# Olli Rehn: Monetary policy normalisation in the world of uncertainties

Keynote speech by Mr Olli Rehn, Governor of the Bank of Finland, at the Bank of Finland monetary policy seminar, Helsinki, 31 October 2018.

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Accompanying slides of the speech.

Ladies and Gentlemen,

Welcome to our seminar on monetary policy normalisation and frameworks. It is a part of the economic research and policy analysis work-stream of the Bank of Finland, which aims at contributing, for our part, to the making of monetary policy in the Eurosystem.

With this event we want to deepen our interaction with and learning from the academic community. Thus, it is indeed both a pleasure and an honour to have you here today and discuss how monetary policy should evolve, in order to continue contributing to a strong, sustainable economic progress in Europe. So, welcome once again.

In my opening remarks today, I will discuss monetary policy and its challenges in the current world of major uncertainties, focusing on the euro area. But before going into that, let me reflect on an issue with which I have recently often been confronted.

That is, I have frequently been asked the classical but sympathetically simplistic question: "Are you a hawk or a dove?"

To my mind, apart from being simplistic, this is also a misleading question, since it appears to assume that one could pursue sound monetary policy only with one policy orientation, with one analytical model, with one mental map – regardless of space and time.

Instead of such simplicity, we could well ponder what kind of features a sound and solid monetary policymaker should possess. To answer that, I would refer to the classic distinction by the philosopher Isaiah Berlin who divided policymakers to foxes and hedgehogs: “the fox knows many things and the hedgehog knows one big thing”.

However, instead of seeing this as a binary question “must be one or another”, in my view a competent central banker should possess the qualities of **both** the fox **and** the hedgehog. Pursuing the price stability objective with consistency and resolve, while keeping sound focus on sustainable economic growth and job creation, requires traits of the hedgehog. At the same time, having a keen strategic understanding of the interplay between the economy and politics, the markets and the media – and knowing when to play offense, when to stick to defence, and when to combine the two! – are obvious attributes of the fox.

Working on the basis of such dual approach is particularly appropriate in the current world of significant uncertainties, which requires a steady but creative hand from the makers of monetary policy. From this point of departure, today, let me focus on the challenges of monetary policy normalisation and framework over the medium term.

## The ECB monetary policy and gradualism

*Slide 2. Euro area GDP in 2008-2020*

Despite some moderation following the strong growth performance in 2017, the euro area economy continues to expand at a rate estimated to be higher than its long-run potential growth rate. There has been good progress in the labour market, and over 9 million jobs have been created during the recovery since 2013. The underlying strength of the economy should support the convergence of inflation to our price stability target.

Despite the anticipated winding-down of the Eurosystem's net asset purchases, the monetary policy stance of the European Central Bank remains very accommodative, which is still needed to support achieving our price stability target in a sustained manner over the medium term.

In this, in many ways benign situation, monetary policy makers are bound to take decisions in the world of uncertainties. Today's **concrete** uncertainties stem from the continued trade tensions, vulnerabilities in the emerging market economies and financial market volatility. They are amplified by **analytical** uncertainties related to the functioning of the economy and the operation of economic theories, which we use daily in formulating our policies. These uncertainties are related to e.g. the prospect of secular stagnation, the assessment of the natural rate of interest, and the slope and movements of the Phillips curve. We will hear Michaela Schmöller's presentation about the issue of secular stagnation shortly.[1] A corollary from these factors is the additional question: what is the impact of these uncertainties on central banks' strategies?

After a decade of exceptional measures, prospects for returning to a more conventional interest rate environment and a more normal Eurosystem balance sheet have slowly strengthened. A watchword in the discussion on normalisation is **gradualism**. Gradualism has been defined as the central bank tending to adjust the interest rates (and, in the present context, its other instruments) incrementally, in a series of gradual steps in the same direction. Theoretically, this cautious approach can be justified by William Brainard's classic 1967 argument, which showed that gradualism is warranted when there is uncertainty about how the economy will respond to the instruments used[2].

The link between economic uncertainty and policy gradualism seems especially relevant at the present juncture when several uncertainties about the effects of monetary policy are prevailing. I will consider two of them in more detail: the lower state of **the natural rate of interest**, and **the changing relationship between economic activity and inflatio**n – in textbook terms, the position and shape of **the Phillips curve**.

