



€ MU Watch

No. 76

The ECB's monetary policy: pretence and reality

- Six months after the start of the euro the ECB can look back on an impressive performance. In the first half of 1999 the inflation rate and bond yields reached historically low levels. The depreciation of the euro should not be overrated. Fluctuations of that size can be regarded as an absolutely normal feature of a system of flexible exchange rates.
- Less convincing is the ECB's "stability-oriented monetary policy strategy". It proclaims a medium-term objective for price stability and a two pillar approach for the ECB's policy: a "prominent role for money" and a "broadly based assessment of the outlook for future price developments".
- This concept is difficult to reconcile with the practice of the U.S. Federal Reserve System and the Deutsche Bundesbank. It is also incompatible with the interest rate policy that the ECB has followed so far. In all three cases empirical evidence shows that the cyclical situation has played an important role in monetary policy decisions. As the performance of the Fed and the Bundesbank shows, such an orientation has no negative effects on the target of price stability. In addition, the ECB seems to disregard the "monetary pillar" of its strategy, but this is also very much in line with the Bundesbank's approach.
- For a more transparent and thus more credible strategy the ECB should substitute its "broadly based assessment" by a fully-fledged inflation forecast. This would also allow to abandon a genuine "monetary pillar", as monetary developments would have to be incorporated in the inflation forecast. After such an overhaul the ECB's strategy would become more similar to the strategy of "inflation targeting" as it is practised by the Bank of England.

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Hinweis: Guest authors express their own opinion, which is not necessarily that of Deutsche Bank Research. This article is based on a report compiled by the author for the European Parliament.

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Successful first six months of European monetary policy

Six months after the introduction of the euro the European Central Bank (ECB)¹⁾ can look back on a very positive performance. The inflation rate in the euro area was 1.1% in April 1999 (harmonised index of consumer prices). This is much less than the average inflation rate of the D-Mark which was 2.6% in the whole period from June 1948 to 1998. For the year 2000 all forecasters expect price increases of less than 2%. The great trust of financial markets in the stability of the euro is shown by the historically low bond yields in the first half of 1999. For German issuers the rate for outstanding bonds is presently at 4% which is well below the yields that were recorded in most of the D-Mark's lifetime (Chart 1).

In the public discussion this positive performance of the ECB has been overshadowed by the depreciation of the euro vis-à-vis the dollar by about 14% compared with its initial rate of 1.1789 on January 4, 1999. Obviously it is not well understood that such short-term variations are a common feature of a system of flexible exchange rates. The history of the D-Mark shows that the extent of the present depreciation is by no means exceptional (Chart 2). Even when the D-Mark reached a record low of DEM 3,47 per dollar on February 26, 1985 nobody spoke of a "soft" mark.

"Stability-oriented monetary policy strategy" of the ECB

For the good start of the euro the Maastricht Treaty with its stability-oriented monetary constitution has provided a very stable platform. It is now important how this basis will be used by the European Central Bank for its concrete monetary policy. The conceptual framework is the "**stability-oriented monetary policy strategy**" (SOMPS) which the ECB has presented in October and December 1998.²⁾ In the following I will describe and analyse the main elements of this strategy:

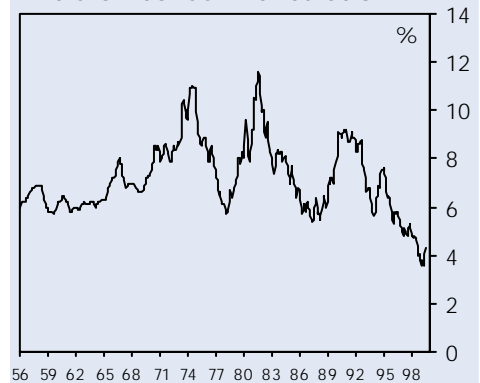
- At the level of **final targets** of monetary policy I will discuss the implications of the ECB's medium-term target for price stability for other macroeconomic targets, especially real output and employment.
- In order to reach the final macroeconomic targets with its instruments a central bank needs a "**navigation system**". It should identify whether the main target and the other targets can be reached with a given policy stance or whether a more restrictive or more expansionary course of monetary policy is required. The ECB has decided to assign a "prominent role" to money by using the money stock M3 as a "reference value" for its monetary policy. The second pillar of its strategy is a "broadly based assessment of the outlook for price developments". I will discuss whether the two pillars of SOMPS can be regarded as a transparent "navigation system", especially in comparison with the strategy of "inflation targeting" which is practised by the Bank of England and some other central banks.

1) In this text the words European Central Bank and Eurosystem are used as synonyms. The latter is the correct expression for the system comprising the European Central Bank and the eleven national central banks participating in the European Monetary Union (EMU). The expression European System of Central Banks includes the Eurosystem and the four EU central banks that do not participate in EMU.

2) The SOMPS was published in ECB Press Releases of October 13, 1998 and December 1, 1998. It is discussed in detail in ECB (1999a).

Chart 1

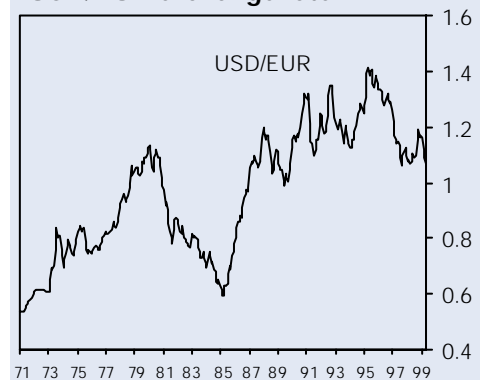
Yield on bonds in circulation



Source: Deutsche Bundesbank

Chart 2

USD/EUR exchange rate



Source: Deutsche Bundesbank

Achievement of final targets of monetary policy ...

... requires a suitable navigation system ...

- At the level of **operating targets** a monetary policy strategy should show whether the actual policy stance is in line with the requirements determined by the "navigation system". This leads to the difficult question of determining adequate indicators of monetary policy. In the present discussion different indicators are used (yield structure, nominal and real interest rates, long-term and short-term interest rates). The ECB has not yet clarified which indicator(s) it intends to use for this purpose.

... and suitable indicators

The final targets of monetary policy

The starting point for European monetary policy is Article 105 (1) of the Treaty. It stipulates: "The primary objective of the ESCB shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community with a view to contributing to the objectives of the Community as laid down in Article 2."³⁾ In the SOMPS the ECB has given a more precise formulation of its target:

"Price stability shall be defined as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%".

In addition it has defined a time horizon for its target:

"Price stability is to be maintained over the medium-term."

