Speech at the conference dinner on May 23, 2024
Lars E.O. Svensson

Torsten, thank you very much for these kind and generous words and your wonderful account of our joint personal and intellectual history and friendship. And Maury, thank you very much also for your kind and generous words, including your lively account of our joint adventure at the 1993 Banque de France conference and the papers we presented there.

I have very much enjoyed listening to the presentations and participating in the discussion today, about the lessons of three decades of inflation targeting. I look forward to tomorrow's presentations and discussions.

These three decades have indeed been quite an experience.

I have had the great privilege of first being an advisor to the Riksbank for 17 years, from 1990 (34 years ago) to 2007, and then being a Deputy Governor and Executive Board Member for 6 years from 2007 to 2013.

It has indeed been quite an experience, with the fixed exchange-rate regime before 1992, the dramatic speculative attacks during 1992, with a vigorous defense of the krona with a 500 percent policy rate during a first attack in September, and the floating of the krona during a second attack in November,

Shortly after the floating of the krona in November, the governor Bengt Dennis and deputy governor Thomas Franzén gathered a small group of staff members and external academics, including me. The governor and deputy governor told us that the Riksbank's commitment to the fixed exchange rate had been so strong, that the bank had no contingency planning for any policy alternatives to a fixed exchange rate. Therefore, they started from scratch, and they had no idea of what to do.

The governor asked us to write up a few memos to outline the various policy alternatives, in one week. According to my memory, we said, "Look, governor, this is too short. We are also starting from scratch. We cannot do this in one week. We need *two* weeks". Reluctantly, the governor gave us two weeks. Then the group worked very hard and managed to complete the memos within the deadline. The memos were then gathered in a short report and published in December 1992, with the title *Monetary Policy with a Flexible Exchange Rate* (Sveriges Riksbank 1992). Given the circumstances, the report was not so bad at all, I think.

The report essentially proposed inflation targeting, rather than monetary targeting or a return to a fixed exchange rate. To my great positive surprise, already in January 1993, the Riksbank announced an inflation target of 2 percent, to apply from 1995.

As an adviser to the Riksbank, I then had the privilege of participating in many discussions in the Riksbank and of contributing to the formulation and construction the new policy regime, often at informal dinners and subsequent discussions, as Torsten describes in his speech.

By then, the RBNZ, the Bank of Canada, the Bank of England, and the Riksbank had started to pursue inflation targeting. Little did we know that flexible inflation targeting would 30 years later be the main monetary policy regime all over the world, in both advanced and many emerging and developing economies.

Inflation targeting has so far been a spectacular success, has continued to spread over the world, and has survived several crises. Even the most recent experience, of high inflation during the pandemic and the Russian attack on Ukraine, will ex post be considered a success, I think. Dramatic exogenous supply shocks pushed up inflation, but central banks with belated but vigorous policy-rate hikes have eventually brought inflation back toward the target, with only a small or no recession, and without longer-term inflation expectations taking off. Simplifying, I think Team Transitory was essentially right, although the period of high inflation has clearly been longer than first anticipated. And it is not quite over yet.

I think this recent experience is one of several in which flexible inflation targeting has demonstrated it resilience, flexibility, effectiveness, and survivability. I cannot think of a policy regime that would have done it much better.

Let me also add a few comments on forecast targeting and on the handling of ever-present uncertainty.[1]

After my experience as a policymaker in the Riksbank's Executive Board, I believe that flexible inflation targeting is best conducted through what one can call **forecast targeting**.[2] First, the "flexible" in flexible inflation targeting in my mind means that, in terms of a standard quadratic loss function of the target variables, there is weight not only on the squared inflation gap but also on the squared unemployment or output gap.[3] I mostly prefer to use the unemployment gap rather than output gap, because the maximum sustainable unemployment rate is easier to estimate and have a debate about, whereas potential output is often the unverifiable result of a black box. I also prefer equal weight on the squared inflation and unemployment gaps. Flexible inflation targeting can thus be described as "price stability and full employment." I see no difference between flexible inflation targeting and the Federal Reserve's dual mandate. Strangely, the phrase "without prejudice to the price stability target" is never explained in the ECB's and Riksbank's mandates.[4] In my mind, it is best interpreted as "without average inflation deviating too much from the inflation target," where the average is over a period of 4–5 years or so. Thus, we have flexible *average* inflation targeting.[5]

Second, the economy reacts with a lag to policy-rate changes. Therefore, good policy has to rely on forecasts. Furthermore, the *current* policy rate itself has little impact. What does affect longer interest rates and general financial conditions is instead the market *expectations* of *future* policy rates. As Michael Woodford has emphasized, monetary policy is mainly about managing expectations (Woodford 2005). Given this, at each monetary-policy decision point, the objective is to choose a policy-rate path, such that the resulting inflation and

[1] This material has been added to the oral speech.
[2] See Svensson (2020) for the most recent more detailed presentation of forecast targeting. King (1994) made the point that inflation targeting implies that the inflation forecast becomes an intermediate target, a starting point for forecast targeting.
[3] Weight on the squared inflation gap only, what King (1997) referred to as a central bank being an "inflation nutter," I prefer to call "strict" inflation targeting. To my knowledge, the terminology of strict and flexible inflation targeting was introduced in Svensson (1999).
[4] The phrase in the new Riksbank Act is "Without *neglecting* the price stability objective, the Riksbank shall contribute to a balanced development of production and employment…" (Swedish Code of Statutes 2022, chapter 2, section 1, emphasis added).
[5] However, there must be exemptions for extreme shocks like the recent supply shocks during the pandemic and the Russian attack on Ukraine which have caused high inflation. It would not be appropriate to try to maintain average inflation close to the target under such circumstances.

