Øystein Olsen: The monetary policy toolkit

Speech by Mr Øystein Olsen, Governor of Norges Bank (Central Bank of Norway), at the Centre for Monetary Economics (CME) / BI Norwegian Business School, Oslo, 8 October 2019.

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Accompanying charts of the speech.

Introduction

In the wake of the financial crisis, central banks in many countries have stretched the limits of monetary policy. New, alternative policy instruments were introduced. Interest rates are still negative in many countries.

Apart from in the initial hectic months after the collapse of Lehman Brothers in 2008, resorting to alternative monetary policy tools has not been necessary in Norway. Nor is there anything, in our assessment of the outlook, to suggest it would be appropriate to do so in the future. But there are no guarantees that the economy will not experience pronounced downturns in the future. Were that to occur, it would be wise to have thought through which instruments could function in Norway. Norges Bank has therefore assessed the tools that might be useful in the monetary policy toolkit.

To some extent, our assessments can build on the post-crisis experiences of other countries. In some areas that are important for the impact of monetary policy, however, Norway is different from other countries. This could mean that some of the most widely used alternative tools in other countries are not a suitable option for us. I would like to share with you some of our thinking on this subject in my speech today.

An assessment of which tools that might be useful will partly depend on the specific features of the Norwegian credit and financial markets and partly on the shocks that hit our economy. The tools we resort to in a crisis may be less suitable in a normal situation. Gains must be weighed against costs. This brings us to some key interrelated questions: what should the level of ambition for monetary policy be, and how far should the limits of monetary policy be stretched before other components of economic policy must take over?

Conventional monetary policy – how much room for manoeuvre is there?

Chart: The policy rate in Norway

First, a few words on our most important monetary policy instrument – the policy rate. Since the trough at 0.5 percent, the policy rate has been gradually raised to 1.5 percent, reflecting favourable developments in the Norwegian economy.

In our September interest rate forecast, the policy rate remains close to today's level of 1.5 percent for the next couple of years. On the one hand, growth in the Norwegian economy is still solid, inflation is close to the target and capacity utilisation is somewhat above a normal level. On the other hand, there is considerable uncertainty about the global growth outlook. The policy rate path reflects a trade-off between these conditions.

Chart: Low policy rates abroad

A rate of 1.5 percent is considerably lower than the average level for the policy rate since inflation targeting was introduced in 2001. This must be viewed in the context of persistently low policy rates among Norway's trading partners. Weighting our trading partners together, we find an expected policy rate of close to zero at the end of 2022. Among some of Norway's main trading

partners, market rates are negative for maturities as long as ten years.

Despite persistently low interest rates, there are few signs of pressures in our trading partners' economies. Although unemployment in the US, euro area and the UK has fallen steadily for several years, and to somewhat below pre-crisis levels, wage growth remains moderate and inflation is below target for a number of our neighbours.

Chart: Unemployment and inflation in selected countries

The combination of persistently low interest rates, moderate economic growth and low inflation suggests that headwinds have dampened the effect of the monetary policy measures. These conditions can be purely temporary, such as high uncertainty contributing to increased saving and low willingness to invest. But the forces at work are also of a more structural kind, rooted in demographic trends, wider income gaps and global downward pressure on wages for large groups of workers. Regardless, the consequence seems to be that the interest rate level that is consistent with normal growth and inflation, ie what we refer to as the neutral interest rate, has fallen to a low level. How long this will persist is difficult to predict. But an environment in which borrowing is free and the real interest rate is considerably lower than trend growth in the economy is unlikely to be sustainable over time.

Chart: Estimates of the neutral interest rate

The neutral interest rate cannot be observed and must be estimated. In the Bank's *Monetary Policy Report,* the current neutral real interest rate in Norway is assumed to be around zero. The estimate is based on calculations from a range of different models. As we can see in the chart, these calculations show that the neutral interest rate has fallen to a historically low level close to zero over the past 20 years. With an inflation target of 2 percent, this means that setting the policy rate at zero would enable us to bring the real interest rate down to 2 percentage points below its equilibrium level.[1] [2]

In Norges Bank's assessment, monetary policy has sufficient room for manoeuvre with an inflation target of 2 percent. First, international experience has shown that the room for manoeuvre in monetary policy is not exhausted when the policy rate is close to zero. I will come back to this. Second, our calculations show that over the past 20 years, the real interest rate has normally remained less than 2 percentage points away from its estimated equilibrium level.[3] This may suggest that a real interest rate that is 2 percentage points below equilibrium has in most cases provided sufficient economic stimulus.

