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Monetary Targeting in Practice: The German Experience

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I. Introduction

From the mid-seventies on, the central banks of most major industrial countries switched to monetary targeting. The Bundesbank was the first central bank to take this step, making the switch at the end of 1974. This changeover to monetary targeting was due to the difficulties which the Bundesbank - like other central banks - was facing in pursuing its original strategy, and which came to a head in the early seventies, when inflation escalated. A second factor was the collapse of the Bretton Woods system of fixed exchange rates, which created the necessary scope for national monetary targeting. Finally, the advance of monetarist ideas fostered the explicit turn towards monetary targets, although the Bundesbank did not implement these in a mechanistic way.

Whereas the Bundesbank has adhered to its policy of monetary targeting up to the present, nowadays monetary targeting plays only a minor role worldwide. Many central banks have switched to the strategy of direct inflation targeting. Others favour a more discretionary approach or a policy which is geared to the exchange rate. In the academic debate, monetary targeting is often presented as an outdated approach which has long since lost its basis of stable money demand.

These findings give rise to a number of questions: Has monetary targeting actually become outdated? Which role is played by the concrete design of this strategy, and, against this background, how easily can it be transferred to European monetary union? This paper aims to answer these questions, drawing on the particular experience which the Bundesbank has gained of monetary targeting. It seems appropriate to discuss monetary targeting by using a specific example, since this notion is not very precise. This applies, for example, to the money definition used, the way the target is derived, the stringency applied in pursuing the target and the monetary management procedure.

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II. Fundamentals of monetary targeting

1. The ultimate objective of monetary policy

Defining an intermediate monetary policy strategy is not an end in itself. It serves to achieve a specific ultimate objective. Thus, the Bundesbank's monetary policy is primarily oriented towards the objective of price stability. This is in line, for one thing, with its statutory mandate. The Bundesbank Act of 1957 assigned to the Bundesbank the primary duty of "safeguarding the currency". The Act tied the requirement to support the general economic policy of the Federal Cabinet to the qualification that this support does not contravene the Bundesbank's priority task. Secondly, the primacy of monetary stability is also in line with a modern central bank's understanding of its role. In the light of all past experience, the assumption of a stable, negatively sloped long-term Phillips curve does not apply to Germany. A trade-off between inflation and unemployment thus exists, at best, in the short term.[1] Given rational expectations and completely flexible markets, monetary policy is unable to generate higher employment, not even temporarily. But even if the hypothesis of political inefficacy is not met, there is not much to be said in favour of attempting to pursue an active stabilisation policy. Given our limited knowledge about the exact course of the transmission process, such a policy would itself run the risk of triggering macroeconomic disruptions.[2]

In the longer term, by contrast, with stable prices the central bank creates the monetary conditions for steady economic growth and a high level of employment. Empirical studies likewise show that inflation is detrimental to growth. Moreover, there is evidence that growth losses occur not only when inflation rates are high, but also when they are low.[3] It is therefore necessary to commit monetary policy to the target of monetary stability, but not to include the aim of high employment in the central bank's set of

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1 For this result see, for example: A. Weber (1994), Testing Long-run Neutrality: Empirical Evidence for G7-Countries With Special Emphasis on Germany, in: Carnegie-Rochester Conference Series on Public Policy, Vol. 41, p. 67-117.

2 Forgoing a systematic, active stabilisation policy, however, does not imply the absence of any cyclical considerations in the Bundesbank's policy. For example, during periods of combating inflation, a gradual procedure was generally chosen in order to keep the short-term negative impacts on output and employment accompanying disinflation at a low level.

3 See also K.-H. Tödter and G. Ziebarth (1997), Price stability vs. low inflation in Germany: An analysis of costs and benefits. Discussion paper 3/97, Economic Research Group of the Deutsche Bundesbank, Frankfurt.

targets. This order of priorities is nowadays found not only in Europe, but also in other countries.[4]

2. The intermediate target strategy

A particular problem of monetary policy is that its final objective variable - the price level - cannot be managed directly and is not exclusively determined by monetary policy in the shorter run. For one thing, monetary policy measures are not reflected directly in the inflation rate. Secondly, in the short run, the level of the inflation rate is also determined by other factors, especially by wage policy and external influences. These two things together imply that there are long and variable time lags between a monetary policy stimulus and the response of the price level - time lags which the central bank, too, cannot predict with certainty. This uncertainty means, of course, that the risk of procyclical behaviour increases.

In this situation, intermediate-target-oriented strategies offer a way out. They allow the central bank to pursue its final objective without knowing all the particulars of the transmission process. However, an intermediate target must meet the following important preconditions:

- it must be manageable by monetary policy instruments, and
- have a close relationship with the inflation rate.

In concrete terms, this requires such an intermediate target to respond to changes in the central bank's operating target in a stable and predictable manner and, in addition, to indicate the effects on the final objective reliably and at an early stage.

However, intermediate targets not only serve to simplify the monetary management process but, in addition, play a major role in communication between the central bank and the public. An intermediate target must therefore "guide the public's and other economic policy operators' monetary policy and inflation expectations."[5]

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4 See also C. Goodhart and J. Viñals (1995), Strategy and Tactics of Monetary Policy: Examples from Europe and the Antipodes, in: J. Fuhrer (ed.), Goals, Guidelines, and Constraints Facing Monetary Policy, Federal Reserve Bank of Boston Conference Volume, pp. 139-187.