This definition of the primary objective of the ECB's monetary policy is much more explicit than the formulations that can be found in the previous Bundesbank Act or in the Federal Reserve Act. Nevertheless, it gives rise to three important questions:

- What does the predominance of price stability imply for the pursuit of other macroeconomic targets?
- Above all: is the medium-term perspective of the ECB in line with the requirements of Article 105 of the Treaty and with the practice of other big central banks?
- Is the ECB's concrete definition of "price stability" sufficiently transparent and how does it take into account the difficult measurement problems of "inflation"?

Is there a conflict between price stability and employment?

In the public debate it is often argued that a monetary policy geared to price stability has negative effects on real output and employment. In discussing the relationship between price stability and other macroeconomic targets, it is useful to work with the basic macroeconomic framework of aggregate demand and supply that can be found in any standard textbook.⁴⁾ This makes it possible to analyse the effects of major shocks to the price level on the one hand and to output (or the output gap) and employment on the other hand.

Price stability is primary objective

ECB defines "price stability"

Definition of target leaves questions unanswered

Demand and supply shocks can have different consequences for monetary policy

3) Article 2: "The Community shall have as its task (...) to promote throughout the Community a harmonious and balanced development of economic activities, sustainable and non-inflationary growth respecting the environment, a high degree of convergence of economic performance, a high level of employment and of social protection, the raising of the standard of living and quality of life, and economic and social cohesion and solidarity among Member States."

4) See also Bofinger (1999).

These shocks are either

- **demand shocks**, e.g. a decline (increase) in export demand due to a real appreciation (depreciation) or a decline (increase) of private investments due to deteriorated (improved) industrial confidence, or
- **supply shocks**, e.g. a decline (increase) in commodity prices or a decline (increase) in nominal wages which is in not in line with changes in productivity.

If a **negative demand shock** occurs, the aggregate demand curve (AD) shifts to the left (Chart 3). Thus, the price level declines together with real output (an output gap Y^*-Y' opens) and employment. In this situation a central bank that targets the price level has to pursue an expansionary monetary policy. This shifts the aggregate demand curve back to its initial position. Obviously there is no conflict between price stability on the one hand and real output and employment on the other hand.⁵⁾

In case of a **supply shock** things are more complicated. For instance, if there is a major rise in oil prices, the aggregate supply curve (AS) shifts to the left (Chart 4). The central bank has now three main options:

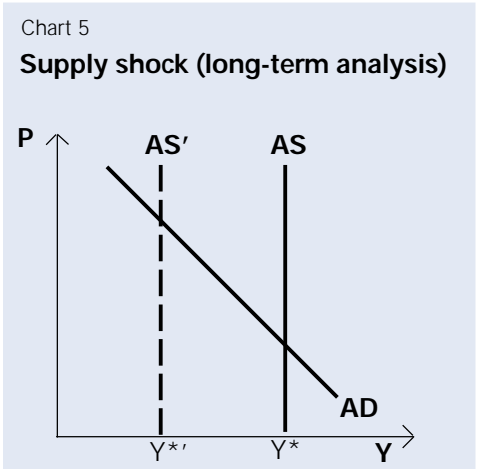
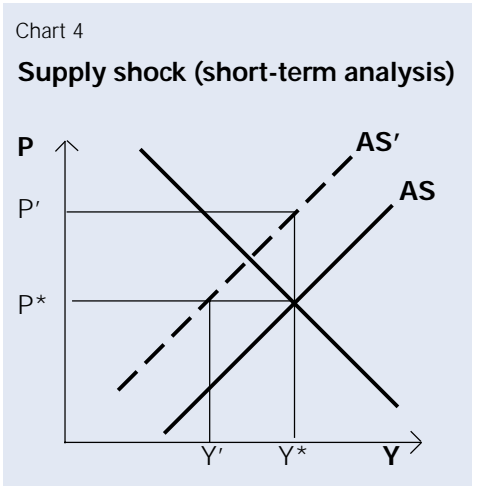
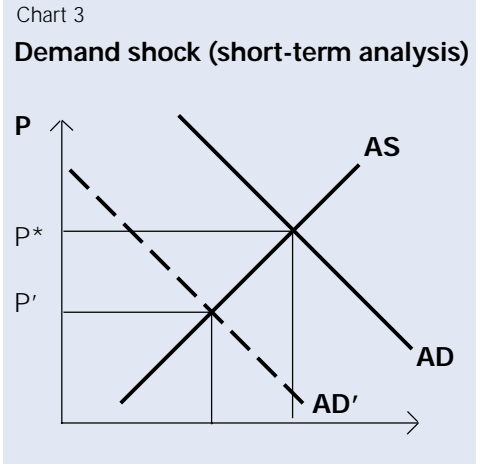
- It can try to keep the level of real output stable, which requires an expansionary monetary policy. As a result, the price level increases even more.
- It can try to stabilise the price level, which requires a restrictive monetary policy. In this situation the output decline is magnified.
- It can take a passive policy stance, i.e. keep the money stock stable. In this case, the shock affects both targets in more or less the same way.

But this conflict only exists in the short run as the positively sloped aggregate supply curve is valid for short-term analysis only. It crucially depends on the assumption of fixed nominal wages. As soon as nominal wages can be adjusted, i.e. after the next wage round, the supply curve becomes vertical (Chart 5). Because of the supply shock the full employment output has declined. In this case monetary policy is no longer able to achieve the previous employment or output level. This can only be reached if the trade unions are willing to accept a decline in real wages which would shift the AS curve back to its initial position. Only in the very special case in which trade unions would accept a real but not a nominal wage reduction, expansionary monetary policy could help to reach the previous employment level in the medium term.

The ECB's view

How does the SOMPS deal with these two theoretical cases? The speeches of the ECB's board members and the ECB publications could lead to the impression that **demand shocks** play no major role in the ECB's philosophy. For instance, the general statement by Duisenberg (1999b):

“A monetary policy reaction to inflationary or deflationary pressures may cause short-run fluctuations in real output.”



5) See also Mishkin (1998, p. 21). “Indeed, inflation targets can increase the flexibility of the central bank to respond to declines in aggregate demand because declines in aggregate demand that cause the inflation rate to fall below the floor of the target range will automatically stimulate the central bank to loosen monetary policy without fearing that its action will trigger a rise in inflation expectations.”

only makes sense in the specific situation of a supply shock. If inflationary or deflationary pressure arises from a demand shock, the monetary policy reaction helps – as shown in Chart 3 – to stabilise output and employment. Second, the ECB doesn't seem to be willing to respond to demand shocks. Duisenberg (1999a) puts this as follows:

" It would be overambitious and therefore risky to steer the economy in the short term. Fine-tuning would more likely lead to instability than to stability." ⁶⁾

And:

" The medium-term orientation of the monetary policy of the Euro-system should help to avoid excessive fluctuations in real economic activity." (Duisenberg 1999b).

