The two pillars of the ECB's monetary policy strategy

The maintenance of price stability in the euro area is the primary objective of the ECB's monetary policy. Given the time-lags in the transmission of monetary policy impulses to the price level, the ECB must be forward-looking. Therefore, the ECB must regularly assess the nature and magnitude of economic shocks and the resulting risks to future price stability. In this respect, the ECB's strategy foresees, first, a prominent role for money (signalled by the announcement of a reference value for monetary growth) and, second, an analysis of a wide range of other economic and financial indicators in order to form a broadly based assessment of the risks to price stability. These two elements have been called the two pillars of the ECB's monetary policy strategy. Taken together, the two pillars form a framework which is used to organise the analysis and the presentation of the information relevant for monetary policy-making in order to maintain price stability.

The two-pillar presentation differs in some respects from the strategies pursued by other central banks. It is, therefore, not surprising that the announcement and explanation of the ECB's monetary policy strategy (see the article entitled "The monetary policy strategy of the Eurosystem" in the January 1999 issue of the ECB Monthly Bulletin) not only triggered an extensive debate, but was also followed by occasional misunderstandings of the ECB's policy framework. In the light of this discussion and of experience gained with the strategy in practice, this article describes and reviews the two pillars and the main arguments for the adoption of a two-pillar framework for the ECB's strategy.

In the presence of considerable uncertainties surrounding the structure of the economy and the transmission mechanism of monetary policy within this structure, when formulating monetary policy central banks should not rely on any single indicator, single model or simple policy rule to take policy decisions. Rather, a diversified approach to the analysis of the information underlying monetary policy decisions is desirable. In accordance with standard economic thinking, the ECB's strategy organises the main approaches to assessing risks to price stability into two groups – on the one hand, approaches which assign a central role to money and, on the other, a variety of other models of the inflation process, predominantly those which focus on the interplay between supply and demand and on cost pressures in the goods and labour markets. The diversified approach prompted by the two pillars of the ECB's strategy is consistent with an awareness of the uncertainties faced by the central bank and stimulates cross-checking between analyses focusing on monetary developments and those concentrating mainly on non-monetary indicators, thereby helping to ensure the robustness of monetary policy decisions.

1 Introduction

In October 1998 the Governing Council of the ECB announced its monetary policy strategy (see Box 1). Most importantly, the ECB provided a quantitative definition of the primary objective of monetary policy in the euro area, namely price stability. Price stability was defined as an annual increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%. It was emphasised that price stability is to be maintained over the medium term. The ECB affirmed that, in line with its Treaty mandate, monetary policy decisions would focus on this overriding objective.

Moreover, the Governing Council announced that its strategy would use two forms of analysis to support the assessment of risks to price stability.

First, in recognition of the fundamentally monetary origins of inflation over the medium term, the ECB assigned a prominent role to money in the formulation of a monetary policy aimed at achieving its primary objective. This prominent role – the so-called first pillar of the strategy – was signalled by the announcement of a quantitative reference value for monetary growth. The first pillar consists of a detailed analysis of potential

Box 1

The ECB's monetary policy strategy

ECB press release entitled *"A stability-oriented monetary policy strategy for the ESCB"*, 13 October 1998.

"At its meeting on 13 October 1998 the Governing Council of the ECB agreed on the main elements of the stability-oriented monetary policy strategy of the ESCB. These elements concern: 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 monetary aggregate; and a broadly based assessment of the outlook for future price developments.

As mandated by the Treaty establishing the European Community, the maintenance of price stability will be the primary objective of the ESCB. Therefore, the ESCB's monetary policy strategy will focus strictly on this objective. In this context, the Governing Council of the ECB has adopted the following definition: '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%'. Price stability is to be maintained over the medium term. (…)

Three features of this definition should be highlighted. (1) The HICP is the most appropriate price measure for the ESCB's definition of price stability. It is the only price index that will be sufficiently harmonised across the euro area at the start of Stage Three. (2) By focusing on the HICP 'for the euro area', the Governing Council of the ECB makes it clear that it will base its decisions on monetary, economic and financial developments in the euro area as a whole. The single monetary policy will adopt a euro area-wide perspective; it will not react to specific regional or national developments. (3) An 'increase (...) of below 2%' is very much in line with most current definitions adopted by national central banks in the euro area.