unemployment (output) forecasts, conditional on all relevant information, including model forecasts and a substantial amount of judgment, *look good*.[6] Here looking good means that the inflation forecast goes to the target and the unemployment (output) forecast goes to the estimated minimum sustainable unemployment rate (potential output) at an appropriate pace, with the forecasts approximately minimizing a quadratic loss function.[7]

Third, the chosen policy-rate path and resulting forecasts are published and justified. It is important to emphasize that they are not a commitment but conditional on current information and judgment, and that they will change with new information and judgment. "It is a forecast, not a promise," as the Riksbank has expressed it. Scenarios for a higher and lower policy-rate path may be published to demonstrate that the chosen path makes the forecasts "look better" than the alternatives. Scenarios for paths and forecast that would be chosen under alternative exogenous developments can also be published. The objective is to make the decided path and forecast credible with the market and general public and thus implement the policy in the most effective way.

Thus, there is forward guidance, in the form of conditional policy-rate paths and forecasts of the target variables.

A decision on an Executive Board policy-rate path and corresponding forecasts of inflation, output, and unemployment was never a practical problem for the six-member board. (It would not have been a problem with nine or even twelve members, I think.) The staff would after a few initial meetings with the board propose one main alternative but could also have proposed more than one. Dissenters could propose their own alternative, as Karolina Ekholm and I did several times. Then the board voted, and the majority path and forecasts were adopted. The attributed minutes from the time show graphs of the alternatives that Karolina and I proposed.[8]

Publishing and justifying the policy-rate paths and the corresponding forecasts of the target variables together with the attributed minutes makes it possible to hold the individual board members accountable for their decisions.

Regarding **uncertainty**, it seems to me that now and then there is a new speech, paper, or book that rediscovers uncertainty in monetary policy, as if this was a new discovery. But I have never participated in a monetary policy decision without substantial uncertainty, sometimes more, sometimes less, but never no uncertainty. My way of handling the uncertainty is fairly conventional. We know that the (badly named) certainty-equivalence theorem says that (1) a quadratic loss function, (2) a linear transmission mechanism, and (3) additive uncertainty implies that mean forecasts are sufficient statistics for finding the optimal policy. So, under approximate linearity and additivity, making mean forecasts look good is appropriate.

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[6] "Judgment" is information, knowledge, and views outside the scope of a particular model (Svensson 2005).
[7] I here for simplicity only consider "normal" circumstances, when large-scale asset purchases and sales is not an issue. However, one lesson from the last few years, at least for Sweden, is that it would have been better to have moved the policy rate further down in the negative range and to have done less asset purchases. For one thing, a low policy rate can quickly be raised when no longer needed.
[8] The minutes during my time at the Riksbank, including graphs of policy alternatives from the critical fall of 2010 and spring of 2011, are available on my website at https://larseosvensson.se/riksbank-monetary-policy-decisions/

Taking uncertainty into account in this way is an example of optimal risk-management. Mean forecasts are risk-adjusted forecasts. It should be mean forecasts, not modal forecasts.

We also know that for multiplicative uncertainty, certainty equivalence does not hold. For example, if there is uncertainty about the effect of the policy-rate on the target variables, more attenuated policy is appropriate (Brainard 1967). If there is uncertainty about the persistence of inflation, more aggressive policy is appropriate (Söderström 2002). But normally policymakers don't have enough information about the precise nature of the uncertainty at a given decision point to know whether policy should be more attenuated or aggressive. If so, the certainty-equivalent policy and its mean forecasts are still the best policy, in my mind.

Under normal circumstances, with modest shocks and modest policy changes, linearity of the transmission is a good approximation. For large shocks and large policy changes, any assessed nonlinearity may influence the policy. The most relevant nonlinearity is arguably the effective lower bound for the policy rate. The ELB is not zero but negative, it is not hard but soft, and we don't know exactly where it is. For Sweden, it is for several reasons likely to be lower and further down in the negative range than in most advanced economies (in my mind at least at minus 1 percent and probably a bit lower).

The nonlinearity of the ELB causes the appropriate policy to be nonlinear. It implies more aggressive and expansionary policy early on to prevent inflation and inflation expectations from becoming too low. To prevent the policy-rate and the economy from falling into an ELB trap, the policy rate will sometimes have to be lowered more aggressively towards the ELB.

Finally, I am very happy and feel very honored by this dinner and conference. I am very grateful to the Riksbank for having organized it. I am most grateful to my friends in the Organizing Committee, Martin Flodén, Stefan Laséen, Jesper Lindé, Marianne Nessén, Torsten Persson, and Ulf Söderström, who have taken the initiative to this event, set up the program, and invited the participants. And I thank the local organization team, Tracey Green, Jessica Penzo, and Lena Sundvall, for keeping everything together and on track.

And I thank you all very much, my friends, coauthors, and colleagues from several countries, for having come to participate in the conference and the dinner tonight.

This will be a wonderful memory for me.

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