurately identify the seasonal pattern that would have occured

Seasonal variation in money growth is pronounced



SOURCES: Board of Governors, Federal Reserve System.
Federal Reserve Bank of Dallas.

in the absence of unintended policy influences. Thus, the identification of correct policy response in the present is hampered by the unknown distorting effects that past policy decisions have on the seasonal pattern of money growth.

The concept of seasonal adjustment

Most time-series data can be thought of as a combination of trend-cycle, seasonal, and irregular components. The trend-cycle component is the portion that is due to the long-run growth and business cycle trends of the economy. The seasonal component is the portion that is caused by seasonal influences, such as weather, holidays, and tax-filing deadlines. And the irregular component consists of "noise," or variation that has no regular pattern and therefore is not predictable.

These components, however, are only analytical constructs. One can actually observe and measure only the sum of the components. A particular component—the seasonal one, for example—can never be directly observed or measured. This complicates the task of seasonal adjustment considerably since, having no actual data against which to measure errors, one can never determine with precision the degree of accuracy of any particular seasonal adjustment technique.

With the present seasonal adjustment method in use at the Federal Reserve Board, the X-11 variant of Census Method II, the trend-cycle and irregular components are removed by a statistical technique. When the calculations are completed, a reasonably reliable estimate of the seasonal component remains. This seasonal component identifies the seasonal adjustment factors, which are applied to the original unadjusted money stock data to obtain seasonally adjusted figures.

This seasonally adjusted money represents the sum of the trend-cycle and irregular components. The seasonal component has been removed so that analysts can see more clearly the longer-run trend-cycle component of the money stock.

The trend-cycle component is still somewhat obscured by the remaining irregular component, however. Over short intervals, such as for monthly

growth rates, the irregular component is likely to be relatively large. But over longer periods, such as for quarterly and semiannual growth rates, the irregular component tends to average out, leaving the important trend-cycle component increasingly more apparent.

A shifting seasonal pattern

If the seasonal pattern of money growth remained unchanged through time, it would be a simple matter to calculate a reasonably accurate "average" seasonal pattern. However, statistical tests for stability indicate that the seasonal pattern of money growth is not stable. It changes in a mostly gradual, yet unpredictable manner. Therefore, only the seasonal patterns of nearby years are useful for calculating seasonal adjustments for a particular year.

The present seasonal adjustment technique uses a weighted moving average of seven years of data, centered on the middle year. Thus, the seasonal adjustment factors for the year 1974 depend on the seasonal patterns for the years 1971 through 1977.

This, of course, causes a problem when we wish to know the seasonal adjustment factors for the present year, the one on the policymakers' front burner. The X-11 program will produce *final* seasonal adjustment factors for 1978 only after data are available through 1981. This would be of little use for policy in 1978. Therefore, *preliminary* seasonal adjustment factors are computed and used currently. In this computation, apparent recent trends are extrapolated and allowed to influence the preliminary seasonal.

Revisions of seasonal factors tend to have a larger impact on the seasonally adjusted monthly money stock figures than do all revisions of the basic underlying data, including benchmark revisions.

Significant changes can occur between the preliminary and final seasonal factors. Between the preliminary factors of early 1974 and the final factors calculated in early 1978, revisions of the seasonal pattern alone caused January 1974 money growth, at a seasonally adjusted annual rate, to be altered from − 3.1 percent to + 6.7 percent. The effect of seasonal revisions on the June growth rate lowered it by 6.5 percent. As illustrated in the accompanying table, revisions of seasonal factors tend to have a larger impact on the seasonally adjusted monthly money stock figures than do all revisions of the basic underlying data, including benchmark revisions. For longer periods, however, seasonal-factor revisions diminish in importance relative to revisions of the underlying data.

Seasonal-factor revisions usually have a larger impact on seasonally adjusted money stock figures than do all revisions of the underlying data.

(In percent, at annual rates)

1974	Effect of revisions: Of underlying data	Effect of revisions: Of seasonal factors	Total
January	−0.8	+9.8	+9.0
February	−1.6	−6.7	−8.3
March	−1.5	−1.9	−3.4
April	−3.3	−2.2	−5.5
May	−1.2	−.6	−1.8
June	+6.1	−6.5	−.4
July	+2.4	−1.1	+1.3
August	−3.2	+2.8	−.4
September	−2.3	+3.6	+1.3
October	−.4	+1.3	+.9
November	+3.0	−1.6	+1.4
December	+1.2	−1.2	.0
Mean absolute effect	2.250	3.275	—

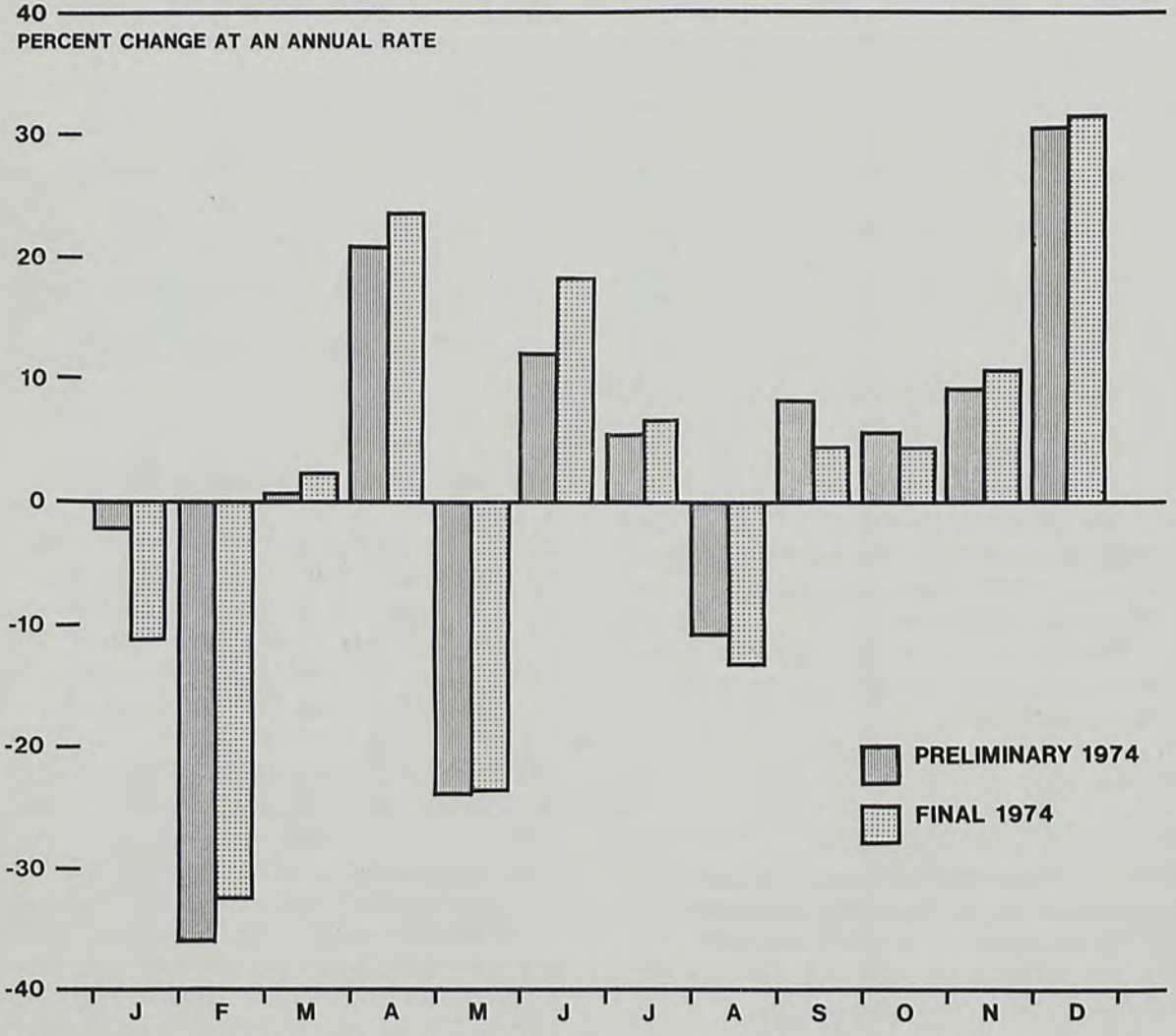
EXAMPLE: The 9.8-percent effect of seasonal-factor revisions increased the seasonally adjusted annual rate of money growth for January 1974 from −3.1 percent to +6.7 percent. Revisions of the underlying data had a small offsetting effect of −0.8 percent, so that the final growth rate was +5.9 percent.

