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Inflationary Expectations and Public Policy

by
David P. Eastburn

No one knows very much about economic expectations. Economists and statisticians have been trying to measure them, with less than complete success. Behavioral scientists have made little inroads into an understanding of them. Public policymakers, nevertheless, now find it vitally important to change expectations if they are to succeed in curbing inflation. This is tricky business, and chances of succeeding without having a substantially depressing impact on the real economy seem smaller every day.

What appears to have happened is something analysts of the trade-off between price increases and unemployment (the so-called Phillips-curve phenomenon) pointed out might happen. They saw that if the public comes to believe policymakers are aiming for a certain ceiling on unemployment and will tolerate inflation to achieve it, prices might rise at an increasing rate as businessmen, consumers, and employees build inflationary expectations into their calculations.

If inflationary expectations are to be changed, somehow the public has to become less certain that the policymakers will tolerate price increases in order to maintain a given ceiling on unemployment. It is tempting to wish that the public might seriously believe that unemployment would be allowed to rise as steps are taken to choke off inflation without such an increase really happening. It may be, however, that the only way for people to see this as a possibility is for it to be an actuality.

The first article in this issue of the *Business Review* gives little encouragement to anyone who might think expectations can be turned around easily. If corporate treasurers are anywhere near as bullish about 1970 as they indicated in responding to our questionnaire, and if corporations act on the basis of these expectations, the outlook for quickly curbing inflation is not good.

But the fact that the treasurers seem so *very* bullish raises perplexing questions about public policy. Does it mean that restraint must be all the more severe to accomplish a change in expectations? Or will a slowdown in the real economy come as such a shock that expectations will be revised, perhaps sharply and drastically? Or both? Simply to ask these questions reveals the hazardous territory in which policy is now operating.

The second article raises a question of why expectations should remain so strong in the face of a much reduced growth in the money stock during the past several months. One reason may be that although an increasing number of people believe that money matters, many believe that other things also matter a great deal. True, bullish expectations must eventually subside if growth in money continues to be small, but in the short-run, they may proceed on an independent course from what is happening to money. The problem right now is a short-run problem, and expectations have very much a life of their own.

Public policymakers have no choice. They must do what they can to turn inflationary expectations around. This will require a firm hand on the money and credit helm. And, above all, it will require resolute and prompt action by Congress on the fiscal front if whatever good influences on expectations already exerted by both monetary and fiscal policy are not to be undone.

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The Achilles' Heel of Capital Spending in 1970

by

Edward G. Boehne

Bullish expectations about the economy still abound in the business community. That, in a nutshell, is the result of our nationwide poll of treasurers of large corporations. There is a kicker among these expectations, however—plans for plant and equipment are vulnerable to substantial cutbacks in 1970 if an economic slowdown develops.

Our canvass confirms the 7 to 9 per cent increase in capital outlays planned for 1970 found in other surveys. But treasurers also say they are counting on a hefty increase in after-tax profits next year to help pick up the tab for larger investment expenditures. If the economy heads into a slump, as accumulating evidence suggests it will, actual profits would fall short of expectations, and the internal flow of funds would be squeezed. Moreover, failure of profits to reach expected levels may precipitate a re-appraisal of expectations generally. Then, capital spending plans would probably be curtailed. In short, although business investment cannot be counted on to precipitate a slowdown in 1970, it now seems clear that planned outlays will have to be cut if a slowdown develops.

CAPITAL SPENDING—MORE OF THE SAME

Despite mounting evidence that an economic slowdown will occur in 1970, top management apparently is not convinced that the business climate really will be very bad for very long. Accordingly, businessmen are taking the longer view and setting their sights on the prosperous '70's. In this context, business planners are more concerned about being caught short with inadequate facilities later on than they are about over-expansion now. With equipment and construction costs rising rapidly, the "buy now" strategy is persuasive. In addition, zooming labor costs, they say, make modernization a

ABOUT THE SURVEY

In early October, questionnaires were sent to treasurers of corporations included in *Fortune's* compilation of the largest 500 manufacturing and 150 non-manufacturing corporations. The overall response rate was 63.5 per cent with no question answered by less than 41.5 per cent of the sample.

Although surveys for business spending on plant and equipment are well known, this survey is the only large-scale attempt to determine the financial feasibility of corporate spending plans. Corporations responding to our survey account for about 40 per cent of total capital outlays. So, a reading of their financial expectations can give us a clue to the general firmness of overall spending plans for next year.

Two caveats should be noted, however. The survey is limited to the largest firms in the country. No attempt was made to ascertain if expectations of smaller firms might differ. Second, probing expectations of the corporate financial mind on a comprehensive basis is relatively new and must be regarded as experimental. Nevertheless, two previous surveys of corporate treasurers did shed some light on the year ahead. The 1967 survey, for example, suggested that the internal flow of funds in 1968 would be greater than most people thought at the time. And it was. Similarly, last year's survey indicated that after-tax profits in 1969 would be at about the level of 1968. Over a year later, this forecast is turning out to be fairly accurate. So, there is reason to look closely at what treasurers tell us about the corporate sector of the economy.

more pressing need. For these reasons, businessmen plan to boost capital spending 7 per cent in 1970 (see Chart 1).

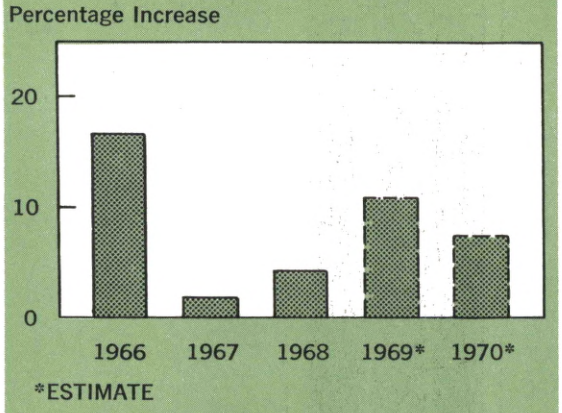
Of course, there may be a big slip between cup and lip. Planned outlays could be rolled back or deferred if a sales slump crimps internally generated funds or jars bullish expectations. In the fall of 1966, just before the mini-recession, for example, outlays for 1967 were expected to jump 5 to 6 per cent. As the subsequent economic slump developed, however, expenditure plans were trimmed substantially and actual outlays rose only 1.7 per cent, as shown in Chart 1. So, with many clouds of uncertainty now hanging over the economic landscape, spending plans for 1970 must be considered more tentative than usual.