5 See also J. v. Hagen and M. J. M. Neumann (1996), A Framework for Monetary Policy under EMU, in: Deutsche Bundesbank (ed.), Monetary Policy Strategies in Europe, p. 148.

If intermediate targets are publicly announced - which is always the case in practice - they constitute a kind of self-imposed commitment for the central bank. The central bank's performance becomes verifiable. Target misses require a detailed justification. Compared with a purely discretionary policy, it is less tempting in such an environment to try to achieve short-term success in increasing employment at the expense of price stability.[6] Given sufficient transparency, an intermediate target strategy, by way of the concomitant self-imposed commitment, facilitates the stabilisation of inflation expectations and their being fixed at the central bank's envisaged level. Unnecessary friction in the overall economy is thus avoided and the effectiveness of monetary policy is enhanced. Moreover, the self-imposed commitment helps the central bank to resist other players' demands running counter to the needs of stability, by reference to the intermediate target. In this way the commitment also fosters the central bank's independence.

3. The money stock as the preferred intermediate target

There are a number of indicators which can be used as an intermediate target: interest rates, foreign exchange rates and monetary aggregates. However, there are numerous objections that can be raised against interest rates. Short-term nominal interest rates can be managed by the central bank, but they lack a convincing link with the final objective. In that respect, long-term interest rates come off better, but they cannot be managed satisfactorily, particularly in the presence of globalised capital markets. Finally, real interest rates and the term structure of interest rates, which are more important in the transmission of monetary policy stimuli, can only be measured inadequately or do not have a stable correlation with the final objective.

Foreign exchange rates are an appropriate intermediate target for smaller countries only. By linking itself to an anchor country with relative price stability, a small country can import the successful stability track record of the latter. However, such an option does not exist for a larger country like Germany. Significantly, exchange rate pegging does not figure in the debate on the European Central Bank's strategy.

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6 See also R. Barro and D. Gordon (1983), A Positive Theory of Monetary Policy in a Natural Rate Model, in: Journal of Political Economy, Vol. 91, No. 4, pp. 589-610 and the appended literature.

At least in the major countries, a number of factors suggest that the money stock is in a sense the ideal intermediate target for a monetary policy whose priority task is to ensure monetary stability. Thus, the changeover to monetary targeting was the central banks' strategic answer to the acceleration of inflation during the seventies. Perhaps it is no coincidence that the Swiss National Bank and the Bundesbank, which have the reputation of being the most hawkish on inflation, have stuck to that approach, whereas others, the central banks with a more dovish reputation, abandoned it once they had overcome their biggest inflation problems.[7]

In principle, monetary targeting meets the criteria which are normally required of monetary policy strategies.[8] It is effective because it enables the central bank to achieve the final objective of price stability. It is transparent since the central bank thus discloses the most important guiding principle behind its decisions. It involves a self-imposed commitment and accountability on the part of the central bank as well as a clear demarcation of responsibilities. Finally, it is geared to the medium term.

There is probably no disputing the fact that inflation is a monetary phenomenon in the long run. Regardless of the precise group of countries, the money stock definition used and the selected method of analysis, empirical evidence impressively bears out the quantity theory as a hypothesis for the longer-term relationship. A comprehensive study by the Federal Reserve Bank of Minneapolis concludes that "in the long run there is a high (almost unity) correlation between the rate of growth of the money supply and the rate of inflation. This holds across three definitions of money and across the full sample of countries and two subsamples."[9] For this reason, money stock aggregates crop up in the set of monetary policy indicators of most central banks.

If the money stock is to function as an intermediate target, stricter requirements have to be met nevertheless. A central precondition is sufficient stability of the underlying monetary relationships. When looking at money demand in Germany, more recent external and internal empirical studies show that the hypothesis of a long-term

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7 B. Bernanke and F. Mishkin (1992), Central Bank Behavior and the Strategy of Monetary Policy: Observations from Six Industrialized Countries, NBER Working Paper No. 4082, p. 38.

8 See European Monetary Institute (1997), The Single Monetary Policy in Stage Three, Elements of the monetary policy strategy of the ESCB, Frankfurt, p. 3.

9 G. T. Jr. McCandless and W. E. Weber (1995), Some Monetary Facts, in: Quarterly Review, Federal Reserve Bank of Minneapolis, p. 3.

relationship between the money stock, interest rates and GNP still holds true.[10] Opinions are more divided on the question of whether the parameters of that long-term relationship have changed in the course of German monetary union. Some analyses assume a structural break, i.e. they identify a one-off shift in parameters. However, this poses few problems for monetary targeting.

The continuity of the underlying long-term financial relationships in Germany seems to primarily reflect the specific terms obtaining in the German financial markets. They are distinguished by a high degree of stability and long-termism. This is due not least to the fact that the general liberalisation and deregulation of the financial markets in Germany occurred at a very early date. For example, bank interest rates were completely decontrolled in 1967, and foreign exchange controls were lifted as early as the late fifties. Thereafter, the financial infrastructure changed only marginally. Moreover, the German universal banking system has ensured the efficient provision of virtually all financial services since time immemorial. Besides the low level of regulation, the macroeconomic fundamentals - especially the low and hardly fluctuating inflation rates in Germany - have resulted in rather low innovative pressures which has fostered the stability of money demand. The introduction of new products - such as commercial paper and money market funds - has upset monetary targeting only temporarily. On the other hand, it cannot be denied that in view of the globalisation, institutionalisation and professionalisation of the financial markets, ongoing, careful market analysis is essential in order to detect potentially detrimental factors in good time.