Thus, one could say that the ECB is neither fully aware of the **demand shocks** nor does it see a possibility to deal with such disturbances in an adequate way. The latter could be justified by a large body of theoretical literature which emphasises time and again Milton Friedman's problem of "long and variable lags" in monetary policy. While these problems are very serious indeed, it seems nevertheless problematic to completely disregard short-term cyclical fluctuations in the conduct of monetary policy.

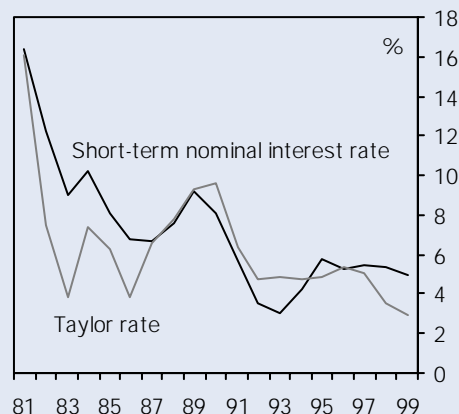
There is strong empirical evidence that all major central banks have been very much concerned about the cyclical situation. This is confirmed above all by the rather good fit of the "Taylor rule" in the United States and in Germany⁷⁾ (Charts 6 and 7). According to this "rule" the real interest rate ($i-p$) is determined by the output gap (actual GDP minus full capacity GDP divided by full capacity GDP) and by deviations of the inflation rate (p) from a target rate (p^*) plus a "neutral" real interest rate of 2 percent:

$$i-p = \frac{1}{2} (Y-Y^*)/Y^* + \frac{1}{2} (p - p^*) + 2$$

Second, there is a risk that a central bank which wants to maintain a "neutral" stance vis-à-vis short-term demand shocks, can cause additional instability of real output. The traditional IS/LM-model shows (Chart 8) that a demand shock leads to a decline in real output (Y') and interest rates (i'). The decline in interest rates can be regarded as a "built-in stabiliser". However, this requires that the central bank targets the money stock. If it targets the interest rate at i^* , this stabiliser would become ineffective and the decline in real output would be amplified (Y''). Thus, without determined monetary targeting it is very difficult to identify a "neutral" level of interest rates. The specific problems of monetary targeting will be discussed in the next section.

Thus, in the case of demand shocks the ECB's strategy is not entirely convincing. This is different for **supply shocks** for which the SOMPS has been designed in a perfect way. In this situation it is absolutely necessary to target the price level in the medium term only, while as a short-term reaction to an inflationary or deflationary pressure it would lead to undue instability of real output and employment.

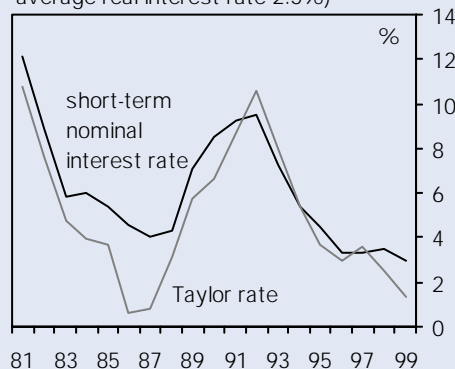
Chart 6
Taylor rule for United States



Source: OECD

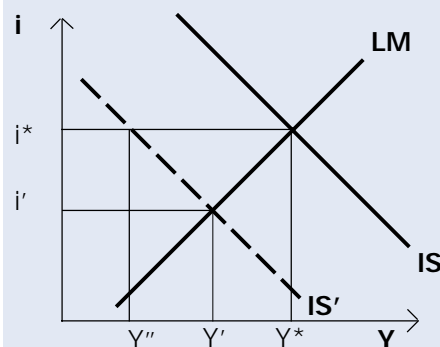
Chart 7
Taylor rule for Germany

(Target inflation rate: 2%, from 1997: 1.5% average real interest rate 2.5%)



Source: Deutsche Bundesbank, own calculations

Chart 8
Demand shock and the interest rate (IS/LM Model)



6) See also Duisenberg (1998a): "A monetary policy reaction to short-run fluctuations in the price level would provide the wrong signals to the market and cause unnecessary interest rate volatility."

7) See Clarida and Gertler (1996, p. 47): "(...) from a variety of evidence, both informal and formal, we find that the performance of the real economy also influences its decision-making. (...) In particular, our formal analysis suggests that, for the most part, the Bundesbank has adjusted short-term interest rates according to a kind of modified Taylor rule (...)" See also Clarida, Gali and Gertler (1997).

This part of the strategy reflects the experience of the early 1970s and 1980s with their strong supply shocks. In these phases even a very ambitious central bank like the Deutsche Bundesbank never tried to keep the price level stable. The implicit inflation targets of the Bundesbank (Table 1) show that it has always been willing to accommodate supply shocks to the price level. It even accepted a temporary acceleration of the targeted inflation rate. Thus, in the situation of supply shocks, the medium-term orientation of the SOMPS will avoid unnecessary conflicts between price stability and real output (and employment).

SOMPS ideal for tackling supply shocks ...

Table 1

Implicit inflation target of the Bundesbank

(Derived from the Bundesbank's inflation assumption for its monetary targets)

Year	Implicit target	Year	Implicit target	Year	Implicit target
1975	6.0	1983	3.5	1991	2.0
1976	4.5	1984	3.0	1992	2.0
1977	3.5	1985	2.0	1993	2.0
1978	3.25	1986	2.0	1993	2.0
1979	3.0	1987	2.0	1995	2.0
1980	4.0	1988	2.0	1996	2.0
1981	3.75	1989	2.0	1997	1.5-2.0
1982	3.5	1990	2.0	1998	1.5-2.0

This does not mean that such conflicts will not arise at all. For instance, if the trade unions are permanently trying to increase real wages beyond productivity growth, this causes an output decline and inflationary pressure. In this situation the central bank's attempts to keep the price level stable over the medium term ("disinflation") will lead to an additional, but unavoidable output decline.