THE WHEREWITHAL

To plan to spend is one thing; to be able to spend can be quite another. But the treasurers now expect to be able to carry out their spending plans in 1970, thanks primarily to greater profits. In surprising contrast to the widespread belief among financial analysts that corporate profits are headed downward next year in the face of a slower-paced economy, corporate treasurers hold tenaciously to their optimistic

CHART 1

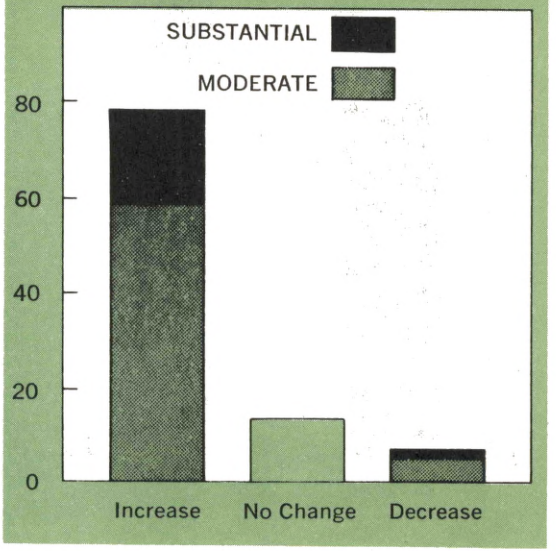
Although the Economy is Slowing, Businessmen still Plan to Boost Outlays for Plant and Equipment in 1970.



Sources: Department of Commerce, and Securities and Exchange Commission

CHART 2

Corporate Treasurers Remain Bullish about After-Tax Profits next Year.



outlook. Nearly four out of five forecast a jump in after-tax profits for 1970 (Chart 2). In the aggregate, treasurers expect a hike of some 8.5 per cent.[1] This contrasts with essentially no gain in profits, as the treasurers see it, in 1969.

The profit outlook means that top financial officers of the nation's largest corporations do not take too seriously talk of a slowdown next year. Or, if they think the pace of the economy as a whole will slip, they somehow expect their individual firms to be insulated. For slumps in business activity always have been characterized by declining corporate profits. In 1967, year of the mini-recession, for example, after-tax corporate profits dipped 5.5 per cent from the previous year.

Another indication that corporate treasurers have not yet been convinced of a slowdown in 1970 is their outlook for prices. Nearly three out of four believe firms in their respective industries will raise prices next year, and that demand will be strong enough to make price boosts stick (Chart 3). Although the bulk of

[1] After-tax corporate profits are complicated next year because of the uncertainty of the Administration's tax proposals in Congress. The President has requested that the corporate surtax be extended at 5 per cent for the first half of 1970. At present profit levels, this proposal would add about $3 billion in after-tax profits for corporations in 1970. However, repeal of the investment tax credit, as proposed, would add about $3 billion in taxes. In effect, the two proposals would about offset each other in terms of their aggregate effect on corporate tax liability if the Administration has its way. But the investment tax credit proposal is especially vulnerable to Congressional amendments which could alter the date the credit is suspended as well as exempt certain categories of investment from suspension. For example, in early December, the Senate approved an exception which would leave the first $20,000 of any business's annual investment still eligible for the investment credit. This exception would add about $720 million annually to after-tax profits. Before final passage, other amendments are likely which could either add to or subtract from this gain. Thus, in the end, suspension of the tax credit and elimination of the surtax may not offset each other. But for now, the "offset" view is the most reasonable and widespread.

CHART 3

And Most Expect Price Hikes in Their own Industries during 1970.

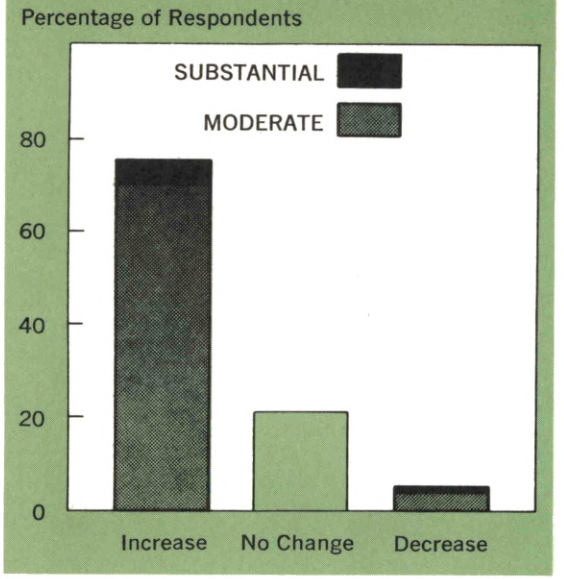
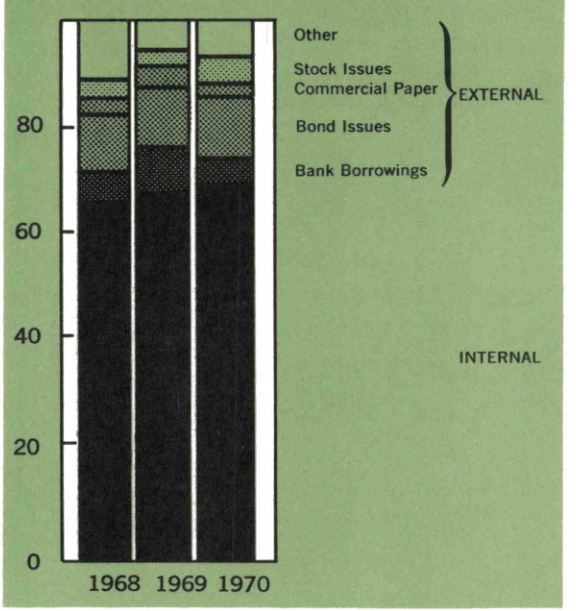


CHART 4

Corporate Treasurers Look for Less Reliance on Funds Raised Externally in 1970.



those indicating price increases look for moderate hikes, the inflationary implications are not comforting. For it means that business decisions are still being based on the contention that "what has been will continue to be."