Furthermore, the statement that 'price stability is to be maintained over the medium term' reflects the need for monetary policy to have a forward-looking, medium-term orientation. It also acknowledges the existence of short-term volatility in prices which cannot be controlled by monetary policy.

In order to maintain price stability, the Governing Council of the ECB agreed to adopt a monetary policy strategy which will consist of two key elements. (1) Money will be assigned a prominent role. This role will be signalled by the announcement of a quantitative reference value for the growth of a broad monetary aggregate. (…) (2) In parallel with the analysis of monetary growth in relation to the reference value, a broadly based assessment of the outlook for price developments and the risks to price stability in the euro area will play a major role in the ESCB's strategy. This assessment will be made using a wide range of economic and financial variables as indicators for future price developments.

This strategy underlines the strong commitment of the Governing Council of the ECB to its primary objective and should facilitate the achievement of this overriding goal. It will also ensure the transparency of the ESCB's decision-making and its accountability. Based on its strategy, the Governing Council of the ECB will inform the public regularly and in detail about its assessment of the monetary, economic and financial situation in the euro area and the reasoning behind its specific policy decisions."

deviations of monetary growth from the reference value, supported and complemented by an examination of the information content of monetary aggregates and their components and counterparts (in particular, credit) for future price developments.

Second, recognising the important information relevant for monetary policy decisions contained in other indicators, the ECB announced that, in addition to a thorough analysis of monetary developments, a broadly based assessment of a wide range of other indicator variables (including

macroeconomic projections and forecasts) would also be carried out and would constitute a further basis for monetary policy decisions. This broadly based assessment has been labelled the second pillar.

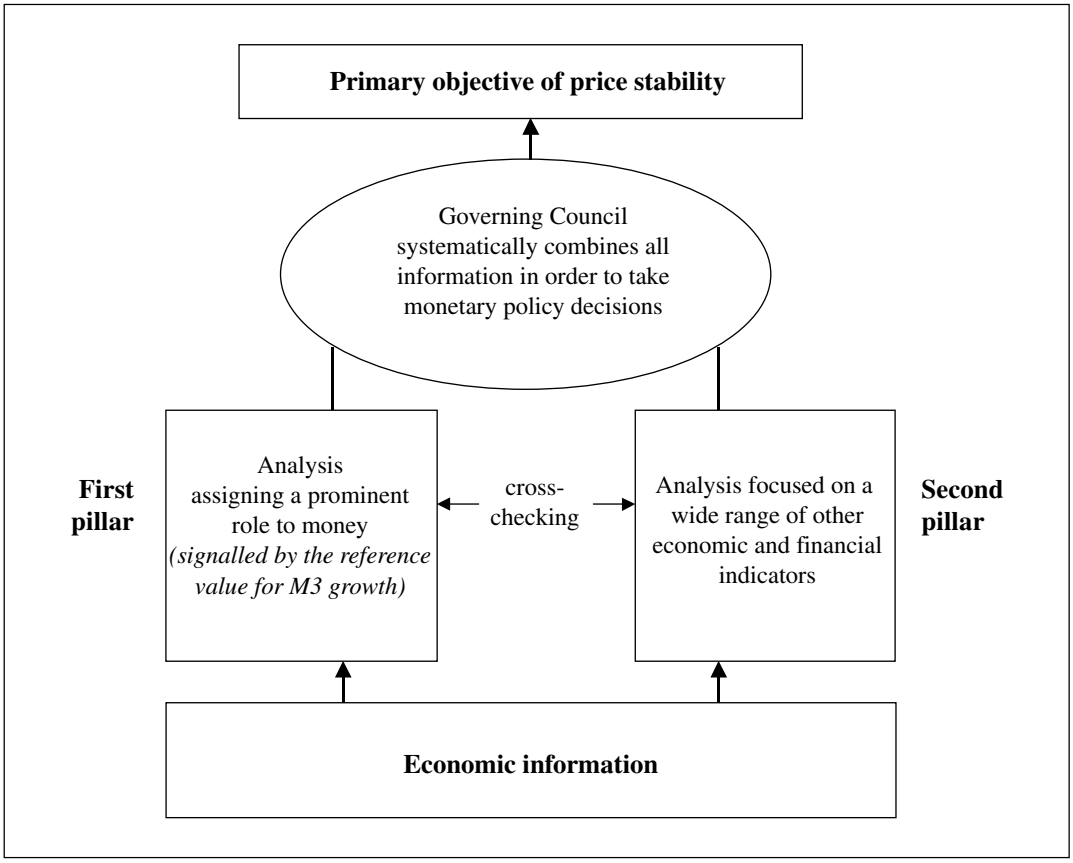
2 A description of the two pillars and their role in the strategy

