# Monetary policy making in the Euro area and in the US

**Olivier Loisel**
*Direction de la Recherche*
*Service d'Études et de Recherche sur la politique monétaire*

*Why is monetary policy apparently more active in the US than in the Euro area? How truly different are the ECB's and the Fed's monetary policy objectives and strategies? How to assess and compare their monetary policy performances?*

*This article addresses these issues by reporting on a panel discussion on the theme "Monetary policy making in the Euro area and in the US" which took place recently on the occasion of an international conference co-organised by the Banque de France, the Institut d'Économie Industrielle of Toulouse University and the Center for International Economics and Development of Northwestern University.*

*This discussion among academic and central bank economists conveyed the general impression that altogether similarities outweighed differences between the ECB and the Fed in terms of monetary policy inertia, objectives and strategy.*

Key words : ECB, Fed, monetary policy inertia, monetary policy objectives, monetary policy strategy.
JEL codes : E52, E58.

On September 15th and 16th, 2006, the Toulouse branch of the Banque de France hosted an international conference on the theme "Macroeconomic fluctuations, risk and policy" jointly sponsored and organized by the Banque de France, the Institut d'Économie Industrielle of Toulouse University and the Center for International Economics and Development of Northwestern University. The conference ended with a panel discussion on the theme "Monetary policy making in the Euro area and in the US" with the following participants:

- Jordi Galí, Professor of Economics, Universitat Pompeu Fabra and Director, CREI;
- Andrew Levin, Assistant Director, Division of Monetary Affairs, Board of Governors of the Federal Reserve System;
- Phillippe Moutot, Deputy-Director General Economics, Director Monetary Policy, European Central Bank;
- Christian Pfister, Director, Research Directorate, Banque de France;
- Anders Vredin, Head of Monetary Policy Department, Sveriges Riksbank.

The panel discussion was shortly introduced by Lawrence Christiano, Professor of Economics at Northwestern University, who noted that as the policy interest rate had completed its first cycle in the Euro area, the time was opportune to compare monetary policy making in the Euro area and in the US with the benefit of some hindsight. Instead of relating each intervention in turn, this article gives an account of the three issues around which most of the panel discussion developed, namely the similarities and differences between the ECB and the Fed in terms of monetary policy inertia, monetary policy objectives and monetary policy strategy.[1]

## 1| Monetary policy inertia

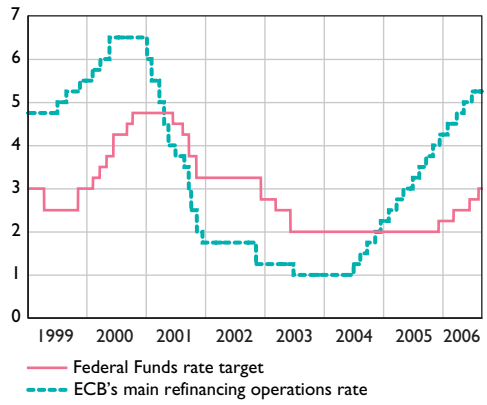
One first issue addressed in the panel discussion was the apparently higher monetary policy inertia in the Euro area than in the US, as a comparison of policy-rate developments in the Euro area and in the US would suggest at first sight (See Chart 1). This difference has, in the past, led some commentators to criticise the ECB for acting "too little, too late".

J. Galí pointed out that the ECB's apparently more passive monetary policy had not led to greater economic instability, since the standard deviations of GDP growth and inflation computed over the period 1999Q1-2006Q2 were both lower in the Euro area than in the US.