Chart: The real interest rate minus the neutral real interest rate

However, both in 2004 and following the financial crisis in 2008, the real interest rate was almost 2 percentage points lower than the estimated normal interest rate, with a somewhat larger gap after the fall in oil prices in 2014. Looking back, we can safely say that the Norwegian economy fared relatively well through these downturns, with some help from other factors. After the financial crisis, high oil investment cushioned the downturn, and in 2014 a weaker krone gave the economy an extra boost. In addition, fiscal policy provided substantial support in both cases.

A future severe downturn could have a greater impact, with more pronounced declines in both employment and inflation. We must therefore take into account that situations could arise that require measures other than cutting the policy rate towards zero. So we should examine the contents of the monetary policy toolkit in Norway and ask not only when the tools should be used, but also how far the limits of monetary policy should be stretched in such a situation.

The policy rate

The policy rate is the key monetary policy instrument. Monetary policy is effective when changes

in the policy rate pass through to market rates. Monetary policy is more effective when central banks successfully influence interest rate expectations.

A downturn in the Norwegian economy should initially be countered by lowering the policy rate. Owing to the characteristics specific to the Norwegian credit market, policy rate cuts quickly result in lower borrowing costs for households and enterprises. One characteristic is that most households prefer floating-rate loans. We need look no further than to Sweden to find a considerably lower share of floating-rate loans than in Norway. In the UK and Germany, only a small minority show the same preference as Norwegian households.

Chart: Share of floating-rate loans – new mortgages

Another characteristic of the Norwegian credit market is that a large share of corporate financing is obtained via banks and often at floating rates.

Changes in the policy rate will pass through to banks' funding costs through short-term money market rates. The high share of Norwegian loans issued at floating rates has its counterpart in banks' preference for floating-rate funding. Fixed-rate payments on bank bonds are typically swapped for floating-rate payments in the derivatives market. In addition, most retail deposits pay interest at a floating rate. Under normal conditions, changes in funding conditions will in the next round be passed on to banks' retail borrowers.

Thus, the structure of the Norwegian credit market makes changing the policy rate an effective tool. But how far can the policy rate be lowered before monetary policy loses its effect?

In Norway, the policy rate has never been lower than half a percent. In other countries, policy rates have been as low as minus 0.75 percent.

Negative policy rates in other countries have on the whole passed through to money market rates. This reflects that cash is a costly alternative to electronic money for participants in these markets.

Chart: IBOR rates in countries with negative policy rates

The pass-through to ordinary bank rates is slower. Households and small enterprises can at relatively moderate cost avoid negative deposit rates by withdrawing cash. If banks offer these groups of customers below-zero deposit rates, the banks risk losing an important part of their funding. If deposit rates do not follow policy rates into negative territory, the pass-through to banks' funding costs will gradually weaken, which will in turn dampen or eliminate the decrease in banks' lending rates.[4]

In order to strengthen the pass-through to long-term market rates, a number of central banks have elected to provide clearer signals about future policy rates, known as forward guidance, in a situation where policy rates are approaching a lower bound and the economic recovery is still sluggish. Some central banks have linked their signals about future policy rates to specific economic indicators or a specific horizon.

In Norway, signals about future policy rates have long been part of the ordinary conduct of monetary policy. Since 2005, our monetary policy reports have included the Bank's own forecasts for the policy rate three to four years ahead. The policy rate path is the Bank's best estimate and not a promise. We have had positive experience with this instrument.

Asset purchases

Over the past decade, a number of central banks have also begun to use a new instrument of monetary policy: the central bank balance sheet. Balance sheet measures can be roughly

divided into two categories: purchases of long-term bonds and long-term extraordinary loans for banks. The objective of this balance sheet policy has been to further reduce the cost of long-term loans.

The measure that has attracted most attention is central banks' government bond purchases, frequently referred to as quantitative easing, or QE. The purchases pull up prices and reduce yields on these bonds. To the extent that the sellers of the bonds shift their demand towards other riskier securities, the yields on these securities could also fall. Central banks' government bond purchases can also function as a signal that policy rates will remain low.

Studies suggest that this policy has had an appreciable effect on interest rates and financial prices.[5] The alternative monetary policy instruments have most probably also stimulated economic activity, pushed up inflation expectations and underpinned bank lending.[6] However, it is difficult to estimate the strength and persistence of these effects more precisely. The choice of method and assumptions affect the results, and estimates diverge widely.