NOTE: Table was derived by comparing initial data published in the *Federal Reserve Bulletin* with data subsequently revised as of April 1978.

SOURCES: Board of Governors, Federal Reserve System. Federal Reserve Bank of Dallas.

Policymakers dealing with current money stock changes cannot know with assurance whether a given change in the quantity of money represents an acceleration or deceleration of the underlying trend rate of growth, is an aberration, or a changing seasonal pattern. Only the first of these possibilities would call for a change of policy operating targets. Thus, the uncertainty produced by changing seasonal patterns may precipitate unwarranted policy action or—what is more probable and equally bad—may induce chronic deferrals of action. The possibility of a changing seasonal pattern offers a plausible rationale for doing nothing to counteract what may actually be an undesirable change in the trend rate of growth of money. However, the tendency toward such behavior within the Federal Open Market Committee is moderated

Preliminary and final growth rates of the seasonal component of money can differ appreciably for some months



SOURCES: Board of Governors, Federal Reserve System.
Federal Reserve Bank of Dallas.

by looking at growth rates over longer periods than a single month and by watching not only the narrowly defined money supply (*M*-1) but other monetary aggregates as well.

Seasonality and monetary policy

Economists are continually struggling with the complexity of the interrelationships in the economy. For example, we know that money and interest rates are related. In the short run, if money is in ample supply relative to demand, interest rates tend to fall; conversely, a scarce supply of money relative to demand will lead to higher interest rates.[1] This relationship causes the seasonal patterns of money and the rate of interest to be mutually interdependent.

If the Federal Reserve were to decide to cause money to grow on a smooth path throughout the year, ignoring seasonal variations of heavy and slack demand for money (for example, the Christmas surge and the midwinter lull), then interest rates would show a marked seasonal pattern. They would be high at Christmas time and low during February. Conversely, if the Federal Reserve were to prefer that interest rates display no seasonal pattern, then the supply of money must be adjusted so as to accommodate heavy and slack seasonal demands for it.

If the Federal Reserve neutralized its own seasonal influence on the supply of credit, both the stock of money and interest rates would show seasonal patterns. On the other hand, a policy decision to smooth out the seasonal pattern of one necessarily results in magnifying the seasonal variation of the other (see Appendix A for a graphic demonstration).

Prior to the Federal Reserve, seasonal credit demands of the agricultural sector had a pronounced effect on credit market conditions and induced strong seasonal movements of interest rates, especially in agricultural producing areas. The Federal Reserve System was created by Congress partly as a remedy for these seasonal "credit crunches." In the preamble to the Federal Reserve Act of 1913, Congress gave to the System the mandate to "furnish an elastic currency" to accommodate seasonally fluctuating needs. In its First Annual Report, the Federal Reserve Board acknowledged this responsibility in its statement that "the more complete adaptation of the credit mechanism and facilities of the country to the needs of industry, commerce, and agriculture—with all their seasonal fluctuations and contingencies—should be the constant aim of a Reserve Bank's management."[2]

The amount of seasonal fluctuation in the money stock is dependent on the Federal Reserve's policy toward interest rate seasonals. Throughout its history the Federal Reserve has followed a policy intended to put most of the seasonal variation into the money stock, thereby removing most of the seasonal variation from interest rates.

The X-11 seasonal adjustment technique is designed for use with economic variables that are not under the close control of policymakers. Since growth of the money supply is directly influenced by monetary policy actions, past seasonal growth rates of money will be intimately connected with past monetary policy decisions.

Some of the effect of monetary policy actions is implicitly intended by policymakers to moderate the business cycle trend. Some is intended to accommodate seasonal fluctuations in the demand for credit. These effects of policy should be allocated by the seasonal adjustment technique to the trend-cycle component and seasonal component, respectively. However, owing to uncertainties, the lack of perfect foresight, international exchange rate considerations, and a host of other reasons, some effects of monetary policy on the money supply cannot be correctly classified as intentional trend-cycle or seasonal influences. This portion of the monetary policy effect should be assigned to the irregular component, which includes all variation not correlated with the trend-cycle and seasonal patterns.

Unfortunately, largely because of the limitations of currently available statistical techniques, some of the effects of past monetary policy that should rightly be classified as irregular are, nevertheless,

1. This is not valid for the longer run, however. An excess supply of money will usually lead to a worsening of inflation somewhat later. Inflationary expectations then become higher and are incorporated in market interest rates, causing them to rise. Thus, while an excess supply of money may lead to lower interest rates in the near term, over a longer time horizon it will result in higher interest rates.

2. *First Annual Report of the Federal Reserve Board, for the Period Ending December 31, 1914* (Washington, D.C.: Government Printing Office, 1915), p. 17.

A Changing Seasonal Pattern of Money Growth

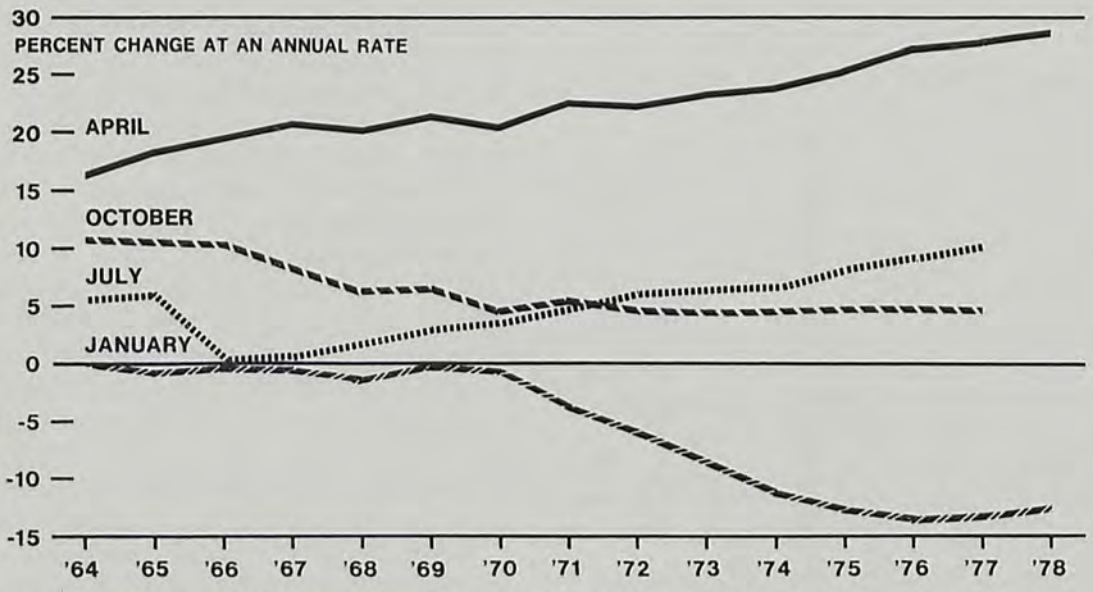
The accompanying graph illustrates how monthly growth rates of the seasonal component of money have apparently changed over the past 15 years. The graph is derived from the latest officially published money stock data, which represent the best estimates by the Federal Reserve staff of the true, but unobservable, seasonal component—based on the X-11 seasonal adjustment technique, with judgmental modifications.

The distinct and persistent trends suggest that the money stock does indeed have a moving seasonal pattern rather than a stable one. But there is also firmer statistical evidence supporting the view that the seasonal pattern of money changes over time.[1]

This changing seasonal pattern causes problems for policymakers and economic analysts alike. It results in significant revisions of the preliminary seasonally adjusted money stock data, since the best estimate of the seasonal component cannot be obtained until several years of subsequent data have become available. Thus, policymakers encounter one more uncertainty—that of not knowing whether the current preliminary seasonal adjustment factors are speaking the truth.

