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STRICTLY CONFIDENTIAL (FR)
CLASS I - FOMC

TO: Federal Open Market Committee
FROM: Normand Bernard *NJB*

Attached is a copy of a memorandum from Mr. Axilrod on issues affecting monetary targets for 1985 and implementation of monetary policy (agenda topic number 4 for the upcoming FOMC meeting). Please limit access to this memorandum to a strict need to know basis.

Attachment

STRICTLY CONFIDENTIAL (FR)
CLASS I - FOMC

TO: Federal Open Market Committee

DATE: December 11, 1984

FROM: S. H. Axilrod

SUBJECT: Comments on operating
procedures and certain monetary
targeting issues

There are three interrelated issues that can be raised in connection with a general discussion by the Committee at this time of monetary policy formulation and implementation. One pertains mainly to implementation, and relates to questions about the most effective open market operating procedure in the context of a predominantly judgmental approach--a matter that was raised by President Morris at the last meeting in connection with the behavior of interest rates and borrowing over the summer and fall and has been discussed in one way or another by other Committee members in the course of the past year or more.

The other two issues have to do with the reliability of M1 as an intermediate objective for policy, particularly in light of its recent weakness, and the related question of whether its recent weakness should be taken specially into account when setting next year's ranges. A few comments can be offered on these two topics at this time partly as background for more formal consideration of specific ranges and their policy significance at the February meeting.

Operating procedures

Reserve paths for guiding open market operations have for some time now been based on an assumed level of adjustment plus seasonal borrowing at the discount window. This borrowing assumption is used to derive for each two-week reserve period a nonborrowed reserve path--which

is what the Desk can really hit (aside from the unpredicted effects of market factors). That path is derived by subtracting assumed borrowing from the sum of estimated required reserves, updated in the course of a reserve period, and a projection of excess reserves.

In practice the actual level of borrowing can deviate from assumption even if the nonborrowed reserve path is hit perfectly and actual required reserves are as estimated. In this case, free reserves (the difference between nonborrowed and required) will turn out as expected, but borrowing may not since the composition of free reserves between excess reserves and borrowing is not within the System's control. However, as noted, we do attempt to estimate in advance the market's demand for excess reserves during any given reserve period in setting the nonborrowed reserve path. There are inevitably unexpected developments in that respect, but they tend to average out over time, and the actual level of borrowing will tend to vary around the assumed level within a reasonable range of tolerance. Over short periods, the market will often look to the level of free reserves as more indicative of System intentions when, for instance, both excess reserves and borrowings are relatively high or when both are relatively low.

An assessment of borrowing, or implied free reserves, as a guide for open market operations involves examination of two kinds of problems. One relates to conditions when money demand is proving to be stronger or weaker than anticipated. A borrowing guide would automatically accommodate such behavior, since open market operations would supply or absorb the unexpected shortfall or overshoot in required reserves. This is not a disadvantage to such a guide when the Committee does not wish to resist unanticipated behavior in money--either because a money demand shift may

be under way or because more time may be required to assess the significance or durability of the change in money.

On the other hand, the accommodative characteristic of a borrowing guide is a drawback at times when the Committee wishes to achieve closer control of money, particularly M1 (the aggregate most directly related to reserves), as would be the case when unanticipated movements in money are more likely to be reflecting or foreshadowing undesired economic performance. In that case, adherence to a nonborrowed or total reserve aggregate guide would be more likely to achieve the desired outcome.

Our present procedures strike something of a compromise. The nonborrowed reserve paths are adjusted within a reserve operating period for unanticipated changes in money and required reserves, so as to maintain the initially implied borrowing level. Over a whole intermeeting period, though, the Committee specifically allows for judgmental adjustments in borrowing in an attempt to resist, at least in part, undesired movements of the aggregates. However, these adjustments are considered not only in the context of behavior of the monetary aggregates but also in relation to economic indicators and financial market conditions generally.

The second problem with borrowing (or free reserves) as a guide emerges in circumstances when money demand and the economy might be about as anticipated, given current interest rates, but when banks' attitudes toward borrowing, and free reserves, begin to shift. In that case adherence to a borrowing guide will cause actual money supply, as well as economic performance, to depart from anticipations. For example, money growth will fall short when banks' demand for borrowing declines (demand for free reserves rises) at given interest rates, because the System in its operations will force banks to be less liquid than they want (unless

the borrowing target is changed), leading to interest rate increases, and, with some lag, to less money demand and actual money growth than anticipated and to weaker economic growth.