The two pillars of the ECB's strategy are embedded in a broader strategic framework, which is described schematically in the chart below. As is illustrated in the chart, the role of the two pillars is to provide a framework for organising, analysing and cross-checking the large amount of economic information available to policy-makers in a manner that helps the Governing Council to take policy decisions which serve the maintenance of price stability in accordance with the ECB's published definition.

The ECB's strategy is sometimes misunderstood by external observers as implying multiple targets for monetary policy, with the two pillars representing competing and potentially conflicting objectives. This interpretation fails to recognise that the maintenance of price stability in the euro area is the only "target" (more formally, it is the "primary objective") of the ECB's monetary policy strategy. Both pillars of the strategy should be understood as instrumental in conducting the analysis needed to guide monetary policy decisions in order to achieve this ultimate objective, rather than as distinct targets in themselves. Therefore, it has been clearly stated from the outset that the first pillar is not a

Chart

Schematic presentation of the ECB's monetary policy strategy



"monetary target" and the second pillar is not an "inflation target". Taken together, the two pillars of the strategy form a framework which organises the analysis and the presentation of the information relevant for monetary policy-making, in order to guide decisions which aim to maintain price stability.

The distinction between the two pillars of the strategy is mainly a distinction between economic models or approaches to the analysis of the inflation process. The first pillar can be seen as representing approaches which assign a prominent role to money in explaining the future evolution of price developments. The second pillar comprises analyses of a broad range of factors and captures models of inflation which focus mainly on real economic variables, such as the interplay of supply and demand in the goods and labour markets. Against this background, in practice, the strategy implies focusing on monetary indicators under the first pillar, while concentrating on conjunctural and mainly non-monetary indicators under the second pillar.

However, as is also indicated in the chart, the strategy does not imply a partition of the information used for the analysis under the two pillars. For example, since the demand for money depends on price developments, real GDP and interest rates, the analysis of monetary developments must always take place in the context of developments in these non-monetary variables. Similarly, the analysis of some monetary variables, e.g. sectoral credit developments, can be of assistance in the assessment of real consumption and investment demand. Thus, analysis under *both* pillars aims at examining the available information in the best possible manner. The difference in emphasis placed on specific variables reflects their role in the framework for the analysis or economic interpretation underlying each pillar and is, therefore, one of degree.

The first pillar

Taking the experience of other central banks into account, the ECB chose to assign a prominent role to money as the first pillar of its monetary policy strategy, in reflection of the fundamentally monetary origins of inflation over the medium to longer term. One of the most remarkable empirical regularities in macroeconomics is the ubiquitous long-run relationship between the price level and the money stock. The monetary origins of inflation are the subject of widespread consensus in the economics profession.

Unlike other countries where monetary developments have been rather erratic during recent decades, available evidence for the euro area continues to point to the existence of a stable relationship between broad monetary aggregates – in particular, M3 – and price developments at horizons relevant to monetary policy-making. Moreover, M3 and other monetary and credit aggregates appear to possess good leading indicator properties for future price developments, especially in the medium term. On the basis of these results, the analysis under the first pillar offers particularly useful guidance over a medium-term horizon.

Furthermore, compared with alternative indicators of future price developments, money has a number of desirable features. Monetary data are measured relatively more accurately than many other economic indicators and are typically available in a more timely fashion.