Along with profits, corporate treasurers also expect depreciation and depletion allowances to continue rising. The result, as shown in Chart 4, is an increased reliance on internal financing in 1970. For every $10 spent next year, treasurers hope to finance nearly $7 internally. This proportion is up slightly from 1968 and 1969.

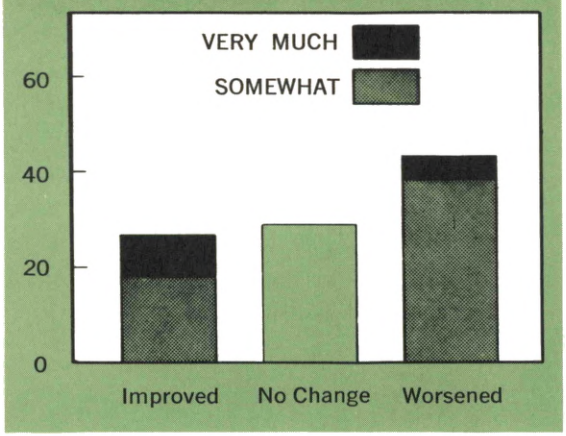
FUNDS FOR OTHER USES

Corporate liquidity has been low in recent years, and it deteriorated even more in 1969 for nearly half the firms, as shown in Chart 5. So, rather than relying on liquid assets to backstop profits in financing capital expenditures in 1970, two out of three respondents intend to increase liquid holdings in 1970. Half of these treasurers expect the volume of internal funds to be sufficient not only to cover capital outlays but also to beef up liquidity next year. The other half plans to use external funds to build up liquidity (Chart 6).

Liquid assets used to be a nice cushion which could absorb shocks of the unexpected. If profits and other internal funds temporarily were inadequate to meet expenditure needs, corporate treasurers could dip into their stockpile of liquid assets. But sharper pencils over the years and rising interest rates since 1965 have caused treasurers to dip so frequently into liquid holdings that for many firms the stockpile has been practically depleted. Consequently, much of the financial cushion has been deflated. What this means is that if planned income exceeds actual income, planned outgo has to be trimmed, par-

CHART 5

Corporate Liquidity Worsened for Nearly Half the Firms in 1969.



ticularly in times of tight money. For 1970, then, if treasurers miss their mark on profits, capital expenditures plans are sure to get a careful review which probably would mean a cut in many cases.

But so bullish are the treasurers about profits that they expect a boost of about 6 per cent in dividend payments in 1970. As indicated in Chart 7, dividends will place a major demand on available funds. The expectations of treasurers, however, are at variance with some evidence which suggests that a dividend slowdown may

CHART 6

But Treasurers are Optimistic about Improving their Sagging Liquidity Positions in 1970 through both Internal and External Sources.

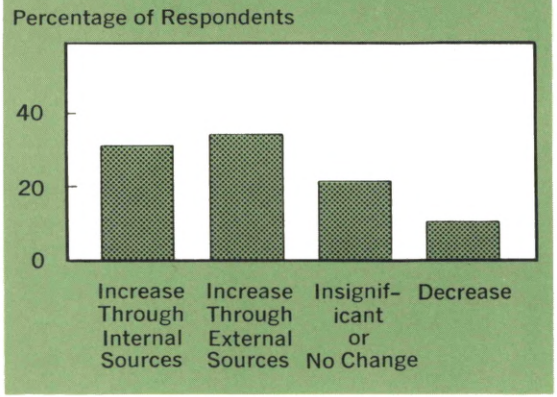
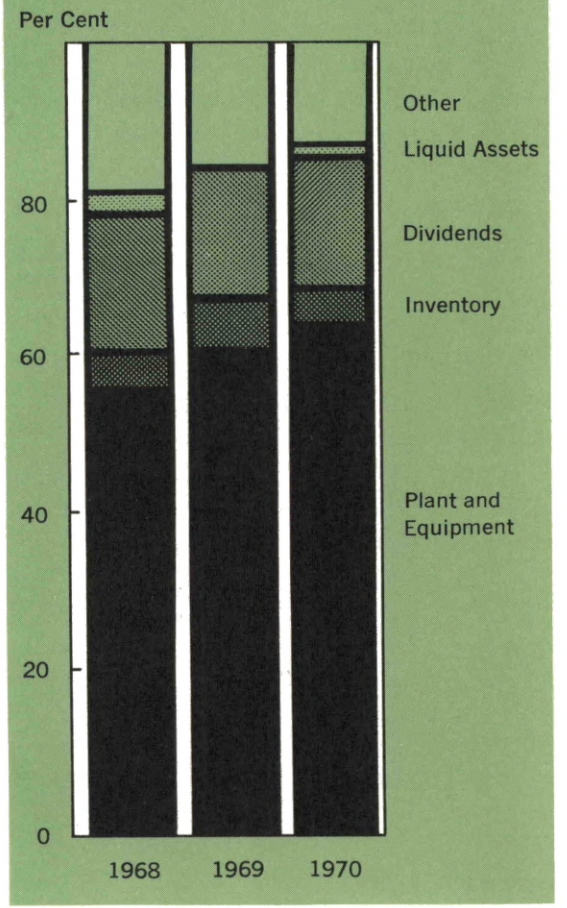


CHART 7

Share of Funds Intended for Spending on Plant and Equipment is on the Rise.



