Philipp Hildebrand: Money and monetary policy – the ECB experience 1999-2006

Comments by Mr Philipp Hildebrand, Member of the Governing Board of the Swiss National Bank, at the Fourth ECB Central Banking Conference: The role of money: money and monetary policy in the twenty-first century, Frankfurt/Main, 9 November 2006.

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1. Introduction

Dear colleagues and friends. It is a pleasure to be here today. I am honored to have the opportunity to discuss *Money and monetary policy: The ECB experience 1999-2006* by B. Fischer, M. Lenza, H. Pill and L. Reichlin in front of such a distinguished audience. The paper presents an overview of the monetary analysis at the European Central Bank (ECB) since its inception. It provides market participants with detailed information on how the monetary analysis has been deployed by the ECB and how it has evolved over time.

A newly created currency presents formidable challenges to monetary policy. Arguably, this is particularly true for the monetary analysis. Two challenges strike me as being paramount: first, policy makers face a fundamentally rearranged financial environment and second, empirical estimates are difficult to come by due to the invariably short sample period. A new financial regime implies potentially unstable money demand equations; a short sample induces imprecise estimates. The presented paper makes a valuable contribution in documenting extensively how the ECB has been conducting its monetary analysis in such an environment.

It should be noted at the outset that the challenges addressed in the paper do not solely apply to a new currency area. A case in point is my own institution, the Swiss National Bank (SNB). The SNB will celebrate its 100th anniversary next year. The Swiss franc can therefore hardly be seen as a new currency. Nonetheless, in the late 1990s, the SNB encountered very similar challenges to those faced by the ECB and described in the paper. It had to cope with increasing instability in the demand for its targeted money aggregates. In light of these parallels, allow me to complement my comments on the presented paper by drawing on the SNB's experience with money and monetary policy. But before I do so, let me briefly highlight the two aspects of the paper that strike me as particularly relevant.

2. Money and monetary policy: the ECB experience 1999-2006

First, and arguably most importantly, the empirical results presented in the paper suggest that the information content of monetary aggregates improve the quality of inflation forecasts derived from other models. In light of these results, research efforts directed at combining forecasts based on different models and accounting for the additional information provided by monetary aggregates are clearly worth pursuing.

Second, the paper documents the thorough analysis done at the ECB to take money demand shifts into account when tracking M3. The result of this work is *M3 adjusted by portfolio shifts*, a new monetary aggregate. It accounts for changes in financial market conditions. At times, this new measure differs significantly from the traditional M3 measure. The paper shows that this new variable has valuable information content in inflation forecasting exercises.

In many ways, the empirical work presented in the paper speaks for itself. Nonetheless, it seems to me, there are at least two factors which limit the extent to which we can draw far-reaching conclusions from the work presented in the Fischer et al. paper.

First, the analysis covers the years from 1999 to 2006. This period is characterized by remarkably low and stable inflation. For a central banker, this is good news. Such prolonged periods of low and stable inflation can, however, give rise to distortions in econometric analyses. An accurate evaluation of the information content of a particular variable for future inflation becomes difficult when the volatility of inflation is low. In such a setting it comes as no surprise that the random walk is a hard to beat benchmark. Therefore, when inflation is low and stable for a protracted period, a low correlation between money and inflation should not automatically lead us to conclude that money no longer matters.

Second, the evaluation of the additional value of money in the paper is undertaken based on a forecast horizon of six quarters. As the authors recognize themselves and as I will point out later on, money appears to be particularly valuable to inflation dynamics of medium and long-term frequencies. A mere six quarters could therefore simply be too short a time horizon to allow for money to begin transmitting in any significant way its impact on inflation.

The Fischer et al. paper will prove to be particularly valuable if it encourages further research to investigate the relevance and stability of its findings under different inflation regimes, in different economies and over longer time horizons. In this context, let me now briefly turn to the Swiss experience with money and monetary policy.

3. SNB experience using information from monetary aggregates

With the collapse of the Bretton Woods system, the SNB had to search for a new policy framework.[1] From 1974 until the end of the 1990s the SNB announced monetary targets; first for M1, and eventually for the monetary base. In 1978, the SNB abandoned its monetary target for a short period in favor of a nominal exchange rate target.[2] During the second half of the 1990s, the monetary base became instable. The SNB faced increasing difficulty using a money target for MO, let alone to communicate through them. Finally, the SNB decided to adopt an altogether new monetary framework in an effort to increase the clarity, transparency, and flexibility of the conduct of its monetary policy.

The new concept, introduced in January 2000, is based on three elements: an explicit definition of price stability, an inflation forecast as the main indicator for policy decisions, and a range for the 3-month LIBOR as the operative target. In contrast to the ECB's two-pillar strategy, the SNB decided at the time to adopt an integrated approach. For the purpose of today's discussion, I would like to highlight two important elements of the SNB's monetary framework.

First, communication considerations were an important element in the design of the new framework. Clearly inspired by the early inflation targeters, a definition of price stability and a quarterly inflation forecast became the primary communication tools with regard to monetary policy. These were considered to be clearer than the alternative of attributing a specific role to monetary aggregates. In other words, the two pillar model of the ECB was rejected primarily on the grounds of communication considerations.