The prominent role of money has been signalled by the announcement of a reference value for the broad monetary aggregate M3 (see Box 2). The announcement of the reference value represents a visible public commitment on the part of the Governing Council to analyse and explain monetary developments and their implications for the risks to price stability in detail. This explanation appears regularly in the President's introductory statement at the

ECB's monthly press conference and in the editorial and commentary of the ECB Monthly Bulletin.

However, as noted above, the reference value for M3 is not an intermediate monetary target. The ECB does not attempt to control monetary growth so as to reach the reference value at a specific point in time. Rather, the reference value acts as an analytical and presentational tool which constitutes an important benchmark for assessing risks to price stability.

Moreover, analysis under the first pillar goes beyond the evaluation of deviations of M3 growth from the reference value. The first pillar involves an analysis of the components and counterparts of M3, in particular credit, and other key aspects of the balance sheet position of financial intermediaries. Such analysis helps to provide both a better insight into the behaviour of M3 in relation to the reference value and a broad picture of the liquidity conditions in the economy and their consequences with regard to the risks to price stability.

This broader analysis of monetary and credit developments is particularly important when evaluating the magnitude of monetary impulses in the economy and assessing their potential impact on future economic developments. In addition, such analysis may help to assess the possible existence and the potential effects of bubbles in financial markets. Historically, booms and busts in asset markets have been closely associated with large movements in monetary and, especially, credit aggregates, and their implications for the economy may depend on the strength of the balance sheet position of the financial sector. This is another reason for the ECB to give a special status within its strategy to the analysis of monetary and credit aggregates and financial intermediaries' balance sheets.

Box 2

The reference value for monetary growth

In December 1998 the Governing Council of the ECB announced the first reference value for monetary growth, namely an annual growth rate of 4½% for the broad monetary aggregate M3. This reference value was confirmed in December 1999. It was also announced then that the reference value would henceforth be reviewed on an annual basis.

The reference value is an analytical and presentational tool which facilitates the formulation and explanation of monetary policy decisions aimed at the maintenance of price stability. To this end, the concept of a reference value has two key features. First, the reference value must be consistent with – and serve the achievement and maintenance of – price stability. This means that the monetary aggregate used to define the reference value should exhibit a stable relationship with the price level over the medium term. Second, substantial or prolonged deviations of monetary growth from the reference value would, under normal circumstances, signal risks to price stability. This means that the monetary aggregate used to define the reference value should possess leading indicator properties for future inflation.

The derivation of the reference value was based on the standard relationship between money, prices, real activity and the velocity of circulation. Using the Eurosystem's definition of price stability (annual increases in the HICP for the euro area of below 2%) and assumptions for trend real GDP growth (2% to 2½% per annum) and the development of M3 income velocity (a trend decline of between ½% and 1% per annum), a reference value of 4½% was derived. By using the Eurosystem's definition of price stability and assumptions for trend real GDP and velocity, the derivation of the reference value emphasises the medium-term orientation of monetary policy. The next review of the reference value will take place in December 2000.

The second pillar

As noted, inflation is ultimately a monetary phenomenon. This notwithstanding, monetary developments cannot be the only guide for assessing risks to price stability. In order to be able to take appropriate decisions, the Governing Council needs to have a comprehensive understanding of the prevailing economic situation and be aware of the specific nature and magnitude of the economic disturbances which threaten price stability. For example, in order to assess risks to price stability it is important to know whether shocks originate on the supply or the demand side, have an external or domestic origin or are temporary or permanent. This information is not revealed in the analysis conducted under the first pillar alone. Therefore, in parallel with the analysis of monetary developments, the ECB also evaluates a wide range of other economic and financial indicators within its broadly based assessment of the risks to price stability in the euro area.

The analysis conducted under the second pillar focuses on revealing the influence of a host of factors, some of which influence price developments in the shorter term. Such short-term developments are nevertheless relevant for monetary policy since their effects may become entrenched and may, therefore, jeopardise prospects for price stability in the medium run. Other indicators considered under the second pillar can also signal threats to price stability in the medium term in a more direct manner. For example, growing shortages in the labour market tend to result in upward pressure on labour costs which may in turn, with a time-lag, have a gradual and quite persistent impact on consumer prices.