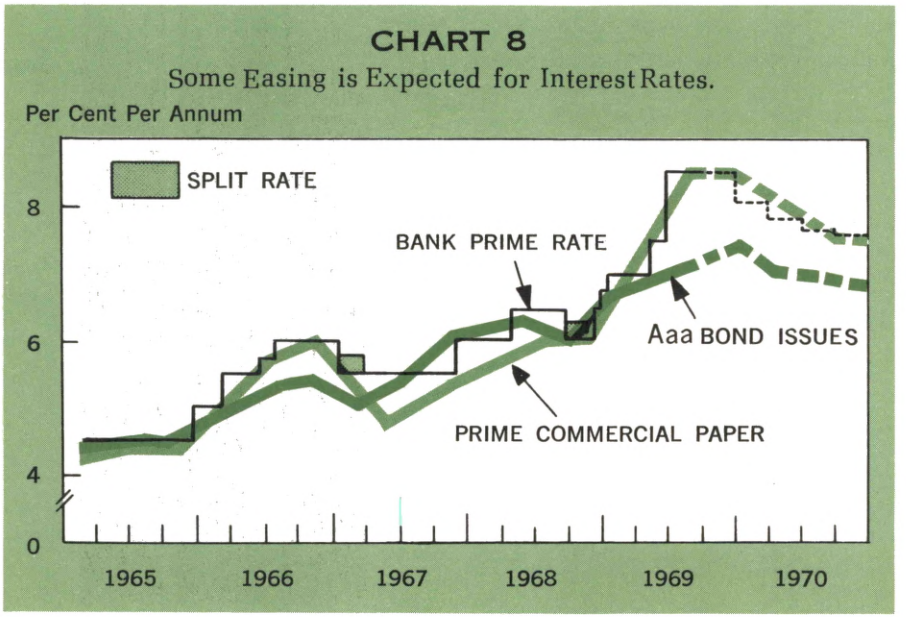
be in the offing because of a squeeze on available funds. Standard and Poor's, for example, reports that in five of the first eight months of 1969, fewer firms increased dividends than in the previous year.[2] If this trend continues, the argument goes, there may be an actual dip in dividend payouts in 1970, especially if the business climate worsens. But the treasurers apparently disagree.

One area where treasurers hope to offset increases for funds next year is inventory investment. Stockbuilding, say treasurers, is taking a bigger bite of available funds in 1969 than it did last year. Treasurers indicate that a substantial cutback in inventory accumulation is planned for 1970. Furthermore, as shown in Chart 7, the share of funds earmarked for additions to inventory next year will shrink from the share of the previous two years.

All in all, when planned increases in capital spending, dividends, and liquid assets are matched with a decline in inventory investment and other uses of funds (for example, a smaller net increase in accounts receivable), the total demands for funds in 1970 are about the same as in 1969. But in relative terms, as indicated in Chart 7, the proportion of funds intended for spending on plant and equipment is on the rise. With capital spending accounting for nearly two-thirds of the projected need for funds in 1970, any major disappointments in raising funds almost certainly would increase pressure to cut back capital outlays, especially in the absence of large liquidity cushions.

IMPLICATIONS FOR FINANCIAL MARKETS

Because the gap between internally generated funds and the total need for funds is expected to narrow both absolutely and relatively, corporate treasurers look for less reliance on



[2] *Wall Street Journal*, September 15, 1969, p. 1.

funds raised outside the company.

After a substantial increase in bank borrowing in 1969, corporate treasurers say they will rely much less on bank funds and commercial paper in 1970 (see Chart 4). As for bond sales, little change in volume is contemplated next year over that of 1969. But treasurers indicate some increased reliance on sale of stock as a source of funds in 1970.

Financial markets are affected, of course, by influences other than those generated in the corporate sector. For example, the impact of the government and mortgage sectors as well as actions of the Federal Reserve are all important. Nevertheless, treasurers see their own actions as having some impact on money and capital markets in 1970. As shown in Chart 8, respondents project a decline of one point in the bank prime rate as well as in the rate on prime commercial paper by the end of next year. Only a slight decline is anticipated in interest rates on long-term bonds.

So, the treasurers are saying that their reduced reliance on external financing should take some pressure off the money markets next year with little change anticipated in the capital markets. And, despite their expectations of a robust economy and escalating prices, they apparently do not see a further tightening of monetary policy or increased demands on the part of other users of funds in 1970.

CONCLUSION

Even in the wake of restrictive economic policies and signs that the boom is cooling, corporate treasurers view 1970 with unabashed optimism. Not only do corporate treasurers confirm bullish plans for capital outlays found in other surveys, but they also dramatically point out the extent of the "boom psychology" in the business community. Corporate profits will rise next year, say treasurers, not fall as many financial analysts are forecasting.

But capital spending cannot be financed with profit expectations, even if these expectations are firmly imbedded in a psychology stemming from a four-year inflationary boom. If the economy continues to slow under the braking action of restrictive economic policy, corporate profits are bound to dwindle. Thus, while expectations may prop up bullish spending plans, actual capital outlays, because of a profit constraint, will be responsive to an unwinding economy in 1970.

The Myth of Fiscal Policy: The Monetarist View

by

Ira Kaminow

Times are changing. What is obvious today was obviously wrong yesterday; this is as true of questions involving economic issues as any others. Many of us, for example, believe in the efficacy of fiscal policy—in the Government's power to influence the level of national income by its own spending and taxing policies. Indeed, the expenditure-income chain explanation of the operation of fiscal policy is part of today's conventional wisdom. The Government spends more or spurs private spending by taxing less, and so creates more jobs and higher profits. The new income so created generates additional demand and private spending, creating even more income.

All this is Keynesian economics—the so-called New Economics. But it wasn't long ago that the Keynesian Revolution was rejected by most laymen, and not long before that, that it was rejected by most economists. Today, with victory in hand, the New Economics is facing a counter-revolution which may again change the economic thinking of the nation. There is a small but highly vocal group of economists who are suspicious of Keynesian economics in general and of fiscal policy in particular. The members of the group are sometimes called Monetarists.[1]

Monetarists view the controversy over economic theories as being like a law suit. As judges, they rule that the New Economists have presented no acceptable historical evidence in support of the income-expenditure theory. As

[1] Strictly speaking, the Monetarist view involves more than mere suspicion of the efficacy of fiscal policy. Indeed, one can be a Monetarist and still agree that fiscal policy has a powerful and systematic influence on the economy. Nevertheless, the popular press identifies Monetarist with those who believe that monetary policy is much more important than fiscal policy, and this usage of the term is adopted here.

litigants, they present the following case: (1) over the years, the major movements in national income have been associated with major movements in the money supply and *vice versa*; (2) no equally strong or systematic relation can be found to support the Keynesian view of the operation of fiscal policy; (3) therefore, monetary forces have played a much more important and/or more stable role in determining national income than fiscal forces. Monetarists do not claim that the income-expenditure chain is erroneous in principle—merely that history tells us it is too weak or unpredictable to be of much use for economic policy.