Furthermore, major instabilities in money demand probably cannot be confined to the latter, but also tend to affect other macroeconomic behaviour functions, such as the consumption function. That may have implications for inflation forecasts, by which a central bank is guided in the context of the strategy of direct inflation targeting.[11] Compared with this strategy, the crucial factor is not the stability of money demand in

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10 See, for example J. Wolters and H. Lütkepohl (1997), Die Geldnachfrage für M3: Neue Ergebnisse für das vereinigte Deutschland, in: Ifo Studien, Nummer 1/1997, pp. 35-54; Deutsche Bundesbank (1997), Review of the monetary target, in: Deutsche Bundesbank, Monthly Report August 1997, pp. 17-32. M. Scharnagl (1996), Monetary Aggregates with Special Reference to Structural Changes in the Financial Markets, Discussion paper 2/96, Economic Research Group of the Deutsche Bundesbank; F. X. Browne, G. Fagan and J. Henry (1997), Money Demand in EU Countries: A Survey, European Monetary Institute Staff Paper No. 7.

11 See also M. J. M. Neumann (1998), Für und Wider der Geldmengenpolitik, Zeitschrift für das gesamte Kreditwesen, Nr. 9, p. 464.

itself. "What matters is the relative stability of money demand compared with the stability of the relations included in the inflation forecast."[12]

Besides the structural changes in the financial markets, conventional wisdom holds that Goodhart's Law likewise may lead to an unstable money demand. According to that view, a stable relationship between the money stock, interest rates and income collapses if it is instrumentalised for monetary policy purposes.[13] Issing, however, has argued that "the constancy of the Bundesbank's monetary strategy and its actual success have made a substantial contribution to stabilising market participants' expectations. ... a policy of monetary targeting geared to steadiness and medium-term objectives reinforces the stability of the monetary relationship and hence the foundation of the policy itself."[14] Almost twenty-four years of monetary targeting in Germany in themselves argue against the general validity of Goodhart's Law.

But the stability of the underlying monetary relationships alone is not enough to make the money stock a meaningful intermediate target. Additionally, the money stock should run ahead of price movements, i.e. it should not be a reflection of the price movement. Recent econometric analyses for Germany suggest that the money stock M3 actually has this required lead over price movements.[15]

III. The practice of monetary targeting

1. Target formulation

The success or failure of monetary targeting also depends on its design. Bernanke and Mishkin stated that "clarity, openness, and consistency in the targeting procedure [are] potentially almost as important as whether the targets are met. Central bank actions that increase the clarity of its policies include: targeting only one aggregate at a time; announcing targets on a regular schedule for a specified horizon; being as consistent as

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12 J. v. Hagen and M. J. M. Neumann (1996), loc. cit., p. 141.

13 See also C. Goodhart (1975), Problems of Monetary Management: The U.K. Experience, in: Reserve Bank of Australia, Papers in Monetary Economics, Vol. 1, p. 5.

14 O. Issing (1997), Monetary Targeting in Germany: The Stability of Monetary Policy and of the Monetary System, in: Journal of Monetary Economics, Vol. 39, p. 78.

15 See Deutsche Bundesbank (1997), loc. cit., pp. 17-32 and König, R. (1996), The Bundesbank's Experience of Monetary Targeting, in: Deutsche Bundesbank (ed.), Monetary Policy Strategies in Europe, pp. 107-140.

possible in the choice of the aggregate to be targeted; and giving clear explanations of the reason for and expected duration of deviations of money growth from target."[16]

In this respect the Bundesbank's approach certainly stands out by reason of its clarity and remarkable continuity, even if the Bundesbank regarded monetary targeting as an experiment in the first few years and the structures of the monetary targeting strategy only gradually took concrete shape. It is only some technical features of the strategy that have changed over time, such as the definition of the broad money stock and the numerical presentation of the annual objectives. Major elements have remained unchanged, however. This applies in particular to:

- the explicit derivation of the annual growth objectives for the broadly defined money stock from medium-term macroeconomic benchmark figures;
- the flexible implementation of monetary targets, which includes temporary departures from the medium-term rule;
- the two-stage implementation procedure, whereby the control of short-term key money market rates and bank reserves serves to achieve annual monetary targets and the final policy objective of non-inflationary growth.

From the outset, the Bundesbank has based its money stock target not - as recommended by the monetarists - on the monetary base, but on a broadly defined monetary aggregate. Other central banks have for the most part adopted a similar approach. Switzerland, too, which mostly conformed to monetarist recommendations in formulating its target for the central bank money stock, has recently been taking a closer look at the more broadly defined aggregate M3. In Germany, the central bank money stock[17] was initially chosen as the intermediate target; since 1988 it has been the money stock M3 (currency, sight deposits, shorter-term time deposits and savings deposits at three months' notice). The Bundesbank has never pursued multiple targets. The inferior theoretical substantiation of a broadly-defined aggregate is offset primarily by better econometric properties. As a result, M3 is superior to alternative definitions in terms of stability and lead properties. This is mainly because the interest-rate-induced shifts between the individual money

16 B. Bernanke and F. Mishkin (1992), loc. cit., p. 45.

17 In addition to currency, the central bank money stock comprised sight, time and savings deposits, which were each weighted by their minimum reserve ratios (of January 1974).

components, which are quite pronounced in Germany, do not play a role here, or only play a minor role.

