

23)

**BANK PAPERS ON MONETARY TARGETS  
15<sup>TH</sup> DECEMBER 1977 - 17<sup>TH</sup> JANUARY 1978**

MR HIDDLESTON

Mr Bridgeman  
Mr Higgins  
Mr Matthews  
Mr Williams  
Mr King

#### BANK PAPERS ON MONETARY AGGREGATES AND MOVING TARGETS

1. You asked for some quick comments on these papers and on the Coghlan M1 paper. As I see it the issue of which aggregate and how to track it are largely independent. So I shall aim to discuss the Goodhart paper "Which M for emphasis" and the more recent comments by Mr King in this note and report on the other issues and the econometrics separately.
  
2. I should at the outset admit that I am in general agreement with the eclectic spirit of the Goodhart paper and with most of the points made in the paper. I also think that Mr King's summary is useful and fair. However I do not think Mr King's conclusions follow from such analysis. Since I do not have the time to comment in detail on these papers I shall attempt to review the main issues.
  - A. Money as a short run stabiliser
  
3. Monetarists are best known for their long run propositions but as I understand it one of the main arguments for controlling monetary aggregates is that shocks to the real economy will largely dissipate themselves in price/rate changes rather than real output changes if aggregates rather than interest rates are fixed. This argument is spelt out in the article by Laidler appended. An autonomous rise in expenditure will raise output and the demand for money. If the money supply is fixed interest rates must rise to bring the demand back into line. And this will have the effect of moderating the rise in expenditure compared to a situation in which rates were fixed.
  
4. For money to act as an automatic stabiliser in this way it is important that -
  - a. shocks to the demand for money are small relative to autonomous shocks to expenditure.

9. As for b. I think that most people would accept that both in theory and practice M1 responds to rate levels whereas M3 responds to rate differentials. The Bank's work suggests that because the own (OD) rate leads other rates upwards a rise in rates will lead to a perverse movement in M3. Our own work suggests that this can be the case in some circumstances but need not necessarily be the case.

#### B. Identities and Behavioural Relationships

10. Goodhart argues that the demand for M1 estimates are based on black box relationships whereas M3 figures are based on identities. However the usual build up of M1 from the PSBR, reserve changes and so on is usually taken to be a supply side identity. Given these figures a demand for M3 equation is still necessary to work out the implications of this supply for interest rates and output. If such an M3 relationship should break down errors will wind up either in a failure to meet an M3 target or in real activity or prices, just as would an M1 target and equation breakdown. It is important to realise this given that work from the Bank reads increasingly like an AA manual.

11. If the identity is seen as a demand side identity, reflecting private sector surpluses and demand for borrowing and gilts then the question is whether or not our equations and judgement in forecasting these flows are so much better than M1 relationships that we can ignore the latter entirely. I doubt that I could claim this.

#### C. The independence of Monetary and Fiscal Policy

12. It seems to be taken as axiomatic that it is better to have an aggregate such as M3 that reflects the PSBR, indeed Mr King suggests that there is something suspect about an aggregate that reserve changes and so on does not have this property. But this feature is surely a disadvantage and must lead to confusion. The most elementary textbooks emphasise that these influences are properly analysed under the separate headings of fiscal and exchange rate policy and so on. It certainly leads to problems at the econometric stage since it is not possible to identify the separate effects of variables that move together. And it leads to a control/assignment problem. If the monetary aggregates cannot be controlled independently of fiscal policy then fiscal policy (or reserve changes) must be assigned to the achievement of monetary targets, reducing policy options enormously, as has been the case recently in the foreign exchange market. Having said this I would accept that in many circumstances such

changes in the LA/CD and other differentials which have no implications for real activity.

To sum up:

1. Goodhart plays down the high short run volatility of the M1 series, manifested in a large percentage standard error. This must disqualify M1 as a short run target but some attention ought be paid to its year on year performance.
2. A breakdown in the M3 equation would be just as problematic in conjunction with an associated target as would an M1 target and breakdown. A brief review of the Bank's latest work on M3 confirms that there are severe econometric problems in this area especially for medium term forecasting.
3. There are grounds for believing that M3 could be controlled independently of IBELs and fiscal policy if the authorities lead their interest rates before market rates not behind them. However this would be more difficult than some suggest.

P. D. SPENCER  
13/12

Mr Bridgeman  
Mr Wiggins  
Mr Matthews  
Mr Bell  
Mr Williams  
Mr King  
Mr Spencer

BANK PAPERS ON MONETARY AGGREGATES AND MOVING TARGETS

There will be a meeting in Mr Middleton's room tomorrow at 4 pm  
Friday 16 December to discuss the above.

Papers needed:

Mr Middleton's minute 6 December to Mr Bridgeman  
Bank papers on Monetary Aggregates and Moving Targets  
enclosing a mass of Bank papers

Mr King's minute 9.12.77 to Mr Middleton  
Bank papers on Monetary Aggregates and Moving Targets

Mr Matthews' minute 12.12.77 to Mr Middleton  
Monetary Targets

Demand for the Narrow Money Stock - Coghlan B/Eng

Mr King's minute 12.12.77 to Mr Middleton  
Demand for the Narrow Money Stock

Mr Spencer's minute 13.12.77 to Mr Middleton  
Bank papers on Monetary Aggregates and Moving Targets

Also

Mr King 14.10.77 to Mr Middleton  
Indicators of Monetary Stance.

I think this is roughly speaking it - but you may be able to think  
of a few more relevant papers!

*E. A. Clarke*  
MISS E A CLARKE  
15 December 1977

MR MIDDLETON

c Mr Bridgeman  
Mr Wiggins  
Mr King  
Mr Matthews or  
Mr Spencer  
Mr Bell  
Mr Locke

MONETARY TARGETS: TECHNICAL ISSUES

Following last Thursday's meeting I attach a revised version of this paper, together with extra copies for you to send to the Bank, and, if you wish, to Mr Littler.

*M L Williams*

M L WILLIAMS

17 January 1978

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## ROLLING TARGETS: TECHNICAL ISSUES

### Introduction

This paper considers some of the technical problems in deciding how to monitor and formulate monetary targets which are rolled forward periodically. Annexes are attached outlining German and American experience. In this section, the principles underlying the establishment of rolling targets are reviewed, as similar considerations are relevant to their formulation. The numerical examples and graphs are all in terms of (seasonally adjusted) sterling M3, but the same factors would apply to a target in terms of M1.