... but conflicts between price stability and real output can still arise

The macroeconomic policy assignment in Euroland

This short analysis shows that the optimum macroeconomic policy assignment is conditional on the nature of shocks which affect the euro area. In the situation of a demand shock monetary policy should assume comprehensive responsibility for price stability, full employment and full capacity output. As demand shocks are normally of a short-term nature, this requires a monetary policy reaction even to short-term deviations of the price level. In case of a supply shock it is important to target monetary policy on price stability in the medium term while the trade unions are responsible for full employment and a return to the original output level. In addition, the government can try to improve productivity by supply-side policies. In situations without shocks, a "neutral stance" of monetary policy is required. If the central bank targets the interest rate, a "neutral real interest rate" (Blinder 1998, p. 31) should be targeted. Of course this is a difficult concept:

Optimum assignment can vary

"It is therefore most usefully thought of as a concept rather than as a number, as a way of thinking about monetary policy rather as the basis for a mechanical rule" (Blinder 1998, p. 32)

Of course, the task to even out demand shocks could also be assigned to national fiscal policies. However, in case of shocks which affect the whole euro area, the ECB's monetary policy seems to have a clear comparative advantage over national fiscal policies:

Monetary policy vs fiscal policy

- The ECB's decision processes are much faster than those of the national governments. In addition, monetary policy measures can be reversed much easier once a shock subsides.
- The ECB can guarantee a comprehensive policy reaction for the whole euro area while individual national governments could always be tempted to adopt a free-rider position.
- The growth and stability pact leaves little room for expansionary fiscal policies at the national level.

ECB measures more appropriate for dealing with shocks to the entire euro area

How can "price stability" be defined?

In the academic discussion it is widely accepted that the target of price stability is compatible with a certain rise in the statistically measured price index. Because of quality improvements, new products and sales, official price statistics always give a biased picture of the "true" inflation rate.

Price stability in principle compatible with rise in price index

Thus, the ECB was confronted with the difficult task of defining a "non-inflationary rate of inflation" (NIRI) for the euro area. In its first publication of the SOMPS in October 1998 the ECB defined its target as "below 2%". As this definition was rather ambiguous, the ECB (1999a, p. 46) has made its intentions more explicit. The NIRI lies in range with an upper bound of "below 2%" and a lower bound of greater than zero.⁸⁾ From the ECB's derivation of the "reference value" for money one can calculate a NIRI of 1.5%.⁹⁾ It seems obvious that a more transparent definition of the price stability target (either a clearly defined midpoint or a precise target range) would have been possible.

Defining NIRI

ECB target between 0% and 2%

Table 2

Inflation targets of other central banks

Central Bank	Target
Bank of England (BoE)	2,5 % (± 1 %)
Bank of Canada	1-3 %
Bundesbank	1985-1996: 2 % 1997-1998: 1,5-2,0 %
Reserve Bank of Australia	2-3 %
Reserve Bank of New Zealand	0-3%
Swedish Riksbank	2 % (± 1 %)

Compared with the inflation targets of other central banks the ECB has set a rather ambitious target (Table 2). For the ECB an inflation rate in the range between 2% and 3% would already mean "inflation" and require a restrictive monetary policy reaction, while for other central banks such an outcome would still be considered as "price stability" or as something very close to it.¹⁰⁾ On the other hand, the present HICP inflation rate of 0.8% would be close to deflation for all central banks except the Reserve Bank of New Zealand. Thus, for most central

ECB target rather ambitious

8) ECB (1999a, p. 47): "Therefore, the definition has avoided explicitly embodying specific estimates of the HICP measurement bias by not setting the lower bound for measured price increases at zero."

9) The ECB assumes trend growth of real GDP in a range of 2-2 ½%, the decline of the velocity of money is assumed to be in a range of ½ % -1%. With the midpoints of these two ranges and a reference value of 4 ½ % for M3 one can calculate a NIRI of 1 ½ %.

10) In the United Kingdom deviations of the inflation rate from the target by 1 % or more, on either side, require an open letter by the Governor of the BoE to the Chancellor of the Exchequer explaining why the discrepancy has occurred. (Allen 1999)

banks it would indicate the need for an expansionary policy stance, while the ECB seems to regard this as "price stability". The ECB justifies its ambitious approach as follows:

"Eurostat has expended considerable efforts to reduce or to eliminate the measurement bias in the HICP. It is therefore probable that the bias in the HICP is smaller than that observed in national CPIs of the countries comprising the euro area." (ECB 1999a, p. 46)

But it also admits:

"The success of these attempts to minimise the measurement bias in the HICP is as yet unknown." (ECB 1999a, p. 46).

It is obvious that the problem of precisely defining the NIRI becomes especially relevant in a period of very low inflation. If the NIRI is set too low, it prevents a monetary policy reaction to deflationary tendencies. However, it is clear as well that the measurement problems are huge.¹¹⁾ Thus, a very careful approach should be applied. A relatively simple solution can be developed for the case of demand shocks. In this situation, the ECB has the possibility to use the output gap as an additional indicator for deflationary or inflationary tendencies. This allows to derive an additional theoretical justification of the Taylor rule. It implies that the central bank uses two different indicators for the same shock: the output gap and the deviation of the inflation rate from the NIRI. Due to measurement problems with both indicators, **the ECB can use the Taylor rule as an indicator for demand shocks** which is a simple arithmetic means of two interrelated variables. This again emphasises the need to observe short-term fluctuations of real output in the conduct of the ECB's monetary policy.

A specific contribution of monetary policy to the unemployment problem?

Simple macroeconomic models have the disadvantage that they are of a completely static nature. Thus, they cannot be used to assess the impact of monetary policy on economic growth and the effects of a higher growth rate on employment. Of course, these relationships are very complicated. The ECB expects that price stability will contribute to an increase in investment activity:

"One particular benefit to be derived from a stable price environment is that borrowers are not requested to pay extra, to cover the risk of an unexpected rise in the general price level. As a consequence, real interest rates, i.e. interest rates for expected inflation will be lower, thereby encouraging people to commit more resources to productive activities." (Duisenberg 1998b)

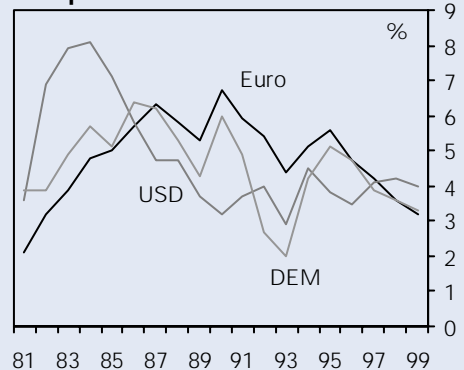
In fact, Chart 9 shows that real long-term interest rates in the euro area are now at a very low level compared with the 1990s and the 1980s and also in comparison with the United States and Germany. Thus, in the present situation the financial conditions for private investment and growth are very positive. The extremely low the real long-term interest rate in 1981 cannot be regarded as a benchmark as it is distorted by the unexpected acceleration of inflation due to the second oil price shock.

Size of measurement bias in HICP is unknown

Taylor rule as a suitable indicator for demand shocks

Chart 9

10Y gov. bonds in international comparison



11) Hoffmann (1998, p. 195) concludes a very detailed study on the measurement bias of the CPI in Germany: "Es handelt sich also um eine mehr oder weniger begründete Spekulation, für die der Anspruch auf Wissenschaftlichkeit nur sehr eingeschränkt erhoben werden kann."