A SIMPLE EXPLANATION OF THE MONETARIST VIEW

How do the Monetarists reconcile their view of history with the apparently powerful logic of the income-expenditure chain?[2] The heart of the Monetarist view is the supply of and demand for money—a dramatic shift from the usual emphasis. Because of the near total victory of the New Economics (at least in introductory textbooks on economics) in the fifties and sixties, the spotlight of popular policy discussions has been firmly set on the pivot point of Keynesian economics—the demand for goods.

A look at the economy from the perspective of the money side of things (or the goods side, for that matter) will reveal only a partial and perhaps slightly distorted picture of the economy. Nevertheless, anyone who has been to the circus knows how difficult it is to look at all three rings at once and that there is something to be gained from looking at only one at a time.

Although not all economists agree on the definition of money, we will not break too much with tradition if we use the term to mean all assets that are generally accepted as a means of payment (see box). More concretely, we can define money as the sum of coins, paper currency, and checking account deposits.

An easy way to illustrate the Monetarist view is to suppose that a certain quantity of money is required to support any particular level of income. When national economic activity (as measured by income) rises, more money is required to carry on conveniently day-to-day transactions; when economic activity declines, households and businesses find that they engage in fewer transactions, and hence, need less money. More specifically, we can assume that the demand for money balances *relative* to the level of income (what economists call desired *relative* money balances) is fixed. By way of illustration, we can imagine that institutional arrangements—like the availability of credit cards and the length of the average pay period—lead the public to desire money balances equal in value to 10 per cent of national income. If annual national income is $800 billion, then desired balances would be $80 billion.

What happens if the economy has more money than it requires? Say, for the sake of argument, that the actual stock of money in the previous example is $90 billion, or $10 billion more than is required. Since money yields no pecuniary return, households and businesses will attempt to exchange money for other assets—assets that yield satisfaction directly (like television sets) and assets that yield a pecuniary return (like stocks and bonds). The increased

[2] A completely accurate answer to this question is extremely complex. There is no reason, however, why the complexities and nuances should keep us from the essence of the Monetarist argument. A look at the simplest version of the theory (a version not seriously proposed by anyone) will reveal more than an investigation of one which requires endless digressions and footnotes and which reflects the particular views of only one or two Monetarists.

LET'S BE SURE THAT WE'RE TALKING ABOUT THE SAME THING . . .

It is always a good idea to be sure of our definitions. One word that means different things to different people is money. The great variety of usages has contributed to numerous misunderstandings by economists and laymen. A selected list of what economists DON'T mean by money will be helpful in understanding what they do mean by the word. Economists rarely use the word money in the following contexts:

1. "How much money (income) did you earn last year?"
2. "Most of his money (wealth) is tied up in bonds."
3. "It's almost impossible to get mortgage money (credit) in today's market."
4. "This country does not have enough money (resources) to fight the war in Vietnam and the war on poverty."

When economists use the word money, they usually mean assets (cash and checking account balances at banks) that are generally accepted as a means of payments—for example, "If I didn't keep some money on hand, I'd be running to the savings bank every time I wanted to buy a candy bar."

demand for goods and services will stimulate greater output and perhaps will boost prices as markets respond to the new demand. At the same time, the increased demand for financial assets like stocks and bonds will drive interest rates down. The decline in interest rates will further encourage the demand for goods by making credit cheaper. This will induce still higher prices and output. The pace of economic activity will quicken. Economic activity will continue to increase until income is pushed up to a level consistent with the $90 billion money stock—that is, to $900 billion.

The rigid relationship between the demand for money and national income makes this environment inhospitable to fiscal policy. If the national goal is to raise income, it can be achieved only by raising the money stock. An increase in Government expenditures won't work except for a very short time. As soon as income rises a bit, the money stock will be inadequate. There will be a general scramble for money, and the private demand for goods will decline as businesses and households try to increase their holdings of money. Consequently, income and output will be pulled back down by the limited money stock.

Stated somewhat differently, any increase in Government expenditures (not accompanied by an appropriate increase in the money stock) will be matched by an equal decline in private expenditures; any decrease in Government expenditures (not accompanied by an appropriate decline in the money stock) will be matched by an equal increase in private expenditures.

The key that allowed monetary policy to work in the simple world just described is the constancy of desired *relative* money balances. In

rder to achieve an equilibrium, annual national ncome will always adjust so that it is ten times he stock of money. If we can control the noney supply, we can control national income. The key that locked fiscal policy out is that Government taxing and spending policies have o effect on desired relative money balances. No natter what fiscal policies are followed, annual ational income will always tend to be ten times igher than the stock of money. In these two eys are the germs of the Monetarist position: 1) Although demand for relative money balnces is not fixed, it is the most stable and predictable variable on which we can count for conomic policy. (2) Although fiscal policies may ave some influence on desired relative money balances, they do not have a strong, predictable nfluence; therefore, fiscal policies are of relaively little or no use.

A LOOK AT THE NEW ECONOMICS FROM THE MONEY SIDE

Advocates of the New Economics do not agree that income is the only variable that exerts a strong, predictable influence on the demand for money. They argue that a typical family might find it very convenient at some given level of income to go about its daily business with an average checking account balance of $100. But convenience must be balanced against cost. One hundred dollars in the checking account is not earning interest. When the interest rate on savings accounts is very low, the household may indeed hold a $100 checking account balance. But let the interest rate rise substantially and the household may decide that it can get by with only $75 or $50 worth of money. The lower money balance might mean more bother—more accurate balancing of the checkbook, more trips to the bank—but the bother is compensated by the greater interest income. In short, the New Economists argue that both the level of income and the interest rate determine the desired stock of money. By adding this additional ingredient—interest rates —the New Economist can salvage the argument for the expenditure-income chain.

Keynesians expect roughly the same kind of initial response to fiscal policy as do the Monetarists. An increase in Government expenditures drives income up, and the existing stock of money becomes inadequate to handle the additional income. In an effort to acquire more money, people try to sell nonmonetary financial assets such as bonds. As the supply of these assets rises relative to demand, interest rates begin to rise to make them more attractive to buyers. This hike in interest rates is the key that is supposed to let fiscal policy back in. Higher interest rates mean that the economy will be able to support a higher level of income with the given stock of money. With higher interest rates, households and businesses find it advantageous to economize on the use of money—to make the existing stock "go farther." The economy will, after the initial shock of added Government expenditures, come to rest at a higher level of national income—and higher interest rates. The higher interest rates are necessary; otherwise, the public could not be induced to hold the same quantity of money at the higher level of activity. Put in slightly different terms, the ratio of desired money balances to income will decline because interest rates have risen.