1. For example, see Edward R. Fry, "Seasonal Adjustment of M_1—Currently Published and Alternative Methods," Board of Governors of the Federal Reserve System, Staff Economic Studies, no. 87 (Washington, D.C., 1976). For an opposing view, see William Poole and Charles Lieberman, "Improving Monetary Control," *Brookings Papers on Economic Activity*, 1972, no. 2, p. 327.

Seasonal component of money growth changes over time



NOTE: A given month's value for a particular year is calculated as the percentage change, at an annual rate, of the seasonal component of the M-1 money stock from the immediately preceding month. The first month of each quarter was chosen for illustration.

SOURCES: Board of Governors, Federal Reserve System.
Federal Reserve Bank of Dallas.

incorrectly assigned to the seasonal component.[3] Lengthening the moving-average time period of the X-11 program would moderate this problem but at the expense of reducing its capability to track changes in the seasonal pattern. Until economists and statisticians become more ingenious, we apparently must live with imperfect estimates of seasonally adjusted money growth.

But apart from the problem of accurately estimating the seasonal component, a second issue is that of deciding what the Federal Reserve's policy ought to be toward seasonal variation of the money stock and interest rates. In the appendix on counterseasonal monetary policy (Appendix B), reasons are given as to why the Federal Reserve should not attempt to remove seasonal variation in the pace of real economic activity. A policy of permitting full scope to seasonal variations in economic activity would be consistent with a policy of no seasonal variation in interest rates.[4]

With the X-11 seasonal adjustment technique, one can observe seasonal patterns for both the money stock and interest rates. Using a money demand function (the relationship between money, interest rates, and other economic variables), one might calculate the money stock seasonal pattern that would have been consistent with the achievement of no seasonal variation in interest rates. This money stock seasonal pattern might be identified as the "policy seasonal" and would provide the basis for seasonal adjustment of the money stock for policy purposes in the current year. This policy seasonal would, in general, be somewhat different from the preliminary seasonal calculated by the current X-11 technique.

Such a policy seasonal would be consistent with a rational policy choice with respect to seasonally fluctuating pressures on interest rates. By contrast, money stock seasonal factors presently used as a basis for policy are simply those that describe the seasonal pattern of recent years—a pattern that is largely the result of the unintentional seasonal influences of past *ad hoc* policy actions and that might differ significantly from the seasonal pattern arrived at by deliberate choice of the policymakers.

The Federal Reserve Board does recognize that seasonal patterns of money growth are caused, in part, by the unintended seasonal influences of its own past monetary policy actions. This recognition has been one of the main rationales for judgmental modification of the seasonal patterns calculated by the X-11 program. But the policy seasonal advocated above would substitute an objective standard for modifying the X-11 seasonal factors—an objective standard that is derived from sound economic considerations of efficient output.

Conclusions

There would, of course, still be a need for a descriptive seasonal pattern of money. Such a descriptive seasonal would identify the pattern of money growth that actually occurred during any particular year. Descriptive seasonals are needed by econometricians and others to do research on economic relationships.

But the policy seasonal, on the other hand, should be tailored to the needs of policymakers. If policy is to be rational, the policy seasonal should represent a desired or optimum path in some sense. Policymakers should not simply aim at duplicating recent seasonal patterns, as they implicitly do in current practice, to the extent that they attempt to hit their short-run seasonally adjusted money growth targets.

Striving for a seasonal pattern in money that would eliminate all seasonal variation in interest rates is a rational policy designed to permit the economy to operate on its most efficient seasonal path, given the seasonal constraints imposed by weather, institutions, and traditional holidays. Explicitly adopting such a policy seasonal would be an improvement upon current monetary policy practice.

3. This is true of other irregular components as well. The end result of incorrectly assigning some irregular variation to the seasonal component is to produce seasonally adjusted data that are overly smoothed. For a spectral-analysis study of the money stock data that contains evidence of oversmoothing, see Herbert M. Kaufman and Raymond E. Lombra, "Short-Run Variations in the Money Stock," *Southern Economic Journal* 43 (April 1977): 1515-27.

4. A monetary policy of removing all seasonal variation from interest rates would mean putting all effects of seasonal fluctuations emanating from either the IS or the LM curve into the money stock seasonal pattern. It would be equivalent to a "seasonal LM curve" that is horizontal. This proposal differs from that of Poole and Lieberman's counterseasonal policy (see Appendix B), which implies putting LM seasonal variation into the money stock and IS seasonal variation into interest rates. Both proposals also implicitly assume a Neo-Keynesian framework, in which interest rates are the sole channel through which the monetary sector affects aggregate demand for goods and services in the short run.

The Committee of Experts

The Board of Governors of the Federal Reserve System has formed a committee of experts to review the seasonal adjustment techniques used by the Board in adjusting financial data.

The chairman of the committee is Geoffrey H. Moore of the National Bureau of Economic Research in New York. Other members are Professor George E. P. Box of the University of Wisconsin, Madison; Hyman B. Kaitz, Alexandria, Virginia; Professor James A. Stephenson, Iowa State University, Ames; and Professor Arnold Zellner, University of Chicago.

The committee has been requested to examine the applicability of seasonal adjustment techniques to financial data, with a view to recommending the most appropriate methods to be used. The Board is especially concerned with seasonal adjustment of weekly and monthly series for the monetary aggregates, their components, and related bank reserve and credit flows.

The committee is assessing the usefulness of various seasonal adjustment techniques—including those presently employed by the Board and reasonable alternatives—in light of:

1. The high degree of volatility of many weekly, monthly, and even quarterly financial series
2. The impact of monetary policy decisions on series, such as the money supply, that are closely related to policy
3. The stability (or lack thereof) of the underlying seasonal movement and the ability of seasonal adjustment methods to develop reasonably reliable seasonal factors for a year ahead
4. The desirability of mutually consistent behavior for related seasonally adjusted series, such as bank reserves, deposits, and credit

In its analysis, the committee has available the material on seasonal adjustment of the money supply that was prepared for the Advisory Committee on Monetary Statistics, which reported its conclusions to the Board in June 1976.

Appendix A

Interdependence of Seasonal Patterns

It can be demonstrated with familiar comparative static analysis that removal of seasonal variation in interest rates will magnify seasonal variation in the money stock, and vice versa. Therefore, any observed seasonal pattern in money is inevitably dependent on the *de facto* policy toward interest rate seasonal patterns over the same period.

Consider the money supply functions SS, which is a function of the monetary base and the rate of interest, and a money demand function that varies seasonally over the range DD to D′D′.[1] The latter function varies with the level of national income (which is itself assumed to have seasonal variation), the rate of interest, and exogenous seasonal influences. The money demand function varies between DD and D′D′ owing to both seasonal variation of national income and exogenous seasonal influences.

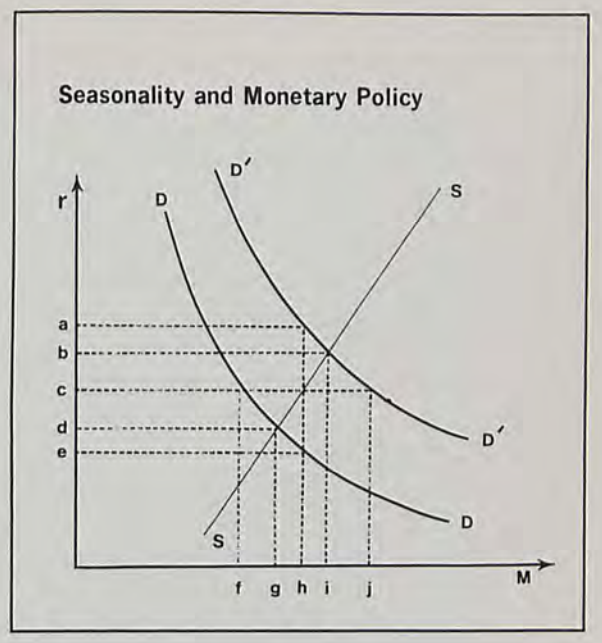
1. The money supply function is interest-sensitive if the demand for excess reserves by commercial banks is a function of interest rates. For a survey of empirical evidence of the interest elasticity of the money supply function, see Robert H. Rasche, "A Review of Empirical Studies of the Money Supply Mechanism," *Review*, Federal Reserve Bank of St. Louis, July 1972, pp. 11-19.