How solid are the "two pillars" of the SOMPS?

If the ECB wants to reach its final target of price stability, it needs a "navigation system" which ideally would help to identify present or future shocks that could endanger the realisation of the final target(s) and the adequate adjustment of interest rates. In addition, for periods without disturbances, the navigation system should help to formulate a "neutral" policy stance. In the SOMPS the ECB has decided to use "two pillars" for these purposes: a "reference value" for the money stock M3, and a "broadly based assessment of the outlook for future price developments".

The first pillar: "A prominent role for money"

Monetary targeting has a simple logic as it is based on the very simple quantity theory of money. It allows to derive a medium-term path for the money supply which is consistent with a stable price level and steady growth of real output. Thus, under ideal conditions monetary targeting provides a "neutral" stance of monetary policy. If the money stock deviates from its target, an increase or decrease of short-term interest rates is required. Of course, such a framework is neither able

- to identify shocks that are caused by other factors than monetary policy, nor
- to prescribe a reaction of monetary policy to such shocks.

As already mentioned, such a neutral role of monetary policy could be justified by the difficulties of forecasting demand or supply shocks and by the "long and variable lags" of monetary policy. For this approach, which implies that the money stock is used as an "intermediate target" of monetary policy, two important conditions have to be met (Issing 1993, p. 167):

- The central bank has to be able to control the money stock with its operating target(s).
- The money stock has to be a main determinant of the future inflation rate, i.e. it must serve as a leading indicator for the inflation rate.

Insufficient controllability of the money stock M3 by the ECB's interest rates

Although the ECB assigns a "prominent role" to money, it does not pretend to be able to control the money stock M3:

"Therefore, the euro area monetary aggregate for which the reference value is announced does not need to be controllable in the short run, using a short-term interest rate influenced closely by the Eurosystem." (ECB 1999a, p. 48)

This lack of controllability can be due to two reasons:

- The demand for the money stock M3 is stable in the long run, but unstable in the short run.
- The demand for the money stock M3 depends on interest rate variables that cannot be directly controlled by the ECB.

The first problem is a typical feature of all money demand functions.¹²⁾ Irregular short-term fluctuations of the demand for money make it very difficult to use divergences between the actual money stock and its

ECB needs indicators to help it identify different kinds of shocks

Monetary targeting has a simple logic ...

... but is not suitable as a navigation system

ECB acknowledges shortcomings of monetary targeting

Instability of demand for money creates difficulties

¹²⁾ For a survey see Schächter (1999).

target value as a basis for interest rate policy. Thus, the "reference value" for the growth rate of broad money will in general provide little help for determining a "neutral" monetary policy stance of the ECB on a day-to-day basis.

The second problem is more serious. If the operating targets of the ECB do not have a systematic influence on the growth rates of M3, the whole approach becomes inapplicable. In this context it is important to note that the stability of the demand for money is a necessary, but not a sufficient condition for monetary targeting. If the interest rate used in such regressions cannot be controlled by the central bank (e.g. a long-term rate, or a difference between a long-term and a short-term rate), the second condition for an intermediate variable is not met. In fact, in the past the euro money stock M3 has shown very little reaction to changes in the short-term nominal interest rates in the euro area.¹³⁾ If there is any relationship, there seems to be a positive interest rate elasticity of the money demand for euro M3 (Chart 10).

The Bundesbank's problems with monetary targeting

The lack of controllability seems to be a general problem of monetary targeting. This applies even to the Bundesbank which was – besides the Swiss Nationalbank – the most fervent advocate of this approach. The German experience shows that the control problem exists not only in the short run but also in the medium and long run. Chart 11 presents the development of the money stock M3 in Germany after German unification and a medium-term target path of 5% which is based on the Bundesbank's annual targets. Even over such a long period was the Bundesbank unable – or unwilling – to reach the target. It is even more astonishing that although monetary growth was too strong most of the time, after September 1992 the Bundesbank steadily reduced its interest rates. This result is also shown in more detailed analyses based on reaction functions for the Bundesbank's interest rates (Clarida and Gertler 1996, Schächter 1999). They unanimously come to the conclusion that the monetary targets were of minor importance for the Bundesbank's decisions.

The ECB is aware of this control problem. Thus, it avoids using the term "intermediate target" and speaks of a "reference value" instead. However, this raises the question of the function of such a reference value compared with the role of an intermediate target, especially if it has to serve as one of the two pillars of the SOMPS.

The German experience also casts some doubts on the indicator qualities of the money stock. The ECB states:

" (...) substantial or prolonged deviations of monetary growth from the reference value would, under normal circumstances, signal risks to price stability of the medium term." (ECB 1999a, p. 48).

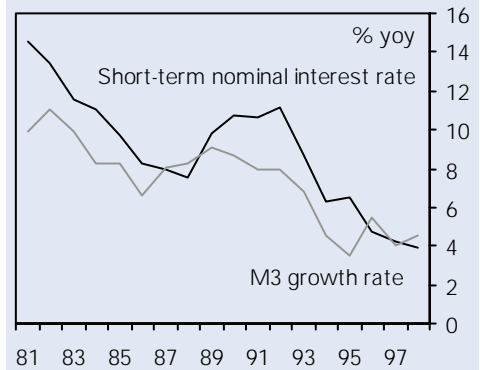
However, the German case shows that in spite of "excessive" monetary growth in the years 1992 and 1993 inflation had come down substantially. This is also confirmed by Svensson (1999, p. 34):

" It is easily shown (...) that such a money-growth indicator will be a relatively useless indicator of risks to price stability and, indeed, mostly a noisy indicator of the deviation of current inflation from the inflation target."

¹³⁾This is different for the money stock M1 which, according to the ECB, is "controllable using short-term nominal interest rates" (ECB 1999a, p. 48). However, this aggregate has the disadvantage that the second condition for an intermediate variable is not met. According to the ECB (1999a, p. 48) "euro area narrow money (...) exhibited neither stability nor significant indicator properties for the price level".