An extreme version of the Keynesian view gives rise to the so-called liquidity trap. Imagine what would happen if the public were willing to hold whatever money balances were offered at the prevailing interest rate. The public would

make no attempt to convert new money balances into other assets, regardless of how much money the authorities pumped into the economy. Any new money that was placed in the economy would be willingly held at the existing interest rate and income. Monetary policy is completely frustrated if and when we get into the trap because then the public's actions are unaffected by changes in the money supply.

In contrast, recall that in the simple Monetarist case the demand for *relative* money balances doesn't change. Individual members of the public never will be willing to hold unlimited quantities of money. If new money is added to the economy, the public will have "too much" money and will try to get rid of the excess. This process will drive income up to a new equilibrium.

DOES IT MATTER IF THE INTEREST RATE MATTERS?

The single most revealing element in the encounter between Monetarists and New Economists is that they cannot agree on the relevance of the relevance of the interest rate. The Monetarist Milton Friedman wrote:

> ". . . in my opinion no 'fundamental issues' in either monetary theory or monetary policy hinge on whether [the demand for money depends on interest rates]."[3]

The Keynesian Paul Samuelson wrote:

> ". . . the minute you believe that [the demand for money depends on interest rates], you have moved to . . . the post-Keynesian position."[4]

Keynesians insist that the interest rate is the added gear in the mechanism that allows fiscal policy to work. For them, fiscal policy (viewed from the money side of the economy) gives authorities control over the interest rate and, through the interest rate, control over desired *relative* money balances. The Monetarists insist that this control must be inconsequential because they see no evidence that it has worked in the past (New Economists, of course, dispute the charge of lack of evidence). For the Monetarists there are two possibilities: (1) fiscal policy has had an erratic, unsystematic effect on the interest rate and, hence, an unobservable effect on national income, or (2) fiscal policies have been so mild as to have only a small effect on interest rates.

The issue (regarding the demand for money) that is of primary importance to the Monetarist is the stability and predictability of desired relative money balances. Evidence of a highly unstable and unpredictable ratio of money balances to national income would directly contradict the efficacy of monetary policy. In terms of the Keynesian theory, the instability would arise if we fell into a liquidity trap. The Monetarists are therefore considerably more interested in whether a trap exists than in whether the demand for money is sensitive to the interest rate.

HISTORICAL EVIDENCE I: THE DEMAND FOR MONEY

It is time to fish or cut bait. A number of issues

[3] Milton Friedman "Interest Rates and the Demand for Money" *Journal of Law and Economics,* October 1966, p. 85. For some technical reasons, not all Monetarists would agree 100 per cent with this quotation. For our purposes, however, it seems to reflect adequately the Monetarist view.

[4] Paul Samuelson "The Role of Money in National Economic Policy," *Controlling Monetary Aggregates,* (Boston: The Federal Reserve Bank of Boston, 1969), p. 12.

have been raised and questions asked about the demand for money. What kinds of answers does history provide? To make things manageable, we can concentrate on three key questions: (1) Does the demand for money depend on income? (2) Is the demand for money sensitive to interest rates? (3) Have we ever been caught in a liquidity trap?

Question One: What Role for Income? Virtually every empirical study undertaken has shown that the demand for money depends on the level of income. Sometimes the relationship is based on a linkage between current income and money demand through the level of transactions of the sort we discussed earlier. Sometimes the relationship is based on more subtle arguments.

These more subtle discussions generally presume that economic well-being is a more important determinant of the demand for money than is the volume of transactions. The discussions take as their point of departure the notion that improved economic status for a nation (or an individual) means a greater demand for most assets, including money. In fact, at least one economist believes that money is a luxury in the sense that the demand for it rises very rapidly as a nation (or individual) moves up the economic ladder.

The two measures of economic well-being that have been used to explain the demand for money are wealth and permanent income. Everyone is familiar with the notion of wealth, and there should be no dispute that it is one measure of economic well-being. The meaning of permanent income, however, is not widely known.

Permanent income is most simply described as expected average lifetime income. It is a good measure of economic well-being because it is adjusted for temporary ups and downs. A day laborer who happens to be working his way through medical school has a higher *permanent* income than his co-worker whose actual or *measured* income is the same but whose ambitions and income expectations are more modest.

Economists who take the permanent income approach do not deny the importance of measured income. They argue that current and past levels of measured income are the most important influences on permanent income. They claim that expectations are largely formulated on the basis of past experience.

Question Two: How Important is the Interest Rate? Historically, the interest rate has influenced the demand for money.[5] This much we know with virtual certainty—that is, if unanimity of opinion implies certainty of knowledge. There is some disagreement, however, on just how important the interest rate has been. Some economists, like Milton Friedman and Maurice Allais, take the view that the interest rate is so unimportant in determining the demand for money that little is lost if it is ignored. Other investigators, however, have presented evidence that the demand for money is highly sensitive to changes in the rate of interest. Perhaps the most sensitive relationship was found by Allan Meltzer who estimated on one occasion that any given percentage change in long-term interest rates would be matched by an equal percentage change (in the opposite direction) in the demand for money.

The disagreement over the importance of the interest does not follow "party lines." As it turns out, all three of the economists mentioned in the last paragraph are Monetarists. Estimates

[5] There are, of course, many interest rates. We shall ignore here the important question of selecting the appropriate one.

of the interest sensitivity by Keynesians are greater than zero but less than Meltzer's.

A major reason for all this disagreement about the importance of the interest rate is that it is often difficult to untangle the influence of interest rates from other influences on the demand for money. Interest rates vary in a more or less systematic way over the business cycle—they generally go up during expansions and down during economic contractions.

Other variables that are likely to influence the demand for money also behave more or less predictably over the cycle. This raises the possibility that an investigator will wrongly attribute the influence of some other variable to interest rates, or the influence of interest rates to other variables.

Milton Friedman and Anna J. Schwartz, in particular, argue that an uncritical reading of history has led to an over-emphasis on the role of the interest rate in determining the demand for money.