The behavior of M1 during the summer was to some extent an example of this problem with borrowing as a guide. Short-term interest rates rose from May through mid-summer, despite an unchanged level of borrowing, and money growth began to weaken. Based on results from our money market model, perhaps about 2 percentage points at annual rate of the M1 weakness over the summer might be attributed to a shift in borrowing demand.

However, the unanticipated weakness in money growth extending into the fall, as short-term rates began to drop substantially, more exemplifies the first problem noted above with a borrowing or free reserve guide. The extended weakness in M1 in good part was associated with diminishing transactions demand as economic growth decelerated sharply. In line with Committee decisions and operating procedures, successive reductions in borrowing targets, and increases in free reserves, were made beginning in late summer. Nonetheless, nonborrowed reserves and total reserves by November were still about at their July levels, as not enough reserves had been supplied both to satisfy banks' demands for liquidity and to attain M1 objectives.

While there are these problems with the current operating technique--as there would be problems, though perhaps different ones, in any procedure chosen--the procedure has worked reasonably well over a difficult period in which the Committee has not wanted to be tied as closely as earlier to an M1 aggregate that was subject to transitional uncertainties, and has wished to give more emphasis to over-all economic

and financial considerations. In any event, economic performance has been reasonably satisfactory during the period in which these procedures have been in place, and financial conditions have been more stable than in the 1980-82 period. Since mid-1983 M1 and M2 have generally remained within their long-run ranges, in part because demand for these aggregates has been less variable than previously; recently, though, M1 has been in the lower portion of its range, an outcome that had not been expected earlier in the year.

Some modifications to current operating procedures could, nonetheless, be contemplated. While the problems caused by shifts in the borrowing function might be mitigated by aiming at a Federal funds rate, I would not suggest elevating the funds rate to a day-to-day target as before October 1979. In the first place, it would not help in the more fundamental case when money demand on the part of the public, and the economy, is weakening relative to expectations. Secondly, it would work to eliminate a very valuable degree of responsiveness of the funds rate, and short rates generally, to actual or anticipated changes in credit or money demand--a degree of responsiveness that often is in a direction consistent with, and helpful to, policy toward the aggregates and the economy, as was the case, for example, in early fall. With the funds rate as a target, by contrast, money market conditions will be much less responsive to factors other than the System's intention.

While the funds rate would not seem to be a desirable target, a reasonable argument can be made for evaluating movements in the funds rate and the money supply relative to borrowing levels, taking account of identifiable factors affecting changes in bank borrowing behavior, to determine whether there have been shifts in the borrowing function that

may call for technical adjustment in reserve paths. This might tend to minimize problems associated with shifts in the borrowing function, but it would not address the first drawback with the current procedure noted earlier--that is, its tendency to accommodate, in part at least, undesired swings in money demand. That drawback may be best addressed by introducing some degree of automaticity in borrowing in response to deviations from the FOMC's path for M1 and related required reserves, if a reasonable degree of reliance can be placed on that monetary aggregate, a question to be discussed in the next section.

Because of remaining uncertainties under current circumstances about the significance of M1 movements, any automaticity should probably be relatively limited in its scope. For example, in any given reserve period, an automatic change in borrowing might be limited to about 25 to 50 percent of a deviation in required reserves associated with an unacceptable variation in M1 from path. If M1 were unacceptably low by an average of \$2 billion, this would mean an automatic drop in borrowing of only \$35 to \$70 million, given the existing 7 percent average required reserve ratio on transactions deposits. One of the advantages to relatively small automatic borrowing changes--and the Committee could always indicate a dollar maximum--is that erratic movements in M1 will not lead to very significant volatility in money market conditions.

Judgmental adjustments would presumably remain as the principal source of sustained movements in borrowing over time in the context of something like the current directive structure, which conditions changes in borrowing on a variety of nonmonetary as well as monetary developments. In connection with factors influencing the judgmental setting of borrowing, it may well be that in current circumstances assessment of the real

degree of financial restraint or ease--which has often been judged by interest rates, credit flows, and liquidity conditions--depends more than usual on indicators of price pressures and on the value of the dollar in exchange markets. Inflationary expectations are, and have been, in a state of flux, and obviously affect the real restraint implied by nominal interest rate levels. Price indicators in that situation would need to be evaluated more closely than usual not only for what they may suggest about aggregate demand but also for their impact on inflationary expectations. In addition, international forces today have become a significant factor affecting U.S. economic activity and prices, arguing for relatively more attention than usual to the dollar exchange rate, which has risen more or less persistently since early this year, in assessing the over-all degree of financial restraint or ease.