Chart 10

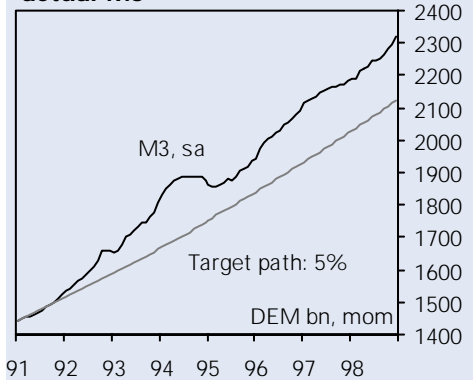
Broad money supply and short-term interest rate: Euro area



Source: ECB, OECD

Chart 11

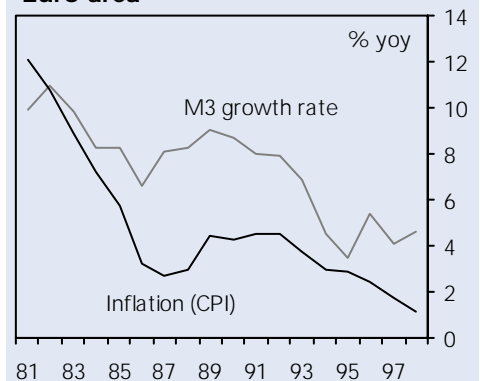
Bundesbank monetary target and actual M3



Source: Deutsche Bundesbank

Chart 12

Broad money and inflation: Euro area



Source: ECB, OECD

In fact, (Chart 12) shows that the growth rate of broad money moves more or less parallel to the inflation rate in the euro area. Since 1995 the growth rate of money has suggested an acceleration of inflation, but the opposite has happened.

The analysis of the "first pillar" of the SOMPS leads to a somewhat frightening result. The ECB maintains that broad money growth is a major determinant of future price trends:

"Inflation is ultimately a monetary phenomenon" (ECB 1999a, p. 47).

But if the ECB is unable to control broad money, it follows that it does not have any control over the price level, either. Of course, the ECB has only admitted a lack of control in the short run, but has failed to demonstrate how it might be able to steer broad money over the medium term. If the euro demand for broad money does not depend on short-term rates, there is no obvious lever for controlling this aggregate in the medium term. For this inconsistency the mainly semantic difference between an "intermediate target" and a "reference value" seems to be of little help.

The second pillar: "A broadly based assessment of the outlook for future price developments"

The second pillar of the SOMPS is "a broadly based assessment of the outlook for price developments and the risks to price stability in the euro area" (ECB 1999a, p. 49). The ECB intends to base this assessment on "a wide range of economic indicators" which "will include many variables that have leading indicator properties for future price developments". They "include inter alia: wages, the exchange rate, bond prices and the yield curve, various measures of real activity, fiscal policy indicators, price and cost indices and business and consumer surveys". (ECB 1999a, p. 49). It is somewhat astonishing that the ECB does not intend to include monetary data (money stocks and/or short-term interest rates) in this pillar.

At first sight one could expect that the ECB uses this information for an inflation forecast which would mean that the "broadly based assessment" is only another word for an inflation forecast with a confidence band. In fact, the ECB states:

"Obviously, it will also be useful to look at inflation forecasts derived using all these variables (...). In this respect, the Eurosystem (...) will also produce its own assessment of the future inflation outlook." (ECB 1999a, p. 49)

But is there any difference between an inflation forecast and a "broadly based assessment"?

It seems that there is, from the ECB's point of view. It explains the difference as follows:

"(...) a forecast cannot encompass all the indicator variables that are important for monetary policy. Nor can it always incorporate indicators in a timely manner. Therefore, a thorough analysis of individual indicator variables plays an important role in the overall broadly based assessment of the outlook for future price developments, in addition to any role these variables may have in the forecast. *Both* (my italics; PB.) forecasts and the analysis of individual indicators will help to inform the Governing Council about the specific nature of the macroeconomic environment and the disturbances to the economy, on which monetary policy decisions would normally depend." (ECB 1999a, pp. 49-50).

M3 moves parallel to rate of inflation

A wide range of economic indicators ...

... used to assess outlook for price developments

ECB: "assessment" different from an inflation forecast

This statement raises several questions that are difficult to answer: Which variables cannot be encompassed in an inflation forecast although they are important for a monetary policy aiming a price stability? Why can a forecast not incorporate monetary policy-relevant indicators in "a timely manner"? In which way does "a thorough analysis of individual indicators" in the "broadly based assessment of the outlook for future price developments" differ from the standard preparation of an inflation forecast? What additional information can be obtained from the analysis of individual indicators compared with a comprehensive inflation forecast?

"A new and distinct strategy?"

All in all, the two pillars of the SOMPS do not look very convincing, especially if transparency is regarded as the main criterion for assessing a monetary policy strategy.

The "money pillar" suffers from the instability of money demand in the short run and the lack of controllability in the longer run. In addition, even the relationship between monetary growth and inflation is debatable. Thus, one can expect that the role of monetary growth as a determinant of the ECB's interest rate policy will be similarly unimportant as it was for the Bundesbank. In fact, the ECB's first interest rate decision on April 8, 1999 was clearly incompatible with the first pillar. With money growth of more than 5% and thus well above the reference value of 4.5%, a cut in interest rates would not have been warranted.

The second pillar raises the question whether it expresses more than what seems obvious, i.e. that the ECB intends to take into account all the information that is relevant for future price developments. Beyond that only a publicised inflation forecast or a clear description of the ECB's model could provide valuable information to the public and thus increase the ECB's transparency.

In sum, the two pillars leave it more or less open how the ECB will proceed in order to "identify those economic disturbances that threaten price stability, and to prompt a monetary policy response which addresses these threats and which is appropriate to both the prevailing economic circumstances and the nature of the threat." (ECB 1999a, p. 50) Therefore, it is difficult to qualify the SOMPS in the same way as the ECB:

"The Eurosystem's stability-oriented monetary policy, as described above, is a new and distinct strategy, which reflects the unique circumstances and institutional environment that will face the Eurosystem." (ECB 1999a, p. 50).

Advantages of the strategy of "inflation targeting"

The advantages and the disadvantages of the SOMPS can be shown more explicit if it is compared with the strategy that is used by the Bank of England (BoE) – and some other central banks – since 1992. The "inflation targeting" of the BoE¹⁴⁾ differs from the SOMPS in three main points:

- The inflation target is defined in a more precise way. Table 2 shows that either a point target is formulated or a band with precise margins.

Distinction not entirely clear

ECB strategy not very convincing

Monetary growth probably relatively unimportant for ECB's interest rate policy

Publication of an ECB inflation forecast could be desirable

Difficult to go along with ECB's praise of the SOMPS

Bank of England as a model?

14) For a recent survey see Allen (1999)

- The BoE provides regular projections for the RPIX for two years in advance under the assumption of constant nominal interest rates. The projection is presented as a fan chart depicting the probability distribution for inflation like a contour map. In addition it gives a projection for real GDP.
- In the BoE's projections monetary aggregates play an important role but they are not given a "predominant role".

If one compares the two strategies, it seems obvious that the approach of the BoE provides more transparency than the SOMPS. With the precise inflation target and the inflation projection the public is given a clear framework for the assessment of monetary policy. The inflation projection together with a projection of real GDP shows in a transparent and verifiable way how the BoE assesses the impact of demand and supply shocks. In addition, changes in interest rates are only possible if a modified inflation projection is presented. This makes a policy of "surprise inflation" much more difficult.