If the monetary authority neutralizes its own seasonal influence by keeping the monetary base fixed, the money supply function does not vary from SS. The seasonal variation in interest rates will be *bd*, and the seasonal variation in the money stock will be *gi*.

On the other hand, the monetary authority could remove all seasonal variation of the interest rate by keeping the rate fixed at its mean level, *c*. It would do so by altering the monetary base through open market operations so as to peg the interest rate at *c*, causing the effective money supply curve to be horizontal through *c*. The seasonal variation in the money stock will now be over the range *fj*, a greater seasonal variation than existed with a policy of inaction, *gi*.

Similarly, it can be shown that the removal of all seasonal variation in the money stock by fixing it at its mean value, *h*, would cause seasonal variation in the interest rate to be *ae*, a wider range than the case of policy inaction, *bd*.

There are, of course, an infinite number of policies toward seasonal variation that could be pursued other than the three illustrated. If the monetary authority adopts any policy



toward interest rate seasonal variation, it will simultaneously be determining the resultant money stock seasonal variation. The "policy seasonal pattern" will, in general, differ from the "natural seasonal pattern" that would exist in the absence of central bank seasonal influence.

Appendix B

A Counterseasonal Monetary Policy

An interesting, and controversial, idea to surface in recent years is a proposal to use monetary policy to smooth seasonal variations in economic activity.[1] The rationale is to increase economic efficiency. Since both overutilization and underutilization of factories and labor, for example, represent less than optimum efficiency, a net economic gain could be engineered, it is suggested, if some production were shifted away from periods of overutilization and into periods of underutilization.

This is essentially the argument, in an annual time frame, that provides the basis for a countercyclical policy—that is, a policy designed to smooth out the business cycle by restraining demand during inflationary boom periods and encouraging it during recessions. If the economic costs of idle resources are nonlinear—that is, if they increase more than in proportion to the degree of underutilization—then such a counterseasonal policy would be beneficial even during periods when all of the seasons were experiencing underutilization.

1. William Poole and Charles Lieberman, "Improving Monetary Control," *Brookings Papers on Economic Activity*, 1972, no. 2, p. 332.

There are a number of problems with a counterseasonal monetary policy, however. For example, to the extent that seasonally strong growth in the fourth quarter of each year is a response to the Christmas buying season, a counterseasonal monetary policy would be equivalent to an anti-Christmas policy. Interest rates would have to be relatively higher in the fourth quarter in order to dampen demand. Even hard-nosed central bankers probably would not like to be cast in the role of "Scrooges," which would likely happen if they were to adopt policies that penalized economic activity during the pre-Christmas season relative to that of other seasons.

Aside from the influence of holidays, such as Christmas, the predominant source of seasonal variation in economic activity is the weather. Agricultural harvests are bunched in the late summer and early fall for reasons of efficient production. Construction activity is reduced during the period of harsh winter weather, again for reasons of efficient production. It would make little sense on grounds of efficiency for monetary authorities to seek to shift more construction activity into the winter period when the associated costs are highest and away from periods when they are relatively low. A similar absurdity would result from attempting through monetary policy to shift agricultural activity away from the optimum growing and harvest seasons.

The argument for a counterseasonal monetary policy fails in an aggregate sense as well. Suppose policy is intended to smooth the rate of total economic production in all industries across the seasons but specific industries, such as agriculture and construction, may retain their seasonal patterns that are related to weather. Some industries that are not weather-sensitive would then have to take on seasonal patterns opposite to those of the weather-sensitive industries, in order to provide internal offsets so that total production would not exhibit a seasonal pattern.

Such a policy would make sense only if resources could freely and relatively costlessly shift between weather-related and non-weather-related industries according to the seasons. It is generally accepted that labor and capital are not that mobile, in part because of institutional arrangements that restrict mobility.

Seasonal fluctuations in economic activity are largely a consequence of producers seeking the most efficient way to produce within the constraints imposed by weather and holiday-sensitive demand. Given the immobility of labor and capital in the short run, the use of monetary policy to counteract seasonal patterns could result in forcing many producers onto less efficient production paths.

Unlike the periods of underutilization or overutilization of resources that are induced by business cycle fluctuations, seasonal patterns of economic activity are largely a consequence of natural phenomena and firmly entrenched human behavior patterns. Seasonal patterns largely represent private efforts toward achieving efficient production, rather than being symptomatic of inefficient production.

The use of counterseasonal monetary policy might also be called the ultimate form of "fine-tuning" the economy—and fine-tuning is nowadays disavowed by even its earlier most ardent advocates. To the extent that it might be doubtful that economic policies currently have a beneficent influence through moderating economic fluctuations that are measured in terms of several years, how much less likely is the probability that policies could be formulated and implemented that would favorably alter fluctuations lasting only a few months. As one example of the difficulties involved, if there are variable lags associated with the impact of monetary policy on the level of economic activity, as the evidence suggests, it would be next to impossible to accurately hit a seasonal target having a duration of only a few months.

Guidelines Proposed for Enforcement of Consumer Protection Laws

Guidelines for enforcement of the Equal Credit Opportunity Act, the Federal Reserve's implementing Regulation B, and the Fair Housing Act have been published for comment by the five financial regulatory agencies. The proposed guidelines have been issued jointly by the Comptroller of the Currency, Federal Deposit Insurance Corporation, Federal Home Loan Bank Board, National Credit Union Administration, and Federal Reserve Board in order to achieve uniform administration of the laws in the case of the financial institutions affected.

The Equal Credit Opportunity Act and the Fair Housing Act prohibit discrimination against credit applicants on the basis of race, sex, marital status, age, religion, and so forth. Under the guidelines, creditors found in violation of the acts would be required to adopt and implement a written loan policy consistent with the acts. In addition, the guidelines propose specific corrective actions when creditors have failed to comply with the acts.

When applications have been discouraged on a discriminatory basis, the creditor would be required to invite credit applications from the discouraged class through affirmative advertising.

When a discriminatory credit evaluation system has been used, the creditor would be required to reevaluate all credit applications during a time period set by the regulator and would have to request new applications from individuals previously rejected on a discriminatory basis. Any application fees previously paid by these applicants would be refunded, and no new application fees would be charged.

Reimbursement or adjustment would be required when a creditor has imposed more difficult terms, such as a higher rate of interest, on a discriminatory basis.

When cosigners have been required on a discriminatory basis, they would be released from liability.

When a creditor has failed to provide appropriate notices of adverse action, the creditor would be required to send such notices to all applicants denied credit in the previous 25 months.

A creditor failing to maintain and report separate credit histories for married persons would be required to obtain and report such information and would have to notify joint account holders.

A creditor failing to collect monitoring information on mortgage applications would be required to collect such information from all who have applied for real estate loans since March 23, 1977, or the previous examination, whichever is later.

When a creditor has terminated or changed the terms of an account, the creditor would be required to return the account to its previous condition unless an evaluation of the creditworthiness of the affected parties justifies other action.

When a creditor is found in violation of the acts and does not take the prescribed corrective action, the relevant supervisory authority will take appropriate administrative action, depending on such things as the character of the violation and the condition of the creditor. Taking corrective action does not assure a creditor that violations will not be referred to the U.S. Attorney General for possible prosecution, nor does it affect the right of individuals to sue for damages.

The jointly proposed guidelines, an improvement in regulatory practices, constitute the second such set for the uniform enforcement of consumer protection laws. The first set, now being considered by the agencies, dealt with the Truth in Lending Act and its implementing Regulation Z.