A range of studies point out that unconventional monetary policy instruments are most effective in the context of market imbalances and when risk premiums are high. The effect appears to have diminished as interest rates and risk premiums have fallen or as policy rates have approached their lower effective bound.[7] In the current environment of very low interest rates in many countries and prospects for slower growth, this gives cause for concern. After ten years of low interest rates, a number of countries may now be caught in what could be described as a liquidity trap. Then, monetary policy is no longer able to stabilise the economy. Other measures are needed. In a number of countries, arguments are being made for the use of fiscal policy measures.

The discussion about the use of unconventional monetary policy also circles around the dividing lines between monetary and fiscal policy.

First, I would like to call your attention to a possible misunderstanding. Although it is true that quantitative easing involves the creation of new money by central banks to pay for their bond purchases, this does not mean that the central bank prints money to fund public finances. Under quantitative easing, the public sector in its widest sense, including the central bank, purchases one form of debt – government bonds – and replaces it with another – central bank reserves. Quantitative easing affects the economy via lower long-term interest rates.

Some people nevertheless point out that central bank government bond purchases can seem "quasi-fiscal".[8] Central bank purchases of government bonds in the secondary market can give government authorities an incentive to issue more government debt. The central bank could thus, indirectly, be in the position of contributing to funding government spending. This could blur the distinction between monetary and fiscal policy.

A provision that clearly prohibits Norges Bank from extending credit directly to the government is included in Norway's central bank act with the express purpose of safeguarding this distinction. However, this provision does not prohibit Norges Bank from purchasing government bonds in the secondary market.

Nevertheless, there is much to suggest that the purchase of government bonds is not an option as a policy instrument for Norges Bank. There a number of reasons for this.

As I mentioned previously, floating-rate loans dominate the Norwegian credit market. Unlike other countries, the level of long-term interest rates in itself has little effect on credit demand in Norway. If government bond purchases do not affect future short-term interest rate expectations either, the effect on Norway's wider economy will be limited. Studies in other countries do not provide an unequivocal answer as to whether the bond purchases have had the strongest impact through a fall in the expected policy rate or through lower term premiums on long-term

government bonds.

We have seen in earlier periods that fluctuations in Norwegian government bond yields do not necessarily influence other interest rates. There were signs of strong demand for Norwegian government bonds during the euro crisis between 2011 and 2012. Government bond yields fell fairly sharply in this period, primarily as a result of lower term premiums, but did not feed through to any great extent to the interest rates that are important for banks' funding costs.

Chart: Yields on government bonds, swaps and covered bonds

Other countries' government bond yields play an important role as a reference for other interest rates, which is not the case for Norway. Relative to GDP, the government bond market is much smaller and less liquid than in many other countries, with a large proportion of foreign owners.

If Norges Bank had conducted an asset purchase programme in Norway, it is unlikely that foreign investors would have considered other Norwegian securities. Many investors would probably have moved the money from the sale out of Norway. This could have stimulated the economy through a weaker krone exchange rate, but what the extent of the exchange rate reaction would be is highly uncertain.

The introduction of a government bond purchase programme in Norway could also lead to market disruptions. This cost must be taken into account. A further reduction in the number of outstanding bonds would reduce liquidity in a market that is already small. Instead, Norway's economy requires other solutions.

Foreign central banks have also provided extraordinary loans to banks and purchased bonds backed by residential mortgages (covered bonds). We associate such instruments with financial market turbulence. In periods of considerable turbulence and high financial market risk premiums, these instruments can reduce banks' funding costs and increase the predictability of banks' funding. The purpose is to prevent an abrupt fall in credit growth from increasing the risk of a severe economic downturn or having an adverse impact on an already weak economy.

In Norway, the government used covered bonds in a swap arrangement that was in operation between November 2008 and October 2009.[9] The swap arrangement was a response to banks' substantially weaker access to long-term funding after the Lehman Brothers bankruptcy. The arrangement dampened the effect of high risk premiums in the market and complemented the policy rate cuts that were made in the same period.

Extraordinary loans for banks

Providing longer-term loans on extraordinary terms was an instrument commonly used by many central banks at the start of the financial crisis. In the euro area, this instrument remained in use after the turbulence had subsided in the form of the so-called TLTRO programmes. The terms of the loans are intended to spur banks to maintain or increase growth in lending to households and enterprises.

Norges Bank regularly lends to banks, but only in the short term in order to regulate liquidity in the banking system. In normal times, when markets are functioning normally, it is not our job to compete with the private investors that fund banks. However, if banks' funding markets cease to function, as in 2008, the situation is different.

