

- Hello. This is Rose Friedman. Since we have made our annual migration from Chicago to Vermont, and since Bill Clark is stuck in Chicago, I am resuming the role of interlocutor for our regular bi-weekly conversation with Milton Friedman, Professor of Economics at the University of Chicago. We are taping this conversation on Wednesday, April 17th, 1974. You have not discussed, for some time, as I remember, anything about the behavior of money. Don't you think it would be a good idea to bring your subscribers up to date at this point?

- The behavior of the quantity of money must be distinguished sharply with respect to its recent short-term movements and with respect to the longer term movements. Over the past two months, since January, the quantity of money has been rising at an extremely rapid rate. For M1, currency plus demand deposits, money has been rising at nearly 14% per year. For M2, which includes tied deposits and commercial buyings other than large CDs, it's been rising at something like 12% a year. Both of these are rates which are extraordinarily high. But it is a mistake to attribute too much importance to these very short-term gyrations. They obviously do have an influence on financial markets. Far be it for me to say that they do not. But from the point of view of judging the stance of monetary policy and what is likely for a longer period ahead, they are extremely misleading. M1 in particular has tended to gyrate up and down and back and forth, so that if you take two months' period, you will have two months' periods or longer periods indeed, such as of June 1973 to October 1973, when M1 was either constant or fell a trifle. And then you have this past period from September to now, when M1 was rising very rapidly, and the past two months when it rose extremely rapidly. The same thing goes with respect to the briefer movements in M2. These briefer movements, of course, do stimulate comments by the monetary authorities and reactions by the markets. In particular, Chairman Burns of the Federal Reserve has recently been making a whole series of statements trying to emphasize that the Fed is going to exercise restraint, that it will not encourage more than a moderate increase in the quantity of money and credit, that he has stated that the problem today is not a shortage of money but a shortage of oil or a shortage of other things, that this is not a typical recession, and so on and so on. But just as the short-term gyrations in the quantity of money are not a good guide to the longer-term policies followed by the Fed, so in the past few years it has been clear that the pronouncements by Chairman Burns or by other members of the Fed are also not a highly reliable guide. The best guide, it seems to me, to what is likely to happen to money is to look at what we can see from a longer-term past. I just plotted for my instruction M1 and M2 over the period from January 1971 to date. Get? That was about when the recovery from the 1970 recession just got underway, and it gives us a three-year period to look at to see if we can detect longer-range policies. I was very much surprised in looking at the two series to discover a phenomenon that had escaped me. Over that three-year period, the rate of growth of M1 had fluctuated a good deal more than the rate of growth of M2. The reason why this is surprising is because the Fed quite explicitly takes M1 as its primary target. It states its instructions to the Open Market Committee in terms of M1, not in terms of M2. And yet it appears that in actual practice, M2 has been much stabler over that period than M1 did. It is also surprising in light of another phenomemon that I shall come back to later on, which is the supposed effects of what's called disintermediation. But to go back to the longer-term movements, in

the three years from March 1971 to March 1974, the rate of growth of M2 was just a little less than 10% per year, about 9.6 or 9.7. The rate of growth of M1 was about 6.5% per year. Those average rates of growth show no sign of any significant change over that period. Indeed, for M2, the stability in the rate of growth is truly remarkable. I calculated the largest deviation between the actual stock of M2 and the stock that would have existed if growth had been precisely at 9.7% per year. The largest deviation was less than 1% of the total money stock, so that the money stock was held within a range of plus and minus 1% of that trend line. The deviations for M1 are very much wider, but there is no significant tendency for the rate of growth of M1 either to accelerate toward the end of the period or to decelerate, just as there is no tendency for M2 to do so. Thus, if we judge from past experience, we would have to say that the expectations for this coming year are that M2 will continue to grow at something like 10% per year, that M1 will continue to grow at something between 6% and 7% a year. Whenever the actual stock of money gets any reasonable way away from the amount indicated by those rates of growth, you can look forward to the Fed pulling it back. Whenever the stock of money gets well below, you can look forward to the stock going up again. Thus, if you look at this very rapid rise in the past two months, I would guess that you will have over the next few months a much less rapid rise, because again, the Fed will be driving to pull it back down to that trend line which implicitly or explicitly seems for the past three years to have been the goal of their policy.

- You mentioned disintermediation. First of all, what does it mean? And secondly, why is it relevant to this discussion of money?