In line with standard models of the business cycle, this analysis is often centred on the effects of the interplay between supply and demand and/or cost pressures on pricing behaviour in the goods, services and labour markets. In this respect, developments in overall output, demand and labour market conditions, in a broad range of price and cost indicators as well as in the exchange rate and the balance of payments for the euro area are regularly reviewed by the ECB (see also the articles entitled "The role of short-term economic indicators in the analysis of price developments in the euro area" in the April 1999 issue of the ECB Monthly Bulletin and "Price and cost indicators for the euro area: An overview" in the August 2000 issue of the ECB Monthly Bulletin).

Moreover, developments in financial market indicators and asset prices are also closely monitored. Movements in asset prices may affect price developments via income and wealth effects. Furthermore, asset prices and financial yields can be used to derive information on the expectations of financial markets, including information on expected future price developments (see the article entitled "The information content of interest rates and their derivatives for monetary policy" published in the May 2000 issue of the ECB Monthly Bulletin).

Under the second pillar, macroeconomic projections based on conventional models and economic experts' knowledge produced both inside and outside the Eurosystem also play an important role as a tool for summarising existing information (see Box 3).

Box 3

The role of macroeconomic forecasts and projections under the second pillar

By contrast with the forecasts produced by international organisations and other institutions, the Eurosystem itself does not produce "forecasts" in the sense of best predictions of future developments. Rather, it produces a "projection" for future developments based on the assumption of unchanged interest rates (and exchange rates). In order to understand the role of the Eurosystem's projections in the ECB's strategy, this distinction must be borne in mind.

Since macroeconomic projections produced within the Eurosystem and the forecasts of other institutions are typically produced on the basis of models of the inflation process which do not accord a prominent role to money, they form part of the second pillar of the ECB's strategy. Given that the range of relevant indicators under the second pillar is potentially very broad, there is a need to structure and summarise this information so as to facilitate the analysis of risks to price stability. Forecasts and projections offer a convenient analytical tool for organising a large amount of information and help to create a consistent picture of possible future developments.

Within the Eurosystem two macroeconomic projection exercises for the euro area are performed every year which bring together experts from both the ECB and the national central banks (NCBs). These are not the only projections produced within the Eurosystem, but they are the projections which involve the greatest interaction between ECB and NCB staff experts.

The Eurosystem's main macroeconomic projections aim to deliver a coherent and consistent assessment of the outlook for short and medium-term economic prospects in the euro area. The projections are constructed by combining econometric model-based projections with non-model-based judgemental assessments. A number of different econometric models are used by both ECB and NCB staff experts in the projection exercises, including a variety of national and euro area-wide structural macroeconometric models. These tools have the advantage of being able to provide a detailed global structure. Based on this structure, the final projections seek to be coherent both with past experience and with economic theory, as well as being consistent with the national accounts identities. Judgemental assessments based upon recent conjunctural information and leading indicators constitute another key input into the Eurosystem projections. Such assessments are produced by sectoral and national experts who have a thorough knowledge of both recent economic developments and the institutional context.

Despite the considerable care taken in producing the projections, it is important to realise that it is not possible to incorporate the entire analysis conducted under the second pillar into these projections. This is because macroeconomic forecasts and projections are inevitably subject to a number of conceptual and practical limitations which need to be taken into account when assessing their information content. First, projections and forecasts can vary significantly, depending on the underlying conceptual framework or the set of techniques employed. For this reason, it is not appropriate to rely solely on any single projection. Any forecast or projection needs to be cross-checked with information derived on the basis of other techniques and/or market expectations of future developments. Second, forecasts and projections are always based on assumptions for the path of some exogenous variables which may be volatile and the future path of which is difficult to predict. Such variables include, for example, exchange rates and commodity price developments. The forecast or projection for future inflation may depend significantly on the assumptions chosen for such variables. In addition, as discussed in the opening paragraph of this box, forecasts and projections need to be made conditional on an assumed path for monetary policy. Within central banks, such assumptions are typically represented as unchanged short-term interest rates in order to allow the projection to be meaningful when assessing the risks to price stability which might arise from current (and unchanged) monetary policy interest rates. In practice, these monetary policy assumptions may often lead to problems of internal consistency, since

