NORGES BANK

3|20

SEPTEMBER

MONETARY POLICY REPORT

WITH FINANCIAL STABILITY ASSESSMENT

The *Monetary Policy Report with financial stability assessment* is published four times a year, in March, June, September and December. The *Report* assesses the interest rate outlook and forms the basis for Norges Bank's advice on the level of the countercyclical capital buffer. The *Report* includes projections of developments in the Norwegian and global economy.

Editor: Øystein Olsen

Contents

This *Monetary Policy Report* is based on information in the period to 18 September 2020
In addition, the proposed budget amendment Prop. 142 S (2019–2020) of 21 September 2020 has been incorporated into the projections.
The *Report* was published on 24 September 2020, the day after the Committee's monetary policy meeting, and is available at www.norges-bank.no.

Monetary policy in Norway

OBJECTIVES

Monetary policy shall maintain monetary stability by keeping inflation low and stable. The operational target of monetary policy shall be annual consumer price inflation of close to 2% over time. Inflation targeting shall be forward-looking and flexible so that it can contribute to high and stable output and employment and to countering the build-up of financial imbalances. Monetary policy objectives and trade-offs are discussed in a box on page 42.

IMPLEMENTATION

Norges Bank sets its policy rate with the aim of stabilising inflation around the target in the medium term. The horizon will depend on the shocks to which the economy is exposed and the effects on the outlook for inflation and the real economy. In its conduct of monetary policy, Norges Bank takes into account indicators of underlying consumer price inflation.

DECISION PROCESS

The policy rate is set by Norges Bank's Monetary Policy and Financial Stability Committee. Policy rate decisions are normally taken at the Committee's monetary policy meetings. The Committee holds eight monetary policy meetings per year. The *Monetary Policy Report* is published four times a year in connection with four of the monetary policy meetings. Prior to publication, several seminars and meetings are held at which analyses are presented to the Committee and economic developments, the balance of risks and the monetary policy stance are deliberated. On the basis of the analyses and deliberations, the Committee assesses future interest rate developments. The final policy rate decision is made on the day prior to the publication of the *Report*. The Committee's assessment of the economic outlook and monetary policy is presented in "Monetary policy assessment" in the *Monetary Policy Report*.

REPORTING

Norges Bank places emphasis on transparency in its monetary policy communication. The Bank reports on the conduct of monetary policy in its *Annual Report*. The assessments on which interest rate setting is based are published regularly in the *Monetary Policy Report* and elsewhere.

Countercyclical capital buffer

The objective of the countercyclical capital buffer is to bolster banks' resilience and to lessen the amplifying effects of bank lending during downturns. The Ministry of Finance sets the level of the buffer four times a year. Norges Bank draws up a decision basis and provides advice to the Ministry regarding the level of the buffer. The advice is submitted to the Ministry of Finance in connection with the publication of Norges Bank's *Monetary Policy Report*. The advice is published when the Ministry of Finance has made its decision. Norges Bank will recommend that the buffer rate should be increased when financial imbalances are building up or have built up. The buffer rate may be reduced in the event of an economic downturn and large bank losses, with a view to mitigating the procyclical effects of tighter bank lending. The buffer rate shall ordinarily be between 0% and 2.5% of banks' risk-weighted assets, but in special circumstances may be set higher.

Decision-making process for *Monetary Policy Report* 3/20

At its meetings on 4 and 15 September, the Committee discussed the economic outlook, the monetary policy stance and the buffer rate. On the basis of the deliberations and a recommendation from Norges Bank staff, the Committee made its decision on the policy rate on 23 September. The Committee also approved its advice to the Ministry of Finance on the buffer rate.

Monetary policy assessment

The Covid-19 pandemic has led to a sharp downturn in the Norwegian economy. Low interest rates are dampening the downturn and mitigating the risk of a more prolonged impact on output and employment. Since the June 2020 *Monetary Policy Report,* economic activity has picked up broadly as expected, but there is still substantial uncertainty about developments ahead.

Norges Bank's Monetary Policy and Financial Stability Committee decided to keep the policy rate unchanged at 0% at the monetary policy meeting on 23 September. There are prospects that the policy rate will remain at the current level for some time ahead.

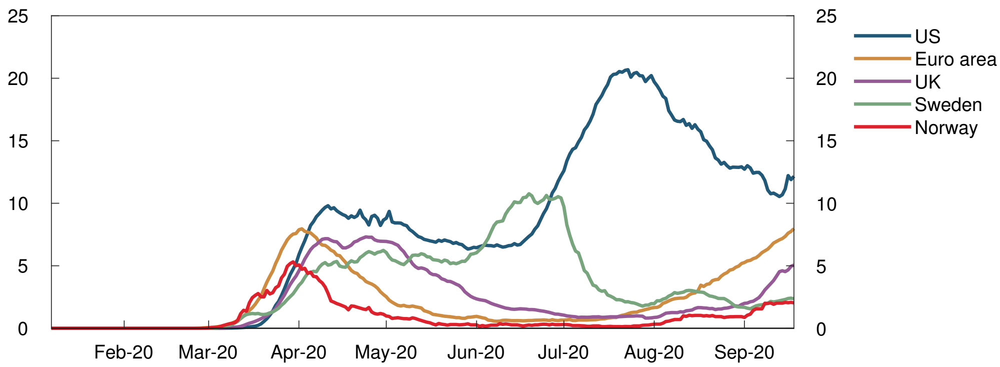
Global recovery under way

The Covid-19 pandemic has led to a sharp downturn in the global economy. Activity among Norway's trading partners is on the rebound and has so far risen somewhat faster than assumed in the June *Report*. The easing of measures to contain the pandemic through summer has boosted economic activity, while it has also led to increased infection rates. In some countries, registered infection rates are now higher than in spring. Continued high unemployment and prospects for low wage growth will contribute to keeping global inflation low in the years ahead. Market-implied rates still indicate very low interest rates among Norway's trading partners for a long time ahead.

Oil prices have risen since the June *Report* and are now above USD 40. Futures prices indicate somewhat higher oil prices in the coming years. European gas prices have increased markedly since June.

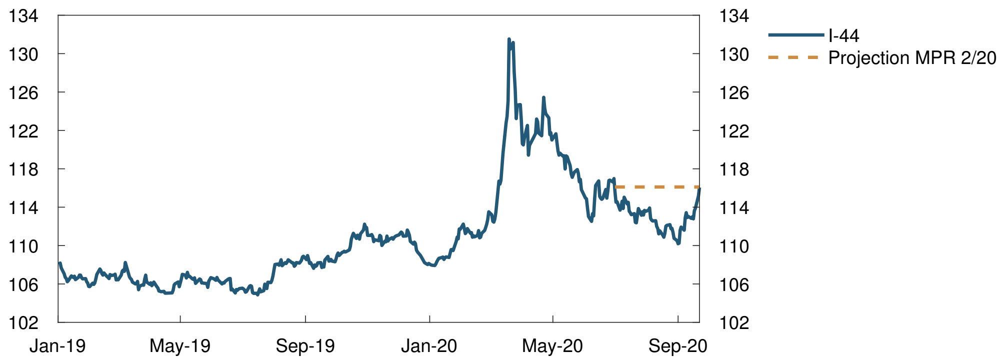
Chart A Higher infection rates after summer

Seven-day moving average of new cases per 100 000 inhabitants



Sources: ECDC, Eurostat, OECD and Norges Bank

Chart B The krone has been stronger than expected
Import-weighted exchange rate index (I-44)



Source: Norges Bank

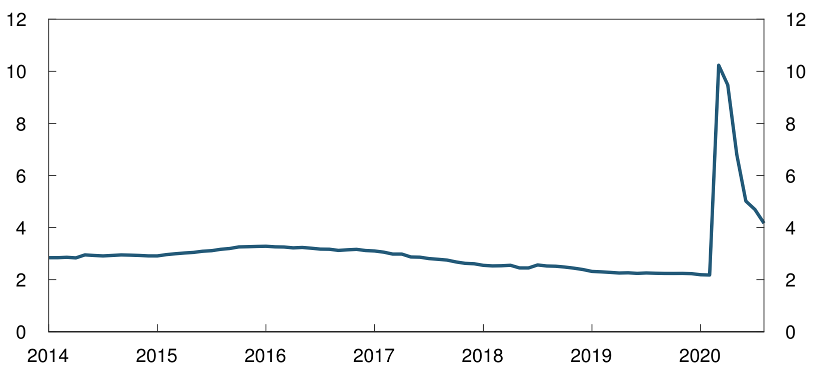
The market turbulence in the wake of the Covid-19 outbreak subsided through spring and summer. Since the June *Report*, money and bond market premiums have fallen further both abroad and in Norway. Norwegian money market rates are at historically low levels. Residential mortgage rates are little changed since June.

The krone exchange rate, as measured by the import-weighted index I-44, has appreciated after reaching record-weak levels in March. Reduced uncertainty in global financial markets and a rise in oil prices likely contributed to the krone appreciation. In recent days, market turbulence has increased somewhat and the krone has depreciated. The krone exchange rate is now broadly unchanged from the level prevailing at the time of the June *Report*.

Activity in the Norwegian economy has picked up
The spread of Covid-19 and measures to contain it contributed to a marked decline in the Norwegian economy in March and April. The decline was amplified by a fall in oil prices and a contraction among Norway's trading partners. Unemployment reached historically high levels.

In the course of spring, the spread of the virus was brought under control, and economic activity has picked up since May. Nevertheless, mainland GDP was nearly 5% lower in

Chart C Unemployment has fallen, but is still at high levels
Registered fully unemployed as a share of the labour force. Seasonally adjusted. Percent



Source: Norwegian Labour and Welfare Administration (NAV)

July than in February. Developments were in line with the projections in the June *Report*. Growth has primarily picked up in the sectors that were directly affected by containment measures, such as hotels and food service, culture, entertainment and other services. In recent months, many of the furloughed employees have returned to work, and unemployment has fallen somewhat faster than expected.

Household demand in particular has given a boost to mainland economic activity. Household consumption of goods has picked up rapidly, but overall consumption is still low.

After summer, infection rates have also risen in Norway, leading to stricter containment measures in some areas, while further relaxation has been put on hold. This may weigh on household demand in the coming months. On the other hand, there appears to be less of a risk of a total lockdown of much of the economy and of a renewed sharp downturn than in June. Several vaccines are in the testing stage, but it is still uncertain when a vaccine can be widely available.

In August, the enterprises in Norges Bank's Regional Network reported prospects for weak growth in activity ahead. They expected little change in the level of employment in the coming period. Enterprises' investment plans indicate a sharp fall in investment in the coming year.

Housing market activity has picked up markedly through summer. Turnover in the housing market has been high, and house prices have risen more than projected. Growth in credit to households has also been higher than expected.

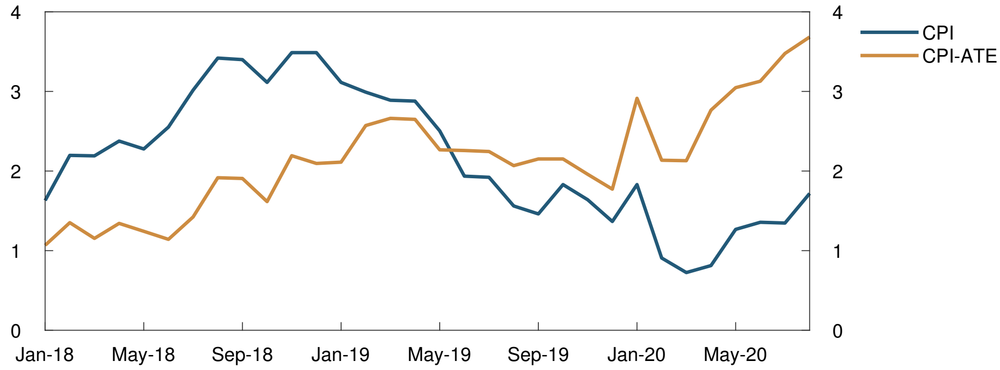
Temporary rise in price inflation

The rise in the consumer price index (CPI) has moved higher in recent months after lower energy prices contributed to a marked decline through 2019. In August, 12-month CPI inflation was 1.7%. Futures prices for electricity and fuel indicate a rise in energy prices ahead, which would contribute to a pick-up in CPI inflation in the coming year.

The underlying rise in prices measured by the CPI adjusted for tax changes and excluding energy products (CPI-ATE) has moved up over the past year. Underlying inflation has been higher than projected in the June *Report*, and 12-month CPI-ATE inflation was 3.7% in August. The rise is primarily attributable to higher imported goods inflation, which in turn reflects the krone depreciation through winter and spring. Norges Bank's Expecta-

Chart D Marked increase in underlying inflation

CPI and CPI-ATE. Twelve-month change. Percent



Source: Statistics Norway

tions S urvey indicates that inflation expectations in the somewhat longer term are well-anchored around the inflation target.

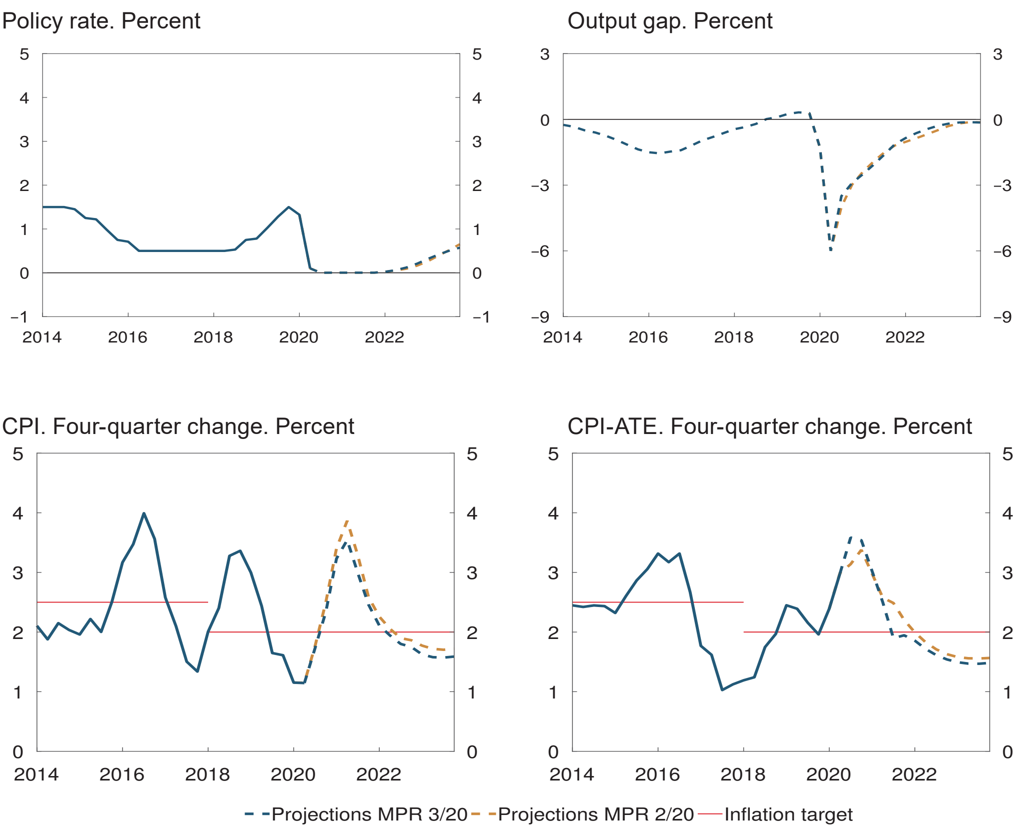
This year's wage settlement began in August, and on the basis of negotiations with manufacturing sector trade unions, the wage norm for manufacturing as a whole was estimated at 1.7%. A marked decline in the number of low-wage employees in isolation lifts annual wage growth somewhat. Overall, it appears that wage growth in 2020 may be broadly as assumed in the June *Report*.

Low policy rate ahead

The operational target of monetary policy is annual consumer price inflation of close to 2% over time. Inflation targeting shall be forward-looking and flexible, so that it can contribute to high and stable output and employment and to countering the build-up of financial imbalances.

The Norwegian economy is in the midst of a deep downturn. Activity has picked up through summer but is still lower than at the start of the year. Even though unemployment has moved lower, it remains high. There is considerable uncertainty surrounding the further recovery of the Norwegian economy. The increase in infection rates and reintroduction of some containment measures may put a brake on the upswing in the coming period. Once a vaccine is widely available, growth is likely to pick up. Nevertheless, it will take time for output and employment to return to pre-pandemic levels. Underlying inflation is above the target, but the krone appreciation since March and

Chart E Low policy rate helps to achieve the objectives of monetary policy



Sources: Statistics Norway and Norges Bank

prospects for low wage growth suggest that it will moderate. As long as capacity utilisation is rising, there is limited risk that inflation will become too low.

In discussing the trade-offs facing monetary policy, the Committee placed weight on the contribution of low interest rates to speeding up the return to more normal output and employment levels. This reduces the risk of unemployment becoming entrenched at a high level. In its discussion of the balance of risks, the Committee was also concerned that a long period of low interest rates increases the risk of a build-up of financial imbalances.

In the Committee's assessment, the overall outlook and balance of risks imply a very expansionary monetary policy stance. In spring, the policy rate was reduced by a total of 1.50 percentage points to 0%. The sharp economic downturn and considerable uncertainty surrounding the outlook suggest keeping the policy rate on hold until there are clear signs that economic conditions are normalising. The Committee does not envisage making further policy rate cuts.

The policy rate forecast is little changed since June and implies a rate at the current level over the next couple of years, followed by a gradual rise as activity approaches a more normal level. With such a policy rate path, there are prospects that capacity utilisation will gradually increase and that the output gap will close towards the end of the projection period. Unemployment is projected to edge lower, but to remain somewhat higher than prior to the pandemic. Underlying inflation is projected to lie above the inflation target over the next year, before gradually falling to close to 1.5%.

If output and employment increase faster than projected, or there are signs of accumulating financial imbalances, a policy rate rise may occur earlier than indicated. If the downturn lasts longer than projected, for example owing to a resurgence in infections or because it takes a long time before a vaccine becomes available, the policy rate may remain at the current level longer than implied by the rate path.

The Committee decided unanimously to keep the policy rate unchanged at 0%. In the Committee's current assessment of the outlook and balance of risks, the policy rate will most likely remain at today's level for some time ahead.

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23 September 2020

THE COVID-19 PANDEMIC CREATES CONSIDERABLE UNCERTAINTY

The ongoing pandemic is creating considerable uncertainty about developments ahead, both globally and in Norway. Developments will depend on the spread of infection and measures to contain it and on how quickly a vaccine can be made widely available. This box provides an account of the assumptions underlying the projections regarding these factors.

In *Monetary Policy Report* 2/20, it was assumed that the gradual easing of containment measures would continue and that economic activity would pick up from summer 2020. However, many countries have experienced a greater-than-expected rise in infections after restrictions were relaxed. While the resurgence in Norway has been relatively moderate, daily infection rates in many European countries are higher than in March/April.

At the beginning of the pandemic, most countries implemented nationwide lockdowns to contain the spread of infection. With lower infection rates and an increased need to limit the adverse economic impact of containment measures, many countries have changed strategy. There is now a greater emphasis on temporary, targeted measures in areas where infection rates are rising and on increased capacity for testing and tracing. Nationwide measures are also used periodically. It is assumed that this approach will continue. The strategy of mainly employing more limited measures has likely reduced the risk of a more protracted economic downturn somewhat.

In the period ahead, it is assumed that containment measures, both globally and in Norway, will be relaxed more slowly than assumed in the June *Report*. This will likely entail somewhat weaker economic growth in the coming quarters. If public health rules are effective and infection tracing improves, so that the restrictions can be limited to even fewer persons, restrictions can be eased more quickly. Conversely, a failure to control local outbreaks may entail a need to reimpose nationwide restrictions.

It is highly uncertain when a vaccine will be ready, with questions surrounding development, production and distribution of the vaccine. Initially, health workers and the most vulnerable segment of the population will probably be prioritised. The World Health Organisation (WHO) does not expect a vaccine to be in widespread use globally until autumn 2021.