Second, the new monetary framework was deliberately designed to allow sufficient room for judgment and flexibility in the conduct of policy. The inflation forecast as the main indicator for policy decisions is derived from a "portfolio" of models and indicators. Some of these models contain monetary aggregates; others don't. The weights assigned to different models and indicators are allowed to vary over time as their reliability and applicability may also vary across different economic situations. Empirical studies backed the "portfolio of models" approach. Empirical evidence drawing on six years of Swiss data suggests strongly that combining inflation forecasts from different models and specifications improve the forecasting accuracy of the SNB's inflation forecasts.[3]

Of course, the SNB does not claim to have solved the fundamental problem of linking monetary and non-monetary analyses. The Governing Board feels strongly, however, that there are significant advantages in aggregating the information from our different models and indicators in an internal process and subsequently publish a single SNB inflation forecast. Let me simply mention the most obvious one. In the SNB's integrated approach, the Governing Board avoids the potential communication problem of conveying the impression that fixed weights are attached to the monetary and non-monetary analysis in the conduct of monetary policy. The biggest challenge the SNB Governing Board has so far faced with regard to the integration of both the monetary and non-monetary views was in 2003. While monetary aggregates rose significantly, negative output gap

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1 As extensively documented in Nelson (2006), "the competition between monetary and non-monetary views of inflation" was "resolved earlier and more decisively in favor of the monetary view" in Switzerland than in other countries, with the close observed relationship between money growth and inflation playing a determinant role in shaping monetary policy since 1973.

2 The new regime was announced on October 1, 1978 and lasted until the end of 1979. It can be seen as an illustration of the fact that the SNB had traditionally employed money targets in a flexible way.

3 Jordan and Savioz (2003)

measures suggested a disinflationary risk. Similarly to what is described in the Fischer et al. paper, the monetary and non-monetary signals were reconciled through an analysis of portfolio shifts driven by the near-zero interest rate policy at that time.

Understandably, some of you might be concerned that not giving a prominent and distinct role to monetary aggregates could lead to relegating money to an insignificant role in the decision making process. This is not the case. To the contrary, I would argue that the SNB's "plurality of approaches" concept guarantees that money will retain an important role in policymaking, as long as money provides useful information for subsequent inflation fluctuations. There are theoretical as well as empirical studies which indeed suggest that money provides useful additional information for subsequent price developments.[4] Using Swiss data, empirical work conducted at the SNB show that money growth rates and deviations from an estimated money demand equilibrium contain useful information for both short- and long-term Swiss inflation developments.[5] Similarly, a more recent study, again drawing on Swiss data, finds that money growth adjusted for changes in the equilibrium interest rate has a significant and proportional influence on subsequent inflation developments relative to information in output and interest rates.[6]

4. Money and long-term financial imbalances

Let me conclude by stressing a final point, which strikes me as being worth emphasizing more prominently in the Fischer et al. paper: the role of money beyond a medium-term inflation forecast.

Clearly, the relevance of money extends beyond the medium-term. Several recent studies have discussed the relationship between monetary aggregates and asset prices.[7] Today's economic models are unable to produce reliable inflation forecasts with a horizon beyond at most three years. I doubt this will change going forward. Nonetheless, developments in monetary aggregates can play a useful role in helping to identify potential imbalances in financial markets which could, in time, undermine economic and price stability.

According to a recent study, since 1980, the value of global financial assets excluding real estate has grown from an amount roughly equaling the global GDP to more than three times its size.[8] In light of the growing importance of financial assets, central bankers have an incentive to consider longer-term price risks more thoroughly. In a global economy increasingly affected by the effects of rising and falling asset prices, it seems to me that the role of money and credit aggregates in signaling potential long-term financial imbalances will become more important. Here I would like to refer to Mervyn King who recently said: "Monetary policy will, therefore, need to be alert to the information contained in a wide range of asset prices, to be forward-looking in its aim of maintaining low and stable inflation, and to be ready to respond to changes in the signposts."[9]

In practice, it is often difficult to consider money in the conduct of policy. Nonetheless, it allows us to address some of these important issues at least at first approximation. In that context, both the ECB and the SNB conduct a careful analysis of monetary aggregates partly in an effort to assess the risks of long-term financial imbalances. Moreover, acknowledging the monetary source of long-term inflation helps avoid the build-up of excess liquidity in the first place. In closing, let me therefore repeat that the Fischer et al. paper could benefit from focusing more extensively on the admittedly complex but nonetheless important link between money, asset prices and long-term inflation perspectives. In the

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[4] For example, Nelson (2003) argues that movements in monetary aggregates provide useful indications regarding different yields usually not incorporated in economic models

[5] Baltensperger, Jordan and Savioz (2001), Jordan, Peytrignet and Rich (2001)

[6] Reynard (2006)

[7] For example, Issing (2002) provides evidence of a close relationship between excess money growth and real asset prices, a relationship that does not appear by looking at a standard Taylor rule as a measure of monetary policy stance. Similarly, Friedman (2005) showed that pre- and post-financial market crash evolutions of stock prices and gross domestic products were strongly related to the pre- and post-market crash evolutions of monetary aggregates. White (2006) pointed to the need of pushing further the frontiers of economic research in the direction of incorporating financial variables to assess longer-term macroeconomic developments.

[8] McKinsey (2005, 2006)

[9] King (2006)

case of the SNB, the flexible nature of the policy framework and the importance attached to money and credit variables means that in an effort to avoid potential long-term financial distortions from emerging, the Governing Board could conceivably tighten monetary policy even if our inflation forecast signals no imminent inflation threat.

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