Rolling monetary targets forward gives the authorities more scope for coping with two problems associated with fixed targets:

1. If a divergence from a target range occurs towards the end of the target year, it may be too late to correct in the remainder of the period, or require an over-sharp reaction in order to bring it back within the range.
2. If it was apparent that the target was being missed, the market's expectation of the authorities' likely reaction could remove any chance that remained of hitting the target. In particular, if it appeared that the target was being over-shot, the expectation of increases in interest rates would limit the authorities' ability to sell gilts.

Underlying these justifications for rolling targets is the view that monetary policy cannot be used as the sole instrument of demand management policy. It must instead be linked with fiscal policy and forecast developments in output and prices. This argues for flexibility in the setting of targets. The authorities' monetary stance cannot be judged only by its achievement or otherwise of a pre-determined target over a fixed period. The emphasis must rather be on the desired trend over time. This in turn requires that the authorities' stance is measured against actual and likely future developments in the economy, and in the light of decisions taken from time to time about economic priorities; and targets should be rolled forward accordingly.

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Moving averages can present one problem. If towards the end of a target period, money supply growth is off-target, then the necessary adjustments can be made more difficult. For example, if a growth rate has been above trend for the first eleven months of the year, then the necessary adjustment in the final month must be greater if 3 month average are used. This is because the burden of bringing the whole three months back on to the desired trend will rest on performance in just one month. This problem, however, is minimised if targets are rolled forward.

The German authorities take the approach one step further. They set an annual target as an average of the target year, compared with the average of the previous year; ie the base is effectively a twelve month average. The German system is discussed more fully in Annex I. The use of a 12 month average is presentationally confusing, and should be regarded as a substitute for rather than a complement to a system of rolling targets.

Annex III discusses another suggestion: that monetary growth should be presented on the basis of movements in the aggregates over the last twelve months; ie the base period would change as new figures became available. This may on occasion be valuable, when monitoring growth, but the Annex points to <sup>some</sup> difficulties with the measure.

### Which Three Months?

Basing the target announced in the budget on a 3 month period centred on the end of a financial year - the closest parallel to what was actually done in 1977 - present a number of difficulties. This is because the base period figures would themselves have to be forecast, and in order to provide a figure for the 3 month period centred on banking April it would be necessary to look forward to the end of banking May. With an early April budget outturn figures would not normally be available even for banking March. Basing the target on a single month (as was done in 1977) reduces the problem a little, but the marked monthly fluctuations often experienced around the end of a financial year make this a risky procedure. Thus in 1977 M3 was virtually flat in banking March (which would have meant imposing a higher velocity of circulation than originally intended if that month had been the base period), but then increased by nearly



[REDACTED]

action) could not usually be before November because of the need to await the return of Parliament and to complete the autumn NIP, and by that time the October figures may be available. There might therefore be a case for choosing a July-September base in order to reduce the difficulties inherent in pushing the base back into the past.

### Point or Range

Targets set in terms of ranges leave the authorities open to criticism if each time that they are rolled forward, the new base is towards the top of the previous range and no explicit allowance is made for this in the new target. Such base drift would allow targets to be set that are apparently unchanged, but in fact less restrictive as no attempt is made to offset any overshoot in the previous period. A point target would require the authorities to justify explicitly their decision not to allow for over-or-under-shooting.

But point targets have some serious disadvantages. Although a range may appear to carry with it an implication about intervention points for official action to bring the money supply back on course, a point target would almost certainly allow the authorities little scope for delaying any policy correction. Its spurious accuracy could have a serious destabilising effect on the market; far from the authorities being in a position to offset any divergence from the target, the markets' reaction would add to such divergence. The target would become a knife-edge. The arguments in favour of flexibility therefore strongly favour the use of ranges. For the same reason there would be no value in setting a point target in the form of a ceiling (a floor would be out of the question) as the authorities would have to operate well below it to avoid an adverse market reaction. Indeed the target would become a ceiling even if it was not planned as such.

If a range is chosen there will still be a need publicly to show an awareness of base drift when setting new targets which will have to be justified in terms of past, as well as future performance. Base drift, however, is only a symptom of missing the target; it says nothing about the reasons for the miss or whether it should be reflected in the new target.

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### Expression of the target

The purpose of a range is to avoid problems caused by erratic movements in the statistics and to provide some leeway if developments elsewhere do not turn out as foreseen when the target was set. The width of the range must be such as to allow scope for these effects, but not be too wide so as to blur the purpose of the targets. With rolling targets, the problem of leeway is less, as there is less time for the assumptions underlying the target to become invalidated; the range in US rolling monetary targets has been 2% to 3%, and has varied both over time and between targets.

Following the Chancellor's announcement of a range of 9-13% for 1977-78 commentators have presented the authorities' aim<sub>as</sub> being to keep cumulative growth over the period within 9-13% when expressed at an annual rate. This interpretation has been rejected by the Chancellor but the range has nevertheless become to be defined in terms of a "cone" (see Graph B, which shows monetary growth this year compared with the target cone). The market tend to regard the sides of the cone as intermediate targets leaving the authorities little flexibility over the target year. Since erratic fluctuations at the start of a period could give a misleading picture of the trend, it was perhaps lucky that the first couple of months of 1977-78 were below the target range rather than above. If the order of the months May to September had been reversed, there might have been pressure on the authorities to initiate fairly severe action at an early date as the annualised figures would have been above the accepted range for each of the four months.

An alternative solution would be to express a target differently; for example by specifying that the money supply should not vary more than 1 or 2% above or below the desired growth path of 11%. Thus the present Canadian target is for a growth rate of M1 of between 7% and 11% a year from June 1977, but if growth is kept within a band 2% above or below the mid point of the range, growth is regarded as being on target. Such a system allows more scope for fluctuations in the earlier part of the period, and therefore can be thought to provide a more realistic frame of reference. But a target expressed in this

[REDACTED]

way is equivalent to monitoring by parallel bands; these are shown as dotted lines on Graph B. It has an added complication that it would not be possible to monitor the achievement of a target in terms of the usual annualised growth rates; comparisons would have to be in terms of the money stock outstanding.

If the targets are to be rolled forward every six months, parallel bands are apparently more generous to the authorities than a cone format. They could allow the base to drift upwards by 2% each six months period; in terms of the Graph, the authorities could set point X as a new base and still claim that it was on target; with a cone, point Y would be the maximum. But such marked upward drift in the base period would clearly be transparent and undermine the authorities' intention. On the other hand, to allow variation of only plus or minus 1% would be too restrictive, particularly if the trainlines came to be considered as intervention points.