Once a vaccine becomes widely available, it will make a positive contribution to growth in the global and Norwegian economy. The likelihood that a vaccine will be widely available already in 2021 appears to be somewhat greater than it did before summer. The projections in this *Report* are based on this assumption. If a vaccine is found quickly, growth will likely turn out higher than currently projected. If it takes a long time to find a vaccine, growth will turn out lower than projected.

1 The global economy

The level of activity among Norway's main trading partners fell substantially in March and April, but picked up appreciably in summer. Economic measures implemented by the authorities have contributed to the rapid recovery, but the rise in Covid-19 cases since summer will probably dampen growth ahead. GDP among trading partners is projected to return to pre-pandemic levels at the end of 2021. Market-implied rates indicate expectations of very low policy rates among trading partners for a long period ahead.

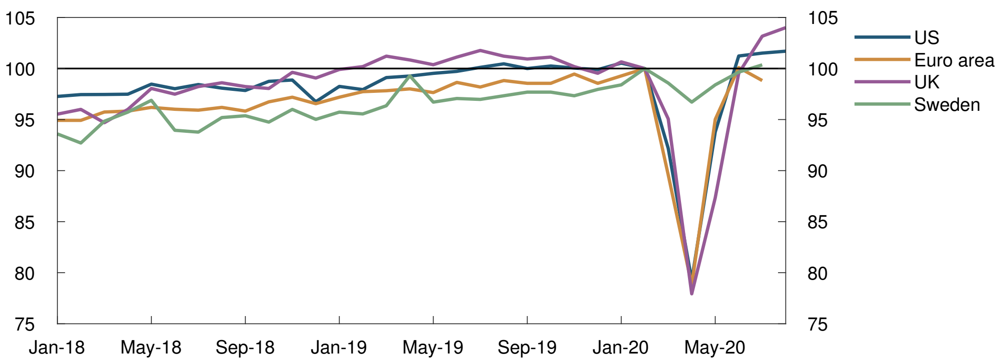
Recovery after deep decline in the global economy
Global economic activity fell markedly in March and April. GDP for Norway's main trading partners contracted by close to 10% between 2020 Q1 and Q2, approximately as expected in the June *Monetary Policy Report*. The UK economy showed the sharpest decline, with GDP falling by over 20%. Activity in China, the first country hit by the outbreak, fell substantially in Q1, but rose by more than 11% in Q2.

Retail sales and manufacturing output fell sharply in April, but picked up markedly in the following months. Retail sales in particular have recovered rapidly and were above the pre-pandemic level in July (Chart 1.1). Labour market measures and other support schemes have underpinned household income and curbed the rise in unemployment, particularly in Europe. The measures have likely contributed to the rapid reversal in goods consumption.

The service sector is still severely affected, in particular the transport, restaurant and tourist industries. Activity indicators have picked up through summer, suggesting that activity is on the rise (Chart 1.2).

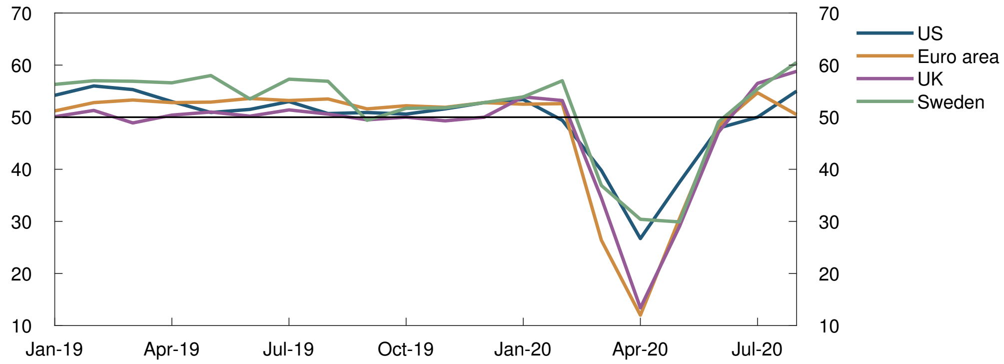
Increased activity and continued monetary and fiscal stimulus, combined with positive news about the development of a Covid-19 vaccine, have pushed up equity indexes. Central bank balance sheets have expanded further through summer as a result of asset purchase programmes. Long-term interest rates have remained at very low levels since

Chart 1.1 Sharp increase in goods consumption
Retail sales. Index. February 2020 = 100



Sources: Refinitiv Datastream and Norges Bank

Chart 1.2 Activity indicators have improved
Services PMI. Diffusion index centred around 50



Source: Refinitiv Datastream

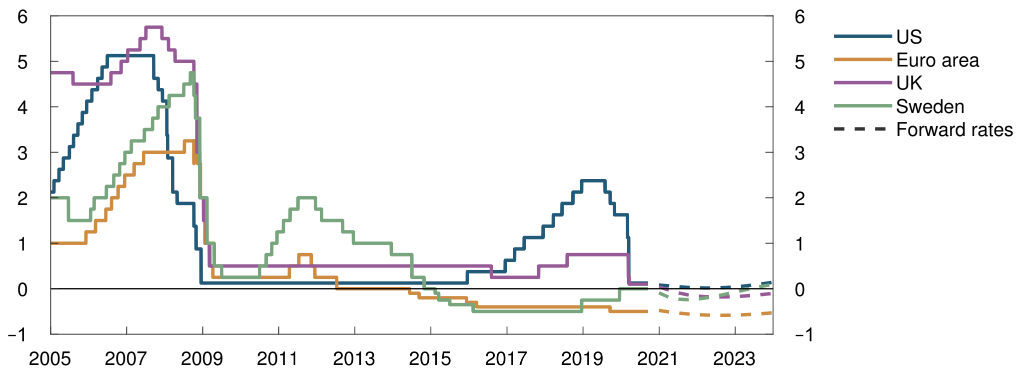
the June *Report,* while corporate risk premiums have continued to fall, particularly for firms with low credit ratings. Market-implied rates indicate expectations of very low policy rates among Norway's main trading partners for a long time ahead (Chart 1.3).

Until the beginning of July, the number of new Covid-19 cases was falling in a number of European countries. In recent months, the number has risen sharply, particularly in Spain and France. The number of hospital admissions has only shown a slight rise, which may suggest that most of those infected now do not become seriously ill. So far, contact tracing and local lockdowns have been used in response to higher infection rates, and governments have not felt the need to reimpose nationwide lockdowns.

Partly owing to the rapid rise in goods consumption, GDP growth in Q3 appears to be higher than projected in the June *Report*, although higher infection rates in several countries will likely weigh on growth. GDP among Norway's main trading partners is projected to increase by close to 7% between 2020 Q2 and Q3.

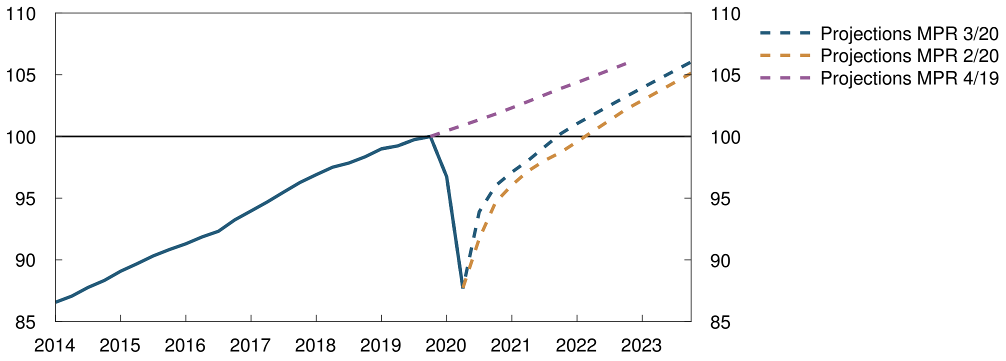
The projection is conditioned on the assumption that higher infection rates will continue to be dealt with locally rather than reimposing a broad economic lockdown, but that containment measures will have some dampening impact on growth in the near term.

Chart 1.3 Low policy rates expected for a long period ahead
Policy rates and estimated forward rates in selected countries. Percent



Sources: Bloomberg, Refinitiv Datastream and Norges Bank

Chart 1.4 GDP not back at pre-pandemic levels until end-2021
GDP trading partners. Index. 2019 Q4 = 100



Sources: Refinitiv Datastream and Norges Bank

Assumptions concerning the evolution of the pandemic, containment measures and vaccines are discussed further in a box on page 10. Overall, GDP for trading partners is projected to fall by about 6% in 2020. The projected decline is smaller than in the June *Report*. Expansionary monetary and fiscal policies are dampening the decline in most countries. GDP growth for trading partners is projected at about 5% in 2021 and 3.5% in 2022 (Annex Table 1). With such a path, GDP among trading partners will return to pre-pandemic levels at the end of 2021 (Chart 1.4). Trading-partner imports are projected to fall by about 13% in 2020, slightly more than twice the fall in GDP.

The Covid-19 pandemic in isolation is expected to contribute to a reduction in production capacity on the back of lower investment and slower productivity growth. Capacity utilisation is projected to be lower than normal throughout the projection period despite the downward revision in production capacity.

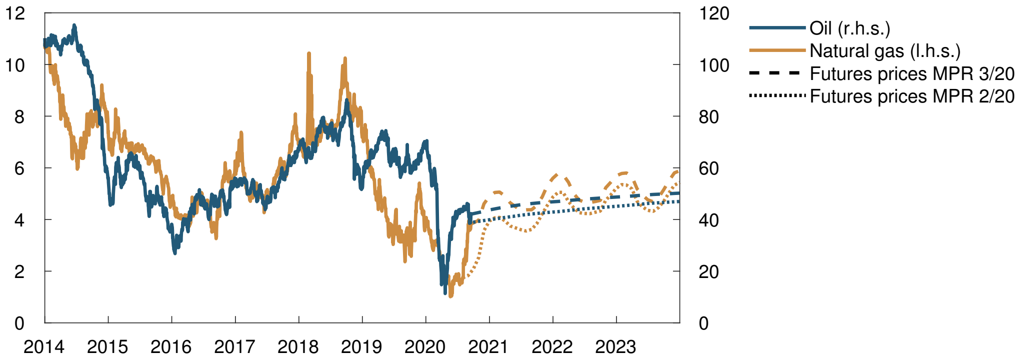
There is considerable uncertainty about global economic developments ahead. Developments will depend on factors such as the evolution of the pandemic, the scale of containment measures and how quickly a vaccine becomes widely available (see box on page 10). In addition, there has been little progress in the negotiations on a trade agreement between the UK and the EU. If no agreement is reached, growth in Europe may be lower than projected. Uncertainty about the future relationship between the US and China may also pull down GDP growth ahead.

Low inflation ahead following temporary rise

Underlying inflation for Norway's main trading partners fell in the first half of 2020. It moved up through summer and was somewhat higher than expected in the June *Report*. Goods prices rose in particular, both owing to fewer summer sales in summer 2020 than in previous years and a shift in demand from services to goods owing to mandated business closures. Underlying inflation fell in August. Looking ahead, high unemployment is assumed to dampen price and wage inflation despite potential price pressures on some goods and services generated by, for example, supply problems and containment measures. Underlying inflation is projected to be well below inflation targets in the coming years, but the projections have been revised up slightly from the June *Report*.

Producer prices for consumer goods imported to Norway, in foreign currency terms, have fallen in recent months for almost all goods components, with prices for cars and audiovisual equipment showing the largest fall. The rise in prices since the June *Report*

Chart 1.5 Oil and natural gas prices have increased
Oil. USD per barrel. Natural gas. USD per MMBtu



Sources: Refinitiv Datastream and Norges Bank

has been lower than projected. The projection for 2020 has been revised down (Annex Table 1).

Higher oil and gas prices

Oil prices are now above USD 40 per barrel, somewhat higher than at the time of the June *Report* (Chart 1.5). Futures prices have also increased, indicating a rise in prices to USD 50 at the end of 2023. A gradual improvement in the global economy and production restrictions by OPEC+ countries will likely result in a reduction in OECD oil inventories from the current record-high levels to more average levels in 2021. Oil prices are nonetheless expected to be lower throughout the projection period than in the preceding years.

European gas prices have risen markedly since the June *Report*. Gas inventories in Europe are edging down from record-high levels. In addition, gas prices in Asia have risen. European gas futures prices indicate that gas prices may rise gradually in the period to 2023, but remain lower than in the preceding years.

2 Financial conditions

Residential mortgage rates fell in the period to summer following the policy rate cuts in spring, and have shown little change thereafter. With the policy rate at zero and money market premiums at low levels, the money market rate is low by historical standards. Bond premiums have edged down further since June. For banks and mortgage companies, premiums are now close to pre-pandemic levels, while for other corporates they remain higher.

After depreciating markedly in March, the Norwegian krone has appreciated. Since June, the krone exchange rate has been stronger than projected.

2.1 Interest rates

Low residential mortgage rates

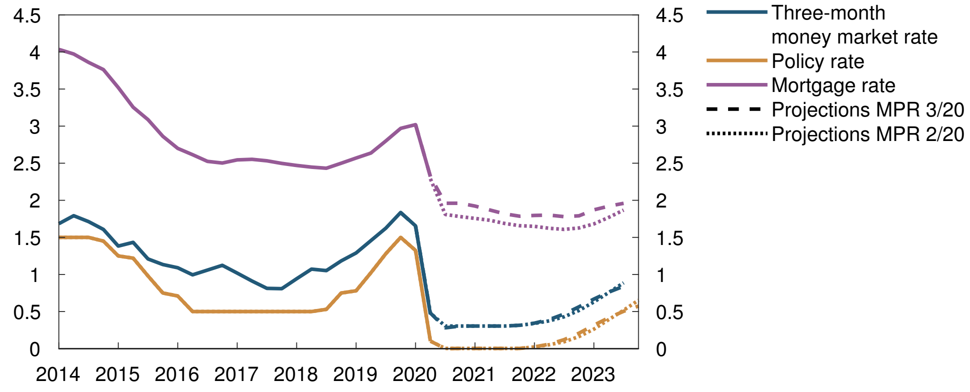
Following policy rate cuts totalling 1.5 percentage points in the course of spring, mortgage rates fell in the period to summer, broadly as expected (Chart 2.1). In July, the average residential mortgage rate was close to 2%, marginally lower than in June. Banks' quoted mortgage rates are somewhat lower than that and have been stable since the June *Monetary Policy Report*.

Since the June *Report*, residential mortgage rates appear to have moved down a little less than projected. The average rate is therefore expected to lie slightly higher throughout the projection period than anticipated in June. Residential mortgage rates are expected to show little change in the coming period. Further out, refinancing of existing mortgages to a lower rate will contribute to pushing down the average rate slightly, followed by a small rise towards the end of the projection period as a result of a rise in the policy rate.

Since February, quoted floating rates for new residential mortgages have declined somewhat less than the policy rate. This may be because banks' funding rates have in some cases fallen less than the policy rate. Banks finance lending primarily with deposits and wholesale funding. The fall in deposit rates has likely been restrained by banks' reluctance to charge

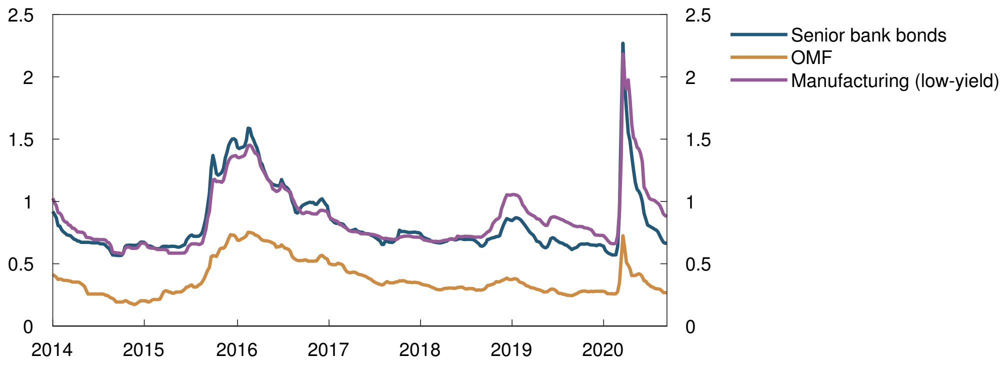
Chart 2.1 Bank lending rates have fallen

Percent



Sources: Statistics Norway and Norges Bank

Chart 2.2 Further decline in risk premiums
Norwegian krone bonds with five-year maturity. Percentage points over three-month money market rate



Sources: DNB Markets and Nordic Bond Pricing

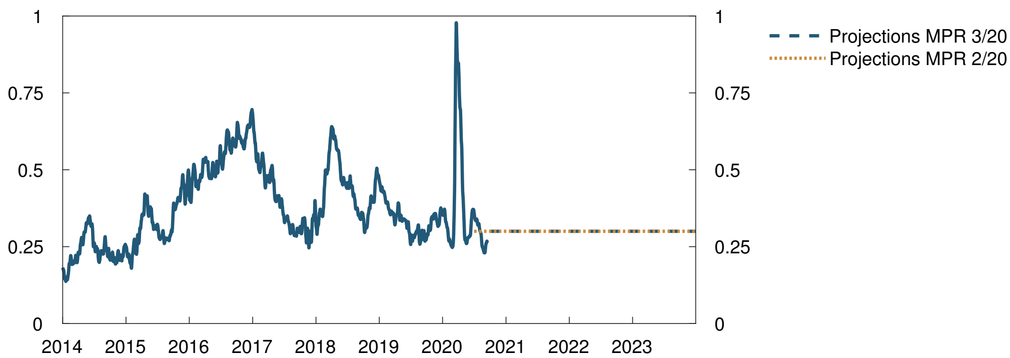
negative deposit rates. This may have induced banks to maintain earnings by increasing the spread somewhat between residential mortgage rates and the money market rate.

Banks normally pay the money market rate (Nibor) and a risk premium for wholesale funding. During the market turbulence in March, the risk premium on new wholesale funding increased substantially. The premium has since fallen back in pace with the improvement in bond market liquidity. The premium has continued to drift down since the June *Report,* and for bank bonds and covered bonds, the premium is now close to the levels observed before the turbulence intensified in March (Chart 2.2).

The Nibor rate reflects the market's policy rate expectations for the next three months and a risk premium, often referred to as the money market premium. Since the June *Report*, lower money market premiums have led to a fall in Nibor in pace with a steadily lower premium in the US money market. So far in Q3, the money market premium has averaged around 0.3 percentage point, approximately as anticipated. The premium is projected to remain near that level ahead (Chart 2.3).

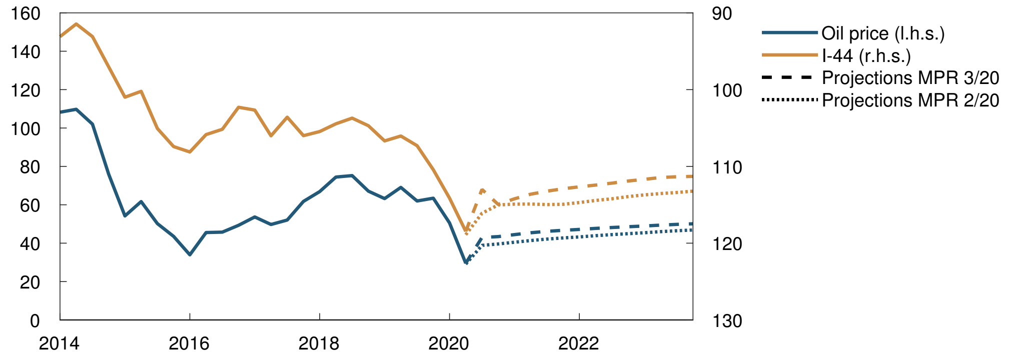
Banks' corporate lending rates are normally linked to Nibor. At end-July, the average rate stood at 2.6%, after falling by 1.3 percentage points since before the policy rate was reduced in spring. Large corporations can also choose to raise financing directly in the

Chart 2.3 Lower money market risk premium
Percentage points



Sources: Refinitiv Datastream and Norges Bank

Chart 2.4 Prospects for a somewhat stronger krone
Import-weighted exchange rate index (I-44) and oil price



Sources: Refinitiv Datastream and Norges Bank

bond market. Risk premiums on corporate bonds have edged down since June, but are still higher than the levels observed before the turbulence intensified in March (Chart 2.2).