By using a money stock definition which is less prone to fluctuation, the correlation between the expansion of the money stock and the development of macroeconomic expenditure is easier to detect. At the same time, the envisaged course of monetary policy can be derived fairly clearly from movements of the target aggregate. More broadly defined aggregates are thus more visible to the general public.[18]

To serve as a guideline, the money stock target - and that seems particularly important - is not published by the Bundesbank without any comments, but rather derived from a small number of macroeconomic benchmark data which are explained to the public. This procedure is simple and emphasises the medium-term orientation of monetary policy, even if the actual monetary targets always apply for one year. Accordingly, the annual target for monetary growth is derived from the sum of the figures

- for estimated growth of the overall production potential,
- for the medium-term price assumption and
- for the estimated trend decline in the velocity of circulation of money.

The Bundesbank - generally speaking - takes the term production potential to mean the total output which can be generated with the existing capital stock and labour potential taking due account of technological progress and a normal utilisation of factor inputs. To calculate it, the Bundesbank uses macroeconomic production functions for western and eastern Germany each, which comprise the two factors of production labour and capital as well as technological parameters. With the link to production potential, a quasi-automatic stabilisation mechanism for economic stability has been built into monetary targeting. Thus, the criticism of cyclical insensitivity which has sometimes been levelled misses the point of the monetary targeting strategy.[19]

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18 For general information on the trade-off between “controllability” and “visibility” in the selection of monetary target variables see A. Cukierman (1995), Towards a Systematic Comparison Between Inflation Targets and Monetary Targets, in: L. Leiderman and L. E. O. Svensson (eds.), Inflation Targets, pp. 192 - 209.

19 It therefore comes as no surprise that econometric studies of the reaction function of the Bundesbank sometimes arrive at the conclusion that German monetary policy also reacted to cyclical movements (in terms of the output gap). See, for instance, R. Clarida and M. Gertler (1996), How the Bundesbank Conducts Monetary Policy, NBER Working Paper 5581.

From 1975 to 1984, when inflation rates were relatively high, the Bundesbank included an "unavoidable" rate of price increase when converting the real production potential into a nominal variable. This tolerated rate of inflation was always lower than that actually expected. It was intended to exert pressure towards price stability, but not to generate it by shock, in order to prevent major negative growth. When price stability was virtually reached in the middle of the eighties, the Bundesbank changed over to a medium-term price norm or price assumption of not more than 2 %. In view of the moderate level of inflation which had been reached and was expected for the future as well, it reduced this figure to 1 ½ % to 2 % for the first time when deriving the target for 1997. Notionally, this figure should not be regarded as the optimum inflation rate, but as the maximum rise in prices which can be tolerated in the medium run. In a certain sense, this operationalises the postulate of monetary stability in monetary policy practice. The concept of the medium-term price assumption primarily takes due account of the fact that conventional price indices tend to overstate price rises for various reasons. The most recent analyses by the Bundesbank show "that the average 'bias' in measuring inflation in western Germany could be of the order of magnitude of ¾ percentage point per year".[20]

The link to medium-term inflation expectations strengthens the character of the published money stock targets as a commitment to an anti-inflationary policy. The final objective of monetary policy becomes evident and the "subservient" role of the intermediate target is underlined. Thus, it is easier to justify deviations from the money stock target which are due to temporary money demand shocks and therefore not inflationary. Finally, it is made clear that the time horizon for the control of inflation through monetary policy is primarily the medium term rather than the short term. Some think that this connection between the final objective and the intermediate target is actually a major reason why the monetary targeting strategy has survived in Germany, in contrast to other countries.[21]

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20 Deutsche Bundesbank (1998), Problems of inflation measurement, in: Monthly Report, May 1998, pp. 51-64. See also J. Hoffmann (1998), Problems of Inflation Measurement in Germany, Discussion paper 1/98, Economic Research Group of the Deutschen Bundesbank, February 1998.

21 See also J. v. Hagen (1995), Inflation and Monetary Targeting in Germany, in: L. Leiderman and L. E. O. Svensson (eds.), Inflation Targets, p. 119.

Over time it has turned out that the money stock has tended to grow more strongly than production potential. The reasons for this were, firstly, increasing DM cash hoarding abroad and, secondly, the use of money as a luxury item which was increasingly in demand owing to its function as a store of value. When deriving the money stock target for 1988, the Bundesbank for the first time added a premium of ½ percentage point to account for the declining trend in the velocity of circulation of money. It raised this to a full percentage point when setting its money stock target for 1994.

The appropriate annual average growth rate of the money stock is derived from the aforementioned benchmark data. From 1976 to 1978 the Bundesbank also formulated its money stock target in the form of an annual average. However, that turned out not to be very operational. For that reason the Bundesbank changed over in 1979 to a four-quarter target running from the fourth quarter of the previous year to the fourth quarter of the current year. In implementing it, the Bundesbank also takes a look at the monetary starting point in the fourth quarter. It not only takes due account of monetary developments in the previous year, but also gauges the liquidity supply, using longer-term yardsticks.

With the exception of 1989, the concrete money stock target has not been expressed in a single flow figure since 1979, but by a corridor of 2 to 3 percentage points. A certain corridor seems appropriate in order to cope with exogenous influences on monetary developments, short-term irregularities in the functioning of the financial markets and difficulties posed by the statistical measurement of the money stock. Furthermore, the corridor concept also reflects uncertain macroeconomic conditions. After all, the targets for the expansion of the money stock, which are always announced for a calendar year, should not deprive the Bank of any possibility of responding to changes in the performance of the economy, in foreign exchange rates or in costs and prices. On the other hand, one must admit that it will be easier to stabilise expectations the narrower the corridor is. For that reason the Bundesbank has sometimes specified in the course of a year whether it intends to aim more towards the upper end or towards the lower end of the corridor.