*1 This article has been read and approved of by the panellists. The views expressed are those of the panellists and should not be interpreted as reflecting those of their respective institutions, notably the Banque de France, the European Central Bank, the Federal Reserve Board or the Sveriges Riksbank.*

**Chart 1 ECB and Fed policy rates**

*(%)*



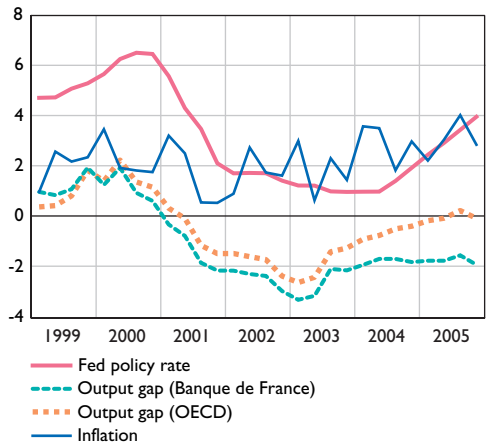

*Sources: European Central Bank, Federal Reserve.*

C. Pfister first noted that the observed difference in interest-rate paths did not prevent the correlation between the short-term nominal interest rate and the output gap from appearing as strong in the Euro area as in the US since 1999 (See Charts 2 and 3).

He then pointed out that this difference in interest-rate paths did not necessarily reflect a difference in the degree of monetary policy gradualism or interest-rate smoothing per se, but could instead be due for instance to a difference in the way the inflation rate and the output gap evolve over time. Indeed, estimations of augmented Taylor-type interest-rate rules lead

**Chart 2 Fed policy rate, US output gap and US inflation**

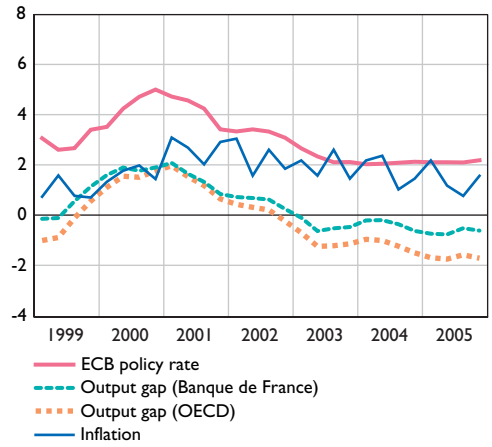
*(%)*




*Sources: Banque de France, Federal Reserve, OECD.*

**Chart 3 ECB policy rate, Euro area output gap and Euro area inflation**

*(%)*




*Sources: Banque de France, European Central Bank, OECD.*

to a similar lagged interest-rate coefficient for the Euro area and the US. He cautiously acknowledged however that the measurement of the degree of monetary policy gradualism by this lagged interest-rate coefficient had been criticized since the seminal work of Rudebusch (2002), most recently by Fève, Matheron and Poilly (2006) for the Euro area and Carrillo, Fève and Matheron (2006) for the US.

He finally argued, on the basis of Christiano, Motto and Rostagno (2006a) and Sahuc and Smets (2006), that the apparent difference in monetary policy inertia between the Euro area and the US was the consequence of a difference in macroeconomic shocks rather than in economic structures, and most notably of the US having been hit by larger demand shocks than the Euro area.

P. Moutot stressed that even though both economies had experienced comparable stock-price boom-bust cycles at the turn of the millennium, the reason for this observed difference in interest-rate paths between the Euro area and the US had more to do with a difference in macroeconomic shocks and economic structures than with a difference in monetary policy strategies.

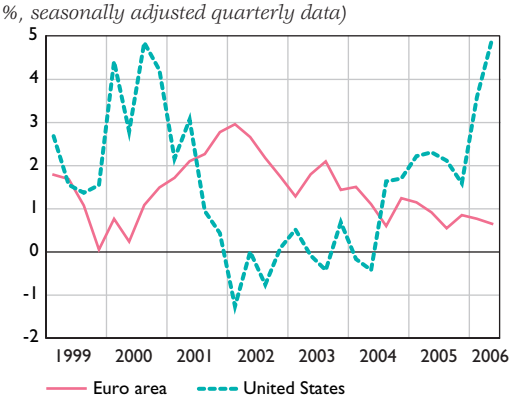
Concerning macroeconomic shocks, he noted that the Euro area had been hit by more adverse supply shocks than the US (cf. Smets and Wouters, 2005). In particular, there had been a decline in labour productivity in the Euro area over the past fifteen years, which contrasted with an increase in labour productivity in the US over the same period. This difference in labour productivity developments explained in part why unit labour costs growth had dramatically decreased in the US and slowly increased in the

Euro area from 2000 to 2002 (See Chart 4). In turn, this difference in unit labour costs growth developments contributed to explain why inflation had dramatically decreased in the US and stayed above 2% in the Euro area from 2000 to 2002 (See Chart 5), and consequently why the policy rate had decreased faster and by a larger amount in the US than in the Euro area between 2001 and 2003 (See Chart 1).