The market's policy rate expectations have shown little change since June. Market-implied rates indicate expectations that the policy rate will be increased from today's level at the beginning of 2022.

2.2 Krone exchange rate

The krone has been stronger than expected
The krone exchange rate, as measured by the import-weighted exchange rate index I-44, depreciated to record-weak levels during the financial market turbulence in March. The krone has since appreciated against most currencies, particularly against the US dollar (Chart 2.4). The krone appreciation has coincided with a rise in oil prices and reduced uncertainty in international financial markets. The krone has recently depreciated somewhat, but has still been stronger than projected in the June *Report*.

Looking ahead, the krone is expected to strengthen somewhat and is projected to be stronger than anticipated in the June *Report*. Futures prices indicate a rise in oil prices in the coming years, which could contribute to strengthening the krone, as could prospects for a slightly wider interest rate differential against trading partners. There is still substantial uncertainty regarding the future krone exchange rate level.

EXTENDED PERIOD OF EXTRAORDINARY LIQUIDITY MEASURES

To ensure the transmission of the policy rate and foster well-functioning markets, Norges Bank has offered banks extraordinary F-loans since March. Financial markets are now functioning more normally, and money market premiums are low. On 14 August, Norges Bank announced that the period for extraordinary F-loans would be extended to the end of 2020, with a reduction in the number of maturities and frequency and an increase in the interest rate. One extraordinary F-loan with three-month maturity will be offered banks each month from September until year-end. It was also announced that the temporary relaxation of the guidelines for pledging collateral published in March would be partly reversed from 1 February 2021.

3 Norwegian economy

The Norwegian economy is still in the midst of a deep downturn, but economic activity has picked up considerably in recent months and many furloughed employees have returned to work. Higher infection rates and continued containment measures will likely dampen the upturn in the coming period, but at the same time, the likelihood that a vaccine will be broadly available in 2021 now appears to be somewhat higher that in June. Partly owing to this, combined with a continued expansionary fiscal policy, lower interest rates and improved cost-competitiveness, economic activity is projected to continue to pick up. Nevertheless, there are prospects that unemployment will remain higher than pre-pandemic levels through the projection period, and capacity utilisation in the Norwegian economy is not expected to approach a normal level until 2023.

Underlying inflation has picked up in recent months. This can to a large extent be attributed to the effects of the krone depreciation earlier this year, which will eventually fade out. Along with prospects for low wage growth, this suggests that inflation will moderate further out. Inflation is projected to remain above the inflation target over the coming year before gradually falling to close to 1.5% towards the end of the projection period.

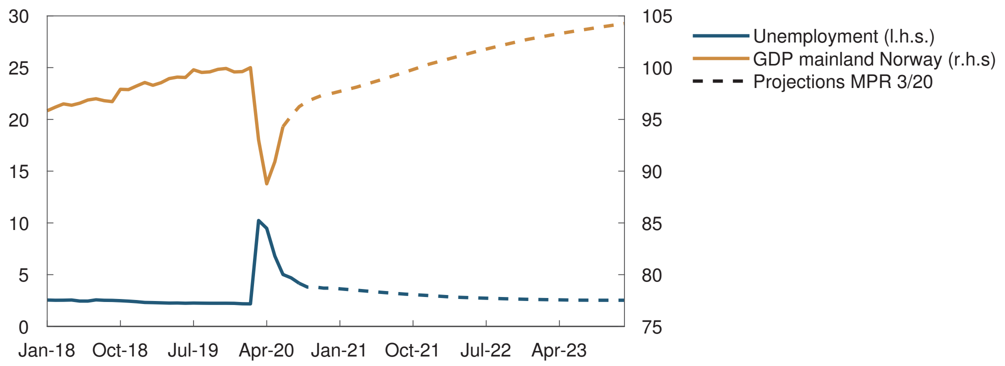
3.1 Economic developments

Activity in the Norwegian economy on the rebound

Higher infection rates and the introduction of strict containment measures on 12 March 2020 led to a sharp economic downturn in Norway. A global contraction and the fall in oil prices amplified the impact on the economy. At end-March, more than 10% of the labour force in Norway was registered as fully unemployed by the Norwegian Welfare and Labour Administration (NAV), and mainland GDP fell by just over 11% between February and April (Chart 3.1).

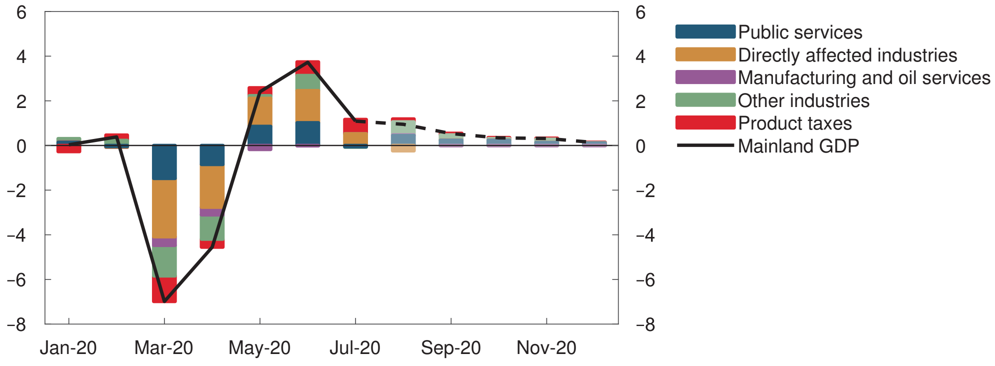
Chart 3.1 Sharp downturn in the Norwegian economy

Mainland GDP. Index. Seasonally adjusted. February 2020 = 100. Registered fully unemployed as a share of the labour force. Percent



Sources: Norwegian Labour and Welfare Administration (NAV), Statistics Norway and Norges Bank

Chart 3.2 Declining growth
Mainland GDP. Contribution to monthly growth. Seasonally adjusted. Percent



Sources: Statistics Norway and Norges Bank

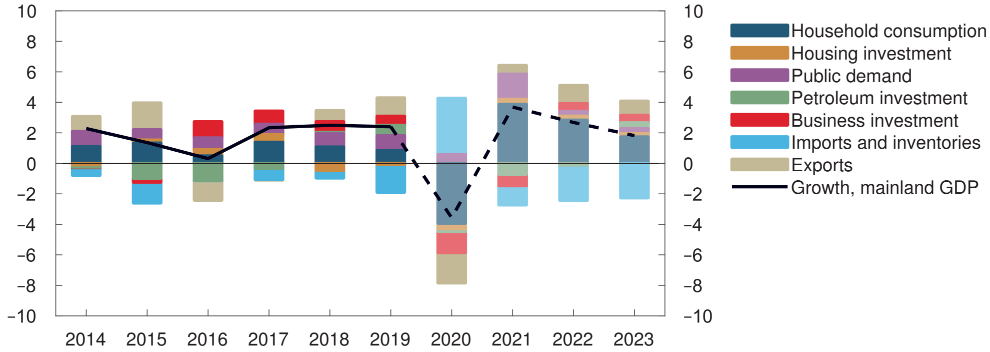
As the spread of Covid-19 was brought under control and containment measures were eased, economic activity started to pick up and many furloughed employees returned to work. Although mainland GDP has increased markedly since April, the level of GDP in July was still almost 5% lower than in February. Registered unemployment has fallen further in recent weeks, but continues to be almost twice as high as in February. In addition, many people are registered as partially unemployed.

Growth in mainland GDP is projected to continue through the rest of 2020, but growth will slow (Chart 3.2). Industries directly affected by containment measures accounted for much of GDP growth in the period to end-July, but the further reopening of society has been put on hold owing to rising infection rates of late. There has also been a tightening of some measures. The projections are in line with signals from Norges Bank's Regional Network, where contacts report weak prospects after a summer of solid growth. Oil service and household-oriented service enterprises expect activity to decline over the next six months. However, growth is expected to continue in the public sector, where economic activity so far in 2020 has been weaker than assumed. As projections for public sector growth have been revised up somewhat, the GDP projections through the remainder of the year are little changed from the June *Report*, despite the delayed reopening of society. Annual mainland GDP is projected to fall by 3.6% in 2020.

The gradual recovery is expected to continue in the coming years. The likelihood that a vaccine will be widely available already in 2021 appears to be somewhat greater than before summer. The projections in this *Report* are based on this assumption (see box on Covid-19 and uncertainty on page 10). There are prospects that GDP will return to pre-pandemic levels towards the end of 2021, but with registered unemployment of about 3% around the end of 2021, capacity utilisation in the Norwegian economy will still be low in our assessment. It is not until the very end of the projection period that the output gap closes.

The recovery is supported by fiscal policy. Petroleum revenue spending is assumed to lie above 3% of the Government Pension Fund Global (GPFG) throughout the projection period. Increasing activity among Norway's trading partners will lift Norwegian exports, and a persistently weak krone is also helping firms exposed to foreign competition in the Norwegian market. Household demand is still the dominant driver (Chart 3.3). A marked fall in both consumption and housing investment in 2020 will be followed by strong growth in the coming years, partly driven by low interest rates.

Chart 3.3 Households support growth ahead
GDP for mainland Norway. Contribution to annual growth. Percent



Sources: Statistics Norway and Norges Bank

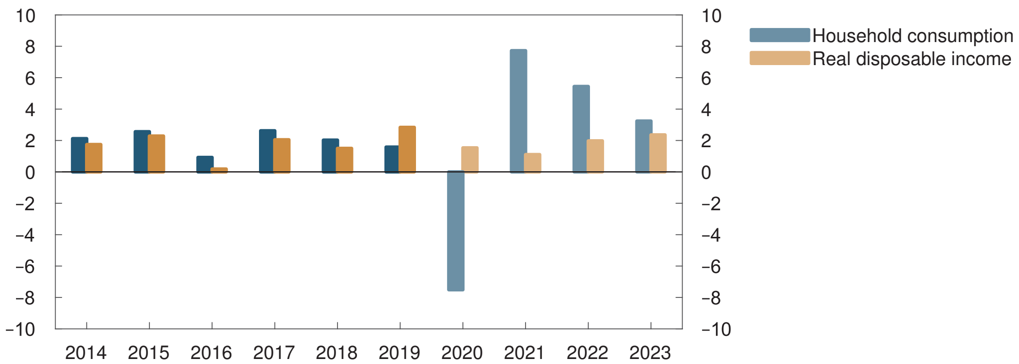
Household demand is picking up again

Household consumption fell by as much as 20% between February and April 2020. Even though consumption increased substantially in subsequent months, consumption is still clearly lower than at the start of 2020 (see Special Feature on page 31). Between 2019 and 2020, there are prospects that consumption will decline by more than 7% (Chart 3.4), which is by far the largest decline in the postwar period.

Lower interest expenses, together with new and extended government support schemes, are helping to support household income. Household saving, which is the difference between disposable income and consumption, has hence increased markedly. Households saved 17% of their disposable income excluding dividend income in 2020 Q2 (Chart 3.5).

A number of factors have contributed to higher saving. Considerable delays in government support payments likely weighed on consumption through spring, as did substantial uncertainty about the economic outlook and fears of job losses.[1] Despite the recent rise in infection rates, consumer confidence indicators reflect greater optimism than in

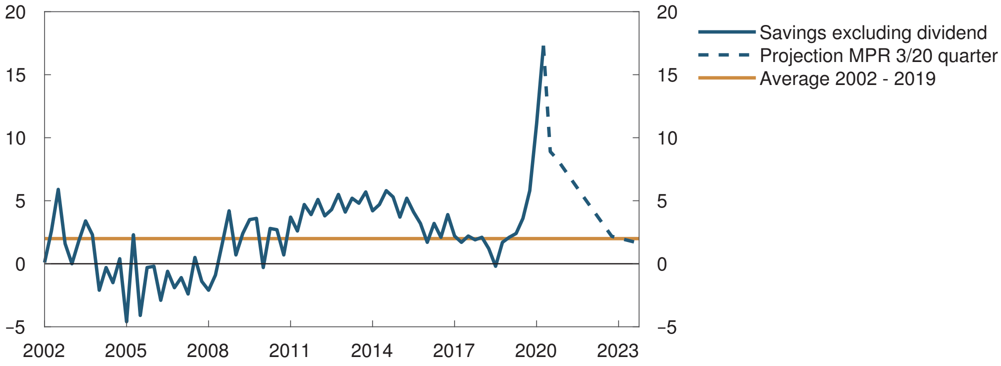
Chart 3.4 Prospects for strong consumption growth
Annual change. Percent



Sources: Statistics Norway and Norges Bank

1 When calculating the saving ratio, the income measure includes unpaid entitlements. The data do not capture disbursements when actually made. Thus, the measured saving ratio overstates household disposable income in the first months following the lockdown in March.

Chart 3.5 Temporary high saving
Household saving excluding dividend income. Share of disposable income. Seasonally adjusted. Percent



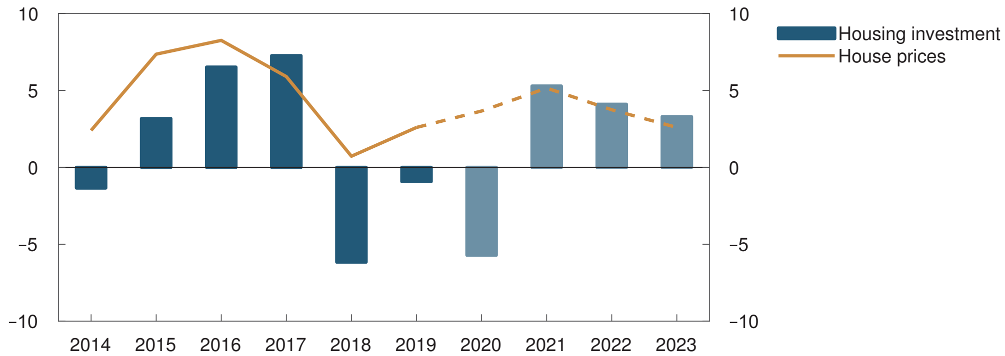
Sources: Statistics Norway and Norges Bank

spring. However, the saving ratio remains high, which may indicate that containment measures have been the main driver of the high saving ratio. Holidays and other consumption may be postponed pending the removal of the measures. Fear of infection may also induce some people to avoid certain activities regardless of the containment measures in force.

High saving gives households room to increase consumption considerably more than income in the coming years. Employment picks up in the projections, whereas income growth is dampened by prospects for continued low wage growth. In the projections, the saving ratio declines towards a historical average through the projection period.

There is considerable uncertainty concerning household behaviour ahead. If a large number of households prefer to spend savings accumulated once containment measures are scaled back, consumption could increase substantially and result in markedly lower saving for a period than currently envisaged. On the other hand, if uncertainty generated by Covid-19 increases households' preference for larger financial buffers, consumption growth could be weaker than projected. For output and employment developments in Norway, the persistence of the recent shifts in consumption will also play an important role (see Special Feature on page 31).

Chart 3.6 Prospects for higher housing investment ahead
Housing investment and nominal house prices. Annual change. Percent



Sources: Eiendomsverdi, Finn.no, Real Estate Norway, Statistics Norway and Norges Bank

There are similarities between recent housing market developments and the path of household consumption. House prices fell in March and April, but house price inflation has subsequently picked up and has been higher than projected in the June *Report*. In addition, sales of new and existing homes have recovered from the low levels in March and April.

There are prospects that house price inflation ahead may turn out to be higher than projected in June also going forward. Lower interest rates and the temporary easing of the residential mortgage regulation, which applies until the end of September, may have stimulated the housing market more than assumed. The higher willingness to pay for housing may also reflect increased remote working and limited consumption opportunities (see Section 5 for a further discussion of housing market developments).

Higher-than-assumed housing starts, combined with increased house price inflation and higher new home sales, have contributed to an upward revision of the housing investment projections. Increased spending on renovation and maintenance also pulls up housing investment. There are still prospects for a decline in housing investment between 2019 and 2020, but the decline appears to be more moderate than assumed in the June *Report*. Investment growth is expected to be clearly positive through the remainder of the projection period (Chart 3.6).

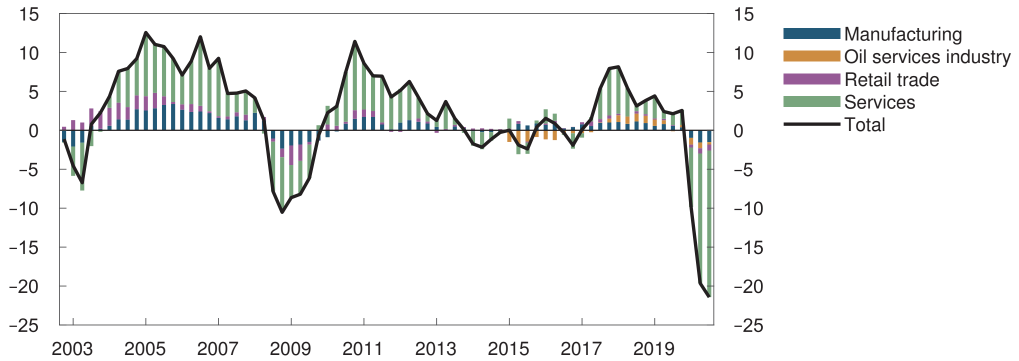
Declining business investment

Mainland business investment has so far fallen less than projected in the June *Report*, but there are prospects that developments ahead may be weaker than assumed. Regional Network contacts have become more pessimistic since the previous survey in May and the investment outlook has never been more negative (Chart 3.7). Service industry contacts in particular expect lower investment. Statistics Norway's investment intentions survey for manufacturing and the electricity supply sector indicates declining investment in 2020 and 2021.

Owing to less exploration activity due to the fall in oil prices, investment on the Norwegian shelf will fall back somewhat between 2019 and 2020 (Chart 3.8). In the projection, the completion of a number of large development projects results in a further fall in investment in the coming years, but this is followed by a clear upswing in 2023. Investment in new development projects increases markedly in 2023. This is because the temporary tax reductions passed by the Storting (Norwegian parliament) before summer

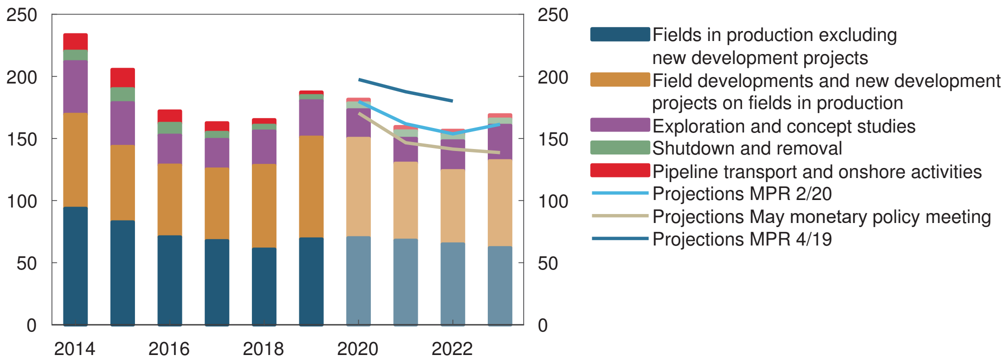
Chart 3.7 Mainland enterprises plan lower investement

Expected change in business investment the next 12 months. Percent



Source: Norges Bank

Chart 3.8 Prospects for lower investment in the petroleum sector
Petroleum investment. At constant 2020 prices. In billions of NOK



Sources: Statistics Norway and Norges Bank

apply to all new development projects started by end-2022. For other investments, the tax changes apply in 2020 and 2021. Compared with the projections in the June *Report*, investment in 2020 and 2021 is broadly unchanged, followed by somewhat higher investment in 2022 and 2023. The upward revision reflects higher oil and gas prices.

Rebound in foreign trade

Owing to a marked fall in activity among Norway's trading partners, the fall in oil prices and international travel restrictions, mainland exports declined by almost 15% in the first half of 2020. Tourism fell most, although most industries experienced a fall in foreign demand. As demand among trading partners is on the rebound, exports are also projected to increase from 2020 Q3. Nevertheless, exports are set to decline by almost 9% between 2019 and 2020, which will be the sharpest postwar fall in exports.

A somewhat stronger krone than assumed in the June *Report* dampens the recovery in the coming years. The oil price has increased somewhat since the June *Report,* but the outlook for relatively low prices in the coming years points to somewhat slower growth in oil service exports than in other exports.