## The natural rate of interest

Interest rates in the euro area and in other advanced economies are presently lower than what they used to be prior to the global financial crisis. This phenomenon, visible through the term structure of interest rates, is partly policy-induced, but it is also likely that the so-called long-term equilibrium real interest rate has declined.

The natural rate of interest can be defined as the real interest rate that is consistent with the macroeconomic equilibrium. It is the real interest rate that would prevail if the economy were at the equilibrium employment, the output at its potential level, and the inflation stable – neither accelerating nor decelerating. It is a major reference point for monetary policy, as it defines the "neutral" policy stance at any given time. Low equilibrium rates obviously affect the monetary policy stance, and any given policy rate is less stimulatory with lower equilibrium rates.[3] If policy induces a short-term real interest rate that is higher than the natural rate, monetary policy is restrictive.

A major analytical problem is that the natural rate is not a constant but a moving target, and as a theoretical concept it is also unobservable. That is to say, it cannot be measured outright — instead it must be inferred using a variety of econometric methods.

Estimates of the natural rate, drawing from various studies, lead to the conclusion that the natural real rate of interest has declined in the major advanced economies over the last 20 years or so, and, in the euro area, it is currently significantly lower than prior to the financial crisis. The slide shows a range of estimates of the natural rate for the euro area.

*Slide 3. Estimates of the natural rate of interest in the euro area*

However, the estimates of the natural rate of interest are subject to a lot of uncertainty.[4] The reasons for the decline of the natural rate of interest rate are linked to changes in the saving-investment balance in the advanced economies, both in Europe and globally. An increase in the economy's propensity for savings, or likewise a decline in its demand for investment, would produce a lower natural rate of interest.

The changes in the saving and investment behaviour have their deeper underlying causes, cyclical or structural. The structural explanations, which suggest a permanent change, are potentially more significant. They relate to the possibility of 'secular stagnation', i.e. the slowing down of long-term growth potential in the advanced economies. This deceleration of growth can be a result from population ageing (which would increase the saving rate), or a general deceleration of productivity growth (reducing investment), or both.

Now, if the natural rate has indeed declined, monetary policy in the course of normalisation becomes tighter at an earlier stage than the past experience of historical interest rates would suggest. A given rise in policy rates would result in a higher degree of monetary tightening than a backward-looking analyst or policy maker would expect.

In the longer run, a worrying consequence of a permanently lower natural rate of interest is that the economy would hit the zero lower bound of interest rates more frequently than in the past, and even following smaller negative (demand) shocks than in the past. The efficacy of conventional monetary policy would then be hampered, and its ability to fight recessions and deflationary risks weakened.

These long-run considerations suggest that the unconventional monetary policy measures and instruments that were used during the crisis years, and the ECB, for one, is still using, should stay permanently in the monetary policy toolbox, at least in the reserve.

## Shifts and readings of the Phillips curve

The persistent and even surprising weakness of inflation pressures in the euro area, despite the long and significant recovery of the economy and the remarkable decline of unemployment, is one of the sources of uncertainty for monetary policy. How long will it take before the on-going expansion will result in a sustained adjustment to a higher rate of inflation? How much longer is at least some monetary stimulus needed before our definition of price stability will be satisfied?

These questions revolve around the Phillips curve, which describes the relationship between inflation and economic slack. During and after the crisis, the behaviour of the Phillips curve has diverged from its past, as the rate of inflation has not picked up significantly despite higher economic growth and employment.

*Slide 4. Euro area Phillips curve in three periods in 1999–2017, as a correlation between core inflation and unemployment*

In other words, the Phillips curve has 'flattened' – a dilemma, which has haunted economists and central bankers throughout the post-crisis years. In the slide, the Phillips curve for 1999–2003 is indicated in red and clearly points to a negative correlation between underlying inflation and the rate of unemployment. However, already for the years 2004-8 the Phillips curve gets flatter. Finally, when looking at the years 2010–2017, we discover that the Phillips curve seems almost

horizontal, signalling that the above-mentioned correlation between inflation and unemployment was no longer valid for this period.