A formal compromise between these conflicting requirements would seem to be unnecessarily complicated. Too well-defined a target path might suggest that the boundaries of any range are intermediate targets. There are always likely to be erratic monthly fluctuations, and a few months' figures cannot therefore necessarily be taken as an indication of the underlying trend. The solution perhaps lies in more positively drawing attention to the trend rate of growth; using 3 months averages should assist this. The targets should similarly be expressed as a trend; for example "a trend in the range 9-13%".

### Monitoring and Presentation

The authorities will internally monitor monetary growth against the performance of the economy and their primary objectives; and they will form a view of the effect of the monetary target chosen and the desirability of any policy changes. The public, however, will also be in a position to form their own conclusions from the extensive monetary data published. The way the authorities choose to present the figures can nevertheless have a significant impact on how the information is received and interpreted and how the markets react. It is important to note that rolling targets forward does not allow the authorities to avoid their performance being measured against

[REDACTED]

targets set in the past. In the US where there are always four targets extant for each aggregate, performance is measured against targets set in previous periods, as well as those set most recently (see Annex II).

The simplest way of assessing monetary growth, assuming that it is generally accepted that the movements in any one months' figures are subject to too much fluctuation, is to judge the underlying trend on the basis of growth over the last three months. This is illustrated in Graph C, which shows three monthly annualised rates. There are considerable fluctuations in the measure and it is clear that there are disturbances in the underlying trend which dominate any changes in the three monthly figures. Such changes should therefore not be presented as an indication of the trend, in the absence of additional information.

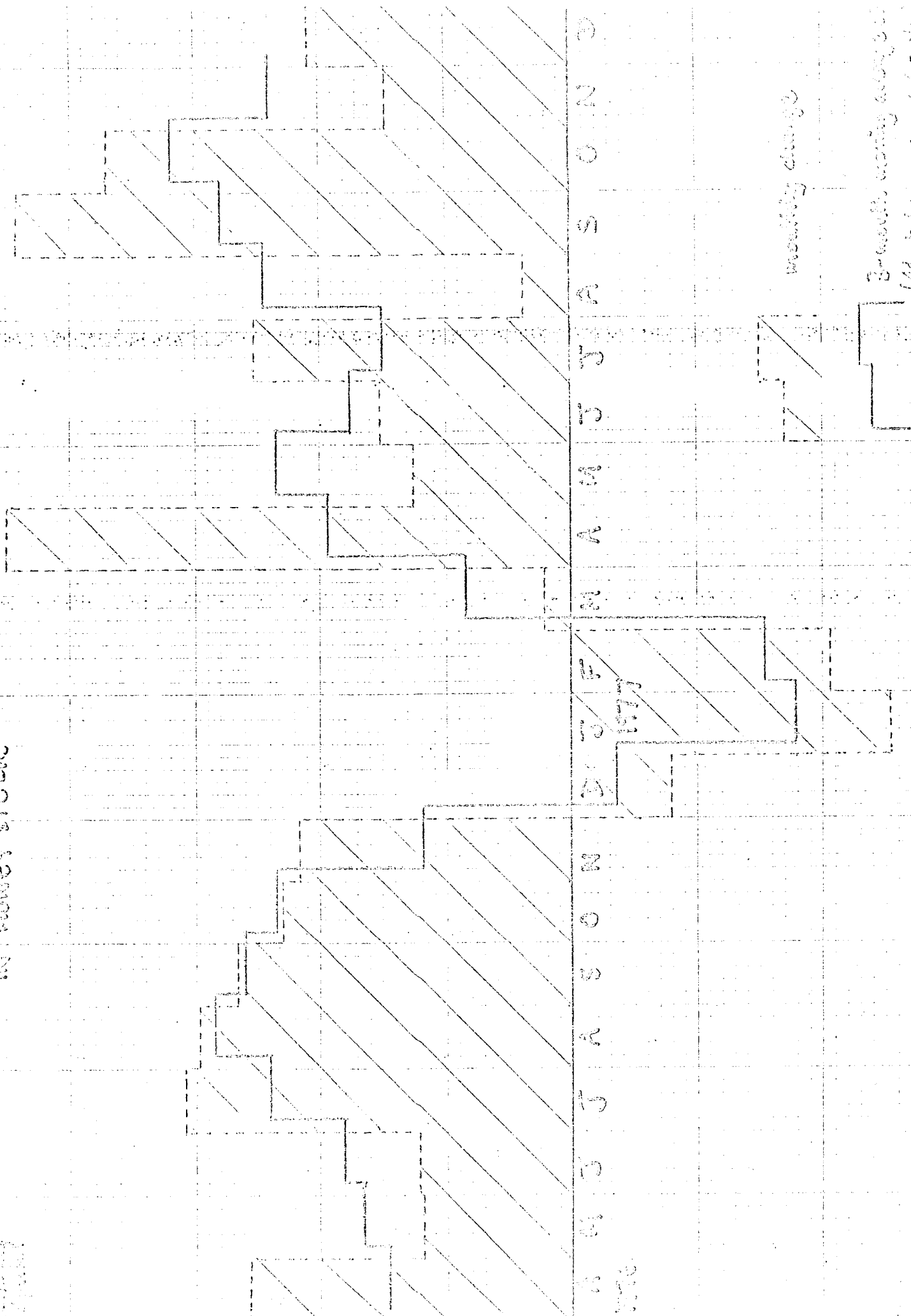
The obvious solution, leaving aside the problem of fluctuations at the start of the target year, is to annualise on the basis of growth in the target year to date. The logic of a three month moving average base is to monitor by annualising the rate of growth in the latest three months, compared with the base period. Graph D shows annualised rates this year for the outturn to date together with an annualised three month moving average compared with a three months base straddling banking April. To allow comparability this 3 months base was used for both plots. The need to centre results on the middle of the 3 months means that the outturn for, say, the April period, will not be known until mid June. In order to show more results the graph therefore has been projected forward on the basis of our tentative forecasts. It is clear that monitoring on a three monthly moving average results in less fluctuation in the annualised rates, and this measure will be presentationally valuable. However, since there are clearly large fluctuations about the underlying trend, any measure that includes a relatively small number of months will not necessarily give a good indication of that trend. In the early months of the target year therefore it will be particularly important for the authorities to have a clear understanding of the information about recent and prospective monetary growth that has been included in the latest target, and whether any deviation justifies action.