In view of the risk of misjudgements being included in the formulation of the target and of short-term fluctuations in money demand, the Bundesbank has always reviewed its annual monetary target in the middle of the year. However, it has only once made a

formal change to the original target formulation, namely in 1991, under the particular circumstances prevailing after German reunification. Otherwise it has always reaffirmed the medium-term target, in keeping with the steadying strategy.

2. Target implementation

The Bundesbank manages the money stock indirectly by influencing the conditions in the money market. It has never subscribed to the idea of directly managing the monetary base. The uncertainties involved in an indirect management procedure and the resultant medium-term orientation of the strategy suggest that it is better not to try to achieve money stock targets in the very short term, i.e. from month to month. Another factor arguing against this is that the financial markets would thereby be subjected to unnecessary disruptions. For that reason, the Bundesbank is not rattled by short-term fluctuations in the money stock.

It has also occasionally missed its annual targets. Since 1975 only 12 of 23 money stock targets have been attained. Especially in the initial stages of monetary targeting, which the Bundesbank itself called a phase of experimentation, the error ratio was high. That phase was followed by a relatively long period in which the money stock targets were reached. Major difficulties did not recur until the end of the eighties and in the nineties. If the disrupting factors are to be categorised, external shocks predominated in the first 15 years of monetary targeting. Although the transition to a floating exchange rate of the D-Mark against the US dollar had enlarged the Bundesbank's room for manoeuvre, it had not closed the vulnerable external flank. With the increasing globalisation of the financial markets, exchange rate volatility rose. At the same time, real economic interdependence grew. As a result, the impact of undue fluctuations in the dollar on prices, economic growth and employment could not be disregarded by monetary policy. There were repeated exchange rate upheavals and inflows of capital within Europe as well. For German monetary policy, the external economic integration thus continued to harbour considerable potential for disruption, which forced the Bundesbank on several occasions to tolerate failures to meet the monetary target.[22]

In the nineties, a number of domestic factors (especially German unification and changes in tax conditions) resulted in major fluctuations in monetary growth. The rebuilding of

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22 See also R. König (1996), loc. cit., p. 119.

the eastern part of Germany called for high fiscal transfers. Public authorities' deficit spending, along with interest rate subsidies and tax relief for private investors, resulted in a strong growth in lending, which was mostly beyond the reach of monetary policy. A role was additionally played by changes in tax regulations - especially those concerning the taxation of interest and property income - which had a temporary effect on investors' behaviour.

A third category of disruptive factors is linked to the changes in the financial markets. The influence of central bank rates on capital market rates has been reduced in line with the increasing integration of the financial markets. In addition, financial innovations, such as the introduction of money market funds in autumn 1994 and the deregulation of savings, at times left a significant mark on the movement of the money stock.

In view of the fact that the movement of the money stock was repeatedly upset by temporary shocks in money demand, the Bundesbank never geared its interest rate policy to very short-term monetary growth rates. Especially in the nineties, when the aforementioned disturbing factors considerably increased the volatility of shorter-term monetary growth, the Bundesbank focused more attention on the longer-term relationships, both in its interpretation of the monetary expansion and in its substantiation of interest rate policy decisions. Furthermore, it analyses other monetary aggregates besides the intermediate target variable. Worth mentioning here are notably the money stock M1, which primarily focuses on the currency's function as a payment medium, and more recently the money stock M3 extended, which also includes money holdings beyond M3 (in the Euro-market, in short-term bank bonds and in money market funds).

Beyond this, the Bundesbank monitors a broad range of monetary and real indicators in order to corroborate and verify the information contained in the money stock. In the financial area, this relates, for example, to the balance sheet counterparts of the money stock, meaning primarily the trend in bank lending and monetary capital formation at banks. In addition, the situation in the foreign exchange market and the capital market, including the term structure, is constantly being monitored for risks of inflation. In the real economy, a number of indicators that may provide early indications of inflationary pressures are likewise being analysed.

On the whole, the Bundesbank's response function is thus not determined solely by the movement of the money stock M3, but also by a multitude of additional information and control variables. After all, the Bundesbank's main concern is to achieve the ultimate objective of price stability and not to meet the intermediate target as such.[23] Monetary targets are intended to serve a specific purpose and are not *l'art pour l'art*.[24] It is therefore certainly correct to say that in practice, the differences between monetary targeting and inflation targeting are smaller than in theory.[25] However, it would be going too far to conclude that the Bundesbank is basically an inflation targeter, too.[26] Not every central bank that manages its strategy - whatever its design - so as to achieve the ultimate objective of price stability as well as possible can be termed an inflation targeter. Rather, inflation targeting should be understood as an independent monetary policy strategy in itself. And in everyday central banking business, too, there remain differences between a central bank that pursues monetary targeting and one that pursues direct inflation targeting, even though the final goal is the same. In monetary policy analysis, monetary targeting takes monetary growth and its interpretation as a starting point, followed by an assessment of the monetary environment in order to supplement the picture gained by this interpretation. Inflation targeting, though, focuses on making an inflation forecast in which monetary growth can be incorporated, but does not necessarily have to be incorporated. Those differences in the emphasis given to certain information are then reflected in the communications policy vis-à-vis the public.