the expectations and decisions of forward-looking investors, firms and consumers may incorporate different expectations of future monetary policy actions. Third, the production of detailed forecasts or projections is inevitably time-consuming. This implies that forecasts and projections are only produced periodically and, therefore, may not always include all the latest information. Fourth, by their very nature, econometric models provide only a summary description of the economy, consisting of the main relationships governing economic developments and thus do not include all relevant information. Finally, whichever techniques are used, forecasts and projections always need to be adjusted on the basis of informed judgement and practical experience. However, the impact of judgemental adjustments may not be easy to make explicit. Consequently, such judgemental adjustments can complicate the interpretation of the results. This means that a discussion of the developments in indicators underlying the forecasts or projections needs to be made transparent.

For all these reasons, the analysis under the second pillar of the strategy is not limited to the Eurosystem's own macroeconomic projections. The second pillar encompasses a broader set of analyses, which range from the monitoring of timely indicators and more sectoral and structural analyses to the use of small-scale econometric models embodying a different view, estimated with different methodologies or focused on revealing information at specific horizons. Furthermore, these projections are always cross-checked against forecasts produced elsewhere and against forward-looking information derived from financial market prices. Such analyses allow timely information, which is not easily fed into formal forecasting and projection exercises, to be used in the policy discussion, reveal the information in individual indicators and sectors on threats to price stability and help to provide an insight into how developments in specific variables influence the overall inflation outlook.

It should be emphasised that the macroeconomic projections of the Eurosystem are based on the staff's technical expertise. These macroeconomic projections do not embody the view or judgement of the Governing Council of the ECB. The Governing Council itself has to make an overall assessment of the economic situation and of the risks to price stability using *all* the information available, including, in particular, the information derived from the analysis under the first pillar of the strategy, but also information other than the Eurosystem's projection under the second pillar. Any publication of macroeconomic projections by the ECB would have to reflect the (limited) role that forecasts play in the monetary policy decision-making process.

3 Rationales for the two pillar approach

The need for robustness in a world of uncertainty

Central banks operate in an environment of considerable uncertainty. This uncertainty takes on many forms. One form of uncertainty is related to the partial predictability of economic outcomes. This becomes manifest in the form of so-called shocks to individual variables which cannot be predicted in advance. Other, arguably more profound, forms of uncertainty include the inevitably imperfect measurement, interpretation and understanding of the available information, of economic behaviour and, in particular, of the way in which the economy functions. A monetary policy strategy will be successful in such an environment only if it leads to policy decisions which take the prevailing uncertainty into account in an appropriate manner.

Given the considerable uncertainties faced by monetary policy – exacerbated in the case of the ECB by the potential for behavioural and institutional changes associated with the introduction of the euro – monetary policy would be unwise to rely on one specific model, indicator or forecast to the exclusion of alternatives. Furthermore, the possibility of imperfections in the data and the uncertainty associated with the reliability of the economic information available to central banks also call for a continuous cross-checking of information and analyses. By

implication, it would be unwise for central banks mechanistically to use simple "policy rules" which link interest rate changes to developments in a small number of indicators and/or forecasts. On the contrary, central banks should cross-check and compare the signals given by different indicators and evaluate the available information and the consequences of their actions in the light of a range of plausible models of the economy. In this context, a policy that performs reasonably well under many plausible models and in a range of possible circumstances is often the best choice over the medium term.

The ECB's strategy embodies a "full information" approach in a broad sense, i.e. it is a framework that not only encompasses all relevant information, but also takes into account various, possibly different interpretations of this information. Against this background, the strategy adopted by the ECB represents a framework that reduces the risks of policy errors caused by over-reliance on a single indicator or model. Since it adopts a diversified approach to the interpretation of economic conditions, the ECB's strategy may be regarded as facilitating the adoption of a robust monetary policy in an uncertain environment.

Competing paradigms of the inflation process

A reflection of the uncertainties about, and the imperfect understanding of, the economy is the large range of models of the inflation process proposed in economics literature, which incorporates a multiplicity of views on the structure of monetary economies and the transmission mechanism of monetary policy within them. Many of these models capture important elements of reality, but none of them appear to be able to describe reality in its entirety. Therefore, any single model is necessarily incomplete.