GRAPH A: MONTHLY CHANGE IN MONEY STOCK

1970

4800  
4600  
4400  
4200  
0  
-200  
-400

A M J J A S O N  
D F  
M A M J J A S O N

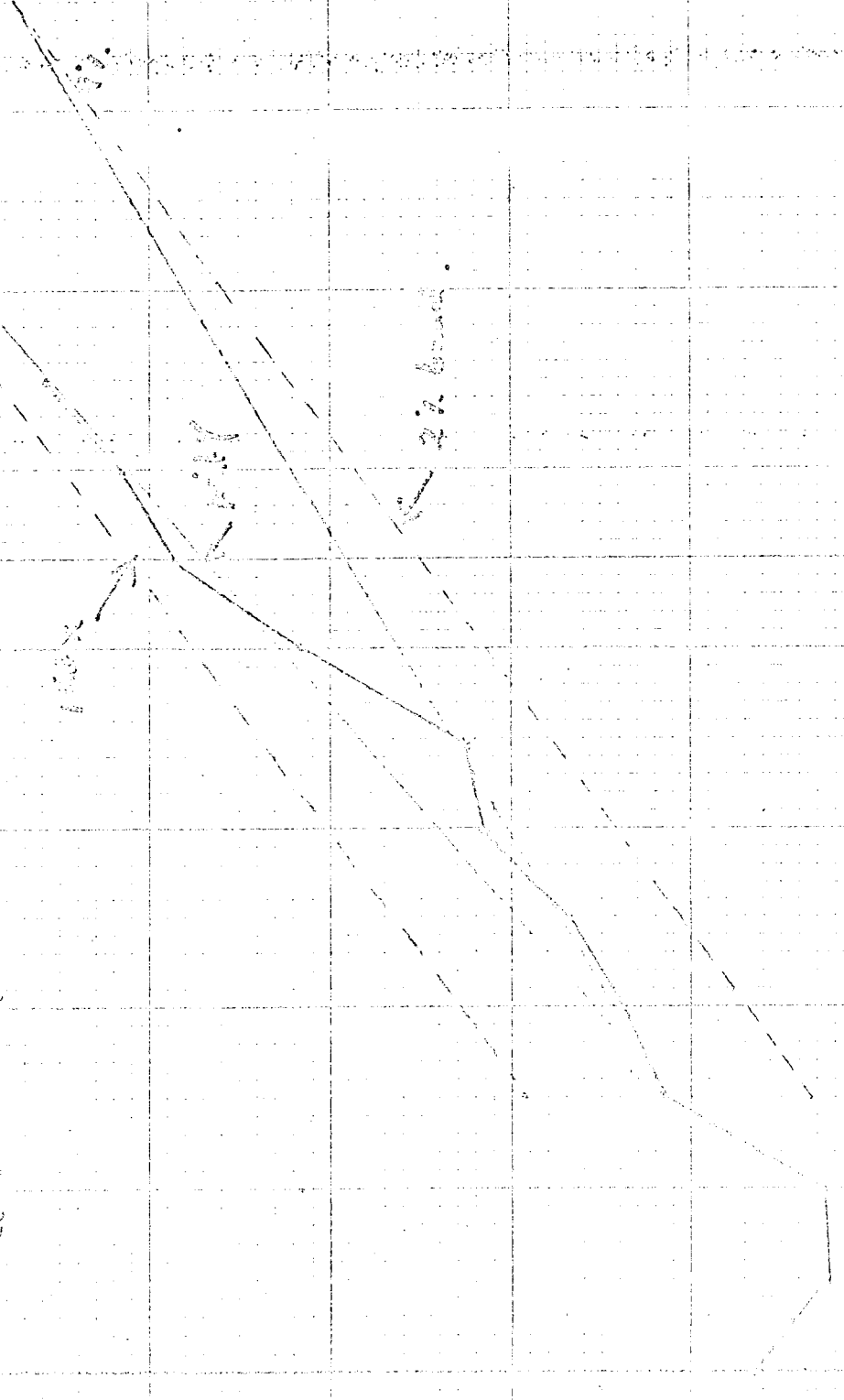


monthly change

3-month moving average  
(Start by one square for clear)

Case 2 Heavy Survey (POMM)  
11/27/72  
11/27/72

(Spiral bound)