Fed Proposes Plan to End Decline in Membership

A plan to provide greater competitive equality among financial institutions and to halt the withdrawal of member banks from the Federal Reserve System has been sent to Congress by the Board of Governors of the Federal Reserve System. Two key elements in the plan are the proposal to require all financial institutions to hold reserves with the Federal Reserve and the proposal for interest to be paid on these required reserve balances. Also, the current reserve requirement schedule would be simplified and reduced, and charges would be made for certain Federal Reserve services. In order to prevent a reduction in Treasury revenues, part of Federal Reserve surplus would be transferred to the Treasury.

The Board sent the plan on July 7 to the House and Senate Banking Committees, which have announced their intent to proceed promptly with hearings and legislative action.

The purpose of the proposed program is to make membership in the Federal Reserve System more attractive to the growing number of banks that are questioning whether the benefits of membership outweigh the costs. As of December 31, 1977, 5,668 banks with total assets of $862 billion were members of the Federal Reserve System, and 9,039 banks with assets of $304 billion were nonmembers. In the Eleventh District—which includes Texas and parts of Louisiana, New Mexico, and Oklahoma—the corresponding figures were 695 member banks with assets of $55 billion and 842 nonmembers with assets of $23 billion.

Over the past ten years, 551 banks have withdrawn from membership in the Federal Reserve System. In the Eleventh District, 85 banks have withdrawn during the same period. Not only are more banks withdrawing, but there is also a growing trend for larger member banks to withdraw. Of the 69 banks that left the Federal Reserve in 1977, 15 held deposits in excess of $100 million. Because of the decline in membership, the proportion of total commercial bank deposits held by member banks has fallen to 72 percent nationwide and to 68 percent in the Eleventh District. This trend has eroded the effectiveness of monetary policy, a key responsibility of the Federal Reserve. It is this problem, as well as the inequity of the competitive situation between member banks and other financial institutions, that the Federal Reserve proposal addresses.

In presenting its program, the Board said:

"If corrective action is not taken a continued, probably an accelerated, erosion of membership and deposits subject to regulation by the Federal Reserve can be expected. This threatens to weaken the nation's financial system, as more and more of the nation's payments and credit transactions are handled outside the safe channels of the Federal Reserve, as fewer and fewer banks have immediate access to Federal Reserve Bank credit facilities, as a national presence in bank supervisory functions becomes increasingly diluted and as implementation of monetary policy becomes more difficult."

Under the Board's proposal, all banks, thrift institutions, and credit unions with $5 million or more in transaction accounts would be required to hold reserves with the Federal Reserve. This would include reserve requirements for the first time on demand deposits at nonmember banks, credit union share drafts, and negotiable orders of withdrawal.

Reserve requirements would be reduced and simplified in two stages. With few exceptions, reserve requirements for all member banks with net demand deposits up to $600 million would be reduced.

The Federal Reserve would begin charging separately for its services, now provided free to member banks. In the first phase, charges would be made for payments services, such as check clearing. In the second phase, certain other services—including shipment of currency and the purchase, sale, safekeeping, and clearing of securities—would also be priced.

The Federal Reserve plans to price competitively with comparable services offered in the private sector while giving due regard to the need "to maintain satisfactory, basic levels of services for the nation as a whole, and to encourage innovation." After the proposed plan of charges has been fully implemented, the Federal Reserve expects to provide direct and full access for nonmembers to payments and other operational services.

Interest would be paid on required reserve balances. During the first phase, which would begin when charging for services begins, interest would be paid at a rate of 2 percent a year. In the second phase, when charges for services are broadened, the rate of interest paid on reserves would equal one-half of a percentage point below the average return on the Federal Reserve System's security portfolio. This rate would be paid for the first $25 million of required reserves, and interest on required balances in excess of $25 million would be at 2 percent per year. The Board estimated that interest payments to member banks would amount to about $430 million in the first phase and $765 million annually thereafter. The amount of compensation paid to member banks after deducting service charges collected would be limited to 7 percent of the net earnings of Reserve banks (before payment of compensation).

To help offset the drain on Treasury revenues resulting from the plan, part of Federal Reserve surplus would be transferred to the Treasury while the program goes into effect. Currently, the Federal Reserve pays most of its net earnings to the Treasury. Last year, this payment amounted to nearly $6 billion. Because the program being proposed by the Board would reduce the net earnings of the Federal Reserve that are paid to the Treasury, the Board proposes to transfer to the Treasury an amount from the surpluses of the Federal Reserve banks adequate to offset any net reduction of Treasury revenues.

New member banks

American National Bank, Dallas, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business July 17, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of $750,000 and surplus of $750,000. The officers are: Colby E. Steddum, Chairman of the Board; Paul A. Rowntree, President; Bill J. Horton, Senior Vice President; Toye Dennis, Vice President and Cashier; Elaine MacPhee, Assistant Cashier; and Kathy Boyd, Assistant Cashier.

National Bank of Commerce, Kerrville, Texas, a newly organized institution located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, opened for business July 17, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of $750,000 and surplus of $750,000. The officers are: Ben R. Low, Chairman of the Board and President; Kenneth D. Adams, Senior Vice President; and Louis J. Haass, Cashier.

American National Bank, Texarkana, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business August 7, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of $750,000 and surplus of $750,000. The officers are: Herbert L. Murray, Chairman of the Board; Donald D. Ralston, President; and John Parker, Vice President and Cashier.

Higher Beef Prices Ahead — The Cattle Cycle Rolls On and On

By Don A. Riffe

Beef prices are going higher. This should be no surprise to cattlemen or consumers familiar with cyclical expansion and liquidation of the U.S. cattle inventory. The rise-and-fall pattern of the number of cattle on farms and ranches has been observed since the late 1800's, and there is nothing to suggest that this pattern will not continue. Prices for live cattle and beef also swing in a cyclical fashion but are much more variable because prices are affected by factors other than cattle numbers. Nevertheless, changes in cattle numbers, past and prospective, provide some clues as to the probable direction and strength of future price movements.

Economic conditions and biological constraints influence the cycle

In the typical cattle cycle, numbers increase for six or seven years and then decline for four or five years. Why do cattlemen expand their herds for several years only to spend nearly as much time reducing herd size? There appear to be two fundamental reasons: changing economic conditions and biological constraints that lengthen periods of adjustment.

As cattlemen perceive their operations are unprofitable, they begin to reduce the number of cattle on hand in an attempt to curb losses. Marketings increase, prices and profits fall further, and herd numbers continue to decline. The inventory reduction becomes "self-sustaining" for a time, as beef prices must fall to encourage increased consumption.

However, the liquidation process is not instantaneous or universal. Farmers and ranchers have different financial positions, costs of production, and expectations about the future. Thus, the liquidation phase occurs over a period of years as the action of individual cattlemen snowballs into reduction of the aggregate cattle inventory.

Just as the inventory reduction is self-sustaining for a time, it is also "self-terminating." As the herd is reduced, the number of calves born each year declines. After a few years, beef production may begin to decline even while herd liquidation is continuing. Prices begin to improve, and eventually it is again profitable to raise cattle. Producers with relatively low costs are the first to hold cows and heifers from slaughter to rebuild their herds. This action further restricts available beef supplies and strengthens prices, encouraging additional cattlemen to expand their breeding herds.

At this point in the cycle, biological factors become a powerful constraint. Cattlemen cannot produce cattle overnight, no matter how profitable it would be. It takes about 2½ years from the time a producer decides to expand production until the resulting calves are ready for slaughter. Again, there is a snowballing effect as individual cattlemen make production decisions that have an aggregate effect on the market two or three years later. By the time a supply-demand balance is reached, decisions have already been made that cause herd numbers to increase in succeeding years. Eventually, profits vanish, and the liquidation phase of the cycle reappears.

Consumer decisions also play an important role in the cattle cycle. At a given price, consumers will buy just so much beef. Consumers can only be enticed to eat larger quantities by lowering the price. Consumer preference and income determine how low prices must go to move larger quantities of beef through the marketing system.