As the set of plausible models is very broad, any policy analysis needs to be organised within a simplifying framework. The ECB has chosen to organise its analysis under two pillars. In this respect, the ECB took account of the fact that it has proven extremely difficult to integrate an active role for money into conventional real economy models, such as those normally used in macroeconomic forecasting exercises, despite the general consensus that inflation is ultimately a monetary phenomenon. Therefore, the first pillar can be seen as representing a group of models which embody a view of price level determination that accords an important role to money. The second pillar encompasses a range of alternative models of the inflation process, predominantly those which emphasise the interplay between supply and demand and/or cost pressures.

Of course, neither pillar in itself represents a single monolithic approach. Within both pillars – and especially under the second – a variety of models and specifications exist. Moreover, these sets of models are undergoing continuous evolution as new empirical and analytical tools are developed.

Quite naturally, occasions may arise when the indications emerging from the two pillars give conflicting signals for monetary policy-making. This potential tension should not be seen as a limitation of the strategy. On the contrary, it actually constitutes the essence of a robust strategy, in the sense explained above. It is only by revealing and confronting such tension between the information revealed under the two pillars that a robust monetary policy response can be formulated. In general, the need to reconcile the potentially conflicting signals represents, in itself, an important source of insight and an additional stimulus for achieving a deeper understanding of the economic situation.

Problems involved when relying entirely on either the first or the second pillar

There are two main arguments against relying solely on the first pillar for the analysis underlying monetary policy decisions. First,

owing to the volatility in the velocity of circulation of money, it may, on occasion, be difficult to interpret monetary developments in the shorter term and extract the signals which they contain regarding risks to price stability. Distortions to the information content of M3 (and its components and counterparts) may be caused by special factors, such as changes in the taxation of interest income on deposits, regulatory changes, etc. Financial innovation, in particular if not anticipated, can also cause difficulty in understanding the indicator properties of money for future price developments.

Second, relying solely on the first pillar entails the danger that insufficient attention is paid to risks to medium-term price stability that arise from developments in variables other than money. For example, excessive increases in nominal wages or other costs may become entrenched and self-perpetuating, and may, therefore, have implications for medium-term developments in the price level. Such threats to price stability are not necessarily signalled immediately by the monetary data. Although sustained inflation is ultimately associated with more rapid monetary growth, threats to price stability of this kind can be identified more promptly by conducting an analysis of wage and cost data and undertaking a thorough assessment of developments in labour and other markets.

At the same time, relying solely on the second pillar would be equally ill-advised. Insofar as the second pillar focuses on indicators of shorter-term price dynamics, the danger exists of a short-term bias being imparted to monetary policy, which would conflict with the medium-term orientation.

The fact that the second pillar also includes projections and forecasts with a horizon of longer than one year does not change this interpretation. Conventional macroeconomic projections and forecasts are always surrounded by considerable uncertainty and this uncertainty becomes greater the longer the horizon of the forecast. This creates difficulties in relying solely on such second pillar projections and forecasts in the context of a medium-term oriented monetary policy.

In addition, the fundamentally monetary nature of inflation – as shown in many studies – implies that relying entirely on the second pillar is misguided. Furthermore, risks to medium-term price stability identified by analysis under the second pillar may be deemed to be of limited importance for monetary policy decisions if – at the same time – analysis under the first pillar indicates that these inflationary pressures will not be accommodated by more rapid monetary growth. One purpose of the first pillar is to ensure and signal a commitment to the thorough analysis of monetary developments.

Problems of combining the two pillars in a single analytical approach in a transparent manner

While the above discussion has made it clear that analysis should always be conducted under both pillars, it should also be apparent that it is not practically feasible to combine these two forms of analysis in a transparent manner in a single analytical approach. In practice, monetary policy-making is too complex and the environment in which central banks operate too uncertain to rely on a single model or approach.

Although the internal procedures of central banks pursuing a stability-oriented policy may not, therefore, differ fundamentally in this respect, differences between central bank strategies arise in the presentation of the analysis underlying monetary policy decisions to the public. In this context, some trade-off between simplicity and openness may exist. Adopting a simple form of presentation may, at first sight, help to make the description of monetary policy easier to comprehend, but it will not honestly convey the complexity of the analysis which central banks have to conduct.