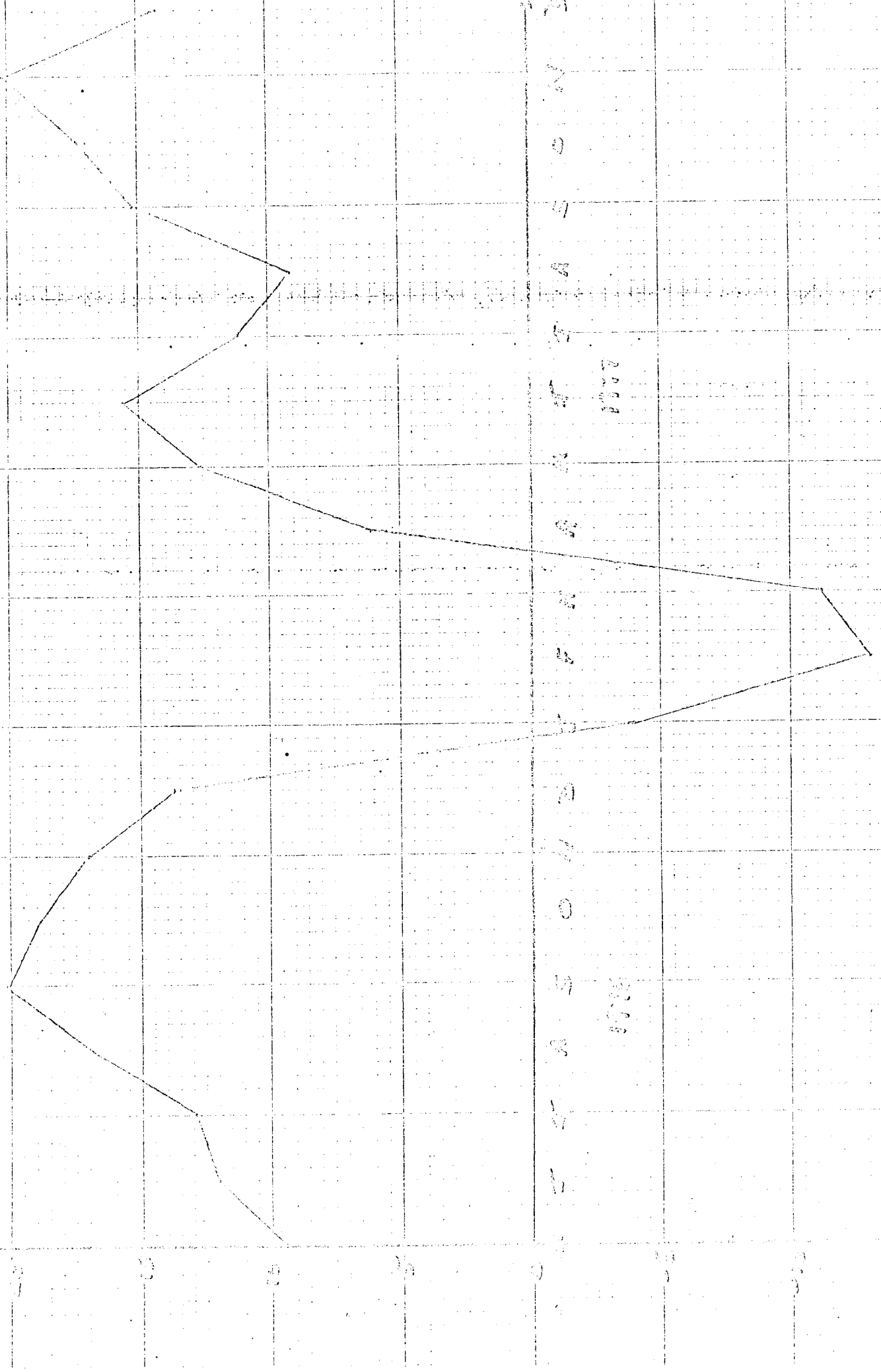


10 9 8 7 6 5 4 3 2 1 0

11/27/72

Area: 2000 sq. ft. (approx.)

Sum C

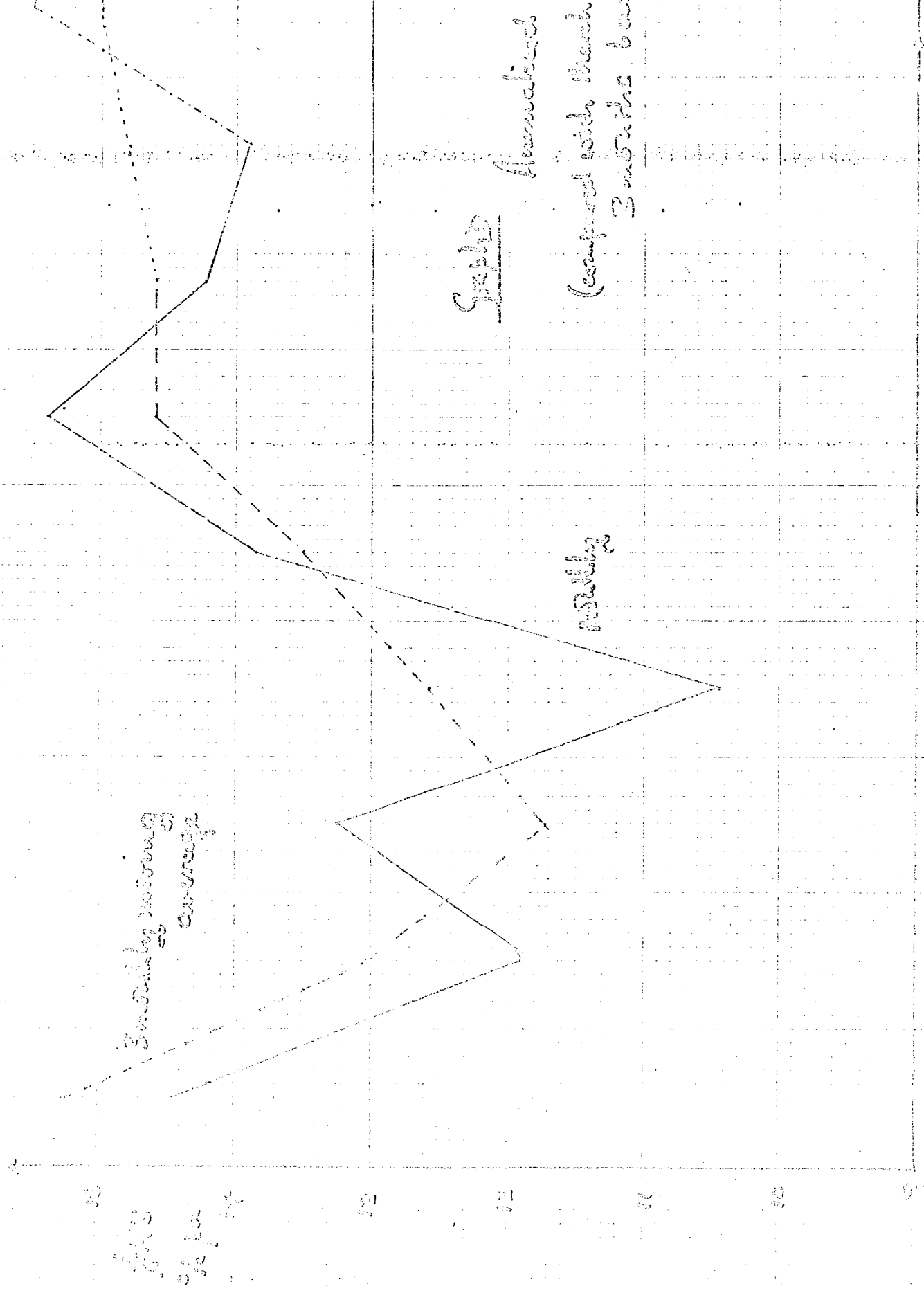


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

1000

1000

wind (p.m.)  
 wind (a.m.)  
 (break)



Monthly average

Monthly

Graph

Annualized Graph Rate:  
 (compared with March - being  
 3 months base)

June July Aug Sept Oct Nov Dec Jan Feb  
 1977 1978

[REDACTED]

ANNEX I : MONETARY TARGETS IN GERMANY

The German authorities have announced since the end of 1974 quantitative targets for the rate of monetary expansion. The targets have been set in terms of Central Bank money; ie notes and coin in circulation plus the compulsory reserves against domestic liabilities that banks have to hold with the Bundesbank (calculated on the basis of constant reserve ratios). Different reserve ratios are required for different categories of deposits; Central Bank money can therefore be regarded as a weighted average of other monetary measures. The Bundesbank believe that Central Bank money is superior to these other measures because it is not subject to erratic movements between the different types of bank deposits, for example following changes in relative interest rates; it is under control of the authorities (being equivalent to a base money concept) and directly reflects the underlying trends. As the attached graph E shows, Central Bank money has grown more smoothly than other monetary measures.