Reliability of M1

Even if operating procedures are essentially judgmental, the degree to which adjustments are made in borrowing will depend to a great extent on confidence in the reliability of the aggregates--particularly of M1 if some degree of automaticity were allowed in operations--as indicators of current and future economic activity and prices. Over the years, much research has been devoted to comparisons of M1 and other aggregates as they relate to GNP and prices. Our work has generally shown that, of the various aggregates, M1 has conveyed the most information about current and future GNP and has also had the most stable, or predictable, demand relationship to income. There have, however, been episodes when these relationships have broken down in one way or another--for example 1975-76 and most recently 1982-early 1983. Even apart from such periods, the

relationship between money and GNP is subject to considerable noise and uncertainty, particularly the shorter the time period considered.

Because of the sharp, atypical drop in the velocity of M1 in 1982-early 1983, the Committee greatly reduced the weight on M1 for guiding day-to-day operations. In the latter part of 1983, the velocity of M1 began to behave more typically, given the stage of the business cycle, and after a time the Committee increased the weight on M1 in some degree. It was still not given the importance it had over the three years following October 1979, partly because of lingering uncertainties about the likely behavior of M1 under varying economic and financial circumstances, in light of the institutional changes of recent years.

Our most recent examination of M1 behavior in relation to other aggregates and GNP from a variety of statistical perspectives suggests that on balance M1 is still the most reliable of the aggregates as a policy guide and that, following the 1982-early 1983 deterioration, its reliability since around mid-1983 seems to have been improving. As noted, its velocity has begun to behave more typically in recent quarters. It has also shown less unreliability than in 1982-early 1983 as a predictor of GNP behavior in monetarist-type models.

In addition, a recent regression analysis that compares the indicator properties of M1, M2, and M3 relative to each other shows that M1 still bears the preponderant weight in conveying information, with comparatively little additional information imparted by M2 and M3. However, the regression work also suggests that, while the average performance of M1 as an indicator of GNP remains high relative to the other monetary aggregates, the precise weight that one would attach to M1 has

become more uncertain in recent years, as is also the case for M2.^{1/} This perhaps reflects institutional changes of recent years that also may have contributed to some decreased reliability of the aggregates as a group as indicators of GNP.

Thus, examination of recent data provides some assurance that M1 is a noticeably more reliable guide than broader aggregates, but it is still far too soon to be reasonably confident about the underlying trend of its velocity, and its cyclical responsiveness to income and interest rates. In large part, this reflects the need for more experience with the public's financial asset behavior in light of the changed composition of M1 itself as well as the new deposits and fund outlets (such as money market deposit accounts and money market funds) in other, higher-order aggregates that also serve to one degree or another as both as means of payment and a repository for savings. For instance, the weak behavior of M1 thus far in the fourth quarter could be attributable in part to the public's placing funds in MMDA's that in prior years might otherwise have been deposited in M1-type accounts--given present interest rate incentives favoring MMDAs and increased familiarity with such accounts.

Base for the M1 target next year

The specific longer-run ranges for 1985 will be considered by the FOMC at its February meeting, against the background of a broad review of the economic outlook in the chart show and analysis of policy options. It may be useful at this time to raise an issue about the base for the targets, in particular for M1 in light of evidence that, of all

^{1/} Preliminary memorandum by Messrs. Porter and Swartz, "Relative Indicator Properties of M1, M2, and M3: Regressions of GNP Growth on Distributed Lags of Weighted Averages of the M's."

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the aggregates, it may still be a relatively more reliable guide for policy. As will be recalled, the tentative ranges for next year adopted in July entail reductions for M1 and M2, to 4 to 7 percent and 6 to 8-1/2 percent, respectively. Ranges for M3 and total debt were left unchanged. The table below compares these tentative ranges with the ranges and estimated outcomes for 1984 (all data measured from QIV to QIV).

	<u>Ranges for 1984</u>	<u>Actual</u>	<u>Tentative Ranges for 1985</u>
M1	4 to 8	5	4 to 7
M2	6 to 9	7-1/2	6 to 8-1/2
M3	6 to 9	10	6 to 9
Debt	8 to 11	13-1/4	8 to 11

The Committee early this year had indicated an expectation that M1 growth over 1984 would appropriately be in the middle of the range, assuming normal velocity behavior. The velocity of M1 this year looks as if it will grow by about 4 percent, somewhat above previous experience in the second year of expansion. But this velocity outcome has been accompanied by noticeably slower nominal GNP growth (currently estimated at 9.1 percent from QIV '83 to QIV '84) than anticipated by the Committee at midyear, and at the low end of the FOMC's central tendency indicated in February. Real GNP growth was also slower than expected at midyear, but was above the central tendency expectation of early this year. Price behavior has been better than anticipated early in the year and at the low end of the midyear central tendency.