Concerning economic structures, he mentioned that the higher degree of products market rigidity (as measured by price stickiness) in the Euro area implied that a change in the nominal interest rate of a given size had a stronger effect on the real interest rate and hence on real activity in the Euro area than in the US. In turn, this greater monetary policy effectiveness contributed to explain the smaller amplitude of policy-rate cycles in the Euro area than in the US.

**Chart 4 Unit labour costs in the Euro area and in the US**

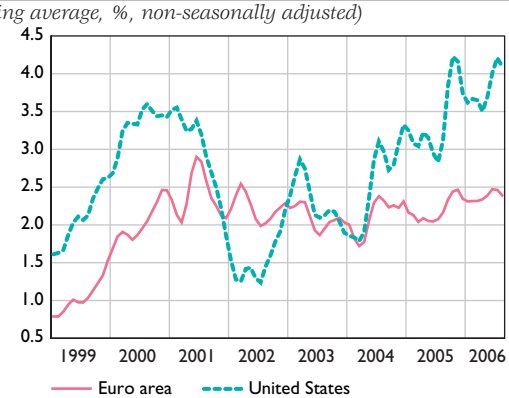
*(annual changes, %, seasonally adjusted quarterly data)*




*Sources: BIS, Eurostat.*

**Chart 5 Inflation in the Euro area and in the US**

*(three-month-moving average, %, non-seasonally adjusted)*




*Sources: BIS, Eurostat.*

Concerning monetary policy strategies, he argued that the ECB's quantitative definition of price stability enabled the ECB to rather successfully anchor private agents' inflation expectations. This better anchoring of inflation expectations balanced the effect of more sluggish price-setting mechanisms on inflation persistence, so that altogether the degree of inflation persistence was similar in the Euro area and in the US. In his view, this relatively successful anchoring of inflation expectations also reduced the need to react to short-term developments and therefore partly explained the ECB's relative patience and restraint in moving its policy rate. He moreover emphasised that its quantitative definition of price stability enabled the ECB to regain control of inflation expectations when they went off track, not by changing its policy rate but simply by credibly threatening to do it if ever they kept off track. For instance, the ECB managed in 2003 and 2004 to bring back long-term inflation expectations (as measured by break-even inflation rates) into line with its price stability objective by no other means than communication. Following Trichet (2005), he then concluded that the lower degree of *ex post* monetary policy activism in the Euro area (compared to the US) was, somewhat paradoxically, partly due to a higher degree of *ex ante* monetary policy activism in the Euro area.

## 2| Monetary policy objectives

One second issue addressed in the panel discussion was that of the similarities and differences between the ECB and the Fed in terms of monetary policy objectives.

P. Moutot stressed that the difference between the ECB's unique primary objective of price stability and the Fed's dual objective of price stability and full employment should not be overemphasised. Indeed, Fed officials –including Chairmen Greenspan and Bernanke– had for a long time publicly acknowledged that maintaining price stability was the best contribution that monetary policy could make to promoting the goal of maximum sustainable economic growth. Moreover, the distinction between the use of core inflation by the Fed and headline inflation by the ECB might not matter so much given the medium-term horizon of the ECB's objective.