It is well known that relative money balances (the ratio of money balances to income) fall during expansions and rise during contractions. Generally speaking, therefore, relative money balances are high when interest rates are low (during slumps), and are low when interest rates are high (during booms). The interest rate seems to do a good job in explaining movements in the demand for relative money balances.

Friedman and Schwartz argue that there is another factor to explain movements in relative money balances over the cycle. It is based on the idea of permanent income (expected average lifetime income) mentioned earlier. During economic downturns, people anticipate that things will get better; so permanent income is higher than measured income. During periods of prosperity, people guess that incomes are unusually high; so permanent income is lower than measured income. Over the cycle, permanent income fluctuates much less than measured income because people recognize that a good deal of income fluctuations are transitory. If the demand for money depends on permanent income, it will fluctuate relatively little over the business cycle because permanent income is relatively stable over the cycle. Therefore, during periods of recovery, the demand for money will rise more slowly than measured income, so relative money balances (the ratio of money balances to measured national income) will fall. During periods of contraction, the demand for money will fall more slowly than measured income, and relative money balances will rise.

Friedman and Schwartz offer some evidence in support of their views in their famous study *A Monetary History of the United States*. For example, they point to the period, 1932-1937, during which both interest rates and relative money balances fell. This pattern is clearly inconsistent with the interest-rate explanation of movements in the demand for money. The 1932-1937 experience is very easily explained by the permanent income concept. In the mid-1930's, the economy started to climb out of the depths of the Great Depression. Income was rising. Nevertheless, vivid memories of 1929, 1930, and 1931 lingered. People were not so sure that the recovery was going to be sustained. Permanent income rose, but not so fast as measured income. Desired money balances, which respond to permanent income, grew more slowly than measured income. So, the ratio of money balances to measured income fell.

Not all economists agree that the Friedman

and Schwartz evidence is convincing. A number of studies have shown that the interest rate has had a strong influence even if one accepts the permanent income hypothesis. In fact, Friedman and Schwartz seem to have retreated slightly on this point. In 1966, Friedman wrote "most estimates [of the interest rate sensitivity], including some we have obtained in our own subsequent work are higher . . . than the estimate Anna J. Schwartz and I used in *A Monetary History.*"[6]

Queston Three: Have We Ever Been Trapped? The answer to this question can be stated very succinctly: The great weight of historical evidence indicates that we have never been in a liquidity trap. A number of studies have attempted to find periods in American history when the public was willing to hold whatever quantity of money balances made available. Over the periods investigated, the public has always made attempts to unload excess money balances in exchange for other assets.

A Summary. Studies of the demand for money can be thought of as the first round in the debate over the efficacy of monetary and fiscal policy. The nice thing about the first round is that each side can go back to its corner confident that it took the round on points. Monetarists smell victory because of the absence of any evidence of the existence of a trap. To them this is the crucial issue. Keynesians are delighted with the outcome because of the overwhelming evidence of the interest sensitivity of the demand for money.

HISTORICAL EVIDENCE II: THE MONETARISTS' GRAND EXPERIMENTS

The second round in the debate brings us back to the beginning—to the Monetarist claim that (1) the major movements in national income have been associated with major movements in the money supply and *vice versa,* and (2) no equally strong or systematic relationship can be found to support the Keynesian theories. For the Monetarist, none of the evidence on interest rates and the demand for money can change these facts. For Keynesians, these "facts" are highly debatable.

Without getting involved in the technical arguments, we can briefly indicate the debate on this evidence.

Keynesian Objection 1: Mere association does not imply causation. The close relationship between money and national income could reflect a causal influence running from money to income; from income to money (if, for example, the monetary authorities tried to provide enough money to meet the needs of trade); a dependence of of both money and income on some third variable; or, as is most likely, a little bit of all three. There is, in short, no way to determine the strength or predictability of the causal link from money to national income using the Monetarist's tools.

Monetarist Response: We agree that mere association does not imply causation. Indeed, we even agree that there has been some influence running from income to money. Our point is that a major cause of the observed coincidence of movement is the effect of monetary forces on national income. There is no need to debate this on a conjectural level, however, because history is not totally silent on this point. There is some opportunity to examine situations in which it is unlikely that the direction of causation went from income to money. One illustration includes those times in history when the money supply has increased because of gold

[6] Milton Friedman, "The Interest Rate and the Demand for Money," *op. cit.* pp. 72 and 73.

inflows or for other reasons unrelated to income. During these periods, income has risen after the rise in the money supply.

Keynesian Objection 2: The Monetarist's tools may be too crude to pick up the strong influences of fiscal policies. It is a mistake to presume such influences do not exist simply because the impact of fiscal policies cannot be measured by the somewhat naive techniques of the Monetarist. The workings of fiscal and monetary policies on the economy are very complex. There is no shortcut to the very hard work of learning about complex and subtle interrelations in the economy.

Monetarist Response: We could not agree more. The economy is certainly complex, and we know very little about it. In fact, this is what we have been saying right along. We conclude that on the grounds of our ignorance, we ought to go with what we've got, and what we've got is this relationship between the supply of money and national income. If more complicated tests show how fiscal policy works, then it will be time to use them. Right now we cannot unlock the code.

Keynesian Objection 3: Your tests are not as conclusive as you think. The definition of monetary and fiscal variables is open to question. We have come up with definitions different from yours that show a strong correlation between fiscal policy and national income.

Monetarist Response: We believe that our measures of fiscal and monetary forces are superior to the Keynesians' measures. We frequently get the impression that the Keynesians choose their measures more because they give good results than because they seem reasonable from an economic standpoint.

A SUMMING UP

It is easy to be pessimistic over the state of the art of economic policy. One can find competent economists at every point on the spectrum between "only money matters" and "money doesn't matter at all." To be sure, the great majority take more moderate positions, but even the moderate range is wide and offers rather diverse policy prescriptions. It would be safe to say that the economics profession could under no conceivable set of circumstances offer anything like a "standard" policy prescription. The point is frequently made that the only thing on which most economists will agree is that policy was wrong. But there is rarely any agreement on what correct policy would have been or even what the actual policy was.