In spite of these advantages of "inflation targeting", the ECB has so far not been willing to follow this approach. In the words of Issing (1998):¹⁵⁾

" (...) in the current circumstances, a pure "direct inflation targeting" strategy is too simplistic for the ESCB, and possibly even misconceived. (...) Because of the well-known lags in the transmission mechanism of monetary policy to the economy in general, and the price level in particular, it is impossible for a central bank to control inflation directly. Therefore, "inflation targeting" in practice means "inflation forecast targeting" where the central bank sets monetary policy to keep their best forecast of inflation at the level deemed consistent with price stability. (...) Forecast uncertainty is likely to be relatively large, possibly rendering the whole inflation targeting strategy ineffective."

But if the ECB is unable to produce an inflation forecast or projection – of course using "a large element of judgement" (Issing 1998) and the information content of monetary aggregates – how will it be able to find out whether a given policy stance is adequate for achieving its final target? Issing is right that inflation forecasts for the euro area are very difficult, but an inflation forecast for a large and relatively closed economy should be easier than for smaller and much more open economies like the previous national currency areas in the EU. Even under these conditions inflation forecasts for Germany were much better than forecasts for other macroeconomic variables. (Döpke and Langfeldt 1995)

Issing (1998) also mentions the problem that "using judgement may prevent outside observers from readily assessing the reliability and robustness of the inflation forecasting procedures used by the ECB."¹⁶⁾ Besides that he himself can always avoid such manipulations when there is always a strong outside control by competing forecasts presented by many institutions (national and international, private and public). This would effectively limit all forms "judgemental manipulation" (Issing 1998) by the ECB.

BoE: regular projections for the RPIX

Inflation targeting is more transparent

Inflation forecasting too difficult?

Manipulation of inflation forecasts?

Competing forecasts exercise strong outside control

¹⁵⁾ Issing (1998).

¹⁶⁾ See also von Hagen (1998, p. 28): "Thus, the signalling value of the inflation forecast is reduced by the complexity of its derivation leaving considerable scope for fudging and making monetary policy look better than it is."

Issing (1998) sees a further disadvantage of "inflation targeting" in terms of the ECB's accountability:

" (...) a strategy that assigns a prominent role to monetary aggregates emphasises the responsibility of the ESCB for monetary impulses to inflation, which a central bank can control more readily than inflation itself." ¹⁷⁾

As the ECB has itself admitted that it is not able to control broad money in the short run (see section 3.1.1) and as it has left open how this will be possible in the medium and longer run, this advantage of the SOMPS seems not very clear-cut. In addition, as Svensson (1999, p. 35) emphasises, the Maastricht Treaty assigns "price stability" as the primary objective of the ECB – irrespective of the underlying shock.

In sum, taking into account the many ambiguities of the SOMPS and the need of inflation forecasts (or assessments or projections) for any sensible monetary policy, it seems not clear why the ECB has been so reluctant to adopt the strategy of inflation targeting. There is no doubt that this approach – with all its obvious difficulties – would increase the transparency, the accountability and thus the credibility of the ECB. The need to make its forecasts public would also increase the ECB's awareness of demand and supply shocks. This would help to realise the target of price stability with a better performance of the other macroeconomic targets.

Operating targets and indicators of the ECB

As mentioned above, monetary policy is a three-stage process. In the first stage, the final target(s) have to be defined. In the second stage, a framework (or navigation system) has to be set up which allows to identify divergences of forecast values of the final variable(s) from the targeted values – based on constant policy parameters. In the third stage, indicators are needed which show whether and how a central bank is using its instruments in a way which is indicated by the navigation system. The SOMPS has not been very explicit about these issues.

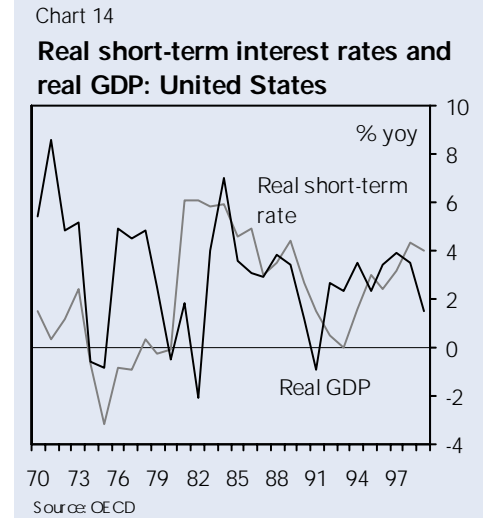
The short-term real interest rate as the most important indicator

However, the publications of the ECB show that it regards the short-term real interest rate as a very important indicator. In its Bulletin of February 1999 the ECB has argued that because of very low real short-term (and long-term) interest rates "monetary and financial conditions are therefore favourable for sustained growth of output and employment in the euro area (...)" (ECB 1999b, p. 6). In its March Bulletin it explicitly discussed "Key issues for the analysis of real rates in the euro area".

In fact, the short-term real interest has several advantages as an indicator of monetary policy:

- It can be controlled by the central bank. With its instruments a central bank can always target a short-term nominal rate and the inflation rate is in the short-term a relatively stable variable.
- By taking into account the inflation rate, this indicator avoids that an increase in the nominal rate which only compensates for a higher inflation rate is regarded as restrictive monetary policy.

Disadvantage for the ECB's accountability?



¹⁷⁾ A similar argument is made by von Hagen (1998, p. 20): " (...) monetary targeting showed that the Bank (the Bundesbank; PB.) accepted responsibility for inflation but only for that part of inflation that was due to monetary policy, namely excessive monetary expansion."

- The German experience shows that all recessions were preceded by a strong increase in the short-term real interest rate (Chart 13). For the United States a similar but less pronounced relationship can be discerned (Chart 14).
- Finally, short-term rates have a strong impact on the lending rates of the banking system (Chart 15). For Germany one can see that the difference between the two series is influenced by the cyclical situation (Hülsewig 1999).

Taking a look at the development of real short-term rates in a longer perspective, the present level of the real short-term interest rates in the euro area is indeed very low by historical and international standards (Chart 16). Only in the 1970s were real rates lower with an average rate of 0.9 percent in the United States and a rate of 1.9 percent in Germany. But this inflationary period is not to an ideal benchmark for a period with very low inflation.