The Bundesbank does not pursue an inflation targeting policy, but by no means does it follow a multi-indicator approach of "looking at everything", either. Instead, its indicators are arranged in a hierarchical order, with M3 undoubtedly remaining at the

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23 Technically speaking, the loss function of the Bundesbank includes the deviation of the inflation rate from the desired path but not failure to achieve the monetary target.

24 Bearing this in mind, it is surprising that the role of the money stock in German monetary policy is often defined in terms of the extent to which the money stock, above and beyond its informative value for future inflation, is of importance in monetary policy decision-making. See, for instance, B. S. Bernanke and I. Mihov (1997), What does the Bundesbank target?, in: European Economic Review 41, pp. 1025-1053, and R. Clarida, J. Gali and M. Gertler (1997), Monetary Policy Rules in Practice: Some International Evidence, CEPR Discussion Paper No. 1750. If such studies find that the money stock has no major "independent" significance, it should not be inferred from this that the Bundesbank did not conduct a policy of monetary targeting.

25 See also O. Issing (1996), Regeln versus Diskretion in der Geldpolitik, in: P. Bofinger and K.-H. Ketterer (eds.), Neuere Entwicklungen in der Geldtheorie und Geldpolitik, p. 6.

26 On such a statement see, for instance, B. S. Bernanke and I. Mihov (1997), loc. cit.

top.[27] The money stock target does not rule out a flexible response to current information, but it continues to provide the primary framework for interpretation and action.[28]

The formulation of the money stock target, its review in the middle of the year and its flexible implementation prove that the criticism that, with a money stock target, monetary policy would be conducted "as if its objective were not to influence non-financial economic activity but to achieve a designated rate of money growth"[29] is hardly an accurate description of the practice of monetary targeting in Germany. Right from the start, the Bundesbank never interpreted monetary targeting as the mechanistic use of monetary policy instruments, but always as economic policy actions taking due account of the overall monetary policy environment.[30] The term "rule-based" seems to me to be more appropriate for such a strategy. Some also characterise the Bundesbank's strategy as "rule-based discretion".[31]

It goes without saying that in this case the exploitation of scope for discretion has nothing to do with arbitrariness. This is ensured by the self-imposed commitment to the money stock target, which lends monetary policy credibility. Only if the central bank can explain convincingly that failures to meet the intermediate target do not jeopardise the final goal of monetary policy are they externally acceptable and unable to cast a stain on the central bank's credibility. Such a justification requirement is therefore a major control instrument against significant deviations from the monetary policy path. This gives a monetary policy which is oriented towards the money stock a major advantage over a purely discretionary policy.[32] The Bundesbank has undoubtedly built up a high reputation thanks to its independence and its stability orientation, which affords it a certain freedom

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27 See also König (1996), loc. cit., p. 125.

28 See also J. v. Hagen and M. J. M. Neumann (1998), Entwurf für eine europäische Geld- und Währungspolitik, in: Europäische Währungsunion, supplement to Kredit und Kapital, 14, p. 374.

29 B. M. Friedman (1993), Ongoing Change in the U.S. Financial Markets: Implications for the Conduct of Monetary Policy, Working Paper, Cambridge, MA, p. 10.

30 See also O. Issing (1997), loc. cit., pp. 67-79.

31 See also M. J. M. Neumann (1997), Monetary Targeting in Germany, in: I. Kuroda (ed.), Towards More Effective Monetary Policy, Macmillan, pp. 176-210.

32 See also O. Issing (1998a), Welche geldpolitische Strategie für die EZB?, reprinted in: Deutsche Bundesbank, Auszüge aus Presseartikeln, No. 29, pp. 6-11.

of movement in its monetary targeting.[33] Or, put differently, even without a mechanistic commitment to rules, it is therefore able to pursue a credible anti-inflation policy.[34]

However, it would be wrong to conclude from this that the stability record of the Bundesbank's policy has helped monetary targeting to be successful, and not vice versa. As a matter of fact, there is an interrelationship here. Monetary targeting has contributed substantially to stabilising the public's inflation expectations at a low level. It is firmly embedded in the German public's consciousness and has thus become an integral part of the German "stability culture". At times in which there were serious risks to price stability, the Bundesbank was able to justify its anti-inflation policy by reference to the movement of the money stock, thus relying on the stability consensus existing among the general public. And even at times when such risks were not obvious, a reference to the movement of the money stock enabled the Bundesbank to sharply reject demands by individual groups which ran counter to the requirements of monetary stability. All in all, monetary targeting has therefore become a major element of the stability-oriented monetary policy pursued in Germany.

Bearing this in mind, it does not seem warranted to conclude from failures to meet the target that the basic premise of monetary targeting is faulty. After all, the success of monetary policy is measured not in terms of the intermediate target but in terms of the final goal. There, the Bundesbank's policy has been an unqualified success. Between 1974 and 1997 prices in Germany rose by around 2 ¾ % annually, and hence only half as fast as in the other industrial countries. Admittedly, this rise in prices is higher than the rate which the Bundesbank, in principle, regards as compatible with price stability, but it also includes exogenous price stimuli, which cannot be equated with inflation, and the fighting of which would have required an excessively tight-money policy.

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33 Thus, in their study of monetary targeting in Germany and Switzerland, Laubach and Posen conclude that “the credible commitment to a long-term price stability goal enhances the exercise of disciplined discretion in the short-term.” See T. Laubach and A. S. Posen (1997), Disciplined Discretion: The German and Swiss Monetary Frameworks in Operation, Federal Reserve Bank of New York Research Paper no. 9707, p.55.