Imports fell by more than exports in the first half of 2020, but looking ahead, imports are projected to pick up markedly, supported by high consumption of goods. Some firms likely drew down inventories in the first half of 2020. Further out in the projection period, increased travel is assumed to result in strong growth in household purchases abroad.

Smaller increase in petroleum revenue spending than assumed

Extensive fiscal policy measures have been implemented to lessen the economic impact of the Covid-19 outbreak. The measures primarily consist of new and extended support schemes for households and businesses, but allocations have also been increased to hospitals, municipalities and other parts of the public sector that have taken on additional tasks owing to the outbreak. In addition, a number of government loan and guarantee schemes have been established, and payment of a number of direct and indirect taxes has been postponed.

Even with the Government's parliamentary proposition of 21 September for new and expanded measures, the overall economic measures appear to be less costly for the government than assumed in the Storting's resolutions in June. There are also prospects for lower growth than expected in public sector demand in 2020. Against this background, petroleum revenue spending, as measured by the structural non-oil deficit, is projected at 3.8% of the value of the GPFG in 2020 in this *Report*, down from an estimated 4.3% in June. Petroleum revenue spending has also been revised down for the coming years (Annex Table 3 on page 59).

Expenditure on the extraordinary support measures will fall as economic activity picks up, but as in the June *Report*, the decline is assumed to be partly offset by higher public demand. This is in line with a technical assumption where the structural deficit gradually decreases as a share of the value of the GPFG ahead. Nevertheless, under this assumption, the deficit will continue to remain somewhat above the 3% path in 2023.

High unemployment and low employment

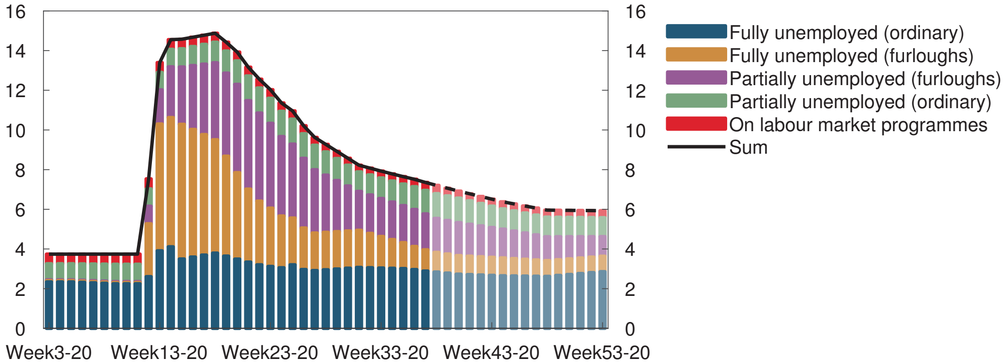
The sharp rise in registered unemployment following the lockdown in March has been gradually reversed in recent months, but on 15 September, 204 000 persons were still registered as fully unemployed, partially unemployed or job seekers participating in labour market programmes. This accounts for 7.2% of the labour force (Chart 3.9). Unemployment in Norway has not been this high since the 1990s. In mid-September, 3.8% were registered as fully unemployed.

A large number of furloughed employees pushed up the unemployment rate in March and April. Since then many have returned to work, but on 15 September, 77 000 were still furloughed. A majority of these employees were partially furloughed. The scheme that provided wage subsidies to firms that brought back furloughed staff in July and August may have contributed to a reduction in the unemployment rate in recent months.

There are prospects that unemployment will continue to decline over autumn, albeit not as fast as in recent months. An extension of the maximum furlough period from 26 to 52 weeks may dampen the decline, but on the other hand, it has now been proposed that firms that take back furloughed employees can receive wage support for October, November and December. The number of furloughed employees is expected to continue to decline, but beyond that, employment growth will be moderate. The number of vacancies fell by almost a quarter in 2020 Q2, and signals from Regional Network contacts do not suggest many new hires ahead. Contacts in manufacturing and oil services expect employment to fall. The sum of fully unemployed, partially unemployed and unemployed participating in labour market programmes is projected to fall below 6% towards the end of 2020.

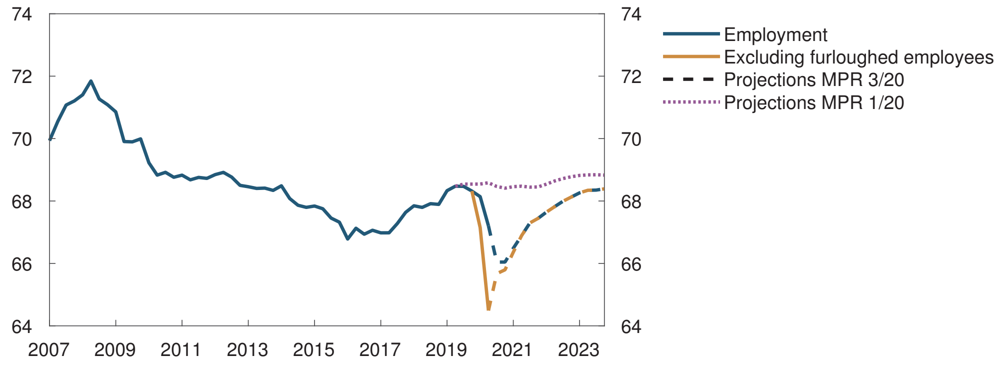
Chart 3.9 Continued high unemployment

Registered unemployed as a share of the labour force by category. Unadjusted. Percent



Sources: Norwegian Labour and Welfare Administration (NAV) and Norges Bank

Chart 3.10 Lower employment than prior to the Covid-19 outbreak
Employed as a share of the population aged 15-74. Seasonally adjusted. Percent



Sources: Norwegian Labour and Welfare Administration (NAV), Statistics Norway and Norges Bank

The gradual decline in registered unemployment is expected to continue in the coming years, but there are prospects that unemployment will remain higher than prior to the Covid-19 outbreak throughout the projection period. Unemployment has declined somewhat more than projected in the June *Report* in recent weeks, but the projections for the coming years are broadly unchanged.

The rise in unemployment in spring is only partially reflected in the employment data in the national accounts, which showed a decline of 1.4% in the first half of 2020. In Statistics Norway's calculations, furloughed employees are considered employed for up to three months of the furlough period, whereas they are unemployed from the first day in NAV's calculations.

During 2020 Q3, with fully furloughed employees from March and April no longer considered employed, measured employment between 2020 Q2 and 2020 Q3 will fall even though many employees will actually return to work, and registered unemployment will fall substantially (Chart 3.10). For Q4, however, there are prospects that measured employment will also rise and the upturn is projected to continue in the coming years.

Measured as a share of the population, employment is not projected to reach the same level as projected in the March *Report*, which was prepared before the lockdown on 12 March. Long-term unemployment may in itself reduce the chance of finding work. At the same time, the Covid-19 outbreak will likely contribute to some employees having to adapt to new jobs, and experience shows that this can take time.[2]

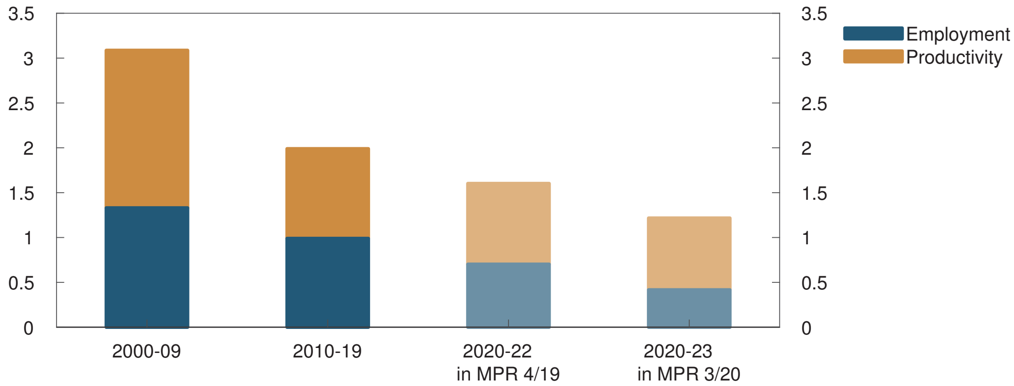
Continued low capacity utilisation

It is challenging to project capacity utilisation in an economy, and the Covid-19 outbreak has made it more challenging. Nevertheless, the overall assessment in this *Report* is that capacity utilisation in the Norwegian economy remains very low, even though it increases markedly between 2020 Q2 and Q3. Capacity utilisation is expected to pick up further ahead. Nevertheless, it is not until towards the very end of the projection period that resource utilisation approaches a more normal level.

Capacity utilisation projections have been revised up somewhat in 2020 Q3, owing to the recent decline in unemployment. Higher infection rates since July are dampening the further upturn, but prospects for somewhat faster growth further out in the projec-

2 See also Special Feature "Long-term consequences for employment?" in the June 2020 *Monetary Policy Report*.

Chart 3.11 Lower growth potential
Estimated average annual potential growth decomposed into employment and productivity. Percent



Source: Norges Bank

tion period, partly owing to a somewhat higher likelihood that vaccine will be widely available already in 2021, contribute to higher capacity utilisation than projected in June.

Norge Bank's estimate of capacity utilisation is based on a broad range of indicators (see box on page 27), but Covid-19 has changed the relationship between a number of these variables. In previous economic downturns in Norway, it has been observed that some workers left the labour force to, for example, study and then returned to the labour force when cyclical conditions improved. In the latest downturns, labour immigration also fell. This has generally resulted in small fluctuations in unemployment compared with the impact on output, employment and capacity utilisation.

However, employees that are furloughed and are therefore still in an employment relationship will, in the very short term, to a limited extent exit the labour force. Thus, based on historical patterns, a rise in registered unemployment, pushed up by an unusually high number of furloughed employees, can exaggerate the decline in capacity utilisation.

Similarly, we have also given weight to data from the Bank's Regional Network. The results from the September Regional Network survey suggest that capacity utilisation increased between 2020 Q2 and Q3, but indicate in isolation considerably higher capacity utilisation than projected. However, Regional Network data only capture the share of enterprises experiencing capacity constraints. How far away the various enterprises are from their capacity constraints is not registered. This is a challenge when some industries experience very large falls in output.

The current assessment of capacity utilisation is primarily based on the fact that high unemployment and low employment indicate that there is considerable slack in the labour market. At the same time, the projections imply that the current sharp downturn will weigh on growth in the economy's potential output in the coming years. The projections for potential growth are somewhat lower than in the December 2019 *Monetary Policy Report* and imply potential growth that is below half of the rate in the 2000s (Chart 3.11).

The projections for both productivity and potential employment have been revised down after the outbreak of Covid-19. Business closures and bankruptcies may result in permanent losses of productive capital, which together with lower investment may reduce productivity. Potential employment may decline as a result of the sharp downturn, but prospects for lower immigration are also weighing on growth.

OUTPUT GAP

The output gap, also referred to as capacity utilisation, captures resource utilisation in the economy. The output gap is defined as the difference between actual output (GDP) and potential output. Potential output is the highest possible level of output that is consistent with stable price and wage inflation. Over time, potential output growth is determined by trend employment growth and productivity.

The output gap is a key monetary policy variable. In interest rate setting, weight is given to smoothing fluctuations in output and employment. To achieve this, the aim is to keep the output gap close to zero. This is referred to as normal capacity utilisation.

If we attempt to keep output and employment above that level, wage and price inflation could become too high. The output gap is therefore also an important indicator of future inflation and is related to Norges Bank's objective of low and stable inflation.

Potential output and the output gap cannot be observed and must be estimated. Norges Bank's current output gap estimates are the result of an overall assessment of a number of indicators and models. In this assessment, particular weight is given to labour market developments.

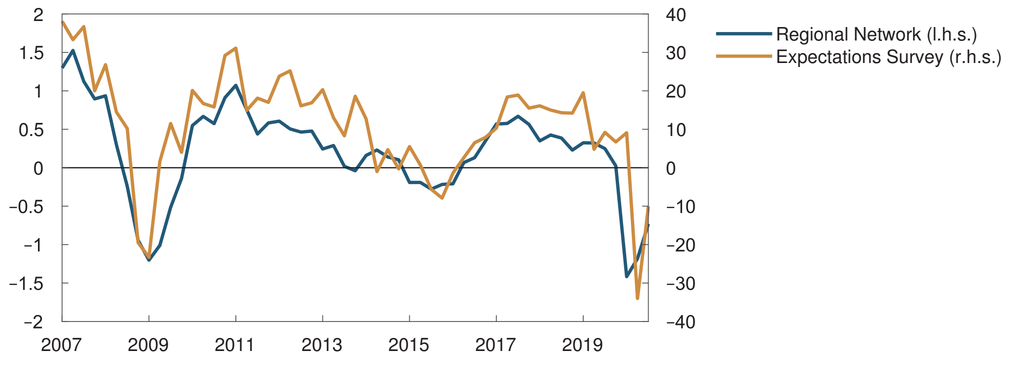
3.2 Costs and prices

Low wage growth

Following a rise in wage growth over the past three years, it appears that wage growth will decelerate considerably in 2020. On the basis of the wage settlement for the manufacturing sector, the wage norm for manufacturing for 2020 was set at 1.7%. So far, all other wage settlements have kept within the norm. The moderation in wage growth must be viewed in the light of a sharp rise in unemployment caused by the Covid-19 outbreak, as well as a marked decline in business sector profitability (Chart 3.12).

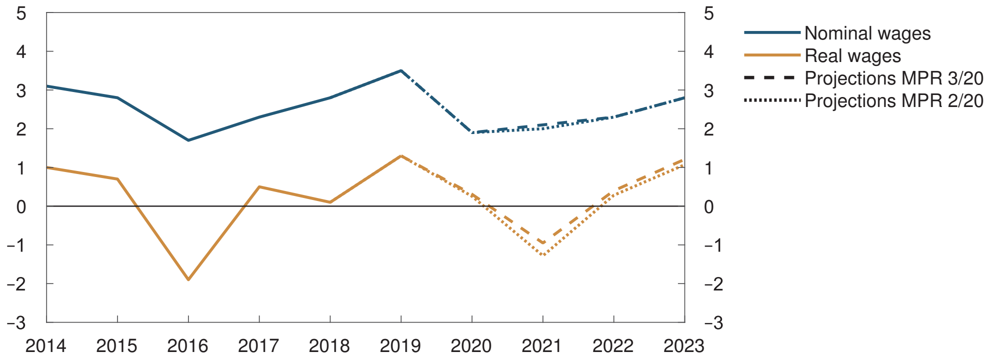
Chart 3.12 Continued weak profitability

Businesses' assessment of operating margin. Norges Bank's Expectations Survey and Regional Network



Sources: Epinion and Norges Bank

Chart 3.13 Low wage growth ahead
Wage. Annual growth. Percent



Sources: Statistics Norway and Norges Bank

In 2020, wage growth uncertainty is unusually high owing to wage growth due to conditions other than central wage increases, also called wage drift. This includes the effect of local wage increases and compositional effects. Since March, there has been a substantial fall in employment in low-wage sectors, which pushes up the average wage level even when individual wages remain unchanged. As this effect is captured in different ways in the various wage statistics, current indicators now give an unusually mixed picture of wage developments. It is assumed that owing to such effects, wage growth, as measured in the national accounts, will be somewhat higher than the wage norm. The wage growth projection of 1.9% is unchanged from the June *Report* (Chart 3.13). This is broadly in line with the Bank's Expectations Survey and the expectations of Regional Network contacts.

In the years ahead, wage growth is expected to rise gradually in pace with a revival in economic activity, but continued spare capacity, low profitability and low productivity growth will dampen the rise. In 2021, as many people in low-wage sectors are expected to return to work, this will reverse some of the compositional effects from 2020. Overall annual wage growth is nevertheless expected to rise a little between 2020 and 2021. The wage norm for 2021 is assumed to be higher than projected wage growth.

Import prices lift inflation

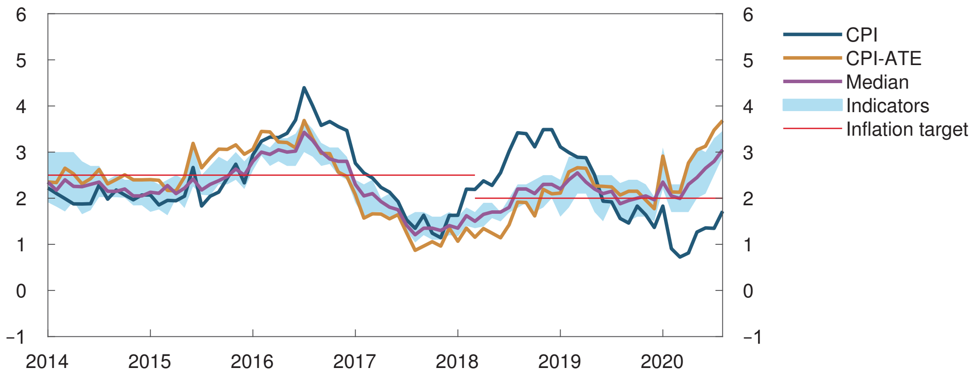
Underlying inflation has moved up since March 2020, as measured by the consumer price index adjusted for tax changes and excluding energy products (CPI-ATE). In August, 12-month CPI-ATE inflation was 3.7%, somewhat higher than projected. At the same time, the 12-month rise in the consumer price index (CPI) was 1.7%, slightly lower than projected in the June *Report*. The average 12-month rise in other indicators of underlying inflation was 3.1% in August, and for all indicators, the rise was lower than CPI-ATE inflation (Chart 3.14).[3]

The Covid-19 outbreak has affected the measurement of consumer prices in 2020 (see box on page 30). The uncertainty linked to price measurement is thus higher than normal.

Since the June *Report*, prices for imported goods in the CPI-ATE have increased more than expected, while the rise in prices for domestically produced goods and services has been broadly in line with projections (Chart 3.15). The rise in import prices must be

3 See Husabø, E. (2017) "Indicators of underlying inflation in Norway". *Staff Memo* 13/2017, Norges Bank, for a more detailed review of various indicators.

Chart 3.14 Other indicators of underlying inflation are below the CPI-ATE
CPI and indicators of underlying inflation. Twelve-month change. Percent



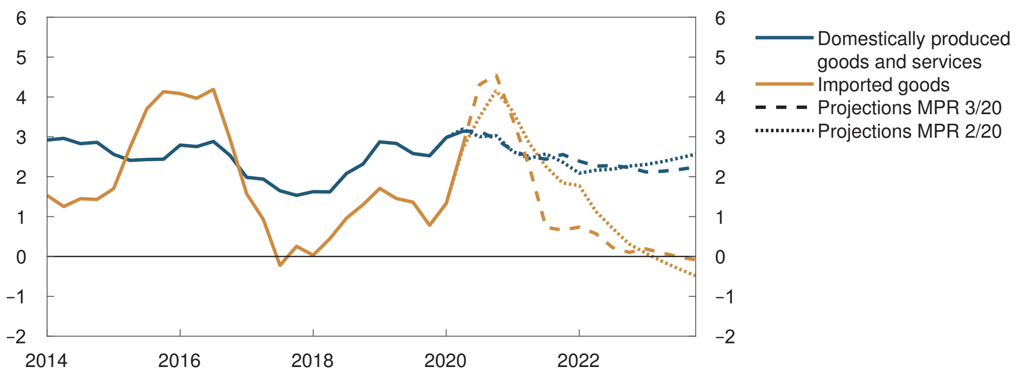
Sources: Statistics Norway and Norges Bank

seen in connection with the marked depreciation of the krone earlier in 2020. The pass-through from the krone to import prices through spring and summer has been somewhat faster than assumed.

So far in 2020, domestic inflation has remained close to 3%, despite a pronounced fall in capacity utilisation in the Norwegian economy. For some industries, higher costs owing to containment measures may have contributed to underpinning inflation. Temporary tax reductions may also have pulled up tax-adjusted inflation (see box on page 30).