The target for 1975 was formulated in terms of the growth in Central Bank money during 1975, but for subsequent years, the targets have related to average growth over the previous year. The change was made because the movement of Central Bank money is subject to chance fluctuations from month to month, and these could more readily be smoothed if the average over the year was measured. In effect, the base is a 12 month moving average; a corollary is that monetary growth is monitored by comparing growth over the last 12 months with the base 12 months. The use of a 12 months average, however, carried with it considerable problems. If the underlying growth increases towards the end of the base year, the authorities can be left with an impossible burden in trying to bring it back on trend. For example, the Bundesbank set a target for 1977 of 8% over the average of 1976. The rate of growth in the last months of 1976, however, was somewhat above 8%; as a result, an 8% target for the average of 1977 was equivalent to a target of about 6% when measured from the end of 1976 to the end of 1977. It should also be noted that German commentators did not seem to understand that the 8% target was relatively restrictive. The German authorities, in order to underscore their stance, set an additional requirement of 6-7% growth from the last quarter of 1976 to the last quarter of 1977. They have repeated this in setting the target for 1978. The use of a 12 month average is an attempt to set objectives for the authorities in terms of the desired trend of monetary growth. Any comparison of two 12 month periods will during the target year include some months of overlap. The system should therefore be seen as a substitute for rolling targets. Although it would be possible to roll forward a 12 month moving average that would add to the difficulties of presentation already inherent in the system without any advantage in terms of linking different periods of monetary growth.

The broad criteria when setting a target has been that the growth in money holdings should be restricted to the growth of productive potential and "unavoidable" price increases. Only single targets rather than ranges have been set. The table below

shows how the targets set for the last three years break down:

	<u>1976</u>	<u>1977</u>	<u>1978</u>
Increase in Production Potential	2%	3%	3%
Increase in Capacity Utilisation	2½%	2%	some rise
Unavoidable Price Increases	4-5%	4%	3½%
Change in Velocity	some rise	-1%	some rise
Target	<u>8%</u>	<u>8%</u>	<u>8%</u>

The figures for productive potential<sup>and</sup>/capacity utilisation seem to have been both targets and forecasts; and those for changes in velocity are clearly forecasts.

The figures for unavoidable price increases are certainly not forecasts, but their status is not clear. In setting the 1978 target, the Bundesbank said that the rate of price rises "must and can" be reduced to 3½%. The Bundesbank have also emphasised that the money supply targets are not to be taken as a guideline for incomes policy purposes, since an improvement in employment requires that production costs are kept to a minimum. The targets are primarily intended to establish a monetary background aimed at promoting other policies, and are therefore consistent with the primary objectives for growth and stability, rather than the latest forecasts.

The Bundesbank have consistently accepted overshooting of the target; their experience is summarised in the table below:

<u>Targets Set</u>		<u>Outturn</u>	
		end year to end year	average year to average year
1975	end 1974 to end 1975:	<u>8%</u>	9.9%      7.8%
1976	average 1975 to average 1976:	<u>8%</u>	8.4% <u>9.2%</u>
1977	average 1976 to average 1977: (and 6-7% from Q4 1976 to Q4 1977)	<u>8%</u>	10.2% <u>9.0%</u> (after 11 months)      (after 11 months)
1978	average 1977 to average 1978: (and 5-7% from Q4 1977 to Q4 1978)	<u>8%</u>	

The Bundesbank have been careful to explain why the target was overshoot, and how this should be reflected in the new target. For example, when setting the target for 1977, the Bundesbank noted that the real growth of the national product had been larger than

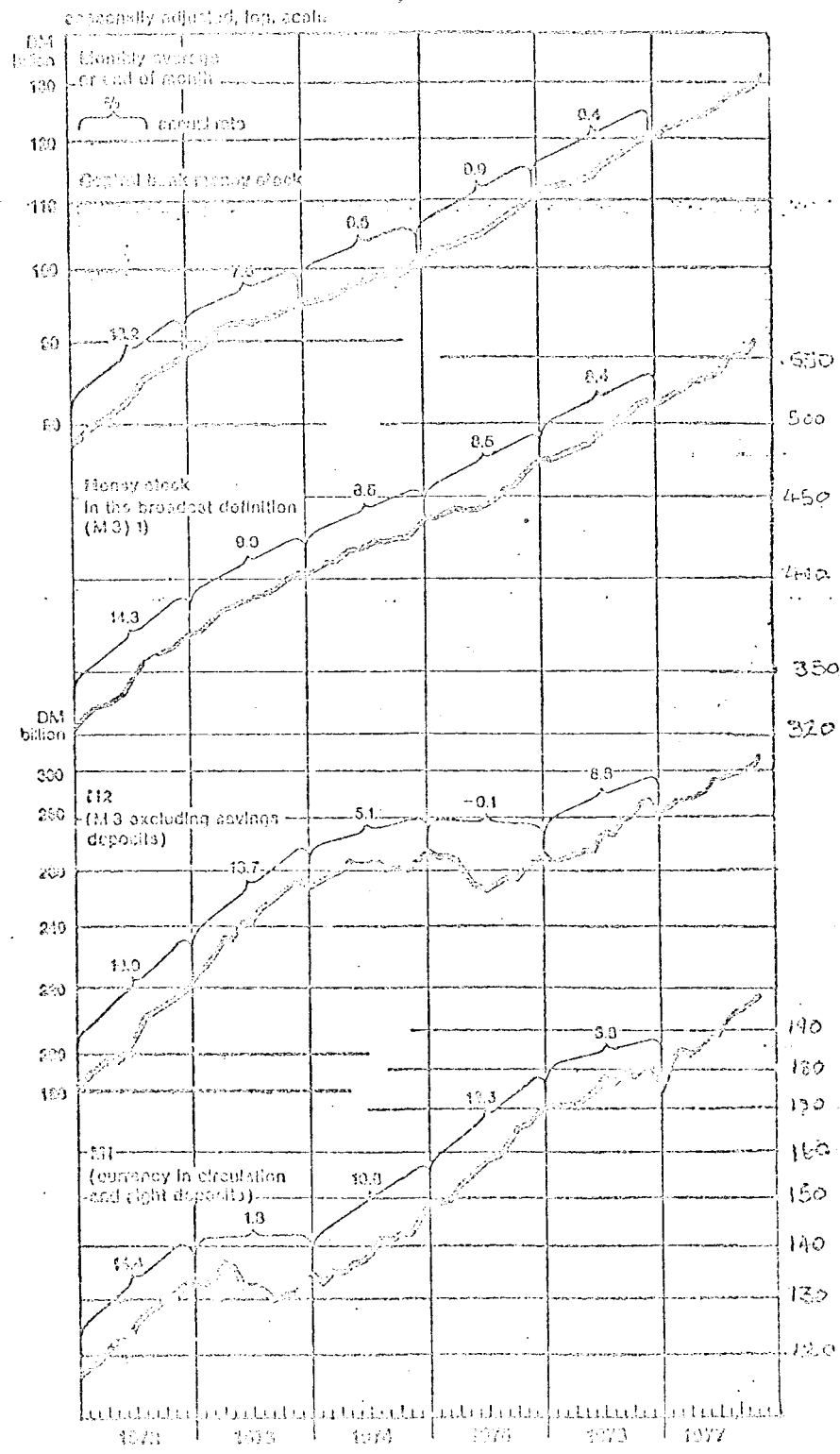
[REDACTED]

expected during 1976, and the increase in prices smaller than had been planned. The nominal growth was as predicted, at 9%. The velocity of circulation, however, did not rise as had been assumed, mainly because, it was thought, enterprises deliberately expanded their cash holdings and inflows from abroad also added to idle balances. As a result, some rise in velocity was built into the target for 1977,