The gloominess of the state of affairs, however, is broken by occasional rays of hope. We are currently devoting more resources than ever before toward finding out how the economy works. Millions of dollars have been spent on large-scale econometric models of the United States. Builders of these models claim that they have made long strides in the past decades. It is in these models and in other attempts to interpret economic history that the real hope lies.

There has been a marked shift in the great economic debate since the initial victories of the New Economics. In the late 1940's and early 1950's, it was generally believed by Keynesians that money didn't matter at all. By the early and mid 1960's, the Monetarists had made sufficient headway to shift the question from "does money matter?" to "does fiscal policy matter?" The New Economists have largely recognized the importance of money, but not its dominance. The Monetarists, however, continue to question the empirical relevance of fiscal policy.

Federal Reserve Bank of Philadelphia

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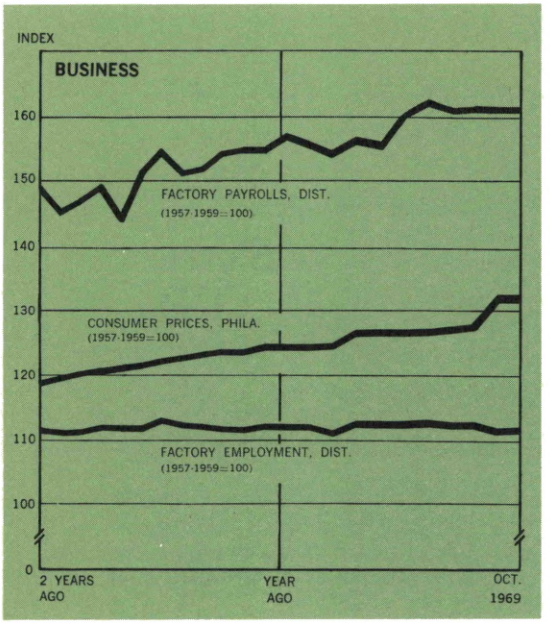
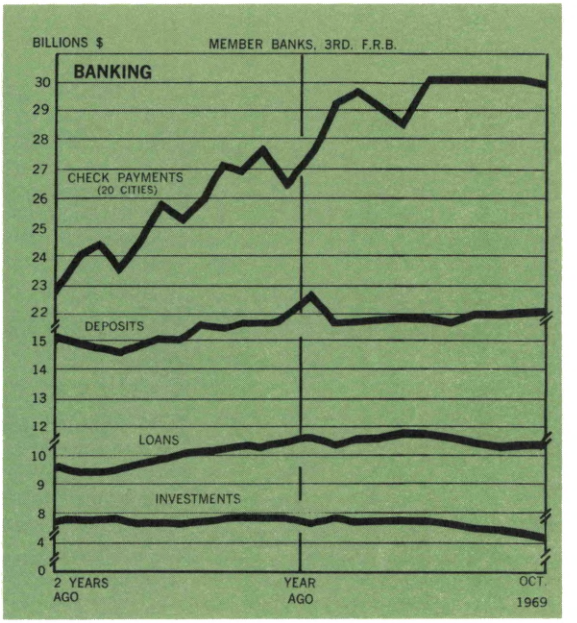
FOR THE RECORD . . .





SUMMARY

	Third Federal Reserve District			United States		
	Per cent change			Per cent change		
	Oct. 1969 from		10 mos. 1969 from	Oct. 1969 from		10 mos. 1969 from
	mo. ago	year ago	year ago	mo. ago	year ago	year ago
MANUFACTURING						
Production	....	....	....	0	+ 4	+ 5
Electric power consumed	0	+ 8	+ 7	....	....	....
Man-hours, total*	0	0	0	....	....	....
Employment, total	0	0	− 3	....	....	....
Wage income*	0	+ 7	+ 7	....	....	....
CONSTRUCTION**	+54	−53	−10	+21	+ 1	+11
COAL PRODUCTION	− 2	+31	+ 1	+ 4	+34	− 1
BANKING						
(All member banks)						
Deposits	+ 1	− 1	+ 5	+ 1	− 1	+ 4
Loans	+ 2	+10	+11	0	+11	+12
Investments	0	− 6	+ 2	0	− 9	0
U.S. Govt. securities	+ 1	−15	− 8	+ 3	−18	−10
Other	− 1	+ 2	+10	− 2	− 2	+ 8
Check payments***	− 4†	+ 9†	+19†	− 2	+11	+17
PRICES						
Wholesale	....	....	....	0	+ 4	+ 4
Consumer	0‡	+ 5‡	+ 5‡	0	+ 6	+ 5

*Production workers only
**Value of contracts
***Adjusted for seasonal variation

†15 SMSA's
‡Philadelphia

LOCAL CHANGES

Standard Metropolitan Statistical Areas*	Manufacturing				Banking			
	Employment		Payrolls		Check Payments**		Total Deposits***	
	Per cent change Oct. 1969 from		Per cent change Oct. 1969 from		Per cent change Oct. 1969 from		Per cent change Oct. 1969 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Wilmington	− 1	+ 2	− 4	− 5	0	+14	+ 5	0
Atlantic City	....	....	....	....	+ 5	+ 9	− 1	+ 7
Trenton	− 1	0	− 3	− 1	0	+ 5	+ 7	+ 9
Altoona	− 2	+ 1	− 2	+ 9	− 3	+20	0	+ 5
Harrisburg	− 1	− 1	− 3	+ 6	− 2	+18	− 1	+ 8
Johnstown	0	+ 9	+ 1	+22	0	+13	0	+10
Lancaster	0	+ 1	+ 2	+12	− 4	+16	+ 1	+12
Lehigh Valley	0	+ 1	0	+10	− 2	+ 2	0	− 8
Philadelphia	0	− 1	0	+ 6	− 5	+ 8	+ 2	− 3
Reading	− 1	− 2	0	− 2	− 4	+10	0	+ 8
Scranton	− 4	− 3	− 6	+ 2	+ 4	− 5	0	+ 1
Wilkes-Barre	+ 1	+ 2	0	+ 8	0	+12	0	−20
York	0	+ 1	+ 1	+ 8	− 2	+16	− 1	+ 5

*Not restricted to corporate limits of cities but covers areas of one or more counties.
**All commercial banks. Adjusted for seasonal variation.
***Member banks only. Last Wednesday of the month.