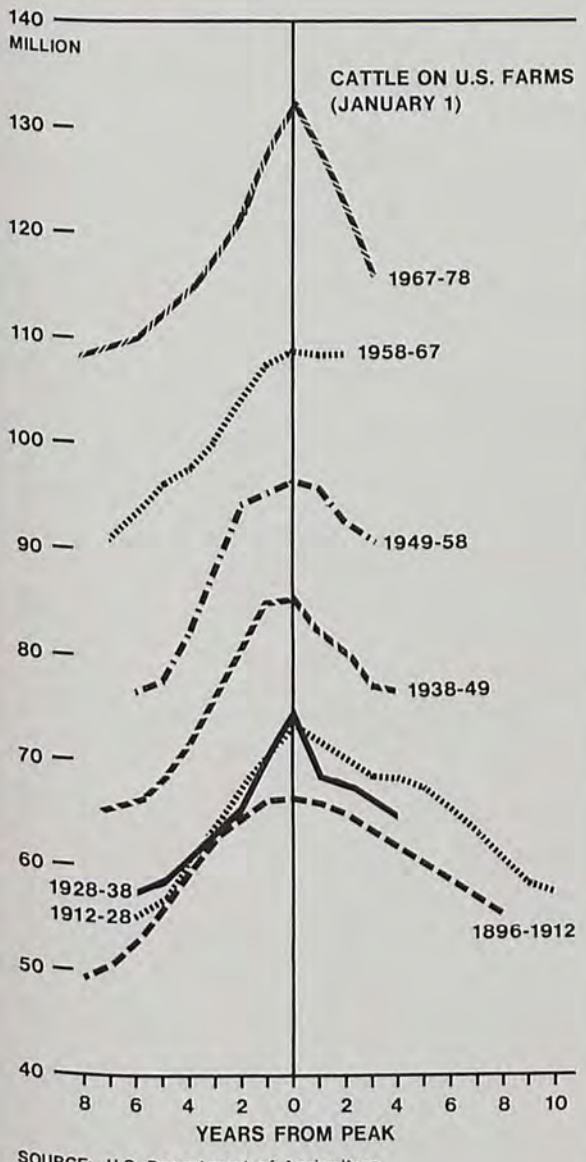
This price information is passed from the consumer to the retailer and then through the system to the breaker, the packer, the feeder, the stocker, and eventually the cow-calf operator. When consumers are unable or unwilling to pay prices that cover all production and marketing costs, cattlemen soon begin the liquidation phase of the cycle. The situation worsens for cattlemen as they force larger and larger quantities of beef through the system. However, consumers enjoy relatively low prices until the "excess" beef has been worked off. Then retail prices begin to rise, allocating the dwindling supply of beef among consumers, and producers enjoy increased profits for a time. There would be no liquidation and, thus, no cycle if consumers would continue to purchase increasingly larger quantities of beef at prices high enough to provide profits to everyone in the production-marketing system.

Given the repetitive swings in cattle prices and numbers, it may seem incredible that cattlemen do not foresee them and stabilize production. The liquidation phase is usually a time of heavy losses for cattlemen. Why do they never seem to learn about the cycle? There are many factors beyond the producer's control that may tend to accentuate the cycle, such as weather, disease, and credit constraints. However, the cycle has been fairly distinct and regular for at least 100 years.

One possible explanation is that the individual decision-making process has remained basically unchanged. The cycle is so long that cattlemen may tend to consider only current and near-term economic conditions when making production decisions. Since no individual seller can significantly affect the market and live animals cannot be stored like grain, there is an incentive to keep marketing cattle when prices are low for long periods in hopes of salvaging as much as possible to cover fixed costs. This makes sense to the individual, but as many individuals make similar decisions, the aggregate result is devastating for them all.

The term "cycle" implies that certain events occur over and over in sequence. The current cycle is nearing the end of its liquidation phase. Cattle

Cattle numbers rise and fall in a cyclical pattern



SOURCE: U.S. Department of Agriculture.

numbers have declined sharply in the past three years and are expected to trough in 1979. To gain insight into impending price movements, it is helpful to examine and compare previous cyclical troughs and associated inventory-price relationships.

Cattle prices begin to rise as numbers drop

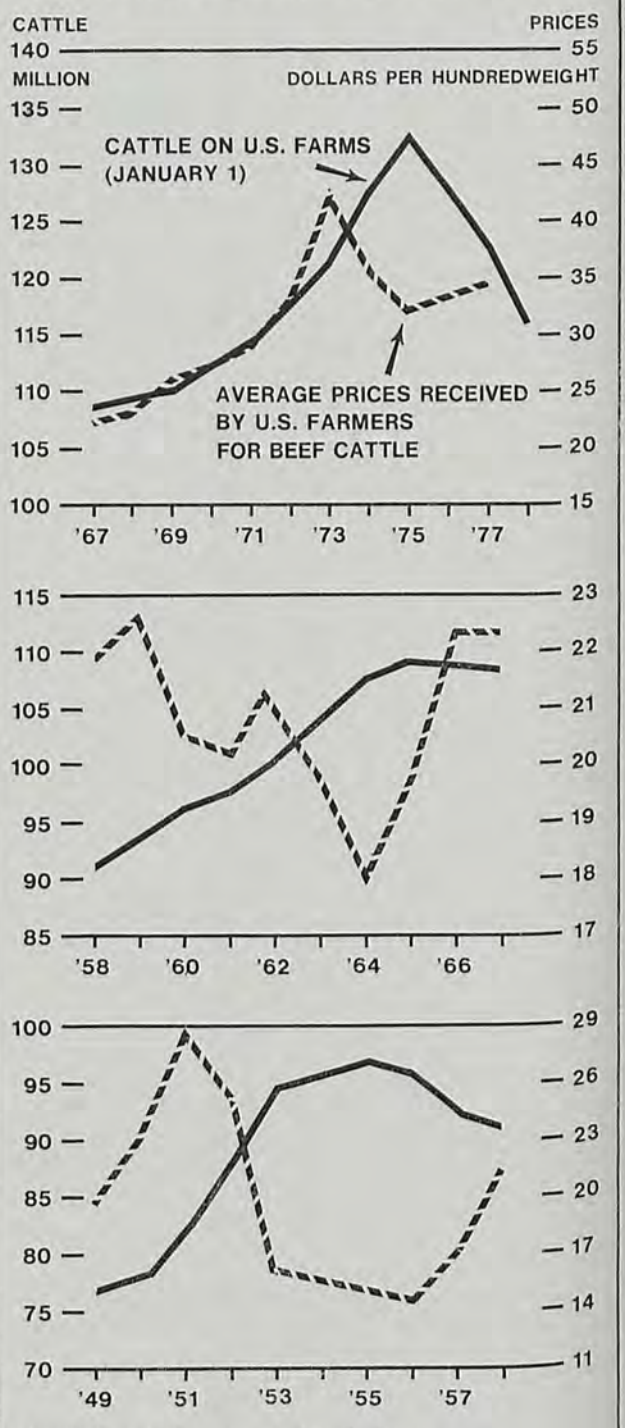
The length of time from trough to trough in the cattle cycle has been approximately 9 to 16 years in this century. Along with the cycle there has been a general upward trend in the cattle population and in beef production. The trend reflects the increasing number of consumers, a growing preference for beef over many other foods, and technological improvements enabling cattlemen to produce more beef from a given land area. Major events such as wars and depressions have, no doubt, had some influence on the growth of the cattle herd, but the cycle has remained surprisingly distinct and uniform through these periods.

Prices, however, have not maintained such independence from major economic events. The most relevant historical relationships are probably those in the years since World War II. The cyclical trough years in cattle numbers were 1949, 1958, and 1967. Annual average prices received by U.S. farmers for beef cattle rose 45 percent from 1949 until the peak in 1951. Prices rose only 3 percent from 1958 until the peak in 1959 but had been rising for two years before cattle numbers reached bottom. The overall increase for the three years was 52 percent. Average prices received by farmers for beef cattle shot up 92 percent from 1967 until the peak in 1973. Prices had been rising for about three years before the 1967 trough in numbers was reached.

History suggests that the logical time to look for sharply higher retail beef prices is within the first two years after a cyclical trough in cattle numbers. Cows and heifers that would previously have gone to slaughter become more valuable as replacement stock, and because of biological constraints, a rapid increase in beef production is not likely.