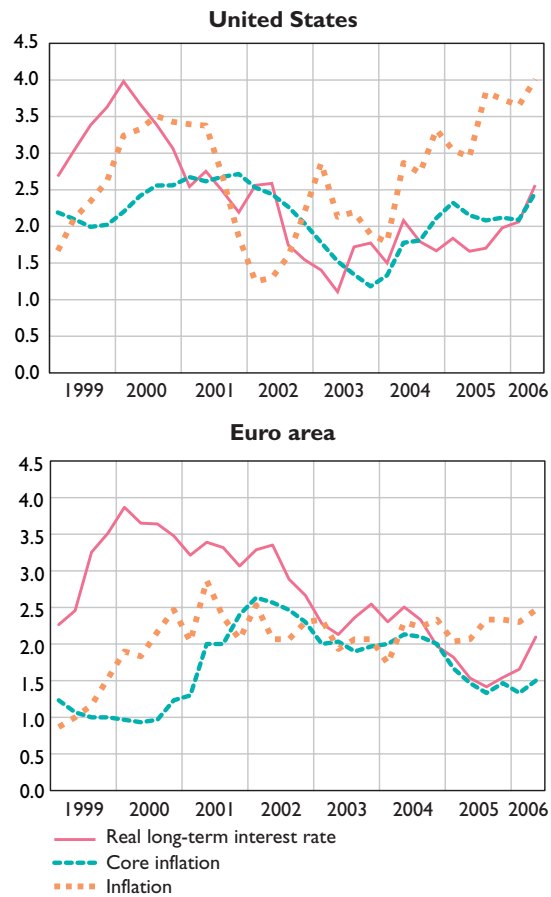
J. Galí argued on the contrary that the ECB might actually care about output growth over and above its officially primary objective of price stability. He made his point by examining the evolution of the real long-term interest rate, which is the relevant monetary policy stance indicator in the standard New Keynesian theoretical framework (à la Clarida, Galí and Gertler, 1999) when the unobserved natural rate of interest is for simplicity assumed to be constant. Real long-term interest rates have

evolved in quite a similar way in the Euro area and in the US since 1999, starting to decrease in 2000Q2 when stock prices went bust on both sides of the Atlantic Ocean. But in the US the real long-term interest rate started to decrease roughly at the same time as core inflation, headline inflation and GDP growth, whereas in the Euro area it started to decrease at the same time as GDP growth while core and headline inflation were still increasing (See Charts 6 and 7).

According to him, this timing suggested that the ECB had conducted a monetary policy looser than required by its official price stability objective. His view was reinforced by the facts that this objective had been missed more often than not since 1999 and that the proportion of respondents to the ECB's Survey of Professional Forecasters predicting a five-year ahead

**Chart 6 Real long-term interest rate and inflation**

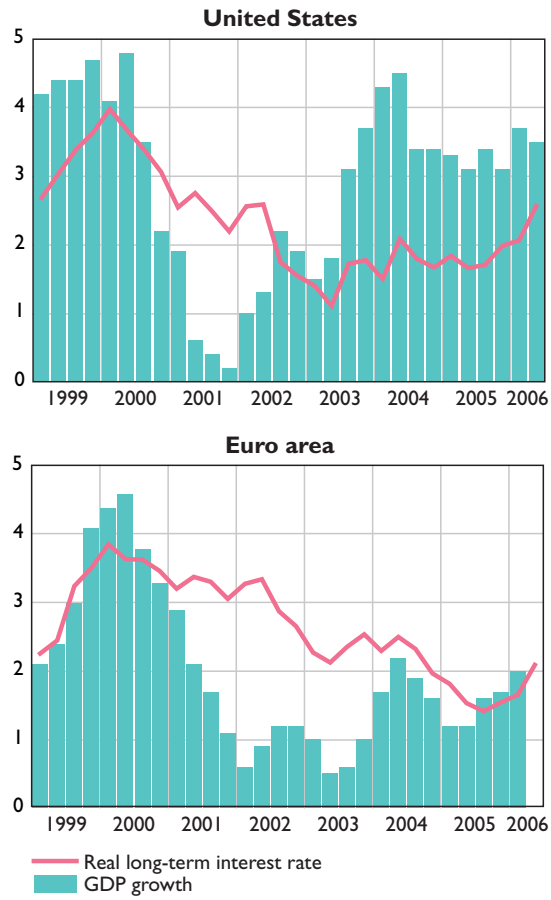
*(%)*




*Sources: Federal Reserve, European Central Bank.*

**Chart 7 Real long-term interest rate and GDP growth**

*(%)*




*Sources: Bureau of Economic Analysis, Federal Reserve, European Central Bank, Eurostat.*