In Norway, central bank loans on extraordinary terms are more likely to be provided in order to bring down short-term money market rates, known as Nibor rates, closer to the policy rate. This could be considered in a situation where the policy rate is near its lower bound while short-term market rates are substantially higher. Whether the measure would be the right option or not depends on the reason for the high risk premium. The measure could have a rapid effect. Short-

term money market rates play an important role for Norwegian banks' funding costs. A reduction in risk premiums will therefore have an impact on much of banks' outstanding debt and not just on new loans.

Foreign exchange market measures

A few words on the exchange rate. For small open economies like Norway, the exchange rate is an important transmission channel for monetary policy. Changes in the exchange rate influence both inflation and the real economy via firms' competitiveness.

Foreign exchange interventions have been used, and continue to be used, by many central banks worldwide. Inflation-targeting countries use interventions less, and often not at all. Norges Bank has not intervened to influence the exchange rate since 1999. The policy rate is the primary instrument of monetary policy and the exchange rate is free floating. In recent years, the exchange rate has been a valuable shock absorber for the economy.

Chart. Exchange rate floors for Switzerland and the Czech Republic

Some inflation-targeting countries have intervened directly in foreign exchange markets over the past decade. The Swiss and Czech central banks have kept their exchange rates weaker than a given level against the euro. The purpose of the measures has been to prevent their own currencies from appreciating in order to prevent inflation from falling and keep it closer to the inflation target than would otherwise have been the case.

Foreign exchange market measures can be effective if there is a risk that confidence in the nominal anchor is being undermined by prospects for low inflation and it is not appropriate to lower the policy rate further. However, this type of measure also exposes the central bank's equity to greater risk. In Norway, foreign exchange market intervention is not applicable in a normal situation.

Division of responsibilities and level of ambition for economic policy

Let me draw together the strands of my discussion so far. The introduction of the inflation target in 2001 laid the premises for today's division of responsibilities in the conduct of Norway's economic policy. Monetary policy pursues the objective of low and stable inflation and is the first line of defence in stabilising the economy. Fiscal policy contributes to stability within the framework of the fiscal rule. This framework has served us well for almost 20 years.

The Norwegian economy is currently performing well, while there are some dark clouds on the international horizon. Hopefully, we are only seeing a period of slower growth, but a severe downturn cannot be ruled out. If such a downturn were to occur with policy rates as low as they are now, monetary policy space for major economies would be very limited.

Chart: Central bank balance sheets

Policy rates are still negative for several of our trading partners, more than a decade after the financial crisis. The extraordinary measures that have been applied have also led to a substantial expansion of central bank balance sheets, and in a number of countries they are still expanding. In Sweden and Japan, the asset purchase programmes have not yet been brought to an end, and the European Central Bank has recently announced that its asset purchase programme will be restarted (also note that Japan has to have a separate graph in this chart). Unconventional instruments appear to have become a part of the ordinary central bank toolkit.

We have more policy room for manoeuvre in Norway as the policy rate has risen slightly. In the event of a severe downturn, we would lower the policy rate. In principle, other countries' experience shows that the impact of a lower policy rate does not stop at the zero lower bound,

even though the scope for rates below zero is limited. But in Norway it is difficult to envisage negative rates over a long period or monetary policy being stretched even further through unconventional measures. Even though such measures would probably have some effect here in Norway, the potential gains must be weighed against the costs. Norway also has fiscal room for manoeuvre.

As I have mentioned, there is probably less to gain from lower long-term rates in Norway than in countries that have used unconventional instruments to reduce rates. And the effects of such instruments are now also being called into question internationally.

The costs are particularly related to financial stability. Persistently low interest rates can induce investors to take on greater risk in the search for yield, bidding up the price of risky investments and pushing down yields to the level of risk-free interest rates. Prices for securities and other assets can be pushed up higher than future income and risk would suggest. High debt ratios create vulnerabilities, increasing the risk of new crises and future losses. Persistently lower interest rates can also hamper necessary structural changes and reduce the economy's growth capacity. Debt becomes easy to service, even for unprofitable enterprises. Projects that generate low returns can be debt-financed.

Chart: Fiscal impulses

The strategy pursued by other countries of stretching the limits of monetary policy must be viewed in the light of monetary policy being practically the only instrument applied. Fiscal policy has made a scant contribution or pulled in the opposite direction. There are probably a number of reasons why this is the case. For some countries with high government debt, the risk of rising interest expenses restricted fiscal room for manoeuvre. At the same time, fiscal policy is managed at national government level. The impact of crises differs across countries, and it is often not the countries with the most room for manoeuvre that are the hardest hit. As a result, the motivation to use the fiscal policy tool is also weaker in these countries.