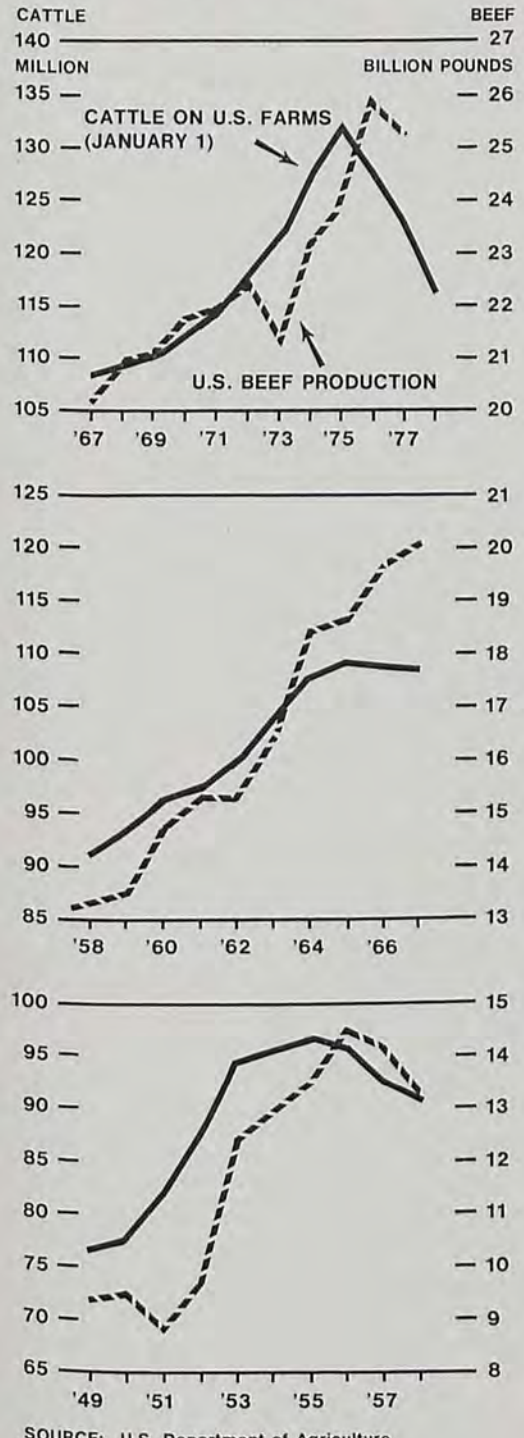
By 1951, beef production had dropped 6 percent from the 1949 level, even though cattle numbers had been increasing for two years. The retail price of Choice beef increased 28 percent in those two years. Beef production rose 10 percent within two years of the 1958 inventory trough, but the average retail price of Choice beef did not decline. A 16-percent increase in retail prices occurred be-

Cattle prices rise when numbers are low



SOURCE: U.S. Department of Agriculture.

Beef production tends to increase at a slower pace when cattlemen are rebuilding their herds



SOURCE: U.S. Department of Agriculture.

tween 1967 and 1969, despite a 5-percent increase in beef production.

It appears that retail prices deviated from the cyclical pattern in 1975, when prices and numbers peaked at the same time. However, a clearer relationship between retail Choice beef prices and cattle inventory levels may be seen by adjusting the price data for inflation. Deflated by the consumer price index, the same retail price series reveals a peak two years earlier, in 1973. The deflated prices also show that Choice beef has been a relatively good buy for consumers in recent years.

Current liquidation has been relatively severe . . . Once prices have begun to rise, the speed at which beef production can rise depends largely on the size of the breeding herd. If the number of cows is reduced severely during the liquidation phase, the following expansion may be more gradual, with a longer period of relatively high prices. The number of beef cows on farms and ranches declined 3 percent during the cyclical liquidation from 1945 to 1949 and 6 percent from 1955 to 1958. Beef cow numbers increased 1 percent from 1965 to 1967.[1]

As of January 1, 1978, beef cow numbers had declined 15 percent from their peak in 1975, and cow slaughter continued at a rapid pace in the first half of this year. It is apparent that few cattlemen have begun to retain cows for herd expansion. This, then, has been the greatest liquidation of the beef cow herd since World War II and will constrain beef production for a number of years. And that strongly suggests higher prices for a considerable period of time.

Comparison of the relative expansion and liquidation of the inventory of all cattle also points to the severity of the current liquidation. From 1938 to 1945, cattle numbers grew 31 percent. In the liquidation that followed, the inventory was reduced 10 percent. The inventory expanded 26 percent between 1949 and 1955, then dropped 6 percent in the liquidation phase. A 20-percent growth was experienced between 1958 and 1965, followed by a decline of less than one-half of 1 percent.

There seemed to be a trend in these three cycles. Each succeeding expansion represented a smaller percentage increase, and each succeeding liquida-

1. Prior to 1965, "beef cows" included cows and heifers two years old or over, other than those kept for milk. Since then, the series has been defined as beef cows and heifers that have calved.

tion a smaller percentage decline. However, the current cycle has been different. The cattle herd expanded 21 percent between 1967 and 1975. Thus far in the liquidation, cattle numbers (as of January 1) have dropped about 12 percent, and further declines are expected.

. . . following a lengthy herd buildup

The relatively severe liquidation of cattle in the current cycle represents the cumulative effects of economic events that began in the midsixties. At about that time, the rate of population growth began to slow, but per capita income began to climb at a faster pace. Real per capita disposable income rose 27 percent from 1965 to 1975. There was a brief decline in 1974 and then another period of rapidly rising incomes, which is still continuing.

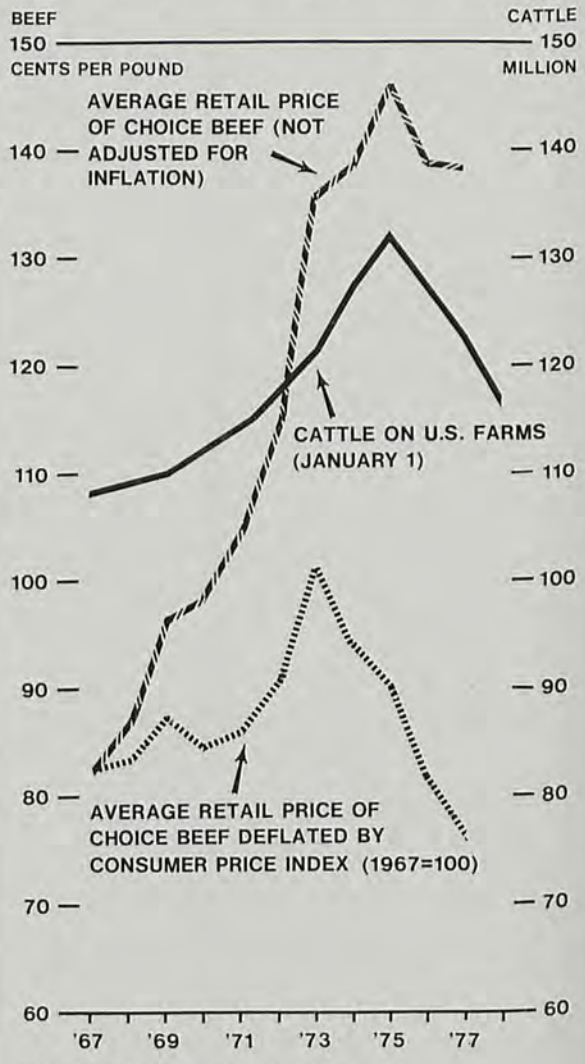
With the growth in income came rapid growth in the demand for beef. The 1965-67 liquidation was not severe because retail and farm prices were rising even as beef production rose. In the decade from 1965 to 1975, beef production increased 28 percent, while the retail price of Choice beef rose 82 percent. American consumers demonstrated a definite preference for Choice beef.