34 See also O. Issing (1996), loc. cit., pp. 3-20.

IV. The stability-oriented monetary policy strategy of the ESCB

In mid-October, the Governing Council of the ECB came to an agreement on the essential elements of a stability-oriented monetary policy. These elements include the quantitative definition of the primary objective of the single monetary policy - price stability -, a prominent role for money with a reference value for the growth of a broadly defined monetary aggregate, and a broadly-based assessment of the outlook for future price developments.

With the quantitative definition of price stability,[35] the ECB Governing Council has specified the primary objective of price stability prescribed by the ECB Treaty and has unambiguously signalled its monetary policy intentions. It has undertaken a clear pre-commitment by which the public can assess the ESCB's performance in future. To that extent, account has been taken of the desire for a large degree of transparency and accountability in monetary policy.

Within the monetary policy framework, which is designed to maintain price stability, the money stock will occupy a position of prime importance. At year's end, the ECB Governing Council will announce a quantitative reference value for the growth of a broad monetary aggregate, which will form the starting point for ongoing monetary analysis. The ESCB has therefore adopted a practice fundamentally comparable with that of the Bundesbank.

Such a „monetary orientation“ has operational and politico-institutional advantages.[36] Being a new institution, the ESCB will not have any experience of the deployment of its instruments. A detailed analysis of monetary growth may reduce the uncertainties involved here, since the money stock responds more quickly than the final goal to a monetary policy stimulus. In addition, the ESCB will need a reliable measure of its responsibility, in order to gain credibility quickly. The ESCB strategy helps to assign responsibilities unambiguously. By announcing a quantitative reference value for the growth of a monetary aggregate, the central bank only assumes responsibility for the longer-term inflation trend, but not for shifts in the price level, which might result from

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35 The definition agreed on by the ECB Governing Council reads as follows: “Price stability shall be defined as a year-on-year increase in the Harmonized Index of Consumer Prices (HICP) for the euro area of below 2 %."

36 See also H.-H. Francke (1998), Braucht die Europäische Zentralbank eine Geldmengenstrategie, Zeitschrift für das gesamte Kreditwesen, No. 9, pp. 466-67.

unwelcome developments in fiscal policy or in wage policy. Thus, announcing a reference value for monetary growth helps the public in general, and the other economic policy players in particular, to form expectations. That will foster confidence in a stability-oriented monetary policy.[37]

Especially at the start of Stage Three, however, relying on a pure strategy of strict monetary targeting would be very risky. Reliably interpreting monetary growth may well be considerably more difficult than has been the case in Germany. The shift in the monetary policy regime may bring about a permanent change in the demand for money in the euro area. Bearing that in mind, the preliminary results of econometric studies, which point towards the stability of the demand for euro area-wide monetary aggregates, should be interpreted with caution.[38]

For that reason, the ESCB will make a detailed analysis of other indicators in addition to the money stock. A broadly-based assessment of the outlook for price developments and the risks to price stability in the euro area will play an important role in the ESCB's strategy. This assessment will be made using a wide range of economic and financial variables as indicators of future price movements.

V. Conclusions

The Bundesbank's monetary targeting strategy has proved to be effective in difficult times, too. Since the mid-seventies, the price rises in Germany have been kept distinctly lower than in comparable industrial countries. For that reason, money stock targets are still up-to-date today. If the empirical preconditions are met, these targets contain numerous advantages. They are simple, transparent and easy to check. Hence, they give the central bank a chance to accumulate anti-inflationary credibility and to attain the objective of price stability more easily.

The specific design of this approach and its implementation have contributed materially to the success of the monetary targeting strategy in Germany. Particularly worth mentioning in this context is the flexible handling of the money stock targets. Deviations from the targets were tolerated if that seemed advisable or acceptable in the light of the

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37 See also J. v. Hagen and M. J. M. Neumann (1996), loc. cit., p. 148.

38 See O. Issing (1998b), Monetary Policy in EMU, reprinted in: Deutsche Bundesbank, Auszüge aus Presseartikeln, No. 60 of October 8, 1998, p. 14.

requirements of monetary stability. Such a pragmatic monetarism can be successful, however, only if a central bank simultaneously does not allow any doubts to arise over its stability orientation. Flexibility in the monetary policy strategy must therefore be accompanied by stringency in the pursuit of the final goal. In Germany, that has generally been the case.

Furthermore, the flexible implementation of the existing strategy must not be confused with frequent changes in the strategy itself. The remarkable continuity of monetary targeting in Germany has probably made a key contribution to its credibility. After all, the Bundesbank had recognised the importance of an intensive communication policy even before "transparency" became a buzzword among central bankers.[39] Its constant efforts to make its monetary policy comprehensible to the general public meant that not every case of departure from the monetary target path was interpreted as abandoning the road of anti-inflationary policy virtue.

Considering the Bundesbank's experience, the decision by the ESCB to go with a strategy which attaches great importance to the money stock but which, at the same time, contains an indispensable degree of flexibility in times of great uncertainty seems appropriate for guiding European monetary policy through what are likely to be rough seas in the first few years of monetary union.

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39 However, there is criticism from some quarters that the Bundesbank's statements are always restricted to an assessment of the current economic situation and past developments but that no forecasts are published. See, for instance, F. S. Mishkin and A. S. Posen (1997), Inflation Targeting: Lessons from Four Countries, in: Federal Reserve Bank of New York, Economic Policy Review, August 1997, p. 25.