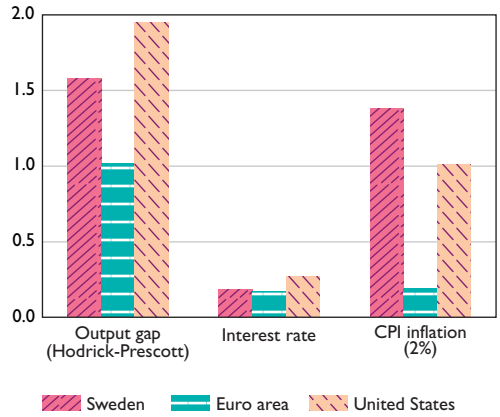
inflation rate higher than or equal to 2% had been on an upward trend from about 38% in 2001Q1 to about 48% in 2006Q2. In answer, P. Moutot pointed out in his intervention that the average inflation expectation had remained constant and slightly below 2%.

J. Galí added that the decline in productivity growth (from 2,3% in the 80s to 1,3% in the 90s-00s) and the stability of inflation despite output growth falling below estimates of potential suggested that Europe might be on a new balanced growth path, which would imply a permanent downward adjustment in the steady state real interest rate. A failure of European policy-makers to recognize this new scenario would then put the success of the ECB's monetary policy at risk for two reasons. First, the probability of hitting the zero lower bound on interest rates, should a large

deflationary shock occur, would increase –unless the inflation target were raised, but he acknowledged that raising the inflation target might well be "tricky" after a long period of inflation above target. Second, the ECB would face growing political pressure to attain historical output growth rates, which could result in a rise in inflation. P. Moutot acknowledged in his intervention that the Euro area's weak economic growth, caused by disappointing productivity developments, had led the public to increase pressure on the ECB to "do more" to sustain economic activity. He noted in a historical perspective that failures to implement structural reforms needed to increase the potential of the economy had usually turned into heightened political pressure on the central bank.

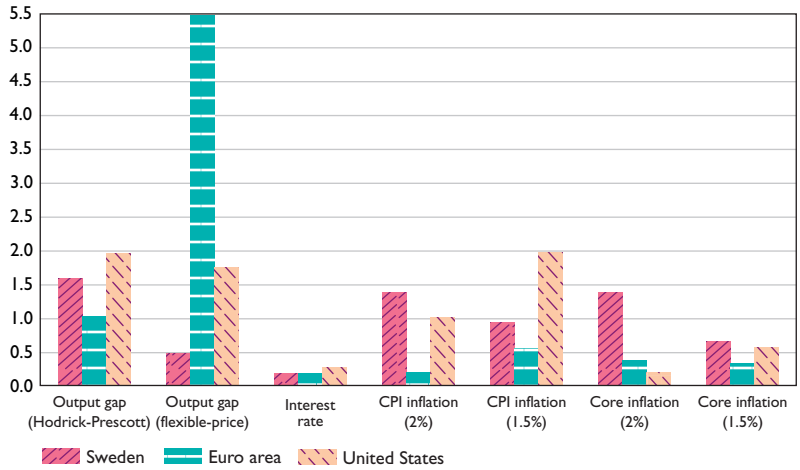
How to assess and compare macroeconomic outcomes in the Euro area and in the US? One simple way is to compute the standard deviations of GDP growth and inflation. Another way is to compute the value taken by an inter-temporal quadratic loss function of the kind which is found to approximate social welfare loss in representative-agent dynamic stochastic general equilibrium models. C. Pfister noted in this respect that the structural differences between the Euro area and the US economies should imply a difference between the corresponding social loss functions and could therefore explain in theory some of the observed differences between the ECB and the Fed in terms of monetary policy inertia, objectives and strategy. A. Vredin used quarterly data from 1999Q1 to 2006Q1 to compute the value taken by a standard inter-temporal quadratic loss function penalising at each date the deviation of inflation from target, the deviation of the output gap from zero and the change in the short-term nominal interest rate. He highlighted the fact that the assessment and the comparison of macroeconomic outcomes in the Euro area, the US and Sweden according to this loss function depended little on the relative weights of the inflation, output-gap and interest-rate-change terms. How the objectives are defined is however very important. For instance, if the inflation objective is that the CPI should grow at the rate of 2% for all countries and if the output-gap objective is to stabilise the deviation of output from its Hodrick-Prescott-filtered value, then the Euro area fares better than Sweden and the US (See Chart 8). If the output-gap objective is instead to stabilise the deviation of output from its flexible-price equilibrium value (according to a certain model), then the Euro area may fare worse (See Chart 9). In order to evaluate monetary policies it is thus necessary that central banks be explicit about their targets, which he noted is an argument for central bank transparency. But he also emphasised that there is no simple answer to the question of what central banks' objectives should precisely be and in particular how the relevant output gap should be measured. He finally stressed that in order to evaluate monetary policy it is not sufficient to assess macroeconomic outcomes by computing the value taken by such a loss function. Indeed, the evaluation of monetary policy also requires the use of some structural framework that makes it possible to disentangle the effects of monetary policy from that of macroeconomic shocks.