In the event it does not seem to have materialised and has been implicitly built again into the target for 1978. 8% however, still looks relaxed; and the Bundesbank have clearly been guided by the need to keep interest rates low. There does not seem to have been any other attempt to compensate for overshooting; the German authorities have throughout emphasised the need for their targets to remain credible. To ensure this, "it is not enough to pursue the objective with determination; it is also necessary to re-examine the target - which was originally formulated in a particular situation and on particular assumptions - from time to time and to correct it if it need be, for it is of course not an end in itself but only a means to the end of a more successful and a more smoothly operating economic policy". (Quote from the Bundesbank's Annual Report for 1976).

# Monetary Growth in Germany

Central bank money and money stock  
 by type of institution



1) Currency in circulation, sight deposits, time deposits and funds borrowed for less than one year, savings deposits of statutory holders.

## ANNEX III : MONETARY TARGETS IN THE UNITED STATES

In spring 1975, the US Congress adopted a resolution requiring the Federal Reserve to report periodically its "objectives and plans with respect to the ranges of growth or diminution of monetary and credit aggregates in the upcoming twelve months". Since then the chairman of the Fed has reported to Congress at 3-monthly intervals announcing targets, in the form of ranges, for M1, M2, and M3. Each target has been based (other than the first for the 12 months from March '75) on the outturn of the immediately preceding quarter to the average of the quarter 12 months from the base quarter. At the same time, projections are given for the growth of the monetary aggregates over the next two months. These however are a guide to open market operations, rather than targets.

The practice of rolling targets forward complicates any assessment of the US authorities' performance. Money supply growth can be, and is, compared with four different targets, although public attention is usually focused on performance measured against the most recent target. By rolling forward the authorities may never meet a target, as the base is moved before the end of the period to which it relates. Any overshooting can be incorporated into a new target as a higher base and, as a result, the targets actually set may be less restrictive than they appear. An analysis of US targets, suggests that M1 has drifted up by only  $\frac{3}{4}$  per cent over the  $2\frac{1}{2}$  years since targets were first published. There are nevertheless considerable quarterly variations. M2, however, has drifted up by  $2\frac{1}{2}$  per cent and M3 by  $3\frac{1}{2}$  per cent. Over the same period there has been some attempt to reduce the target ranges. The current targets for the four quarters from Q3 1977 are 4-6 $\frac{1}{2}$  per cent for M1, 6 $\frac{1}{2}$ -9 per cent for M2, and 8-10 $\frac{1}{2}$  per cent for M3.

Growth in M1 and M2 since late 1976 is shown on graph F and the outturn to Q3 1977 and Q4 1977 shown on the attached table. The last four base quarters for M2 have clearly drifted upwards, although in Q4 1977 money stock was still within the target ranges set 4 quarters earlier. M1, on the other hand finished the year to Q4 1977 outside its target range. It was also above the targets set from Q1 1977 and Q2 1977, although it is almost within that set from Q3 1977. M1 growth was particularly rapid in the autumn of 1977 when it rose considerably above its target range in spite of increases in short term interest rates. These increases, at a time when velocity was expected to rise, were criticised both by monetarists and those concerned with real economic growth. The difficulties both of predicting and controlling monetary growth has accordingly cast legitimate doubt on the appropriateness of the targets. It has been possible to reduce the targets since 1975 but this will become increasingly difficult; and the Fed have expressed privately their consciousness of the problems in revising targets upwards. Some move in this direction is likely to become necessary as the targets set recently have all been somewhat below the rate of growth of nominal GNP which has been over 10%. However, when setting targets for Q3 1977 the Fed stated its determination to maintain monetary control.

[REDACTED]

by maintaining its M1 target, and reducing that for M2. Even this did not satisfy those commentators who expected tighter targets on the basis <sup>of</sup> velocity was likely to rise.

The Federal Open Market Committee's records give some indication of the authorities' thinking in setting new targets, and the extent to which allowance is made for overshooting. Base drift is recognised as an issue, but decisions whether to compensate for overshooting are based on more fundamental considerations, such as the behaviour of the real economy, and changes in income velocity. Base drift will be subsumed in the analysis of these factors and the consequent setting of the new target. In its reports, which indicate considerable disagreement between members, the FOMC measure the outcome against the target ranges, discuss those factors that were responsible for over- or undershooting and outline the reasons for its choice of new target ranges; but very little quantification is given of the various factors that go to make up the targets.

The US press and public has traditionally concentrated its attention on M1. Uneasiness about deviation of M1 from its projected range has not been significantly tempered by the better performance of the other aggregates. Similarly overshooting in the other aggregates has not been a matter of concern so long as M1 is under control. Recently the FOMC has tried to shift focus away from M1 and to give more weight in its deliberations to the behaviour of M2 (which corresponds more nearly to the UK's M3). The FOMC instruct the New York Fed to give equal weight in open market operations to the two aggregates, and have been very careful to avoid attaching importance in public to any one measure. There are also supporters within the Fed of M3. But the market are aware that the Fed's forecasting and judgements stem primarily from M1 and the markets are probably sympathetic to monetarists' belief in the role of "narrow" money. There are, however, difficulties, other than presentational, in making the switch. Although M2 had had a better record in the last year or so (in the sense of moving more closely in accordance with the forecast derived from the Fed's own equations), this stability may be more apparent than real as the definition of M2 is unsatisfactory in a number of important aspects. M3, which is roughly equivalent to our measure of wider liquidity, has fewer deficits, but with present reporting procedures, the full figures do not become available quickly enough to be of use for operational purposes.