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Comments on: Monetary Targeting in Practice: The German Experience
by Peter Schmid

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Peter Schmid's paper gives a broad and comprehensive review of the Bundesbank's experience with monetary targeting since 1974. His account of this experience makes it clear that monetary targeting must be understood more in terms of political economy than in terms of a conventional "Poole model" of monetary policy. My comments focus on three points: path dependence of strategy choice, the role of monetary targeting in the context of the assignment problem, and its role in the communication of uncertainty.

1. Path dependence[1]

The years immediately preceding the Bundesbank's adoption of a monetary target were characterized by high and rising inflation due to external pressures and aggressive fiscal and wage policies. Monetary policy found itself unable to contain inflation, since it bound by the requirement to support a weak dollar in the Bretton Woods system. In the face of massive speculative capital inflows and lacking effective instruments for monetary control, the Bundesbank had effectively lost control over the money supply.

The choice of a monetary policy strategy based on a monetary target soon after the breakdown of the Bretton Woods system must be seen before this background, since the monetary target signaled a number of fundamental decision regarding the new monetary policy regime. First, it was a clear statement that the Bank was determined to maintain its control over the money supply once the latter had been regained in early 1973. Second, it was a clear break with the alternative approaches to monetary policy discussed by the Bundesbank Council at the time, namely the imposition of direct, quantitative loan limits on financial institutions or a legislated liquid reserves ratio.

From the beginning, it was clear that the Bank could not and would not promise reaching the monetary target with high precision. It was also recognized that the relationship between money, income and inflation was far from being deterministic. As result, the Bank announced its new regime as an experiment, and it changed the rules of the experiment several times in the first few years.

2. The assignment problem

The early 1970s clearly revealed the inability of fiscal policy to stabilize the economy in times of inflationary pressures and overheating. While fiscal policy had proven itself very effective in pulling the economy out of the recession of the mid-1960s, it turned out to be politically infeasible to reduce government spending when aggregate demand was too large. Two German finance ministers, Möller and Schiller, resigned when they realized that they could not get a program of fiscal consolidation approved in cabinet. In view of this dilemma, the German government called upon monetary policy and the Bundesbank to stabilize the economy.

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[1]This section draws on von Hagen (1998).

The members of the Bundesbank Council at the time had very different views about the role of monetary policy. One group was willing to accept the call for active stabilization, particularly when the inflation trend was broken in 1974 and the economy started weakening. Another group was skeptical that monetary policy had any power to stabilize the economy at all and preferred a neutral policy stance, one that avoided conflict with fiscal and wage policies. A third group advocated a medium-run orientation for monetary policy, one that would focus on medium-term inflation. This group argued that the central bank should not try to steer aggregate demand in the short run; instead, it should concentrate on setting monetary conditions consistent with low inflation and full employment in the medium run.

Importantly, the monetary target facilitated a compromise between these three groups. Specifically, the first monetary target could be interpreted as reflecting a mildly expansionary monetary policy by the first group, as a neutral policy by the second, and as a medium-run oriented policy by the third.

Furthermore, the monetary target helped the Bundesbank to define the role of monetary policy in German economic policy. With its new strategy, the Bundesbank signaled intention to assume responsibility for inflation. This in turn lead the government to assume explicitly the responsibility to achieving full employment. Thus, the German public learned quickly that monetary policy should not be blamed for unemployment. The absence of public demands for monetary expansions in the face of rising unemployment has certainly contributed to the Bundesbank's success in keeping inflation low.

3. How to communicate uncertainty at the start of EMU

Is monetary targeting an appropriate strategy for the ECB? critics of this approach argue that it is not, because the start of EMU will characterized by an usually large uncertainty about monetary relations in the economy. these critics argue that the ECB should look at many variables all at the same time instead of concentrating its attention on the money supply.

The experience of the Bundesbank does not support that view. First, it must be recognized that the start of monetary targeting was characterized by a high degree of uncertainty, too. Germany had just come out of the Bretton Woods system, where monetary policy was reduced to pegging the dollar and had no need to look at relations like the demand for money. Empirical models of the transmission mechanism of monetary policy did not exist or only in very crude form. As in the Bundesbank's experience, uncertainty does not imply that monetary targeting is inappropriate per se.

Instead, the ECB should emphasize clarity and transparency of its policy and explain deviations from its targets whenever they occur. The central bank would also be well advised to be modest in its goals, i.e., to focus on medium term inflation rather than an inflation target for a specific year.

Combining monetary and inflation targets, at Otmar Issing recently proposed for the ECB, does not help tackle uncertainty for two reasons. First, if the monetary target is abandoned because the monetary relations are perceived unstable, what will make the public believe that the relations underlying the inflation target are any more stable? Second, having two targets necessarily results in a conflict at some point: there will be periods when the monetary target will call for an easing of monetary policy and the inflation target will call for a tightening, or vice versa. At that point, the

central bank will have to make choice and give one target priority. But this will create the impression of inconsistency and discretion in the central bank's policy and, hence, bring about unnecessary confusion.

A more appropriate way to address the larger uncertainty at the start of EMU would be to announce a monetary target with a longer time horizon (say, three years) and update this target every year.[2] In this way, the ECB would signal its intention to focus on medium-term monetary conditions and retain the option to react to changes in the underlying monetary relations when large shifts in these relations occur.

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[2]For details on this proposal see Neumann and von Hagen (1998).