CPI-ATE inflation is projected to remain fairly stable in the coming period and hover above the inflation target the coming year. In the period ahead, the impact of the krone depreciation on imported inflation is expected to fade. Together with prospects for low wage growth, this is expected to lead to a gradual fall in inflation to close to 1.5% towards the end of the projection period. The krone is expected to continue to be a little stronger than projected in June. This implies that overall imported inflation will fall slightly more than expected earlier. At the same time, the pass-through from the krone exchange rate has been faster than assumed, implying a risk that inflation in the near term might be higher than currently envisaged. The long-term pass-through is still not expected to be more pronounced than implied by historical experience.

Chart 3.15 Higher imported inflation
Domestically produced goods and services and imported goods in the CPI-ATE. Four-quarter change. Percent



Sources: Statistics Norway and Norges Bank

Higher costs owing to the Covid-19 outbreak may continue to exert upward pressure on prices for some goods and services in the period ahead. On the other hand, low capacity utilisation and weak wage growth will likely pull in the opposite direction and pull down on domestic inflation somewhat in the years ahead.

In the past year, low electricity prices have contributed to dampening CPI inflation. Looking ahead, energy prices are expected to rise broadly in line with futures prices for electricity and fuel. This will contribute to a rise in CPI inflation in the year ahead, before it moderates gradually through the projection period.

With the current projected path for CPI inflation and wage growth, real wage growth is expected to be weakly positive in 2020. In 2021, higher inflation, partly owing to higher energy prices, is expected to contribute to a decline in real wages. Real wage growth is projected to pick up markedly towards the end of the projection period. The projections for real wage growth have been revised up slightly from the June *Report*, partly reflecting a somewhat higher oil price than in June and an outlook for somewhat higher capacity utilisation than previously envisaged.

Slightly higher inflation expectations

According to Norges Bank's Expectations Survey, long-term inflation expectations fell after the inflation target was lowered to 2% in March 2018. Over the past half-year, inflation expectations have risen slightly. The social partners now expect that inflation five years ahead will be 2.5%, while on the whole economists in academia and the financial sector expect inflation to be 2.1% five years ahead.

MEASURING THE CPI DURING THE COVID-19 OUTBREAK

The CPI comprises a basket of goods and services weighted to reflect household consumption of goods and services. The weights are updated in January of each year and remain unchanged through December. The Covid-19 outbreak and the extensive measures to contain it have had an impact on household consumption, and in periods, it has not been possible to measure prices for some services as there was no turnover at all. The rise in prices for a number of services was therefore extrapolated using the change in the total CPI or based on seasonal factors. As services have gradually become available again, they have been included in the CPI as usual. In August, most services were included in the CPI as usual, but sports events and a number of services related to tourism are still being treated separately. In August, services that were virtually no longer consumed made up less than 3% of the CPI.

Changes in indirect tax rates have also had an impact on the rise in prices since the Covid-19 outbreak in spring. The low VAT rate has been reduced from 12% to 6% for the period 1 April – 31 October 2020 for services such as passenger transport and accommodation, and entry to cinemas, sports events, amusement parks and adventure centres. If businesses reduce their retail prices less than implied by the reduction in the VAT rate in isolation, the tax-adjusted price level will rise, all else equal. Extrapolated prices have not been subject to tax adjustment by Statistics Norway, only measured prices. In pace with the resumption of measuring rather than estimating prices, the effect of the VAT reduction may have pulled up inflation as measured by the CPI-ATE.

HOUSEHOLD CONSUMPTION DURING THE COVID-19 PANDEMIC

Household consumption accounts for around half of total demand in the mainland economy and was close to NOK 1 500bn in 2019. In the national accounts, household consumption is calculated as the sum of consumption of goods and services in Norway plus Norwegian households' consumption abroad less foreign nationals' consumption in Norway.

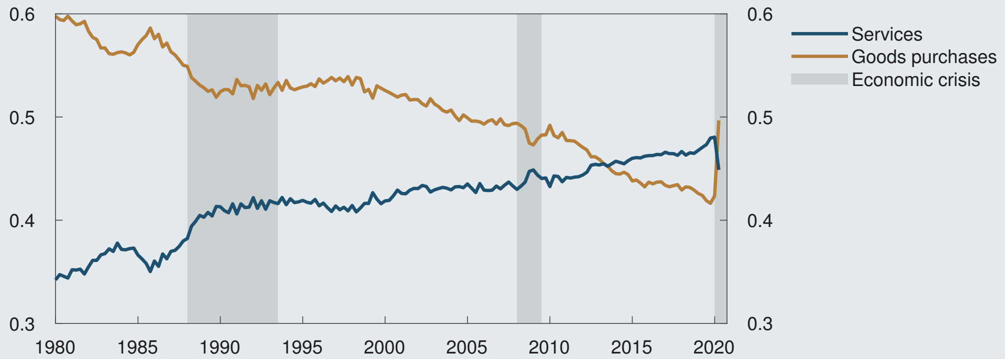
Over time, goods purchases have accounted for a declining share of total household consumption (Chart 3.A). This trend reversed suddenly in March. Following the Covid-19 outbreak, household spending on goods has increased while spending on services has dropped because the authorities' containment measures had a lesser impact on retail trade, while many service firms, such as hotels, restaurants and hairdressers, were closed or had to scale back. Partially closed borders have likely lifted consumption of both goods and services in Norway.

Developments in consumption of goods and services during the Covid-19 pandemic contrast starkly with previous downturns (Chart 3.B). During both the banking and financial crises, the decline in total consumption was driven by a reduction in household spending on goods, especially cars and other expensive consumer items, while positive growth in consumption of services cushioned the fall. Following the outbreak, it is instead a steep decline in consumption of services and a decline in consumption abroad that have pulled down overall consumption, while strong growth in consumption of goods has dampened the fall.

Owing to large differences in the import content of various consumption groups, the composition of total consumption will have a bearing on demand impulses to the Norwegian economy. A large share of the goods sold in Norwegian shops are produced abroad, and for total consumption of goods, the import share is nearly 50%. Even though consumption of goods was close to 10% higher in July than in February, the high import content curbs the positive impulses to mainland economic growth. The import content of consumption of services is much lower overall, at 12%. Thus, developments in consumption of services, which was 15% lower in July than in February, impact the mainland economy more directly.

Chart 3.A Abrupt shift in the composition of consumption

Services and goods purchases as a share of total consumption. Seasonally adjusted



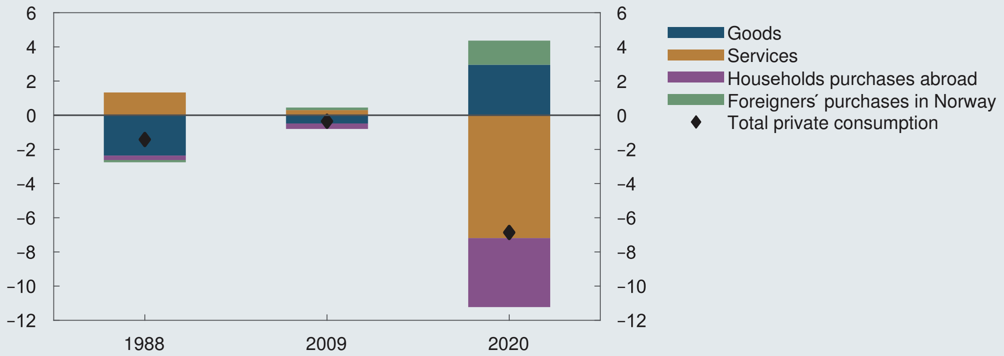
Sources: Statistics Norway and Norges Bank

Despite the fact that higher consumption of goods and less consumption abroad are, in isolation, positive for domestic economic activity, the negative developments in consumption of services dominate the total contribution of consumption to GDP growth. For 2020, the contribution of consumption, adjusted for import content, is expected to pull down GDP growth by around 3 percentage points. If the projected fall in consumption in 2020 were driven by the same components as during the banking and financial crises, the contribution of consumption would be expected to pull down GDP growth by around 1 percentage point. In addition to a high import content, the level of indirect taxes for goods is generally higher than for services[1]. A considerable share of the increase in retail sales accrues to the government in the form of indirect taxes. Since indirect taxes are included in GDP, it means that the difference between the impulses to activity and private sector employment is greater than indicated by the import-adjusted contribution to consumption.

The contribution of consumption to economic activity ahead will depend on developments in consumption of goods and services, in addition to Norwegians' consumption abroad. For near-term projections of consumption of goods, card transaction data via BankAxept are used. These data have proved to provide reliable information about developments about one-and-a-half months before official statistics are released.[2] Updated card use data suggest that goods purchases remained elevated at a high level in August and the first half of September. Projections of consumption of services depend on other statistical sources, since only a small fraction of consumption of services is captured by card transaction data. Information from the Bank's Regional Network plays a key role in the assessments. In July, it was primarily services related to hotels and restaurants, culture and recreation and passenger transport that were markedly below pre-pandemic levels. Regional Network contacts in these sectors expect overall a fall in activity through autumn, which is a clear downward revision from the interview period before summer.

Chart 3.B Historically strong decline in consumption

Contribution to annual change. Constant prices. Percentage points



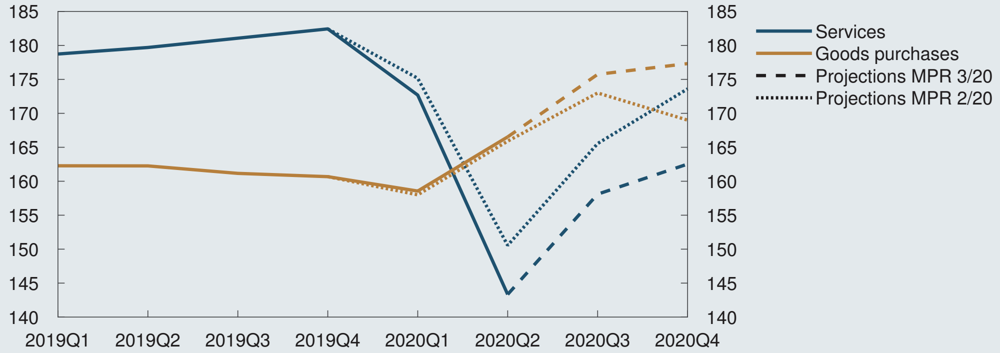
Sources: Statistics Norway and Norges Bank

1 VAT on many goods is 25%, while on most services it is 12%. From 1 April 2020 to 31 October 2020, VAT on a number of services has been temporarily reduced from 12% to 6%.]

2 See Fastbø, T. og K. N. Torstensen (2020) "Kortbruk gir rask informasjon om husholdningenes forbruk" [Card use provides timely information about household consumption]. Blog post published on *Bankplassen blogg*, 26 August 2020 (Norwegian only).

Chart 3.C Weak outlook for consumption of services

Services and goods purchases. Constant prices. Seasonally adjusted. Billions of NOK



Sources: Statistics Norway and Norges Bank

Developments in the coming period will depend on the infection rate and the scale of containment measures. The infection rate has picked up after summer, and stricter containment measures have been introduced in some areas, while further easing has been put on hold. On the basis of this and signals from the Regional Network, spending on services is expected to pick up further out than projected in the June *Report* (Chart 3.C). Continued closed borders will contribute to keeping Norwegians' consumption abroad at very low levels. Since household demand has shifted towards goods during the pandemic in an environment of limited services, the projection for consumption of goods for 2020 Q4 has been revised up. The overall contribution of consumption to GDP is expected to be weaker than projected in June. However, the uncertainty concerning infection rates is high. If containment measures are eased earlier than currently assumed, the contribution of consumption may pick up faster.

4 Monetary policy analysis

The policy rate was kept unchanged at 0% at the monetary policy meeting on 23 September, and the forecast indicates that the policy rate will remain at the current level for some time ahead. The monetary policy stance is very expansionary and supports further growth in output and employment.

The policy rate forecast is little changed from the June 2020 *Monetary Policy Report* and implies a rate at the current level over the next couple of years, followed by a gradual rise as activity approaches a normal level.

4.1 Objectives and recent developments

Low and stable inflation

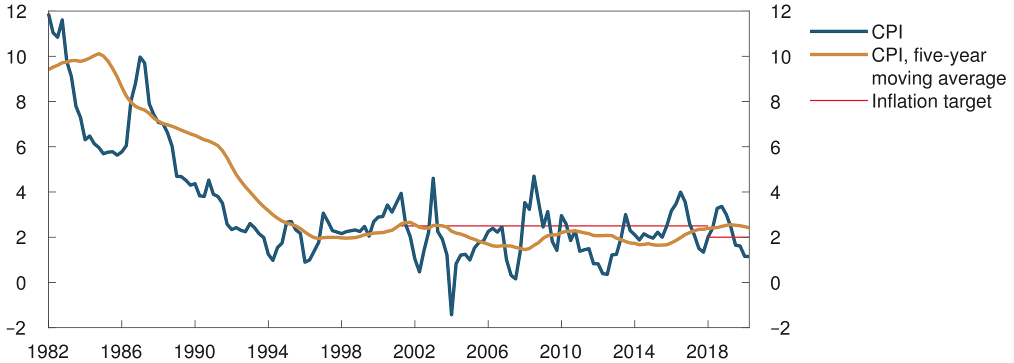
The primary objective of monetary policy is low and stable inflation. When the inflation target was introduced in 2001, the operational target of monetary policy was annual consumer price inflation of 2.5%. In March 2018, the target was changed to 2%. Average annual consumer price inflation has been around 2% since 2001 (Chart 4.1).

Inflation targeting shall be forward-looking and flexible so that it can contribute to high and stable output and employment and to countering the build-up of financial imbalances. Experience from the past 20 years indicates that a flexible inflation-targeting regime has helped to dampen cyclical fluctuations in the Norwegian economy. Monetary policy objectives and trade-offs are described further in a box on page 43.

A very expansionary monetary policy stance

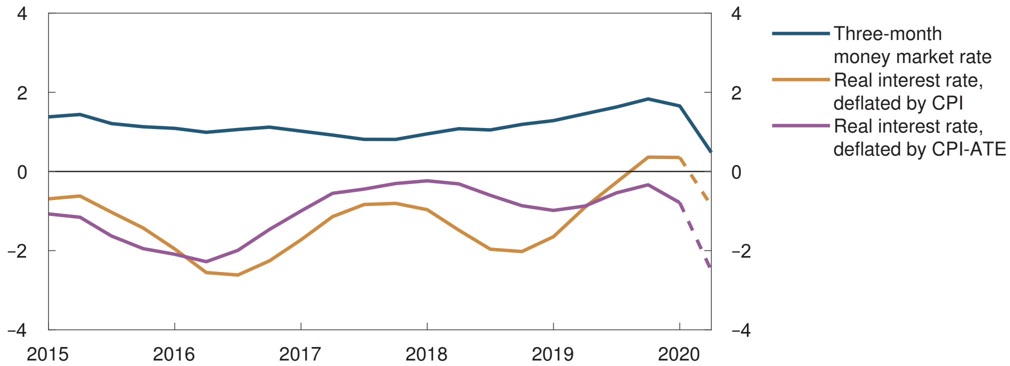
At the beginning of 2020, the policy rate was 1.5%, and the Bank's December 2019 projection for the Norwegian economy indicated that the output gap was weakly positive and would decline to a normal level. Inflation was projected to remain close to the inflation target. Developments turned out differently. The Covid-19 pandemic triggered a sharp economic downturn, both in Norway and globally. Policy rates worldwide were

Chart 4.1 Average inflation close to target
Consumer price index (CPI). Four-quarter change. Percent



Sources: Statistics Norway and Norges Bank

Chart 4.2 The real interest rate has fallen
Three-month money market rate and real interest rates. Percent



Sources: Statistics Norway and Norges Bank

reduced to levels at or close to levels central banks consider to be the lower bound, in an attempt to dampen the impact of the pandemic. In Norway, the policy rate was reduced to 0.25% in March and further to 0% in May. Since then, the rate has remained unchanged.

Both nominal and real interest rates can have implications for how monetary policy affects the economy. The real interest rate is the nominal rate less expected inflation. The neutral real interest rate is the rate that over time is neither expansionary nor contractionary. The neutral real interest rate in Norway, measured as the three-month money market rate less expected inflation, is estimated to be close to zero, but the estimate is highly uncertain (see Special Feature on page 40). This implies that the real interest rate was probably close to a neutral level prior to the pandemic (Chart 4.2).

The policy rate cuts in spring entailed a very expansionary monetary policy stance. This is dampening the downturn in the Norwegian economy and mitigating the risk of more prolonged consequences for output and employment.

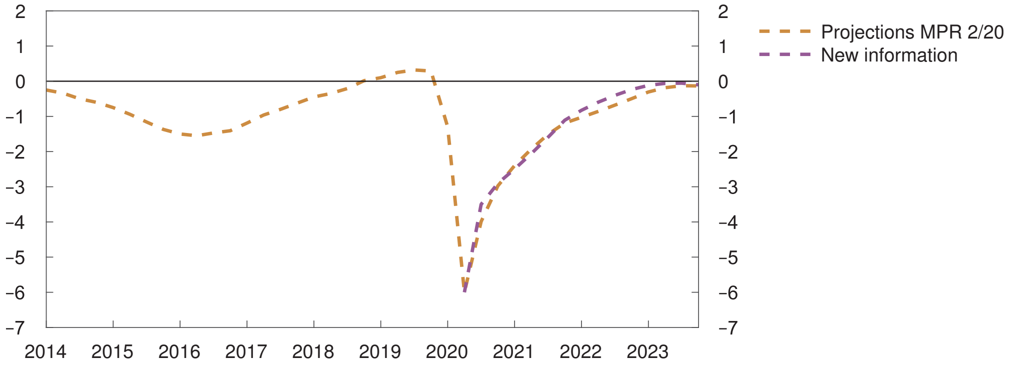
4.2 New information and analyses

The overall outlook is little changed

To shed light on how new information and assessments in isolation influence the economic outlook, a model-based analysis is performed, where new information and assessments are incorporated, but the policy rate path from the June *Report* is held constant. The policy rate path from June indicated that the policy rate would remain at 0% until the end of 2022, followed by a gentle rise.

Higher infection rates and continued containment measures are likely to weigh on economic growth in the coming quarters. The likelihood that a vaccine will be widely available in 2021 appears to have increased somewhat since June. This is assumed to push up growth somewhat in the coming years. Moreover, unemployment so far in 2020 has declined somewhat more than expected. This suggests that capacity utilisation is now somewhat higher than previously assumed. In the analysis with an unchanged policy rate path, this implies somewhat higher capacity utilisation than in the June *Report* (Chart 4.3).

Chart 4.3 Delayed, but faster recovery with unchanged policy rate path
Estimated output gap. Conditional on new information concerning economic developments and the policy rate forecast in MPR 2/20. Percent.



Source: Norges Bank

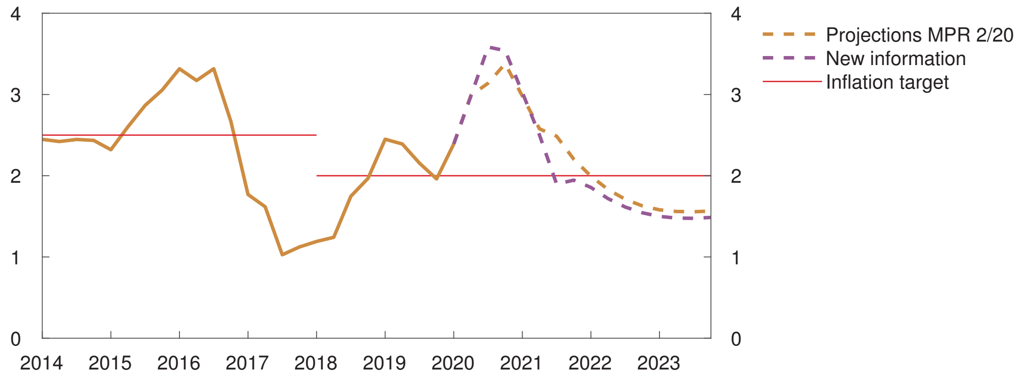
Underlying inflation has been higher than projected and is above the 2% inflation target. This primarily reflects the krone depreciation through winter and spring, which has resulted in higher imported goods inflation. The pass-through from the krone exchange rate to import prices has been faster than assumed earlier. In the model-based analysis with an unchanged policy rate path, inflation is expected to fall towards 1.5% during 2022 (Chart 4.4). Inflation recedes somewhat faster than in the June *Report* owing to the more rapid exchange rate pass-through and the outlook for a somewhat stronger krone ahead. The projections for wage growth are little changed since June.