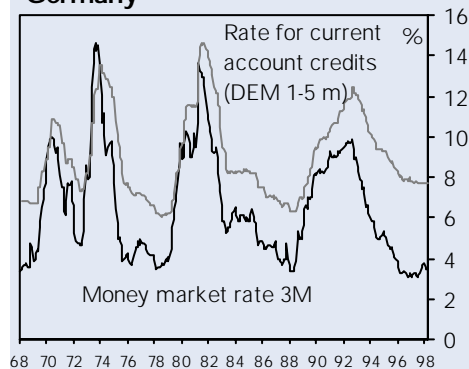
That the present level of the short-term real interest rate is low and thus compatible with the cyclical situation is also confirmed by the Taylor rule. With an inflation target of 1.5%, a current inflation rate of 1.1% and an average real rate of 2.5% (at which level it has hovered Germany since the 1960s and which seems adequate for the euro area with its stability – oriented monetary constitution), the Taylor rule produces a nominal rate of 3 % which is higher than the current short-term rate of 2.5%. But when the ECB lowered its interest rates in April 1999, the inflation rate was 0.8% which produced a Taylor rate of 2.5 (Chart 17).

Is the yield curve an alternative?

In the discussion about monetary policy indicators the yield curve (defined as the difference between a long-term and a short-term rate) is often regarded as an important indicator of the monetary policy stance (Estrella and Mishkin 1995). In practice, this indicator shows a very parallel movement with the real short-rate (Chart 18).¹⁸⁾ This may already explain why the yield structure exhibits rather similar qualities as this indicator. But on closer examination, the yield structure has obvious disadvantages compared with the real short-term rate.

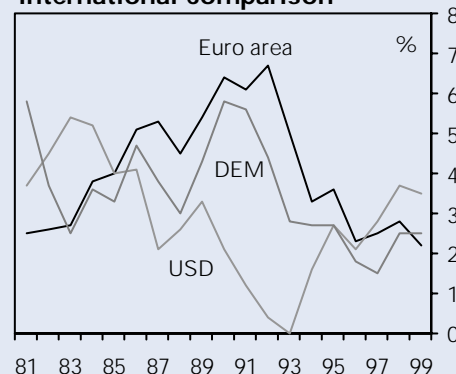
While the real rate is perfectly controllable by the central bank, the yield structure is influenced by actions of the central bank and the assessments of financial markets. For instance, in 1995 there was a strong long-term capital outflow from the euro area to the United States. The euro long-term rate went up. At the same time real short-term rates were increased but to a smaller extent than the increase in the long-term rates. As a result, the yield structure for 1995 shows a rather large spread, which could be interpreted as an indication of expansionary monetary policy. How misleading this signal is, becomes obvious if the first quarter of 1999 is compared with 1995. Today, long-term and short-term rates are much lower than in 1995. But according to the yield structure, the present situation would have to be regarded as a much more restrictive monetary policy stance than in 1995.

Chart 15
Money market rate and commercial bank lending rates: Germany



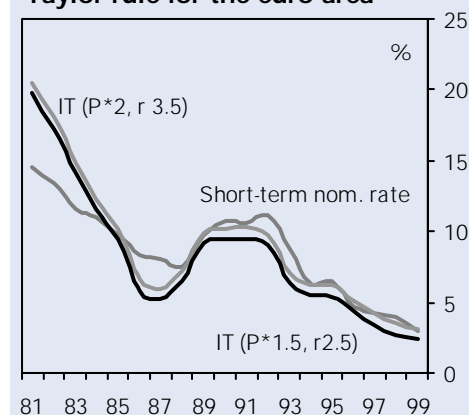
Source: Deutsche Bundesbank

Chart 16
Real short-term interest rates in international comparison



Source: OECD

Chart 17
Taylor rule for the euro area



P*=target inflation
r=short-term rate
Source: OECD, own calculations

¹⁸⁾ This can be explained as follows: For a very simple calculation of the yield structure the nominal long-term rate is subtracted from the nominal short-term rate. The long-term rate can be regarded as the sum of a real rate plus the expected inflation rate. If the expected inflation rate is more or less identical with the actual rate (extrapolative expectations) one actually subtracts the actual inflation rate and a more or less constant term from the nominal short-term rate. This yields the short-term real rate plus a constant.



Above all, there is no sound theoretical basis for the yield structure. Standard theory of investment explains investment decisions with the level of real interest rates, above all the long-term rate. Thus, if long-term and short-term rates come down in parallel this should always stimulate investment, especially if the decline in the long-term rate has been somewhat faster than the decline in the short-term rate. It is very difficult to understand why a simultaneous narrowing of the yield structure should have a negative impact on the real economy.

Thus, the statistical impact of the yield structure is to be seen more as a spurious correlation, where the short-term real rate has to be regarded as the exogenous variable which is economically relevant for an assessment of the stance of the ECB's monetary policy. In the present situation the signals provided by the yield curve should not be a matter of concern.

Pragmatic approach in the tradition of the Bundesbank

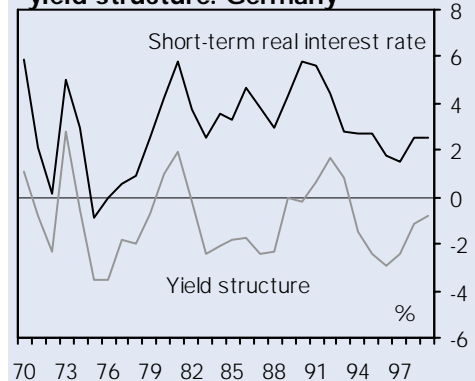
In sum, it is certainly necessary to make a distinction between the SOMPS and the ECB's interest rate policy. If one takes the SOMPS literally, one could come to the conclusion that the ECB will follow a monetary policy which is less responsive to demand shocks than the policy of the Fed or the Bundesbank. But in its practical policy the ECB shows a degree of flexibility which is difficult to reconcile with the SOMPS and the statements of its representatives. This is clearly shown by the fact that the present interest rate level is even lower than the value derived from the Taylor rule, which is based on a very activist approach to monetary policy. Thus, the ECB is very much in the tradition of the Bundesbank which solemnly preached a monetarist doctrine while following quite pragmatic policy.

More transparency would be helpful for the ECB's credibility

In the longer run the discrepancy between the ECB's proclaimed strategy and its actual monetary policy could have negative effects on the transparency and credibility of European monetary policy. As the design of both pillars is not very convincing anyhow, the ECB would be well advised to redesign its whole strategy. In fact it had to be developed under an immense time pressure in autumn 1998. The strategy of inflation targeting could serve as a main model for such a redefinition. It would imply, above all, that the ECB will provide a regular inflation forecast and that the role of the money stock will be less prominent.

Chart 18

Short-term real interest rate and yield structure: Germany



Source: Deutsche Bundesbank

ECB's interest rate policy to differ from SOMPS

ECB's pragmatism may harm its credibility

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