- Well, it's an ugly word, but what people mean by it is the following. There is a legal limit on the rates of interest which commercial banks may pay on time and savings deposits. Whenever the rates on market instruments such as short-term Treasury bills and the like tends to rise decidedly above the maximum rate that commercial banks may pay, there is a strong tendency for people who hold such deposits to shift them out of the commercial banks and seek instead to buy Treasury bills. The reason this is called disintermediation is because the commercial bank, in the process of borrowing demand- I mean time and saving deposits, is really acting as an intermediary for the ultimate investor. What the commercial bank does is on the one hand, it borrows from the depositor. On the other hand, it takes the fund so obtained and invests it in assets. It may, indeed, invest it in short-term Treasury bills. It does to some extent, as well as other assets. Thus it is serving as an intermediary between the lender, who is the depositor on the one hand, and the borrower, who in this case, the case of Treasury bills, is the US government. Thus, when the depositor withdraws his fund from a commercial bank and uses it to buy a Treasury bill, he is eliminating the intermediary and acting directly as his own principal, and that is why it is called disintermediation. Now, of course, from the individual point of view, it looks to a depositor as if he's withdrawing his time deposit, and he is. But the actual effect of this operation is not really to reduce the total quantity of money. Or rather, I should put it, it depends on what definition of money you think of. If you consider M1, the narrow definition, and if bank depositors reduce the amount of time and savings deposits they hold relative to their total deposits, the effect of this is to provide commercial banks with more reserves available for use behind demand deposits. That is to say, the reserves which were held behind time deposits before are now freed and can be used by the banks to expand demand deposits. On the other hand, because the required reserve against time deposits is smaller than the required reserve against demand deposits, the total amount of deposits that commercial banks can have outstanding, including time deposits as well as demand deposits,

goes down. Thus, disintermediation, with the implication of a decline in the ratio of time and savings deposits to demand deposits, tends to have opposite effects on the rates of growth of M1 and of M2. The rate of growth in M1 tends to increase because of the Reserves released from time deposits. The rate of growth of M2 tends to decline because of the impact of the higher reserve requirements against demand deposits. Similarly, when market interest rates fall and you have what is called reintermediaion, the opposite happens. Now, the interesting thing is that over this three-year period, there have been a number of different occasions on which there has been disintermediation. That seems to have affected almost entirely M1. The rate of growth of M2 shows very little or no impact from the disintermediation. We are right now in another period when disintermediation is to be anticipated, and indeed maybe part of the recently rapid growth in M1 was because of disintermediation. We have had again a very rapid rise in short-term interest rates just over the past couple of months. And these are now very much more attractive than the rates of interest that the commercial banks may pay on their time and savings deposits. Incidentally, I should note that this does not include their CDs. They are essentially free to pay any market rate on their CDs. But neither does M2 include CDs. However, CDs do absorb reserves, so that it adds an element of complexity to the situation without changing the fundamental relationships that I have been mentioning. Well, to go back, you are now having another period of disintermediation. Moreover, the incentive is such, the spread between short-term rates that can be obtained on the market instruments, and the rates that commercial banks may pay, is so high that there are developing quite a number of financial institutions that are designed to facilitate this kind of disintermediation. The Wall Street Journal the other day had a very interesting story on the development of such funds. It used to be that you could buy Treasury bills in denominations of \$1,000. The Treasury changed that and made the minimum denomination \$10,000. The reason was very clear. It was to protect commercial banks and also, I may say, other thrift institutions from withdrawals of funds in order to go into Treasury bills whenever the Treasury bill rate got above the maximum rate permitted by law. As a result, the Treasury went to a \$10,000 bill, which was larger than most ordinary individuals having time and savings deposits could manage. The purpose of these financial institutions is to bridge that gap. You have a mutual fund of a kind, which invests its assets in Treasury bills or similar short-term instruments because short-term commercial instruments may pay even higher rates. It takes a fee for its services. It gets its assets from small investors who can buy in small amounts, and pays out a yield equal to the difference between the yield on its assets and the service fee it charges. Recently, it's been able to pay at least 7% and maybe 8%, which is a good deal higher than the rate which is permitted on savings deposits.

- Doesn't this affect savings and loan and mutuals as well as other commercial banks?