## Chart 8 Partial losses for the output gap, the interest rate and inflation




*Note: the HP-filtered output level was computed using a lambda coefficient of 6 400.*
*Sources: Bureau of Economic Analysis, European Central Bank, Eurostat, Federal Reserve, Statistics Sweden, Sveriges Riksbank.*

## Chart 9 Sensibility of partial losses with respect to flexible-price output gap, core inflation and inflation target




*Note: the HP-filtered output level was computed using a lambda coefficient of 6 400; the flexible-price output level was provided by Magnus Jonsson for Sweden, Raf Wouters for the Euro area and Jean-Philippe Laforte for the US.*
*Sources: Bureau of Economic Analysis, European Central Bank, Eurostat, Federal Reserve, Statistics Sweden, Sveriges Riksbank.*

# 3| Monetary policy strategy

One third and last issue addressed in the panel discussion was that of the similarities and differences between the ECB and the Fed in terms of monetary policy strategy.

P. Moutot stressed that the ECB and the Fed fulfilled their respective mandates in a very similar way. Indeed, both shared characteristics which inflation-targeting central banks did not, for instance the absence of a fixed-horizon objective and the fact that inflation forecasts did not play an all-encompassing role. Moreover, both had rejected the use of a single particular model of the economy and incorporated elements of insurance mechanisms against low probability but high-costs events ("risk-management" in Fed language, "robustness" and "cross-checking" in ECB language).

That said, he went on to acknowledge two main differences between the monetary policy strategies of the ECB and the Fed, which in his view might have accounted for a small part of the difference in policy rate behaviours:
• the first difference was that unlike the Fed, the ECB had committed itself to monitor and, if necessary, react to money and credit developments in view of their close association with inflation at low frequency. He argued that this commitment might moreover be helpful in preventing or at least restraining unsustainable asset-price developments, on the basis of recent empirical research showing that excess liquidity was a leading indicator of asset-price boom-bust cycles. Recent theoretical research (Christiano, Motto and Rostagno, 2006b) for instance showed that a central bank following a standard Taylor-type interest-rate rule without reacting to money and credit developments could pave the way to asset-price boom-bust cycles;
• the second difference was that the ECB put greater emphasis than the Fed on stabilising inflation expectations. Referring to Orphanides and Williams' (2003) work, he argued that the ECB had achieved the anchoring of inflation expectations by having adopted a quantitative definition of price stability and by reacting to deviations of long-term inflation expectations from target with threats of policy-rate changes.