In Norway, we have room for manoeuvre in fiscal policy and a tradition of using it in our management of the business cycle. If we were to face a situation with a very low policy rate and prospects of persistently low resource utilisation, it would be natural for fiscal policy to play a greater role than at an early stage. Consequently, there is less need to steer monetary policy into uncharted waters and risk negative side effects.

Let me emphasise that there is a difference between crisis measures and the use of instruments in more normal business cycles. When market confidence breaks down, as in 2008, the potential of monetary policy must be exploited. In such a situation, it may also be necessary to delve deeper into the monetary policy toolkit.

Norges Bank supplied liquidity to banks during the first phase of the financial crisis in the form of loans, as did other central banks. Some of the loans were offered at longer maturities than normal. Norges Bank also managed a swap arrangement on behalf of the government, with the aim of giving banks cheaper and more predictable funding. Combined with a low policy rate and an expansionary fiscal policy, these measures prevented a deep downturn in the Norwegian economy.

Fiscal policy directly affects total demand in the economy. Fiscal policy can be very effective when the economy is characterised by high unemployment and very low interest rates alone cannot provide sufficient stimulus. The side effects of fiscal policy via asset prices are also less severe.

There are good reasons why monetary policy is the first line of defence in managing the business cycle in normal times. The policy rate can react rapidly, both when the economy is exposed to shocks and when the monetary policy impulse needs to be reversed. Fiscal stimulus

measures take longer to implement and can be more challenging to reverse.

A related issue is the ambition level we should set for our inflation targeting. Our statutory responsibility is to deliver low and stable inflation. According to the Regulation on Monetary Policy, our target is annual consumer price inflation of close to 2 percent over time. But monetary policy is also expected to contribute to high and stable output and employment and to counteracting the build-up of financial imbalances. Inflation targeting should be forward-looking and flexible. In some situations, a longer horizon than usual is appropriate for returning inflation to the target after a deviation. This may lead to a better overall result. In the wake of the fall in oil prices in 2014, the policy rate was lowered, but we stopped at 0.5 percent. The objective of financial stability was given weight.

The scope for flexibility in inflation targeting depends on how well inflation expectations are anchored at the target. Norges Bank's experience, based on close to 20 years of inflation targeting, suggests that a small open economy must expect inflation to deviate fairly widely from the target at times, rising above target or falling below. But at the same time, inflation has remained within a range around the target where deviations from the target cannot be said to have entailed material economic costs. This has provided leeway to give weight to other considerations in the Bank's monetary policy trade-offs. Other countries have come to other conclusions and have chosen to stretch the limits of monetary policy further to bring inflation back to target.

If we some time in the future were to experience falling demand and a risk of deflation, we will use the instruments at our disposal to address this situation. Our job will be less difficult if fiscal policy also contributes. The primary responsibility of monetary policy, however, is to provide the economy with a nominal anchor, quantified by the inflation target assigned to Norges Bank. Our instruments will always be geared towards this objective.

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[1] Assuming that inflation holds steady and expectations remain consistent with the target.

[2] How low three-month Nibor will be with a policy rate of zero depends on the size of the spread between Nibor and the expected policy rate, the risk premium. This premium has varied over time. In *Monetary Policy Report* 3/19, it was projected at 0.4 percentage point for the coming years.

[3] The illustration is based on figures used in NEMO, Norges Bank's macroeconomic model.

[4] See for example the analysis based on Swedish data in Eggertsson et al. (2019).

[5] There is now an extensive body of both theoretical and empirical literature, discussing alternative instruments. For example, Borio and Zabai (2016), Dell'Ariccia et al. (2018) and Kuttner (2018) provide an overview of alternative instruments introduced by the central banks in the US, the UK, Japan and the euro area. They also refer to different estimates of the effect of alternative instruments on financial prices and interest rates, the real economy and inflation expectations. See also Filardo and Nakajima (2018), Hesse et al. (2017) and Haldane et al. (2016).

[6] Borio and Zabai (2016).

[7] Cf. Borio and Zabai (2016), Filardo and Nakajima (2018) and Hesse et al. (2017).

[8] Borio and Zabai (2016).

[9] The arrangement allowed banks in Norway to enter into agreements whereby covered bonds could be temporarily swapped for short-term government securities.