- It certainly does. The savings and loan associations and the mutual associations are also limited by law to a maximum rate they can pay. But in another respect, this legal limit is not the important thing. In another respect, thrift institutions, and particularly the savings and loan associations and the mutual banks, are in an extremely difficult spot at the moment. And one of the hidden crises that may be ahead of us is a crisis with respect to these institutions if inflation should continue at anything like its recent rate and as this spreads into long-term rates and short-term rates. The problem is the following. These institutions have for many years been borrowing essentially on demand. Savings and loan associations and mutual savings banks have been following a policy of meeting any demand from their depositors when they were

presented. I say depositors. I'm not using strictly accurate language. Technically speaking, they are shareholders in the savings and loan association and depositors in mutual savings banks, but it will be simpler if I use simply a single word, and so I will use the word depositor. By the letter of the law, the associations can require you to give them notice of so many days. I don't know what it is, 90 days or something like that, before you withdraw funds. But in practice, none of them do. They all meet it on demand. So they have been borrowing essentially on demand. On the other hand, the funds they have obtained this way they have invested in long-term assets, mostly mortgages. These mortgages have terms that may vary up to 20, 30 years. The average term of the mortgages in their own portfolio must now be somewhere 5 to 10 years. I don't know, something like that. The mortgages have fixed rates of interest, and those rates of interest were agreed on at an earlier time when they were very much lower. So here you have a savings and loan association. It has a portfolio of mortgages. The average yield on that portfolio, I don't know exactly what it is. I haven't looked at it in recent times but maybe it's 6%, 6.5% at the most. It is permitted to pay to its depositors rates of interest between, let's say, 5.5%, 6%. It depends on the length of the deposit, the particular kind, but it's as high as 6%. And it must pay that to its depositors at the moment in order to keep them from withdrawing their deposits. Clearly it has very little leeway, and I've probably stated the position more optimistically than it really deserves to be stated. Now, let short-term interest rates stay up anywhere near their present level, or let them continue to rise, and the depositors in the savings and loan institutions will want much higher rates, or else they will withdraw their funds. But the savings and loan associations, entirely aside from the legal limits, are in no economic position to pay higher rates. To put this in another way, if you were to value the present mortgages, the present assets in the portfolio of any savings and loan association in this country or any mutual savings bank in this country, if you were to value it not at the book value, but at its market value, given what has happened to mortgage rates, given the yield at which you can issue mortgages today. There was a piece in today's Wall Street Journal that the minimum rate of interest on mortgages in California had just gone up to 9%, and that probably is not the average. The average rate of interest being charged on mortgages is almost surely somewhere in the neighborhood of 10% or more. Given that, you can see that a mortgage issued at a 5% rate or a 6% rate is worth a good deal less than its face value. If you were to value all of those assets at market rates and also value its liabilities at market prices, which means, essentially, a dollar for a dollar, I doubt that there is a savings and loan association or a mutual savings bank in this country that is not technically insolvent. That technical insolvency will raise no problems whatsoever so long as they can continue to hold onto their present volume of deposits, let alone add to it, because as long as they can continue to hold onto their deposits, they can let the mortgages run off. They will issue new mortgages at the present marginal rate. They can pay their depositors an amount equal to the average that they earn on their whole portfolio of mortgages. But disintermediation threatens them very, very seriously. What happens if interest rates in the market continue at their present level, if these devices for permitting small people to benefit from it expand? It's not easy to depict what the scenario will be. There are a number of governmental institutions providing secondary markets in mortgages. There's a Federal Home Loan Bank. It is inconceivable politically, it seems to me, that the federal government would permit any large fraction of savings and loan associations and mutual savings banks simply to go broke. Maybe that would be a good idea, but it seems to me completely out of the realm of possibility politically. What you will have instead will be a major bailout effort on the part of the federal government. Note that what we are talking about is not peanuts. The total liabilities of the two classes of institutions together are something in the order of \$300

billion. The actual- it's hard to believe that the net deficit, that is to say, the difference between their actual value and their market value, is less than 10%, and that's probably a very conservative estimate. So you are talking about a deficit of the neighborhood of \$30 billion or more. What would be likely to happen in the first instance, if there were an outflow from these institutions, would be that the secondary mortgage institutions of the government would buy up the assets at an inflated value, would permit and thereby enable the institutions to liquidate to some extent. But there is little doubt that there would emerge immediately a great cry that what should be done instead is to have the government subsidize the interest rate paid by the savings and loan associations and the thrift institutions in order to prevent their reduction, because their reduction will be seen as a great threat to the housing market, as a great threat to the idea of government support of owner-occupied housing. I don't know what form this will take in detail. I mention it only as a time bomb that is ticking away beneath the surface. What is the likelihood- The likelihood that it will explode depends on the future course of inflation. If inflation speeds up, interest rates will undoubtedly rise, and you will have an explosion. If inflation slows down, interest rates will stop rising. They may fall. The savings and loan institutions may be able to weather the crisis.

- What rate of inflation does the present monetary policy imply?