US Money Supply Growth Since Q3 1976

Growth at an Annual Rate %

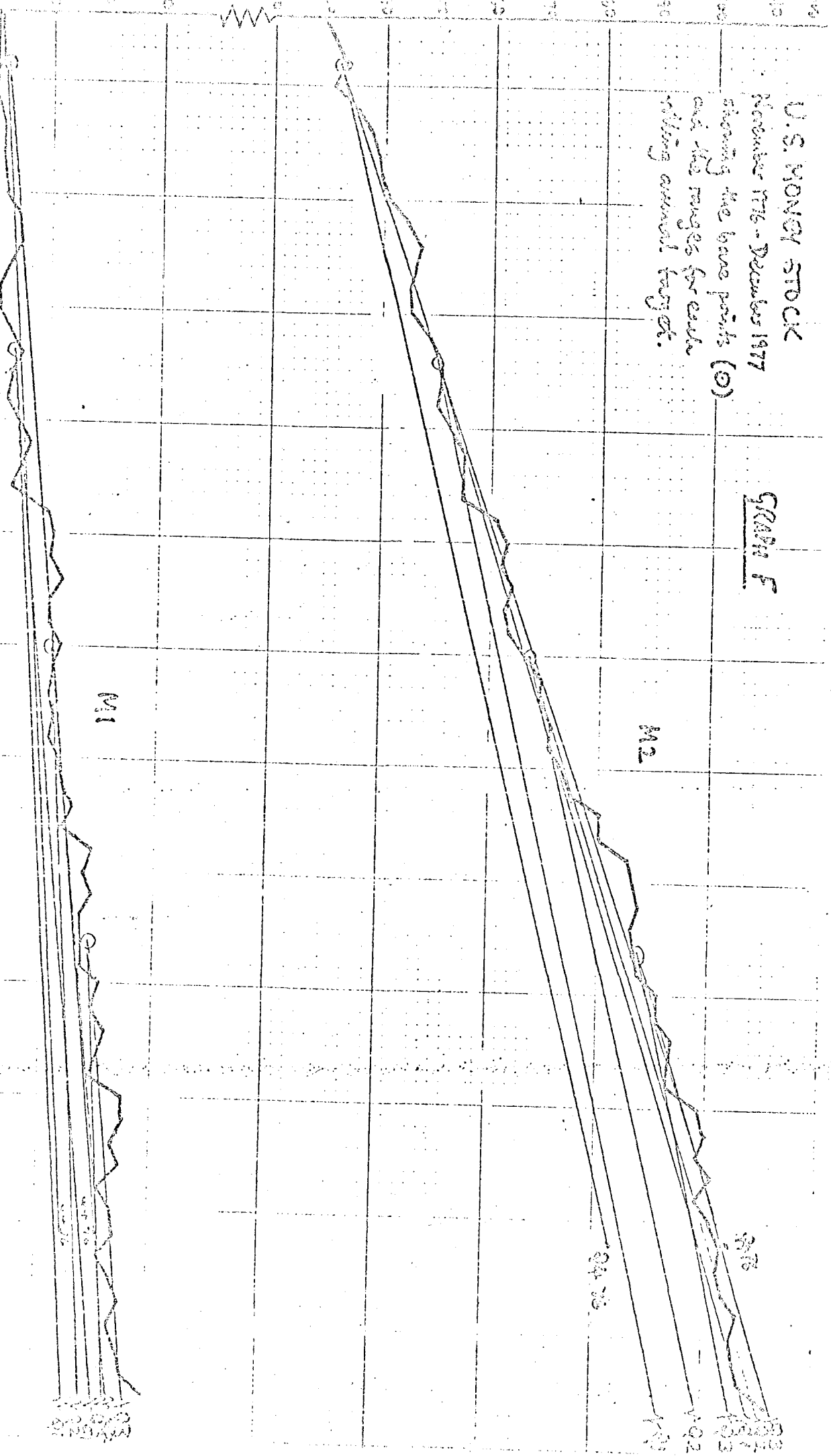
<u>Base</u> <u>Quarter</u>	<u>Target</u> <u>Set %</u>	<u>to Q3 1977</u>	<u>to Q4 1977</u>
<u>I. M1</u>			
Q3 1976	4½-6½	7.4 (4 quarters)	-
Q4 1976	4½-6½	7.5 (3 quarters)	7.3 (4 quarters)
Q1 1977	4½-6½	9.2 (2 quarters)	8.4 (3 quarters)
Q2 1977	4-6½	9.5 (1 quarter)	8.2 (2 quarters)
Q3 1977	4-6½	-	6.7 (1 quarter)
<u>II. M2</u>			
Q3 1976	7½-10	10.9 (4 quarters)	-
Q4 1976	7-10	10.1 (3 quarters)	9.5 (4 quarters)
Q1 1977	7-9½	10.0 (2 quarters)	9.3 (3 quarters)
Q2 1977	7-9½	10.8 (1 quarter)	9.2 (2 quarters)
Q3 1977	6½-9	-	7.6 (1 quarter)

# U.S. MONEY STOCK

November 1976 - December 1977

Showing the base points (O) and the ranges for each rolling annual target.

GRAPH F



11/1/76 11/15/76 11/30/76 12/15/76 12/30/76 1/15/77 1/30/77 2/15/77 2/28/77 3/15/77 3/30/77 4/15/77 4/30/77 5/15/77 5/30/77 6/15/77 6/30/77 7/15/77 7/30/77 8/15/77 8/30/77 9/15/77 9/30/77 10/15/77 10/30/77 11/15/77 11/30/77 12/15/77 12/30/77

ANNEX III : "THE LAST 12 MONTHS"

There are two main difficulties with the proposal that monetary growth should be monitored and presented in terms of changes in the aggregates over the last 12 months:

1. The last twelve months rate is very sensitive to fluctuations in the base month (or three months) being considered. A base for a target year might include an off-trend element, but at least this is constant when measuring performance throughout the target year. If the outturn of the current year was being monitored in terms of the last twelve months, growth to date would appear to have been very moderate - see Graph G. In coming months, however, we would suffer from the low figures around the turn of the year. Indeed, on our current expectation, the growth rate over the last twelve months will increase from the just over 7% in November to  $14\frac{1}{2}\%$  by the end of banking February. But there would not necessarily be a case for action to restrain growth, as there would have been little change in the underlying trend. In fact the trend increased some while ago (the three months annualised growth rates have been added to Graph G), although it has still not been picked up on this measure.
2. Because of these problems of fluctuation and delay, monitoring by the last twelve months would give little guide to the authorities' appropriate policy response. In particular, if there has been a below-trend rate of growth in a previous target period, then that will have been taken into account when formulating the new target. To react over and above this because the last twelve months figures suggest a rate of growth very different from the target rate, would be to double count, and could lead to over or under-shooting. Course corrections will be delayed and the authorities' responses would add to monetary disturbance rather than the reverse. It will of course be necessary to look at growth over the last twelve months or any other period when coming to establish a new target.