When both the earlier and more recent periods are combined in a single graph, the change that has occurred gets highlighted. If this change were to prove permanent, what would be the implications for price stability? Logically it would mean that even a continued expansion of output, and the decline of unemployment, would not lead to the expected acceleration of inflation: there is uncertainty about the limits of expansion and its effect on inflation.

However, the Phillips curve obviously relates the inflation rate to just one background factor – a measure of slack in the domestic economy. In addition, inflation is expected to react to other factors as well, not least to inflation expectations. Indeed, in recent years, changes in inflation expectations seem to be able to explain part of the changes in inflation.[5]

What are the implications for monetary policy? Both the decline in the natural rate of interest and the low inflation expectations reinforce the case for a gradual approach to normalisation. Under heightened uncertainty, this will allow monitoring the effects of monetary policy, and help avoid unforeseen negative consequences. Moreover, it is important that monetary policy focuses on ensuring that inflation expectations are anchored in line with the price stability objective. Otherwise, even further declines in unemployment may not lead to desired movements in inflation towards the price stability goal.

The previous analysis is supported by non-linearity of the Phillips curve. As its inventor A. W. Phillips himself said in 1958, “The relation between unemployment and the rate of change of wage rates is likely to be highly non-linear”[6]. Below, this is illustrated through the relationship between wage inflation and the broad measure of unemployment (= U6).

*Slide 5. Euro area Phillips curve 2005-17, as a correlation between the compensation per employee and the broad measure of unemployment*

In the graph we note a non-linear empirical relationship between wage inflation and broad unemployment. What is the implication? I would read it so that the speed of wage increases will accelerate significantly **only once** unemployment has been substantially reduced. Subsequently, there is still the open question of pass-thru of wage inflation to core inflation. In any case, this way of interpreting the Phillips curve gives credence to the assumption in the ECB Governing Council that euro area inflation is gradually converging to our price stability target.

## On the definition of price stability and monetary policy space

Although headline inflation has been picking up, underlying inflation is still persistently around 1 %, reflecting continuing soft domestic price pressures. Unemployment is declining, but there is still considerable labour market slack in the euro area. In this environment, the gradualist approach required poses a challenge to monetary policy if we are hit by the next recession too soon. Will we have space to react?

Former Chair of the Federal Reserve, Ben Bernanke has sent us, the currently active central bankers, a challenge to create more “policy space” for monetary policy going forward[7]. This is reasonable advice.

Various suggestions have been made to help monetary policy suffering from having too low inflation for too long: these include a higher inflation target, a permanent price stability target, and nominal GDP targeting. I do not want to dwell deep into the pros and cons of these strategies now, but as a general remark it is fair to say that, among central bankers and leading scholars, there is, at least so far, no emerging consensus for any of these proposals.

In his paper Bernanke proposes a “lighter” option for an alternative monetary framework that he

calls “a temporary price-level target—temporary, because it would apply only at times when short-term interest rates are at or very near zero.” Announcing this target would lead the public to expect exceptionally low inflation to be followed by a period of higher inflation, as the central bank would strive to get the price level back to its trend. The reaction of inflation expectations to the temporary price level target should help monetary policy to achieve its objective.

This proposal deserves a thorough analysis, even if one can see challenges in communication[8]. It is of particular interest especially if we do not want to rely on large-scale bond purchases as the first solution to the “zero lower bound” problem in the future. In fact, Bernanke’s solution can be seen as a further developed form of forward guidance.

Even in communication, action can sometimes speak louder than words. Clearly, monetary policy space is reduced if the central bank, as seen from the outside, does not appear to resist downward deviations from its inflation objective, and this appearance gets incorporated to private expectations. Markus Haavio’s presentation, based on the research paper of Paloviita-Haavio-Jalasjoki-Kilponen[9], deals with this matter by analysing the ECB’s reaction function on the basis of real-time data over two decades. The paper asks what the expression "below, but close to, two per cent” has meant in practice. Their key empirical finding is that the ECB’s reaction function since its inception, over the past two decades, has performed as if its inflation objective had between 1.6% and 1.8% – or as if the ECB had responded more vigorously to upward deviations of inflation from its objective than to downward ones.