- Well, if you look at this long-term course of money, you can come out with a very definite answer. M2, as I said before, has been rising for the past three years at a rate which has been highly constant and equal to about 9.6% or 9.7% per year. Judging by historical experience, the velocity of M2 has been highly constant over about the past eight or ten years. That is to say, M2 has stayed about the same percentage of total income. As a result, a 9.6% or a 9.7% rate of rise of M2 implies a rise of exactly that same percentage in national income or personal income or GNP in dollar terms. The physical output of the community can certainly not be expected to rise on the average by more than 3% to 4%. As a result, it is clear that the rates of rise of M2 imply a long-term rate of inflation of 6% per year. The M1 figures do not tell any different a story. Over the past period, there have been increasing economies in the use of M1, stimulated, unquestionably, by the fact that it is illegal for banks to pay interest on demand deposits, and hence, as interest rates in general rise, there is an increasingly strong incentive to economize in the use of M1. As a result, M1 has been declining as a fraction of total income. The 6.5% percent rate of rise of M1, if we allow for this decline in velocity, also implies roughly a 6% rate of rise in prices. Thus, my conclusion is that monetary policy as it is now structured and as it appears to be operating at present is a policy designed to produce a relatively steady 6% per year rate of rise in prices. Now, a relatively steady 6% per year rate of rise in prices does not sound as shocking now as it would have a year ago. In the interim, we have had this very extreme bubble with double-digit inflation, with rates of inflation of 10% and 11% even for cost of living. But as I have emphasized on these tapes before, to a large extent I believe that's a bubble that's due to special, transitory phenomena, and I believe that the rate of inflation is almost sure to drop back considerably. Viewed from a longer-term perspective, 6% is anything but a small rate of inflation for the United States. Viewed in terms of the question which stimulated this, namely the effect on the thrift institutions, we have to ask what that implies for interest rates. For long-term interest rates, that implies a rate of at least 9%, probably 10%. That is to say- And this is for high-grade, corporate AA, AAA bonds. If we look back over the long historical past, if you subtract the average rate of inflation from the yield on such securities, you tend to get a number in the neighborhood of 3% to 4%. So if we add 3% to 4% to the 6% rate of inflation, you get

9% to 10% per year- I'm sorry, 9% to 10% as a long-term interest rate on the very highest-grade securities, an even higher rate on mortgages, which is what's relevant for savings and loan associations. On the other hand, the short-term rate of interest in general has tended to be somewhat less than the long-term rate, so you cannot say that short rates would be as high as that. They might be a little lower. That's very hard to know. But any such rate would perhaps be on the margin. Certainly, if inflation goes above that amount and interest rates go above that amount, the thrift institutions are in extremely deep trouble. But even at that rate of inflation, I think they are as well. One should emphasize that what this means for the new future. If this analysis is right, it means that as of the moment, the rate of inflation will decline between now and the end of the year. It may not get back to 6% by the end of the year, but it may get to 6% or 7%. And if monetary policy stayed the same, if the rate of expansion of the quantity of money stayed at the 10% and M2 and the 6.5% M1, then you could expect that after a while we would settle down to a steady 6% inflation. But I am, as I have emphasized over and over again, not at all optimistic that that would be the outcome. We must not extrapolate this three-year period indefinitely into the future. On the contrary, the experience of the past has been that the rate of growth of the quantity of money has tended to accelerate over time in spurts. If the anticipated reduction in the rate of inflation is accompanied by a recession, or should I say if the recession that has been going on so far continues, and the reduction in the apparent rate of inflation is accompanied by a rise in unemployment, then there will be tremendous pressure on the Fed to engage in an expansionary activity designed to offset the unemployment. That expansionary activity would involve increasing the money supply more rapidly than this prior 10% or 6.5%. And if we judge from their past experience, such a reaction would be extremely likely. Under those circumstances, the immediate effect might be a reduction in unemployment, but the subsequent effect probably sometime in 1976 or '77 would be a further upward move in the rate of inflation, which in turn, of course, would imply an upward shift in interest rates and would bring the crisis of the savings and loan and thrift associations very well to the forefront. To go back to a more general point, there is no danger of a general monetary financial crisis of the kind that occurred in '29 to '33. That cannot happen without a reduction in the quantity of money. But that does not exclude the possibility of a selected financial crisis with respect to this set of institutions.

- I'm afraid that brings us to the end of our time. Remember, subscribers, if you have any questions or comments, please send them to Instructional Dynamics Incorporated, 166 East Superior Street, Chicago, Illinois 60611. We shall be visiting with you again in two weeks.