The model-based analysis of new information shows that with an unchanged policy rate path, inflation gradually falls below the inflation target, while capacity utilisation increases gradually towards a normal level. Compared with the June *Report,* capacity utilisation will be somewhat higher and inflation slightly lower, but the overall outlook is little changed. This suggests small adjustments in the policy rate path.

The policy rate path is little changed

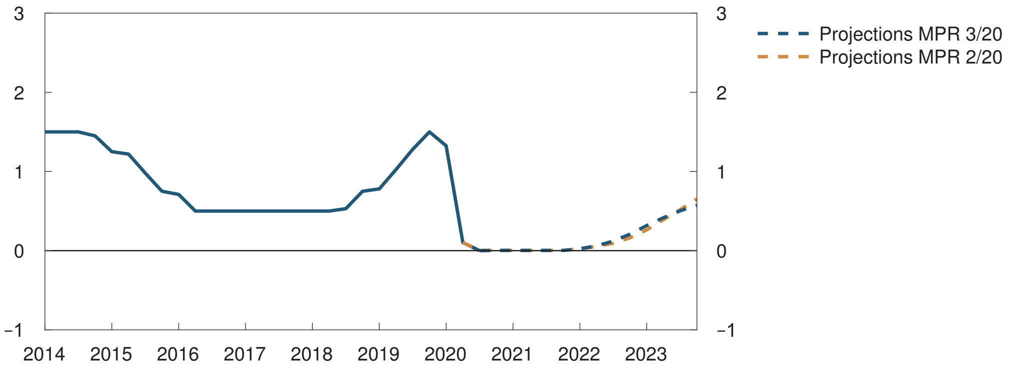
The Monetary Policy and Financial Stability Committee decided to keep the policy rate at 0% at this monetary policy meeting and expects that the rate will remain at the current

Chart 4.4 Lower inflation with unchanged policy rate path
CPI-ATE. Projections conditional on new information concerning economic developments and the policy rate forecast in MPR 2/20. **Fourquarter change. Percent**



Sources: Statistics Norway and Norges Bank

Chart 4.5 The policy rate path is little changed
Policy rate. Percent



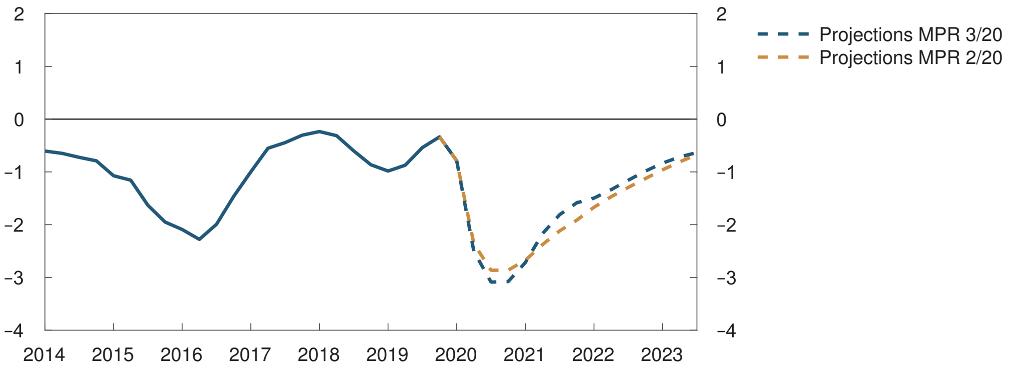
Source: Norges Bank

level for some time ahead. The updated policy rate path, which is based on new information and assessments, is broadly unchanged from the June *Report* (Chart 4.5). The projections imply a rise in the real interest rate through the projection period, first owing to lower inflation and thereafter as a result of a higher policy rate (Chart 4.6). The monetary policy stance will then be less expansionary, but the real interest rate is expected to be well under the estimated neutral real interest rate in the coming years. With prospects for lower inflation and an unchanged policy rate path, the real interest rate is now projected to remain somewhat higher than in the June *Report*, except in 2020.

Domestic factors pull down the policy rate path, the global outlook pulls it up
The policy rate forecast is little changed since the June *Report*. The main factors behind the changes in the policy rate forecast are illustrated in Chart 4.7. The bars show the various factors' contributions. The black line shows the overall change in the policy rate path.

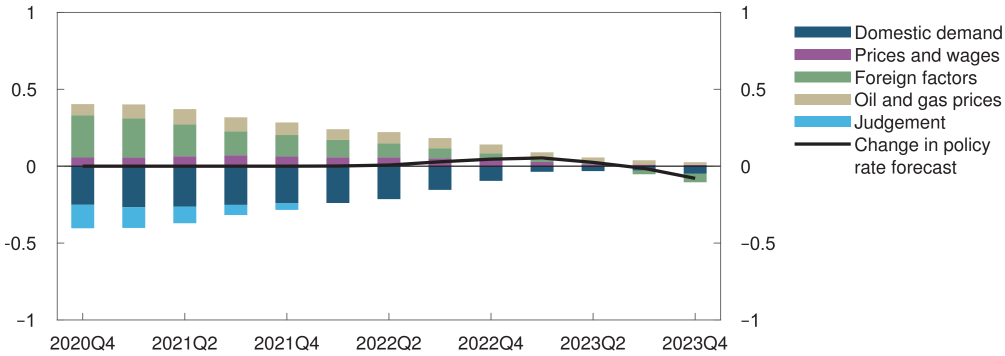
The decomposition of the factors behind the changes in the forecast is based on model output, but there is no mechanical relationship between news that deviates from the forecasts in the June *Report* and the effect on the new rate path. The bars for the various economic factors are based on what has been the historical reaction to news and does not take into account that news can affect interest rate setting differently when the

Chart 4.6 Continued expansionary monetary policy
Real interest rate. Percent



Sources: Statistics Norway and Norges Bank

Chart 4.7 Factors behind changes in the policy rate
Cumulative contribution. Percentage points



Source: Norges Bank

policy rate is already at a very low level. The bars for judgement-based assessments are a result of the Committee's overall assessment of the policy rate outlook.

Oil spot prices have risen since the June *Report*, and futures prices have also risen. In addition, European gas prices have moved up sharply. Higher *oil and gas* prices boost activity in petroleum-related industries and pull in the direction of a slightly higher rate path (beige bars).

Activity among Norway's trading partners has picked up faster than expected in June. This implies higher growth in imports by trading partners and pushes up the rate path (green bars).

The assessment of *price and wage inflation* pulls up the rate path a little. In the near term, this is because inflation has been higher than expected, but the effect is transitory. The remainder of the contribution reflects broadly unchanged wage growth projections compared with the June *Report*, despite somewhat lower inflation prospects. Real wage growth has therefore been revised up a little more than indicated by the change in capacity utilisation. This contributes in isolation to higher inflation further ahead, pulling up the rate path somewhat (purple bars).

Domestic demand pulls down the rate path (dark blue bars). Higher infection rates and continued containment measures will result in a slower recovery in consumption than assumed in the June *Report*. Moreover, Norges Bank's Regional Network gives us reason to expect weaker business investment than assumed earlier. The fact that growth in public demand has been lower than projected and is expected to remain at a lower level throughout the projection period pulls in the same direction. On the other hand, it now appears somewhat more likely than before summer that a vaccine will be widely available already in 2021. This will contribute to higher consumption growth further out than previously assumed. House price inflation has also been higher than expected, which fuels housing investment.

The sum of the factors described above indicates in isolation a slightly higher rate path than in the June *Report*, also in the near term. The policy rate forecast for the coming years is kept unchanged at 0%. This reflects *judgement-based assessments* (light blue bars). In the Committee's assessment, the sharp economic downturn and considerable uncertainty surrounding the outlook suggest that the policy rate should be kept on hold until there are clear signs that economic conditions are normalising.

ESTIMATES OF THE NEUTRAL REAL INTEREST RATE

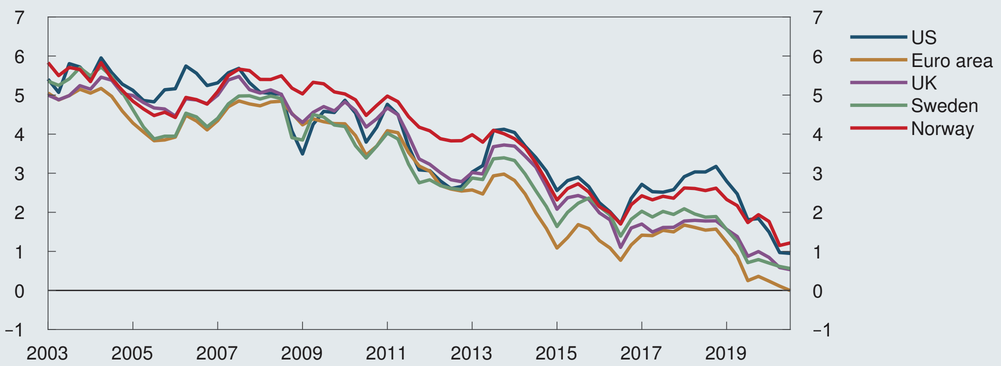
Estimates of the neutral real interest rate are an aid in assessing the level of the policy rate that provides an appropriate trade-off between various monetary policy considerations. The Bank updates its estimate regularly and, since *Monetary Policy Report* 2/19, has estimated a neutral real interest rate for the Norwegian economy of close to zero. The Bank's updated calculations are in line with this estimate. Owing to the Covid-19 pandemic, the calculations are more uncertain than usual.

The neutral real interest rate is the rate that is consistent with balanced developments in the economy in the medium term, when the effects of short-term shocks have faded. In a small, open economy like Norway, the underlying conditions are largely influenced by global developments. This means that over time, the neutral real interest rate in Norway will be close to the global neutral real interest rate. Long-term global interest rates have shown a clearly falling trend over the past decades, which can be interpreted as a fall in the neutral real interest rate.

Norges Bank uses a range of methods to estimate the neutral real interest rate. Long-term market rates provide an indication of market expectations of future interest rates. As the effects of past transitory shocks to the economy can be expected to unwind in the course of five to 10 years, it can be assumed that their effect on long-term interest rate expectations is limited. Adjusted for expected inflation, implied long-term interest rate expectations can express market estimates of the neutral real interest rate. Chart 4.A shows implied five-year rates five years ahead based on swap rates for Norway and four selected trading partners. At the beginning of 2020, market expectations of the money market rate in Norway in five to 10 years was close to 2%. Assuming long-term inflation expectations close to the inflation target of 2%, this may indicate expectations of a neutral real money market rate of 0%. Interest rate movements so far in 2020 may indicate an even lower level of the neutral real interest rate.

In addition to purely market-based measures, estimates from economic models are also used. The models[1] indicate a neutral real interest rate of close to zero when estimated using data up to 2019 (Chart 4.B).

Chart 4.A Falling interest rate expectations
Five-year interest rates five years ahead. Percent



Source: Bloomberg

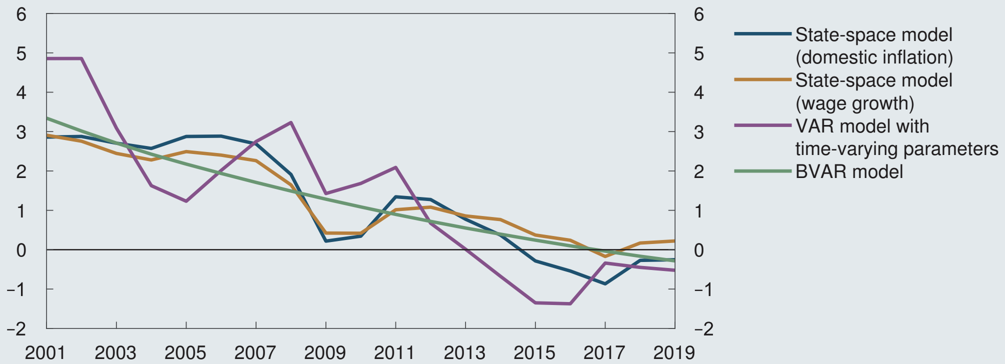
1 The models used are documented in Brubakk, L., J. Ellingsen and Ø. Robstad (2018), "Estimates of the neutral rate of interest in Norway". *Staff Memo* 7/18. Norges Bank. In addition, a BVAR model has been used.

A neutral real money market rate of 0% implies a neutral nominal money market rate of 2%, as long as inflation expectations are anchored around the inflation target. In the case of the policy rate, the neutral level is somewhat lower because the money market rate is equal to the expected policy rate plus a premium. A premium of 0.3 percentage point is assumed in the years ahead.

The uncertainty surrounding the neutral real interest rate is high, regarding both the current level and movements in the years ahead. Following the financial crisis, productivity growth has been historically weak, in both Norway and other countries. It is assumed that underlying productivity growth will remain low in the coming years. This suggests that the low level of the neutral real interest rate will persist. On the other hand, if underlying productivity growth picks up faster ahead than assumed, the neutral real interest rate may turn out higher than estimated. Long-term trends in income distribution and demographic conditions provide a mixed picture. On the one hand, increasing inequality has fuelled increased global saving without a corresponding increase in investment demand, a trend that is not expected to reverse. On the other hand, a steadily ageing population could eventually contribute to reducing the supply of global savings, which in isolation also implies a somewhat higher neutral interest rate further out.[2]

In the period ahead, the Covid-19 pandemic will make it difficult to assess the level of the neutral real interest rate. One reason is how the sharp falls in GDP in spring 2020 are interpreted in the models used for estimating the neutral real interest rate. When changes in GDP are driven by exogenous factors outside the model, the result is an imprecise measure of how important the modelled factors are. A possible consequence is that the estimates of the neutral real interest rate will fall further, since a greater difference between the real interest rate and the neutral real interest rate can help to explain why GDP has fallen, but the estimates would then be skewed.[3] But also market rates signal a lower neutral real interest rate, since market interest rate expectations have fallen

Chart 4.B Model estimates of the neutral real interest rate close to zero
Model estimates of the neutral real interest rate in Norway. Percent



Source: Norges Bank

2 See inter alia Goodhart, C. and M. Pradhan (2017), "Demographics will reverse three multi-decade global trends", BIS Working Papers 656.
3 See https://www.newyorkfed.org/research/policy/rstar for a possible adaptation of model estimates to take account of the Covid-19 crisis.

further in recent months. They currently indicate an expected real money market rate in Norway of -0.8%. Similar developments have been observed in other countries (Chart 4.A). Since long-term real interest rates are normally assumed to be driven by structural developments, this may be interpreted as a fall in market participants' estimate of the neutral real interest rate in the wake of the pandemic.

Factors referenced to explain how the pandemic may reduce the neutral real interest rate include increased precautionary saving and a lower labour supply. On the other hand, the increase in public debt following the crisis may have the opposite effect.[4] Higher public debt can influence the neutral real interest rate as this increases the supply of safe assets among other things. This reduces the so-called "safe assets shortage" and the neutral interest rate level rises.[5]

At the same time, the market-based measure has some limitations since the current low levels of long-term implied forward rates do not necessarily reflect market expectations of the neutral real interest rate. A question can be raised as to whether five years is far enough ahead for implied forward rates to be unaffected by cyclical conditions. Moreover, central banks' large-scale asset purchases have helped to pull down long-term interest rates. Since Norwegian long-term interest rates largely follow movements in global rates, Norwegian interest rates may also have fallen owing to foreign central banks' asset purchases.

A very low neutral real interest may more often lead to a very low policy rate, thus limiting the monetary policy room for manoeuvre. If monetary policy cannot be made sufficiently expansionary, economic downturns may be longer and deeper than if the room for manoeuvre were greater. Moreover, a low neutral real interest rate can result in higher asset prices and debt levels, which in turn can make the economy more vulnerable to negative shocks.

4 Jordà, Ò., S. R. Singh, and A. M. Taylor (2020) "Longer-Run Economic Consequences of Pandemics." *Covid Economics: Vetted and Real-Time Papers* 1 (3 April) undertake an empirical investigation of the effect of pandemics on the natural rate of interest and find a substantial negative effect. However, there are a number of reasons that the Covid-19 pandemic will have less of an effect than what they find based on historical experience. First, the death toll so far is relatively low compared with other pandemics, and there is thus less of an effect on labour supply. Second, deaths from Covid-19 are so far concentrated among the elderly, who are outside the labour force. Third, the public response to the pandemic, in the form of containment measures and crisis response packages, is historically strong. Public debt is therefore expected to increase faster than observed after earlier pandemics.

5 See Rachel, L. and L. H. Summers (2019), "On Secular Stagnation in the Industrialized World", Brookings Papers on Economic Activity, Spring 2019.

MONETARY POLICY OBJECTIVES AND TRADE-OFFS

The operational target of monetary policy is annual consumer price inflation of close to 2% over time. Inflation targeting shall be forward-looking and flexible so that it can contribute to high and stable output and employment and to counteracting the build-up of financial imbalances. The various considerations are weighed against each other.

The policy rate is set with a view to stabilising inflation around the target in the medium term. The horizon will depend on the shocks to which the economy is exposed and the effects on the outlook for inflation and for output and employment.

Monetary policy can contribute to stabilising output and employment at around the highest possible level consistent with price stability over time. This level is determined by structural conditions such as the tax and social security system, the system of wage formation and the composition of the labour force.

When shocks occur, a short-term trade-off may arise between reaching the inflation target and supporting high and stable output and employment. Monetary policy should strike a reasonable balance between these considerations.

A flexible inflation-targeting regime where sufficient weight is given to the real economy can prevent downturns from becoming deep and protracted. This can reduce the risk of unemployment becoming entrenched at a high level following an economic downturn.

If there are signs that financial imbalances are building up, the consideration of high and stable output and employment may in some situations suggest keeping the policy rate somewhat higher than would otherwise be the case. To some extent, this can contribute to reducing the risk of sharp economic downturns further ahead. Nevertheless, the regulation and supervision of financial institutions are the primary means of addressing shocks to the financial system.

The conduct of monetary policy takes account of uncertainty regarding the functioning of the economy. Uncertainty surrounding the effects of monetary policy normally suggests a cautious approach to interest rate setting. This can reduce the risk that monetary policy will have unintended consequences. The policy rate will normally be changed gradually so that the effects of interest rate changes and other new information about economic developments can be assessed.

In situations where the risk of particularly adverse outcomes is pronounced, or if there is no longer confidence that inflation will remain low and stable, it may in some cases be appropriate to react more strongly in interest rate setting than normal.

5 Financial stability assessment
– decision basis for the countercyclical capital buffer

Norges Bank's Monetary Policy and Financial Stability Committee has unanimously decided to advise the Ministry of Finance to keep the countercyclical capital buffer requirement unchanged at 1.0%.[1] The Committee does not expect to advise the Ministry to increase the buffer again until 2021 Q1 at the earliest.

Households and businesses appear to have ample access to credit. Corporate credit growth has slowed in pace with investment. Household credit growth has levelled off after a long period of decline, and residential mortgage demand is strong. Housing market activity is high. House price inflation has picked up from the moderate level prevailing in recent years. Overall, financial imbalances are assessed as approximately unchanged since the outbreak of the Covid-19 pandemic. However, owing to persistently high house price inflation and rising household credit growth, financial imbalances may build up further. Banks' profitability increased between 2020 Q1 and Q2, primarily owing to lower credit losses. Losses ahead remain uncertain. Norwegian banks are well equipped to absorb higher losses while maintaining credit supply.

5.1 Households and businesses have ample access to credit

The countercyclical capital buffer was reduced from 2.5% to 1.0% in March. This was related to the outbreak of Covid-19 and the measures to contain it, which led to a sharp fall in activity in the Norwegian economy. Most other countries that had positive countercyclical capital buffers before the pandemic did the same. It was the first time the buffer was reduced appreciably, and it is therefore too early to conduct thorough analyses of the effects of the reduction. A recent analysis conducted by Norges Bank indicates that lower capital requirements help to dampen a downturn (see Special Feature on page 52). The Bank's assessment is that the buffer reduction reduced the risk of tighter lending standards, which could have amplified the downturn.

FRAMEWORK FOR ADVICE ON THE COUNTERCYCLICAL CAPITAL BUFFER

Advice on the level of the countercyclical capital buffer is based on an assessment of three main areas: (i) households' and business' access to credit, (ii) financial imbalances and (iii) the situation for banks. More about Norges Bank's framework can be found in *Norges Bank Papers* 4/2019: Framework for advice on the countercyclical capital buffer.