Now, the ECB’s well-known operational definition of price stability is “below but close to 2 percent over the medium term.” It is evident that the definition allows a symmetric interpretation. Consequently, a temporary price-level target, which would allow the central bank to let the inflation exceed the medium term target temporarily when needed to compensate for past cumulative negative deviations of inflation from the target, should not be regarded in contradiction the ECB’s operational definition.

Under this interpretation, the ECB definition of price stability would be seen as a symmetric target, with equal probability of inflation going below or above of the “below but close to 2 %”. Following this policy would help prevent the drifting of inflation expectations persistently below the target. Operationally, this could be carried out by a lower-for-longer forward guidance policy regarding the policy interest rates, when needed.

As, in the longer term, inflation would be at the target on average, inflation expectations that are consistent with the target would be supported. This would help avoid an unintended equilibrium with low expectations and unnecessarily low nominal interest rates on average.

Tuomas Välimäki, a Member of the Board of the Bank of Finland, will shortly discuss monetary policy frameworks more in-depth.

## Concluding remarks: regular review of monetary policy frameworks

Over the past decade, the monetary policy framework has come to include a variety of non-standard measures that have proven to be effective in supporting economic activity and returning to the price stability target. Such measures have included asset purchases, negative interest rates, forward guidance and credit-easing instruments. In combination these measures have enabled central banks to create accommodative financial conditions, greatly enhancing the transmission of monetary policy.

However, in the world of rapid transformation, it seems sensible to think that central banks should evaluate their monetary policy frameworks time to time. Regular review would also make the strategy more open and transparent. It is also important that the central bank does not act in a way that does not reflect announced long-term policy goals.

Many central banks already have an evaluation process in place. The Bank of Canada is one example of such practice. The Federal Reserve System also has a procedure in place for strategy review. The same is true for the Bank of England and the Swedish Riksbank. The evaluations could be internal or made partly by outside evaluators. The background papers supporting evaluation could be made public.

The ECB would benefit from considering its strategy work in this perspective. Regular reviews would assist the ECB to stay in tune with the rapidly changing economic and financial environment.

Especially in our present times of uncertainty, it is essential for any central banker to possess a fully modernized monetary policy toolbox that is as functional and as effective as possible.

That would help “the fox” to outsmart the opposing forces and overcome the immediate obstacles, and enable “the hedgehog” to stay the course of medium-term price stability, sustained growth and high employment.

So why not pursue it?

Many thanks for your attention, and welcome to the seminar.

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1 Michaela Schmöller, Secular stagnation: a false alarm in the euro area? *Bank of Finland Bulletin* 4/2018.

2 Brainard, William, Uncertainty and the effectiveness of policy. *American Economic Review*, 57 (May), 411–25.

3 Peter Praet, *Economic policymaking under uncertainty*. Speech at the Caixa, Madrid, 17 October 2018.

4 E.g. a broad study by Banco de España concluded that in the United States, the range is from –3%. to 5%. Similarly, Holston, Laubach and Williams, leading names in this area of research, estimate that the confidence band around their estimates of the natural rate for the U.S. is currently around 5 percentage points.

5 For further discussion on the state of the Phillips curve, slack in the economy and inflation expectations, see e.g. www.bofbulletin.fi/en/2018/1/reports-of-the-phillips-curve-s-death-are-greatly-exaggerated/

6 A. W. Phillips (1958): The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957. *Economica*, New Series, Vol. 25, No. 100, pp. 283–299.

7 See Ben Bernanke’s blog on temporary price-level targeting: www.brookings.edu/blog/ben-bernanke/2017/10/12/temporary-price-level-targeting-an-alternative-framework-for-monetary-policy/ and his paper “Monetary Policy in a New Era”: www.brookings.edu/research/monetary-policy-in-a-new-era/

8 For valid reference to communication challenges, see e.g. Praet 2018 ibid.

9 Maritta Paloviita – Markus Haavio – Pirkka Jalasjoki – Juha Kilponen, What does ”below, but close to, two percent mean? Assessing the ECB’s reaction function with real-time data”. Bank of Finland Research Discussion Papers, 29/2017.