The ECB's two-pillar approach represents a balance between the requirements of clarity

and simplicity, on the one hand, and openness and honesty, on the other. The two-pillar structure recognises the need for central banks to organise the presentation of a wide range of information and an array of models and analytical tools in a clear manner within a consistent framework. At the same time, the two pillars of the ECB's strategy represent the diverse modes of analysis conducted within the ECB and the need to cross-check the results of these analyses in order to make an overall assessment upon which monetary policy decisions aimed at price stability are based.

The two-pillar framework within which policy decisions are presented to the public corresponds closely to the framework used to organise the analysis underlying monetary policy decisions within the ECB. If one defines transparency as the extent to which explanations of policy decisions presented to the public correspond to the actual internal procedures on which these decisions are based, then the ECB's approach to the presentation of monetary policy can only be rated as one of the most transparent in the world.

4 Concluding remarks

The maintenance of price stability in the euro area is the primary objective of the single monetary policy. All aspects of the ECB's monetary policy strategy serve the achievement of this primary objective.

The centre of the ECB's strategy is the announcement of a quantitative definition of its primary objective, price stability. By virtue of this announcement, the ECB provides a clear yardstick against which the public can judge the performance of monetary policy. The two pillars are instruments which facilitate the achievement of this primary objective – they do not represent independent policy objectives which have a value in their own right. The two pillars constitute a framework within which to organise and structure the diverse and extensive analyses underlying monetary policy decisions.

Given the time-lags in the transmission process of monetary policy, central banks need to be forward-looking and have a medium-term orientation. At the same time, the ECB faces considerable uncertainties with regard to, inter alia, the reliability of available economic indicators, the structure of the euro area economy and the transmission mechanism of the single monetary policy. Monetary policy decisions must take these uncertainties into account.

In this context, relying on any single indicator or on a single framework of analysis would entail too high a risk. A well-designed monetary policy must be capable of maintaining price stability across a range of plausible interpretations of the economy. By diversifying across different indicators and analytical frameworks rather than relying on a single, inevitably incomplete approach, the risk of policy errors is reduced.

The strategy adopted by the ECB constitutes a framework which provides for such a diversified approach. The prominent role assigned to money in the ECB's strategy (the first pillar) ensures that monetary developments are thoroughly analysed, taking into account the ultimately monetary nature of inflation. At the same time, the second pillar of the strategy ensures that other forms of analysis, such as investigations of the interplay between supply and demand or cost pressures, are also incorporated into the policy process. In this way, shorter-term developments and risks to price stability are also taken into account, given the fact that such short-term price dynamics may spill over to medium-term price developments. The two-pillar structure of the strategy helps to ensure that information and analyses produced on the basis of one methodological perspective are always cross-checked against information and analyses produced on the

basis of the other perspective. This discipline is imposed not only on the internal analysis, but also on external communication, highlighting the transparency of the ECB's approach.

The experience of using the ECB's monetary policy strategy since January 1999 has illustrated how these elements have disciplined the implementation of the single monetary policy. In particular, in presenting and explaining its monetary policy decisions to the public over almost two years, the ECB has always had: (i) to justify how a decision has served the prospects for the maintenance of price stability; (ii) to explain the role of monetary developments in the decision; (iii) to explain the role of developments in other indicators, projections and forecasts in the decision; and (iv) to account, whenever potential discrepancies have emerged, for the different signals emerging from the two pillars and explain how these have been reconciled in the final decision. Having to address these issues on an ongoing basis has, together with the clear overriding focus on the primary objective, imposed a strict discipline on the ECB's decisions, while eschewing any mechanistic application of simplistic, textbook policy rules.

In its public presentation, the ECB's strategy appears to be more complex than some alternatives. However, this complexity reflects the environment in which policy decisions are made. Furthermore, the ECB has adopted a new – and therefore unfamiliar – strategy, which differs from those pursued by other central banks prior to the introduction of the single monetary policy. A process of learning and familiarisation with the new regime has, therefore, been required. There are indications that understanding of the ECB's strategy is improving. This article is a contribution towards consolidating this process.