1 See letter from Norges Bank to the Ministry of Finance of 23 September 2020.

Creditworthy businesses appear to have ample access to credit. Banks have the capital and liquidity to maintain credit supply (see Section 5.3). In Norges Bank's lending survey for 2020 Q2, banks reported minor changes in credit standards and did not expect to make any changes in Q3. Government loan guarantee schemes may also have contributed to maintaining credit supply. However, withdrawals from the guarantee scheme for banks' lending to small- and medium-sized businesses have declined through summer. In the bond market, issuance volumes picked up through spring and summer. Risk premiums declined in the same period, but remain somewhat higher than before the pandemic (see Section 2.1).

Households also appear to have ample access to credit. In Norges Bank's lending survey for 2020 Q2, banks reported significantly higher residential mortgage demand and minor changes in credit standards. Banks further reported that the expanded flexibility quotas in the regulation on requirements for new residential mortgage loans have been used to some extent. Discontinuing the expanded quotas after Q3 is therefore expected to tighten the credit supply somewhat.[2]

5.2 Broadly unchanged financial imbalances

The Covid-19 pandemic has led to a sharp downturn in the Norwegian economy. Prior to the reduction in March, the countercyclical capital buffer requirement was set at 2.5% against the background of a build-up of financial imbalances over a long period, primarily in credit and real estate markets. In recent years, debt growth has slowed and house price inflation has been moderate. Towards the end of 2019, the assessment was that financial imbalances were no longer building up and that there were some signs that they were receding.

Economic activity has picked up in recent months but remains lower than at the beginning of the year. At the same time, house price inflation has risen sharply and household credit growth has levelled off. Corporate credit growth has continued to slow and commercial property prices have fallen. On balance, financial imbalances are assessed as approximately unchanged since the outbreak of Covid-19. However, owing to persistently high house price inflation and rising household credit growth, financial imbalances may build up further.

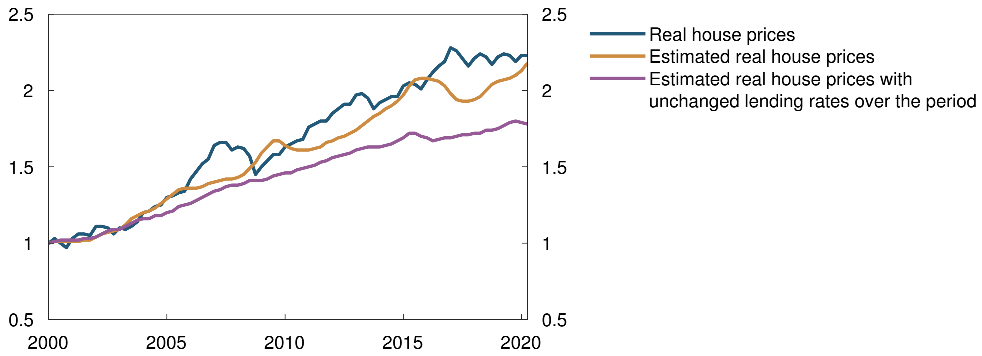
Some of the indicators that are normally given weight in the Bank's decision basis, such as the credit-to-GDP ratio, are now rising as a result of what is projected as temporarily slower GDP growth. When GDP returns to a normal level, this effect will be reversed.[3]

High housing market activity

House prices are at high levels after having risen faster than household income over a long period. Since 2017, house price inflation has been moderate and lower than income growth. Recent analyses conducted by Norges Bank indicate that the rise in house prices over the past 20 years may largely reflect growth in household income and lower residential mortgage lending rates (Chart 5.1).[4] Lower lending rates are estimated to account for approximately a third of the rise in house prices over the period. The analysis shows that house prices are unlikely to be driven up by irrational homebuyers bidding up prices to unsustainable levels. In isolation, this reduces the risk of a marked fall in prices. However, price falls may occur in the event of substantial household income loss or a marked rise in interest rates, for example. Considerable declines in house prices may pose a threat

2 See Ministry of Finance press release of 11 September 2020.
3 A complete overview with updated indicators is available on Norges Bank's website.
4 See Ingholt, M.M. and S. Mæhlum (2020) "Boligprisboble i Norge?" [Housing bubble in Norway]. Blog post published on *Bankplassen blogg* 24 September 2020 (Norwegian only).

Chart 5.1 House price inflation reflects higher income and lower residential mortgage rates
Index. 2000 Q1 = 1

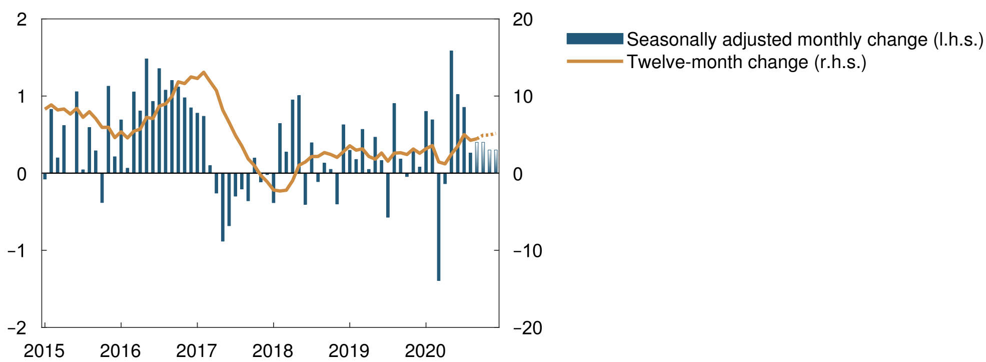


Source: Ingholt, M. M. and S. Mæhlum (2020) "Boligprisboble i Norge?" [Housing bubble in Norway]. Blog post published on *Bankplassen blogg* 24 September 2020 (Norwegian only.

to financial stability, in part because houses are often mortgaged and households would then need to tighten consumption. Reduced consumption can be a source of indirect bank losses as businesses face reduced revenue and default on their debt. In addition, households can be a source of direct bank losses if they are unable to service their own debt. The high level of house prices therefore entails a financial system vulnerability.

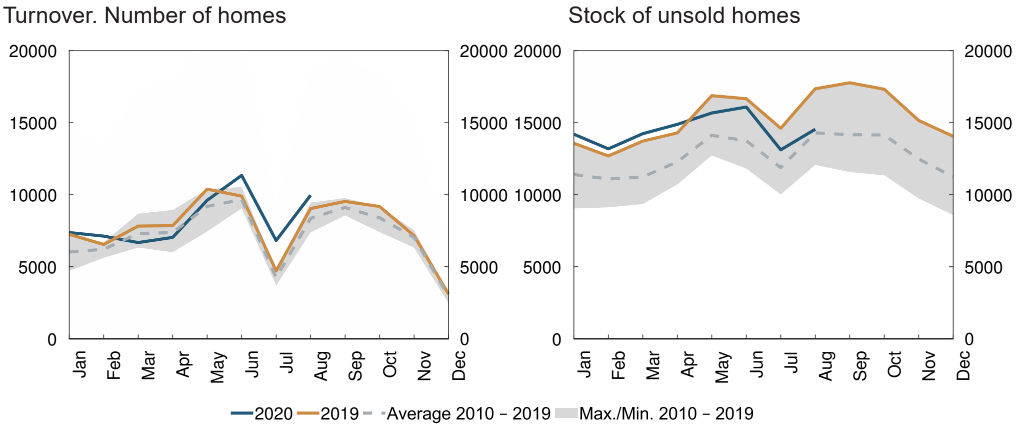
Since May, house price inflation has picked up after prices fell somewhat in March and April (Chart 5.2). The rise in prices has been higher than projected in the June *Report*. Sales of existing homes have been high in recent months compared with previous years (Chart 5.3). There has not been a corresponding increase in the stock of existing homes for sale. As a result, the stock of unsold existing homes has declined from the high level prevailing over the past two years. This development may be due to the stronger-than-expected impact of very low mortgage lending rates on the housing market. The temporary relaxation of the regulation on new residential mortgage loans has also probably had an impact. A higher willingness to pay for housing may also reflect increased use of home offices and limited opportunities for consumption. At the same time, the rise in unemployment may have dampened house price inflation to a lesser extent than expected. This is because unemployment had a greater impact on low-income occupational groups, and the share of homeowners is substantially lower among households with low income than among high-income households. Twelve-month house price inflation is expected to remain close to 5% in 2020 and 2021 before gradually slowing further out in the pro-

Chart 5.2 House price inflation has picked up
Percent



Sources: Eiendomsverdi, Finn.no and Real Estate Norway

Chart 5.3 High activity in the market for existing homes



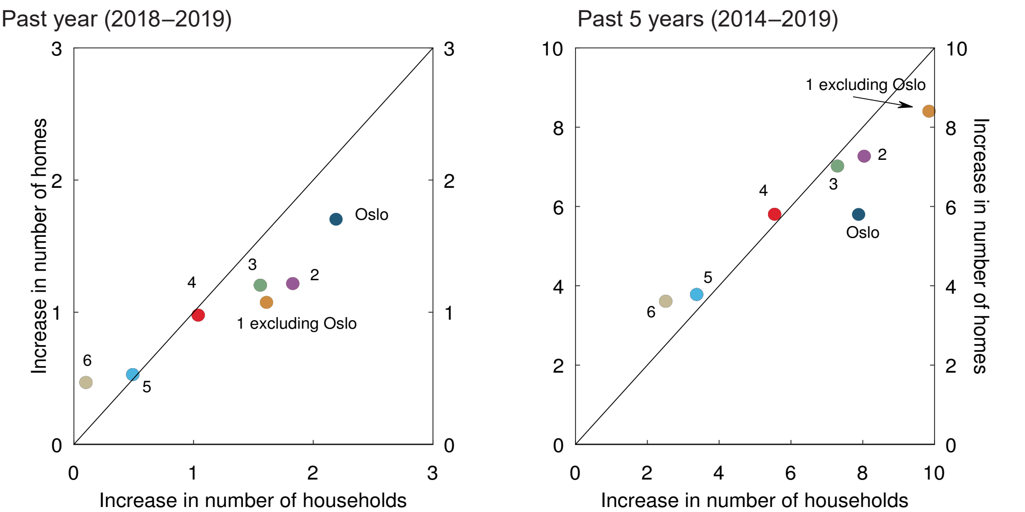
Sources: Eiendomsverdi, Finn.no and Real Estate Norway

jection period (Annex Table 3). At the beginning of the projection period, house price inflation is expected to be higher than disposable income growth.

New home sales fell markedly when the Covid-19 pandemic started, but has recovered through summer to a more normal level. At the same time, the number of new homes listed for sale has remained at a low level during the pandemic, so that the stock of unsold new homes has declined somewhat. Against the background of higher house price inflation and new home sales, residential construction is expected to increase ahead (see Section 3.1).

Residential construction has slowed in recent years, while household formation has remained steady. In urban areas in particular, the rate of household formation is outpacing the increase in the number of homes (Chart 5.4).[5] Together with low interest

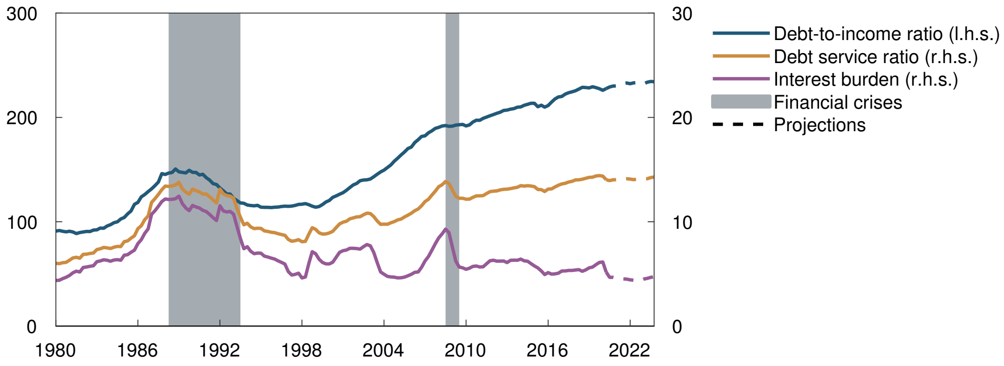
Chart 5.4 Residential construction is not keeping pace with demand in urban areas
Increase in the number of households and number of homes by degree of urbanisation (where 1 denotes the most urbanised). Percent



Sources: Statistic Norway and Norges Bank

5 Analyses conducted by Norges Bank indicate that residential construction has not kept pace over time, see Mæhlum, S., P. M. Pettersen and H. Xu (2018) "Residential construction and household formation". *Staff Memo*, 12/2018. Norges Bank.

Chart 5.5 Higher debt-to-income ratios ahead
Percent



Sources: Statistics Norway and Norges Bank

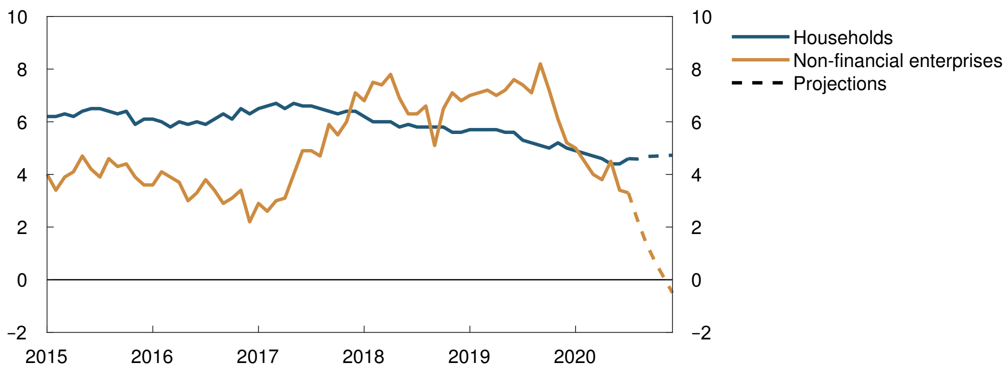
rates, this may drive up house price inflation in these areas ahead. However, house price inflation is being dampened by the expectation that residential construction at a national level will outpace household formation rates in the coming years.

Household debt ratios will likely increase ahead

Household debt ratios are at a high level (Chart 5.5), which makes households vulnerable to income loss, higher interest rates and a fall in house prices. In response to such shocks, many households have the option of deferring principal repayments, drawing on financial buffers or tightening consumption. Since the Covid-19 pandemic began, residential mortgage rates have fallen markedly so that interest burdens have diminished. The use of interest-only periods has also increased. This alleviates the situation, especially for households that have experienced income loss.

Since 2017, household credit growth has slowed (Chart 5.6), reflecting the rise in interest rates in the period between 2018 and 2019 and the introduction of a number of measures by the authorities in recent years to restrain borrowing. The regulation on requirements for new residential mortgage loans has restricted lending to vulnerable households (see Special Feature on page 54). In recent months, 12-month growth in credit has levelled off and in July, credit growth was 4.6%. The increase was higher than projected in the June *Report*.

Chart 5.6 Household credit growth is leveling off and corporate credit growth is slowing further
Mainland Norway. Twelve-month change in transactions. Percent



Sources: Statistics Norway and Norges Bank

Credit growth is expected to edge up in the coming period, owing to higher turnover and prices in the housing market and increasing purchases of other assets that are partly debt-financed. Credit growth is expected to edge down somewhat further out, yet remain at aproximately the same level as assumed in the June *Report* (Annex Table 3) and higher than growth in disposable income. Debt ratios will therefore likely increase somewhat ahead (Chart 5.5).

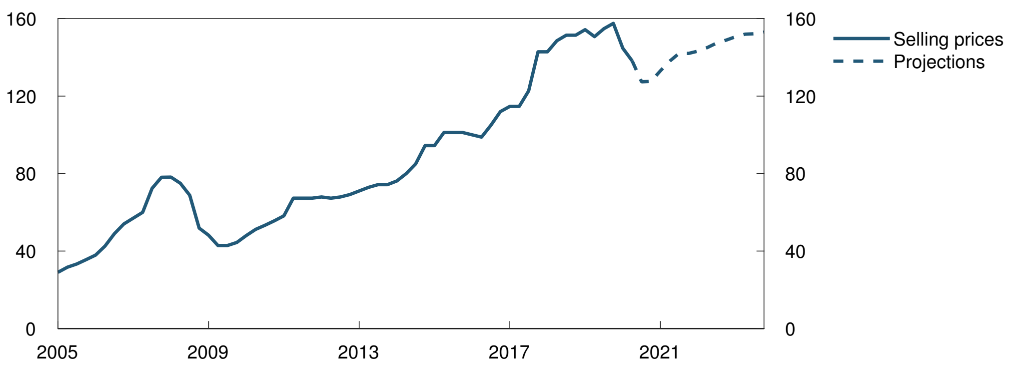
Mainland corporate credit grew markedly faster than GDP in the years prior to the banking crisis and financial crisis, but has risen more in pace with GDP over the past ten years. Growth in corporate debt from domestic sources picked up through 2017 but fell markedly since autumn 2019 (Chart 5.6), reflecting developments in business investment (see discussion in Section 3.1).

In July, the 12-month growth rate fell further to 3.3%, as projected in the June *Report*. Growth in corporate credit is expected to continue to slow markedly in the period ahead, partly reflecting lower credit demand owing to a lower level of business investment (see Section 3.1).

Commercial property prices reflect economic developments
High commercial property (CRE) prices are one of the key financial system vulnerabilities. The office segment is especially important for financial stability since banks' exposure to this segment is substantial. A relatively large share of the stock of office buildings is located in Oslo, and selling prices for prime office space in Oslo are therefore used as an important indicator of vulnerabilities in the CRE market. Historically, these prices have risen considerably ahead of financial crises.

Selling prices for prime office space in Oslo rose for a long period and have reached a high level (Chart 5.7). In the first half of 2020, prices fell markedly, driven by lower rents. Overall, rents for prime office space have declined by just under 10%. Rents in Oslo as a whole have also declined, although the decline has been somewhat less pronounced. Analyses conducted by Norges Bank indicate that office rents in Oslo as a whole are moving in line with developments in the real economy.[6] So far, the decline can be largely explained by the economic downturn. Rents are expected to fall somewhat further in 2020, before rising again as a result of a rebound in the Norwegian economy. Selling prices are projected to show a corresponding increase (Chart 5.7). The projections are

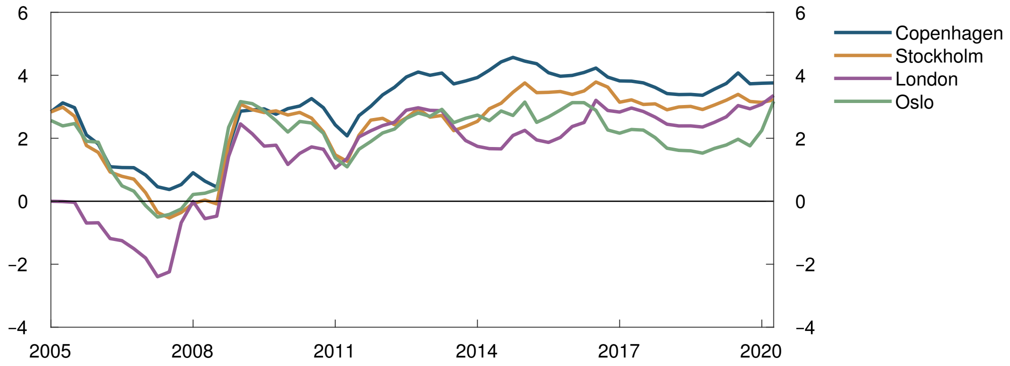
Chart 5.7 Higher CRE prices from 2021
In thousands of NOK per square metre



Sources: CBRE and Norges Bank

6 See Bjørland, C. and M. Hagen (2019) "What drives office rents?" *Staff Memo* 12/2019. Norges Bank.

Chart 5.8 Risk premium in Oslo back to same level as in other European cities
Yield less five-year swap rate. Percentage points



Sources: CBRE and Datastream

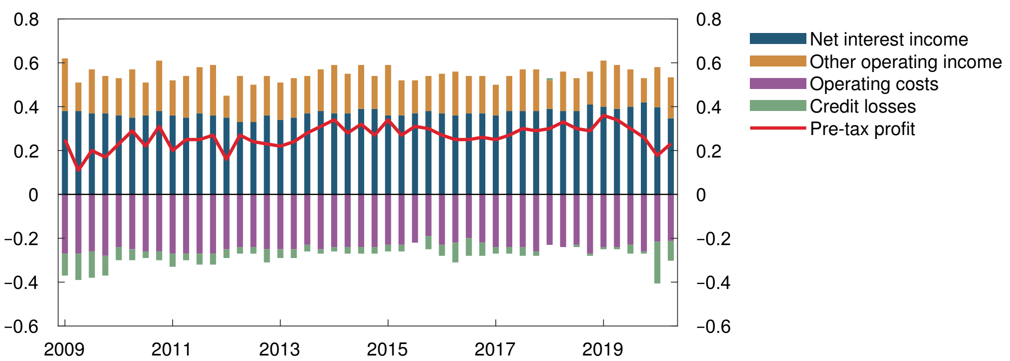
uncertain and changes in the economic outlook could have significant consequences for CRE prices. If the pandemic results in structural changes, in for example a need for less office space owing to increased remote work, developments in CRE prices may also be affected.