With the over-all economic outcome for the year somewhat worse than anticipated at midyear, and with M1 growth for the year in the lower part of the range, it can be questioned whether the range for 1985 should

be based on the actual outcome for the fourth quarter, or instead should be based on the midpoint for that quarter of the 1984 target range. This type of question has, of course, arisen often in the past when the Committee has discussed questions of "base drift."

If the Committee retained the present 4 to 7 percent M1 range for 1985, aimed at its 5-1/2 percent midpoint, and based the range on the fourth quarter midpoint of the 1984 range, actual growth for 1985 would be 6-1/2 percent--making up for the one percent point shortfall relative to this year's midpoint. Such an approach, whatever its economic merits, is awkward presentationally since it would be difficult to avoid public confusion between actual growth expected and the somewhat artificial specification of the target growth range. In addition, there is always the question of why rebasing was undertaken this year, after many years of not formally offsetting overshoots and undershoots--which to a degree have averaged out over time, depending on the starting point.

Moreover, it may be difficult, though perhaps not overridingly so, to explain why the range for one aggregate is based on the midpoint of a previous year's range, whereas others are based on the actual outcome for a previous year. For M2, which looks as if it may end the year near the current midpoint, there is no meaningful problem. But for M3 and credit, which are above current ranges, in part because of special factors, a rebasing to the fourth quarter midpoints of their 1984 ranges would seem to imply much too limited growth relative to M1 and GNP should their tentative growth ranges for 1985 be retained. However, reference to the special factors affecting M3 and credit--for example, merger activity--does provide a rationale for different treatment relative to M1.

If the Committee wished to foster somewhat more rapid growth of M1 next year in light of the shortfall for this year that developed in the second half,^{1/} it could do so more consistently with past targeting practice by continuing to base on the actual fourth quarter outcome and by simply indicating that actual growth is expected to be toward the upper end of the 4 to 7 percent range for 1985.^{2/} But the more fundamental question, of course, is whether it would be desirable policy to compensate for the somewhat slower than expected M1 growth in 1984. The economic issue revolves in part around the question of whether the shortfall represents a "permanent" downward shift in demand for money, which need not be offset later, or whether it reflects a degree of restraint on money supply that will eventually unduly constrain demands for goods and services. In the latter case, the lower money growth would need to be subsequently offset.

Our quarterly model does suggest the possibility of a downward shift in money demand since, given estimated income and interest rates, the model forecasts stronger money growth in 1984, by about 1-1/2 percentage points, than actually is occurring. However, most of this "shift" took place in the fourth quarter, when actual income and to a lesser degree money (on a quarterly average basis) are still uncertain. Moreover, the model's forecast error this year differs little from what would be encompassed by

^{1/} The concurrent seasonal adjustment procedure (as of now and before benchmark adjustments to the underlying data) would raise second half growth (QII to QIV) by 1/2 percentage point to about 3-1/2 percent at an annual rate and lower the first half by the same amount, which would moderate but not significantly change the pattern of steady deceleration in M1 growth quarter by quarter.

^{2/} Although this procedure would produce the same growth for the year as rebasing the current range and aiming at its midpoint, a rebased range would imply scope for more rapid growth early next year. This occurs because a rebased range starts at a higher level, thus arithmetically leading to relatively high actual growth early in the year if money is to move promptly to the midpoint of the new cone.

its normal range of uncertainty. Thus, model evidence about a downward demand shift is ambiguous. It is also difficult to point to institutional developments that clearly would lead to a lasting downward shift in M1 demand this year, though the recent popularity of MMDAs could be contributing to such a development.

Whether or not there have been demand shifts for money, practical, presentational considerations tend to argue against rebasing M1 at the fourth quarter midpoint of its 1984 range. In addition, the degree of looseness in the M1 to GNP relationship is such that the impact of only one percentage point of slower or faster money growth may readily be absorbed, or offset, by compensating unexpected movements in velocity. This looseness has led the Committee to express its annual growth targets for the aggregates as relatively wide ranges. But the Committee has often expressed its view about whether an aggregate can be expected to be high or low in, or at the middle of, its target range. If there is a desire to compensate for this year's relatively slow growth of M1, the size of the year's shortfall is small enough for that objective to be accomplished by growth in the upper part of the range for 1985 without altering past practice. The issue of what particular actual M1 growth would be desirable in 1985 can be more readily addressed in February, when the Committee will have more evidence about the basic strength of demands for goods and services and perhaps about the underlying behavior of M1 velocity.