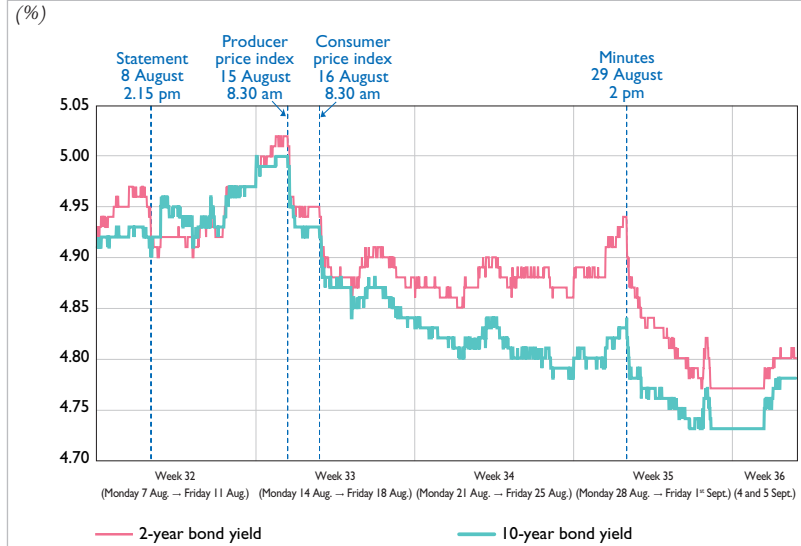
A. Levin discussed the possibility that adopting an explicit numerical inflation target might be useful for focusing and anchoring inflation expectations. Drawing on Gürkaynak, Levin and Swanson's (2006) research work, he noted that break-even inflation rates had significantly reacted to macroeconomic data releases and monetary policy announcements in the US as well as in the UK before the Bank of England gained independence, but had been insensitive to such economic news in the UK afterwards as well as in Sweden. These results supported the view that the adoption of a well-known and credible inflation target improved the anchoring

of long-term inflation expectations. He also showed preliminary econometric evidence suggesting that the response of inflation expectations to CPI or GDP surprises was similarly more muted in the Euro area than in the US. A. Vredin similarly argued that precise, quantitative targets were needed to explain monetary policy to the public, and quoted Bernanke (2004) to recall the wish of the current FOMC chairman to adopt an inflation-targeting framework for the Fed.

The issue of central bank transparency is naturally not limited to the central bank communication of a numerical inflation target to the public. A. Levin reviewed the Fed's main channels of communication to the public and noted the role of issuing a press release immediately after each meeting and of publishing the minutes of the meeting three weeks later. After the August 2006 FOMC meeting, for example, financial markets reacted more noticeably to the publication of the minutes on August 29th than to the press release on August 8th (See Chart 10). By comparison, the ECB does not publish any minutes of its policy meetings.

A. Vredin quoted Bernanke (2004) to underline that communication of the central bank's objectives, economic outlook and policy plans to the public had the main two advantages of raising pricing efficiency in financial markets and increasing the central bank's ability to manage private expectations. He then gave examples of quantitative information which central banks could in principle communicate to the public about their objectives, economic outlook and policy plans, adding however that

**Chart 10 US Treasury nominal bond yields**




*Source: Bloomberg.*

some of this information might be difficult to supply for various reasons. He also argued that central banks were not completely free to choose which information to release and which to keep. For instance, they cannot publish macroeconomic forecasts conditional on their own expectations of the future interest-rate path, which depend on their monetary policy objectives, without revealing these objectives.

One challenge faced by both the ECB and the Fed (as a matter of fact, by all central banks) in the communication of their assessment of the economic outlook is that raised by the substantial amount of uncertainty usually surrounding this assessment. C. Pfister stressed the difficulty for central banks to identify shocks in real time and even to estimate them in retrospect. A. Levin illustrated the challenges of gauging the economic situation in real time by showing the substantial upward revisions in the FOMC's inflation outlook and the downward revisions in FRB/US model estimates of potential GDP growth that have occurred over the past several years. Another communication challenge, this one faced only by the ECB, is that raised by the multinational nature of the Euro area. P. Moutot noted in this respect that Euro area citizens sometimes perceived and assessed the ECB monetary policy stance from a national, rather than Euro area wide, perspective. All these communication challenges did however not prevent the ECB's and the Fed's monetary policy decisions, as he pointed out, from enjoying a similarly high degree of short-term predictability.

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