Cattlemen emerged from the mild liquidation of the 1960's facing rapid growth in the demand for their product. They responded by expanding cattle numbers for eight consecutive years. The expansion phase proved to be longer than any other in the 20th century. The increased demand for Choice beef brought about a new era of large specialized feedlots. Feeding operations of new and larger proportions stimulated the demand for feed grains, which—coupled with a world grain shortage—caused feed grain prices to skyrocket in the early 1970's.

Live cattle prices rose steadily until 1973, when sharply higher feed grain prices combined with the introduction of Government price controls to shock the cattle industry. In 1973 the price of Choice 900- to 1,100-pound steers at Omaha dropped from $57.75 per hundredweight on August 13 to $38.50 on September 24—a 33-percent decline in less than six weeks. Cattlemen suffered losses that grew larger in 1974 as real per capita income dropped for the first time in 17 years. But because of the strong economic incentives of earlier years, production decisions that were made caused cattle numbers to increase until 1975.

The liquidation that followed has lasted for nearly four years. Cattle prices have been gradually im-

Relative to other goods and services, Choice beef prices began declining in 1973



SOURCES: U.S. Department of Agriculture.
U.S. Department of Commerce.

proving since 1975, with notable gains in 1978. However, prices have not yet risen enough to halt aggregate liquidation of the cattle herd.

How high will prices rise?

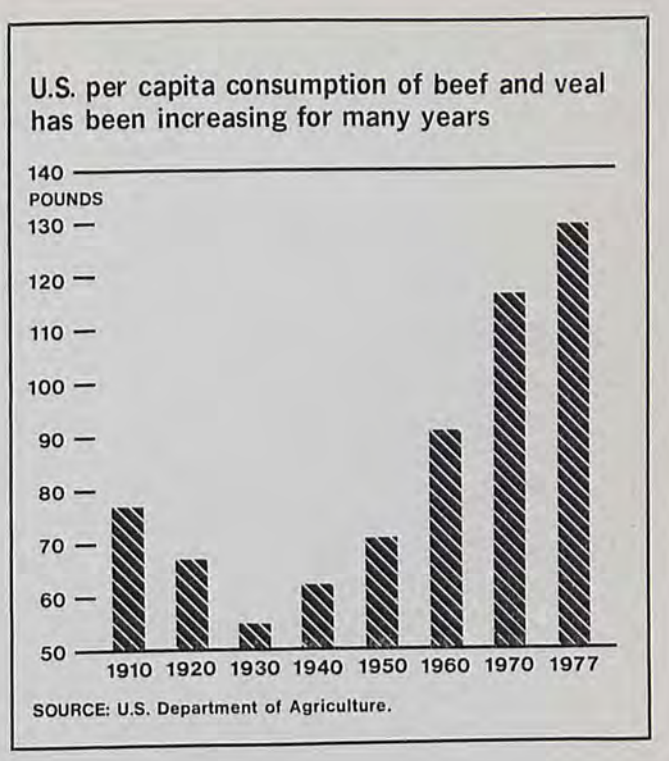
The level of cattle prices required to encourage herd expansion will depend primarily on the price of feed grains. The profit margin is also affected by inflation in the prices of nonfeed inputs, such as land, machinery, fuel, chemicals, and services. The magnitude of any price increase above the level required to stimulate expansion will depend heavily on the size of the breeding herd at the beginning of the expansion phase, consumer preference and income, and the availability of substitutes.

Beef cow numbers have been cut back severely since 1975. One of the most critical factors affecting future price levels will be the rate of cow slaughter during the remainder of 1978 and the first half of 1979. If 1978-79 cow slaughter remains close to the levels of the past two years, the nation's capacity to increase beef production may be seriously impaired.

The number of heifers for beef cow replacements is also declining rapidly. As of January 1 this year, the number had declined 34 percent from 1975. Of particular interest is the fact that the number of heifers on feed has been at record levels this year. These heifers are destined for slaughter and will not be used for herd expansion.

For many years, consumers have demonstrated a continued and growing preference for beef over other meats. Several factors point to continued strong demand for beef, including rising population and per capita income. Since 1975 the population of the United States has increased about 4 million, while the cattle population has declined about 15 million. This underscores the potential for higher beef prices.

As beef prices rise, consumers will undoubtedly search for cheaper alternatives. The primary substitutes for beef are pork and chicken. Broiler production can be increased rapidly, but history suggests that pork is the preferred substitute for beef. Pork production is not expanding as rapidly as was indicated earlier in the year, owing to adverse conditions that reduced the number of pigs raised per litter. However, pork production can be increased substantially in one year, and with recent price levels, it is likely that the economic incentive for expansion has been present. The degree of expansion in the next two years could have a significant impact on beef prices.



Average prices received by farmers for beef cattle rose about 7 percent from 1975 through 1977, and substantial gains have been made in 1978. Since World War II the smallest upswing from a cyclical trough in cattle prices has been 45 percent. The smallest cyclical increase in the average retail price of Choice beef has been 25 percent. A severe liquidation of the cow herd, strong consumer demand, and a slower than expected rise in pork production all indicate that the stage is set for still higher prices. The exact magnitude of the increase cannot be known, but one thing is almost certain: cattlemen will react by overexpanding herds, and prices will tumble again in a few years.

Bank Insider Abuses Not as Widespread as Previously Reported

A follow-up investigation by the Board of Governors of the Federal Reserve System has found a widely publicized survey of bank insider abuses to be seriously misleading. The survey, conducted by the three Federal banking agencies, contained significant statistical errors and erroneously suggested widespread insider abuses in the banking industry. In the follow-up the Board examined 69 of the most serious cases of reported insider abuses among state member banks. It found that only eight of the cases actually involved questionable practices; in addition, most of these cases did not involve practices that were expressly prohibited by law.

The original survey, prompted by the Bert Lance affair, was requested by the Senate Banking Committee. The survey was conducted to determine if officers, major stockholders, directors, and their families receive special privileges from their banks, such as overdrawing their checking accounts without paying interest. The results of the survey, released in March, indicated that many banks did grant special privileges such as this to insiders. However, Governor Charles Partee told the Banking Committee that the Board had "serious reservations" about the reliability of the survey.

Because the results were considered inconclusive, the Board undertook a follow-up investigation. Contrary to the original survey, the follow-up has found that insider abuses are infrequent and not as serious as previously indicated.

In the follow-up the Board selected those cases in the survey that looked the worst in terms of possible abuses. Of the 69 instances of possible improper practices on the part of 60 state member banks, only 8 cases actually involved questionable practices. Preferential treatment was not involved in 40 cases, and 21 had been erroneously reported.

The most serious practice revealed by the investigation involved loans secured by bank stock that were made to officials of other banks at less than the prime rate. Of the 16 banks investigated for this practice, only 3 were found to have made such loans at preferential rates. These cases have been referred to the Justice Department for possible criminal prosecution for misapplication of bank funds.

Of the ten reported cases of loans to insiders of other banks at preferential rates, none were confirmed in the follow-up.

Only 4 of the 21 reported cases of loans to insiders of reporting banks at lower interest rates were found to actually involve preferential treatment.

Finally, only 1 of the 22 reported cases of large overdrafts by bank insiders and public officials was substantiated in the follow-up.

In the few cases where questionable practices were found, most were of a type not expressly prohibited by law. In particular, neither loans to insiders of other banks on preferential terms nor preferential loans to a bank's own directors and major stockholders who are not executive officers are prohibited by law.

While the follow-up investigation concentrated on what appeared to be the worst cases in the survey, the Board intends to follow up on all cases where there is any indication of questionable practices.

Pamphlet Available on Truth in Leasing

Truth in Leasing, the latest in a series of consumer education pamphlets published by the Federal Reserve, is available free of charge from the Federal Reserve Bank of Dallas.

The pamphlet gives a simplified explanation of the Consumer Leasing Act, which was intended to help consumers compare the cost of one lease with another or with the cost of buying for cash or on credit. The pamphlet covers the following topics: the type of leases covered by the law, costs of leases, terms of leases, aspects of open-end lease and balloon payments, limits on balloon payments and ways of shopping for a lease.

To obtain copies of the pamphlet, contact the Bank and Public Information Department of this Bank, (214) 651-6267.