In addition to rents, selling prices are determined by yields. Yields on prime office space have remained relatively stable, despite a sharp decline in long-term interest rates. The difference between yields in Oslo and long-term interest rates has increased and is now at approximately the same level as in other European cities, after having been lower for some years (Chart 5.8). Wider differences between yields and long-term interest rates suggest a higher risk premium and a markdown of rent inflation expectations. This reduces the risk of a pronounced fall in selling prices ahead.

5.3 Banks are solid and can absorb higher losses

Banks have ample access to wholesale funding. Credit premiums on bank bonds have declined somewhat further since the June *Report* (see Section 2.1) and have returned to approximately the same level preceding the market turbulence in March. This has contributed to reducing banks' funding costs.

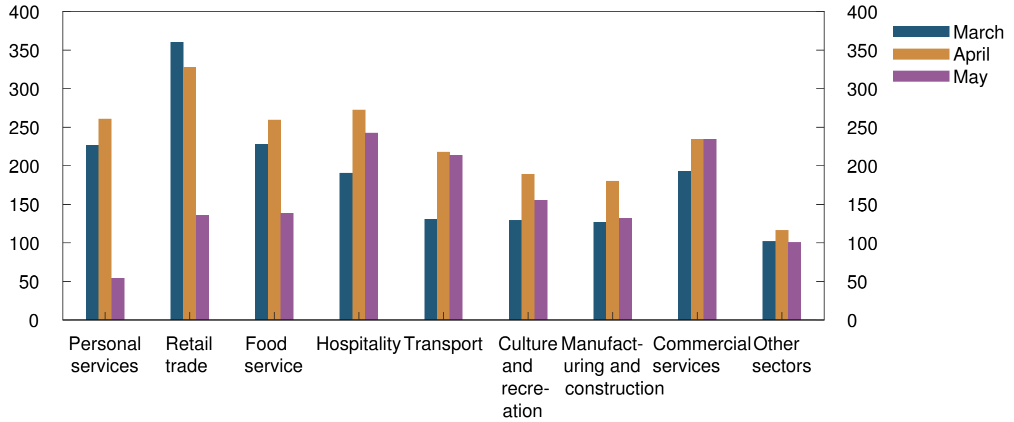
Chart 5.9 Lower bank profitability than in previous years
Largest Norwegian-owned banking groups. Percent of average total assets



Sources: Banking groups' quarterly reports and Norges Bank

Chart 5.10 The Business Compensation Scheme is showing improvements in several sectors

Amounts disbursed. In millions of NOK



Sources: The Norwegian Tax Administration and Norges Bank

Banks' profitability influences both credit supply and loss-absorbing capacity. The profitability of Norwegian banks is solid, albeit somewhat lower than in recent years. Between 2020 Q1 and Q2, profitability increased somewhat, primarily owing to lower credit losses (Chart 5.9). A decline in banks' net interest income pulled in the opposite direction. The decline largely reflects an earlier reduction of banks' mortgage lending rates than of deposit rates because of the two-month notice required for deposit rate reductions.

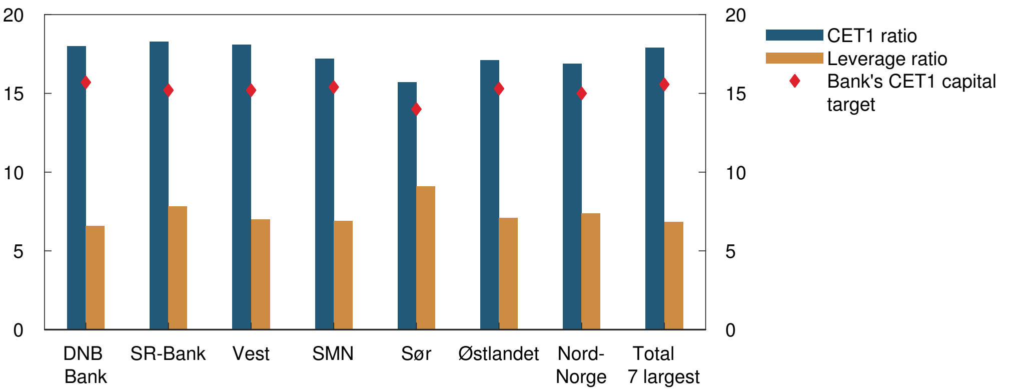
The credit losses of all Norwegian banks and mortgage companies fell in Q2 compared with Q1. Annualised credit losses corresponded to 0.7% of lending, compared with 1% in Q1. Credit losses on oil-related exposures were a main source of losses in Q2, while provisions[7] for expected losses on lending to industries affected by the pandemic declined to some extent from Q1. There is variation across banks and credit losses are particularly high among banks with substantial oil-related exposures, which also leads to lower profitability among these banks.

Losses ahead remain uncertain. There is both uncertainty related to how large losses will be under the economic outlook assumed in this *Report* and greater uncertainty than in normal times surrounding the economic outlook. The Covid-19 pandemic has led to significant revenue losses among many businesses in 2020. However, so far, the number of bankruptcies has been moderate, likely owing to extensive measures by the authorities, and principal payment deferrals and liquidity loans from banks. Subsidies under the Business Compensation Scheme show that many businesses were severely impacted by the lockdown in March and April. In May, the amount of subsidies provided in several sectors fell considerably, including personal services and retail trade (Chart 5.10), suggesting improved conditions for many businesses. However, there were still certain sectors that continued to receive large subsidies in May, including the hospitality sector. As public and bank measures gradually expire, there is a risk that the bankruptcy rate will rise ahead. However, a relatively small share of banks' exposures are to the most severely affected sectors and the risk of losses is therefore limited.

In the near term, the risk of losses is particularly associated with developments in oil-related industries. Many businesses have recognised new, large impairment losses on

7 IFRS 9 requires the recognition of credit impairment to be based on more forward-looking assessments and banks therefore recognise losses earlier in bad times. For further discussion, see Financial Stability Report 2019, page 43, and Andersen, H. and I.N. Hjelseth (2019) "How does IFRS 9 affect banks' impairment recognition in bad times?" Staff Memo 9/2019. Norges Bank.

Chart 5.11 Banks' capital adequacy is above banks' capital targets
Largest Norwegian-owned banking groups. Percent



Sources: Banking groups' quarterly reports and Norges Bank

vessels, and the equity of a number of businesses has been written down to zero. Large-scale restructuring is needed in the sector and banks have recognised relatively large impairment losses on oil-related exposures so far in 2020.

CRE developments will be particularly important for banks' credit losses in the long term. By far, CRE accounts for the largest share of banks' exposures by sector and has been the source of large bank losses during earlier crises. However, CRE companies have relatively high equity ratios. A smaller share of the debt in CRE is now held by companies that have lower equity ratios.[8] As office rents in Oslo have risen in recent years, rents in most existing contracts are still lower than current market rents. Rents can therefore fall somewhat further before the cash flow of businesses that own office buildings in Oslo is weakened.

Compared with the office segment in Oslo, rent inflation has primarily been weaker in other Norwegian cities and segments besides office space in recent years. The impact of the downturn on hotels has been particularly severe, but banks' CRE exposure to this segment is relatively limited. The retail segment was also hard hit, although the situation has improved (Chart 5.10). Overall, losses on banks' CRE exposures are expected to be low in the coming years.

Norwegian banks are solid and can absorb higher losses. Common Equity Tier 1 (CET1) capital ratios increased by 0.6 percentage point for the largest banks overall between 2020 Q1 and Q2. This is due to higher profitability, lower counterparty risk and a stronger krone. At the same time, leverage ratios increased by 0.2 percentage point, primarily reflecting balance sheet contractions owing to foreign currency effects and lower central bank deposits. The largest Norwegian banks are well above the capital requirements and meet their long-term CET1 targets (Chart 5.11). Both higher capital ratios and the reduction of the countercyclical capital buffer from 2.5% to 1.0% have contributed to increasing the gap above the requirements.[9] Some banks have set aside dividends but not paid them out yet, in accordance with recommendations from the authorities.[10] If the dividends that are set aside are not paid out, banks' capital ratios will increase more than shown in Chart 5.11.

8 For further discussion, see Monetary Policy Report 2/20, page 50.
9 Capital requirements take the increased systemic risk buffer into account. Banks using advanced models to calculate capital requirements are subject to a higher systemic risk buffer rate from end-2020. The rate will increase from 3% to 4.5%. For the other banks, the change will be effective from end-2022. The amendment to the regulation has yet to be implemented.
10 See, inter alia, Ministry of Finance press release of 9 September 2020.

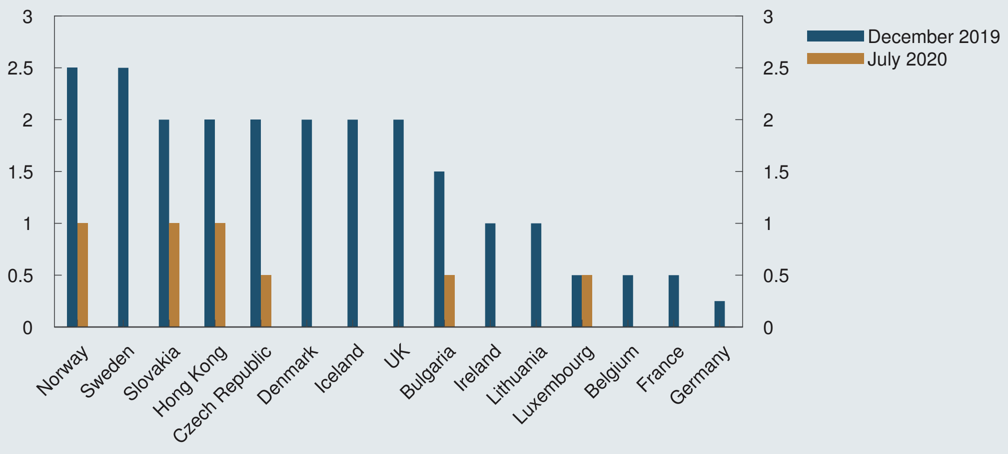
LOWER CAPITAL REQUIREMENTS FOR BANKS HELP DAMPEN THE DOWNTURN

The countercyclical capital buffer (CCyB) is designed to help banks build up capital in good times so that they have more to draw on in bad times and can avoid tightening lending and amplifying downturns. The buffer is a relatively new tool and many jurisdictions have set a positive buffer rate over the past few years. A recent study conducted by Norges Bank shows that there are many similarities across national frameworks, reflecting a common set of international guidelines.[1] All jurisdictions agree to reduce the buffer in the event of a pronounced economic downturn, but there are differences, for example, in the degree of communication about the buffer, including the use of forward guidance. Jurisdictions that have actively used the CCyB generally communicate more about their assessments and decision basis.

During the downturn caused by the Covid-19 pandemic, almost all jurisdictions with a positive CCyB level reduced the requirement (Chart 5.A). In some jurisdictions, the reduction was implemented at the same time as recommendations or requirements for limiting dividend payouts by banks.[2]

This is the first time a severe economic downturn has occurred since the CCyB was introduced and the first time the buffer rate has been appreciably reduced. It is therefore too early to conduct thorough analyses of the effects of the buffer reductions. However, a recent analysis conducted by Norges Bank indicates that capital requirement reductions help to dampen economic downturns.[3] The analysis is based on the transition from the Basel I framework to Basel II in the period between 2007 and 2008, which is one of

Chart 5.A Countercyclical capital buffers reduced in several juristictions
Countercyclical capital buffer requirement. Percent



Source: European Systemic Risk Board (ESRB) and Hong Kong Monetary Authority

1 See Arbatli, E. C. and Muneer M. A. (2020) "The countercyclical capital buffer: A cross-country overview of policy frameworks". *Staff Memo* 6/2020. Norges Bank. The memo provides an overview of CCyB framework design and use in 33 jurisdictions.
2 In the Czech Republic, Iceland, Ireland, Norway and the UK recommendations or requirements restricting dividend payouts coincided with the buffer rate reduction. Slovakia waited to reduce the CCyB until banks communicated their dividend policy.
3 See Arbatli, E. C. and Juelsrud R. E. (2020) "Countercyclical capital requirement reductions, state dependence and macroeconomic outcomes". *Working Paper* 9/2020. Norges Bank. The analysis covers Norwegian banks that do not employ internal ratings based risk models.

few examples in recent years where capital requirements were reduced considerably for many banks. The reduction in capital requirements was permanent and coincided with the financial crisis.

The results show that the buffer reduction resulted in expanded bank balance sheets and a broad increase in bank lending. Banks showed an increase in both household and corporate lending[4], and corporate lending was higher owing to a credit supply expansion rather than a contemporaneous increase in credit demand. Banks also increased their holdings of financial assets such as short-term government bonds and central bank deposits. The analysis further indicates that increased lending leads to more favourable real economic outcomes as investment increases by businesses that borrowed from banks where the capital requirement was reduced.[5]

The impact of reduced capital requirements on bank lending during an economic downturn varies depending on two factors in particular. First, a reduction in capital requirements is likely to have a larger impact when capital ratios are near the required levels. This is because banks that are already near the capital requirement will see a greater increase in their room for manoeuvre when the capital requirement is reduced. Second, a reduction of capital requirements will likely be most effective when businesses are solid. Businesses with primarily low leverage and low default risk were the driving force behind the credit expansion when the capital requirements fell owing to the transition to Basel II.

4 The results show that a 1 percentage point reduction in the capital requirement expands overall lending growth by 7.7 percentage points, household lending growth by 4.4 percentage points and non-financial corporate lending growth by 13 percentage points.
5 A 1 percentage point reduction in the capital requirement is estimated to increase growth in corporate capital investment by 7.5 percentage points.

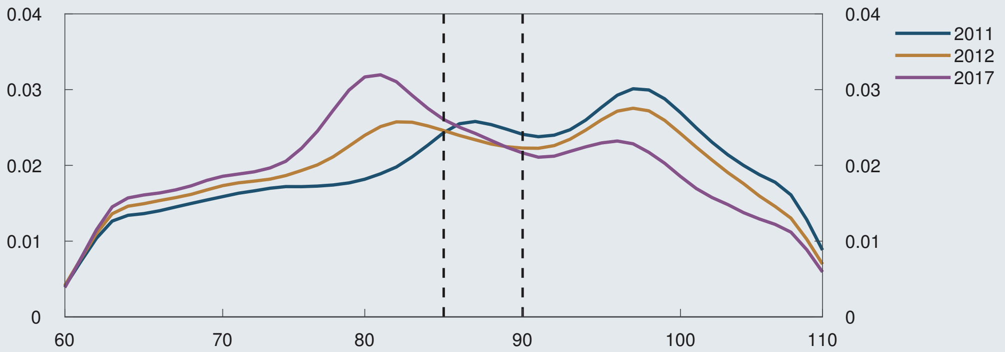
THE REGULATION ON RESIDENTIAL MORTGAGE LOANS HAS LIMITED LOANS TO VULNERABLE HOUSEHOLDS

High household debt ratios are an important financial system vulnerability, which can amplify and prolong crises. High debt can lead households to reduce consumption in the event of a loss of income, higher interest rates or a fall in house prices. Lower consumption can result in losses for banks as businesses lose revenues and default on debt. In addition, banks can incur losses if households are unable to service their own debt.

Regulating banks' residential mortgage lending has likely contributed to reducing this vulnerability by limiting mortgages to vulnerable households. Recent Norges Bank analyses of loan-to-value (LTV) limits introduced as guidelines in 2010–2012 show that these limits are effective in reducing debt ratios and the number of new loans.[1] When the guidelines were tightened in 2012, lowering the LTV limit from 90% to 85%, many homebuyers responded by keeping their LTV ratio just below the new limit (Chart 5.B). The share just below 85% was even higher in 2017. This may be because the regulation of banks' credit standards was tightened in 2015 when the standards were laid down as a regulation. The use of additional collateral is probably an important reason why many homebuyers had LTV ratios above the limit. Other analyses conducted by Norges Bank show that the introduction of the debt as a share of gross income (DTI) limit in 2017 had a dampening effect on house price inflation in 2017 and into 2018 in regions with a substantial share of high-DTI homebuyers.[2] An updated analysis does not find such an effect in 2019, but nor does it find a reversal in the form of a renewed rise in house price inflation in areas with a large share of high-DTI homebuyers.[3] The residential mortgage lending survey for 2019 conducted by Finanstilsynet (Financial Supervisory Authority of Norway) also showed that the tightening of the regulation in 2017 has had an impact (Chart 5.C).

The most vulnerable households are those with high DTI ratios, low debt-servicing capacity and high LTV ratios. In a downturn, households that fall into one or more of the three categories are assumed to reduce consumption more. Households that fall into all three categories are also assumed to be more likely to default on debt.

Chart 5.B Homebuyers have adjusted to loan-to-value (LTV) limits
Distribution of calculated mortgage debt as a share of total home purchases. Percent

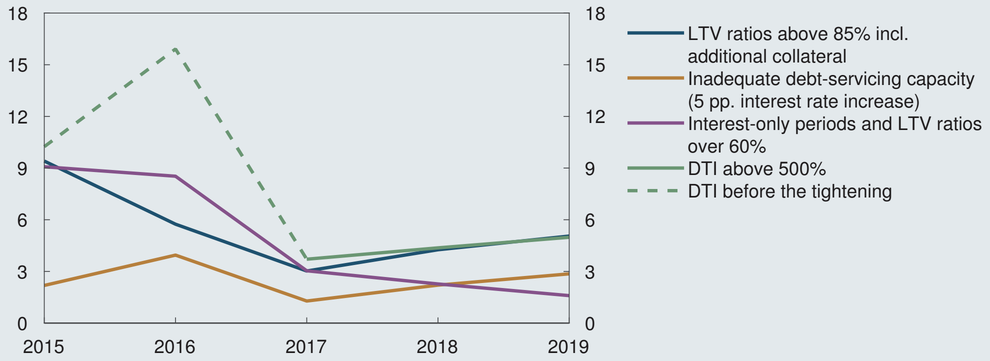


Source: Aastveit K. A., R. E. Juelsrud and E. G. Wold (2020) "Mortgage regulation and financial vulnerability at the household level". *Working Paper* 6/2020. Norges Bank

1 Aastveit K. A., R. E. Juelsrud and E. G. Wold (2020) "Mortgage regulation and financial vulnerability at the household level". *Working Paper* 6/2020. Norges Bank.
2 See Borchgrevink, H. and K. Næss (2018) "Analyses of effects of the residential mortgage loan regulation". *Economic Commentaries* 1/2018. Norges Bank and analysis attachment to Norges Bank's letter to Finanstilsynet (Financial Supervisory Authority of Norway) 16 August 2019 (Norwegian only).
3 Fahre, B. (2020) "En analyse av effekter av boliglånsforskriften" [An analysis of effects of the residential mortgage loan regulation]. MA thesis, University of Oslo (In Norwegian with English summary).

Chart 5.C The tightening of the regulation on requirements for new residential mortgage loans in 2017 had an impact

New repayment loans in breach of the regulatory requirements. Percent of total loan amount



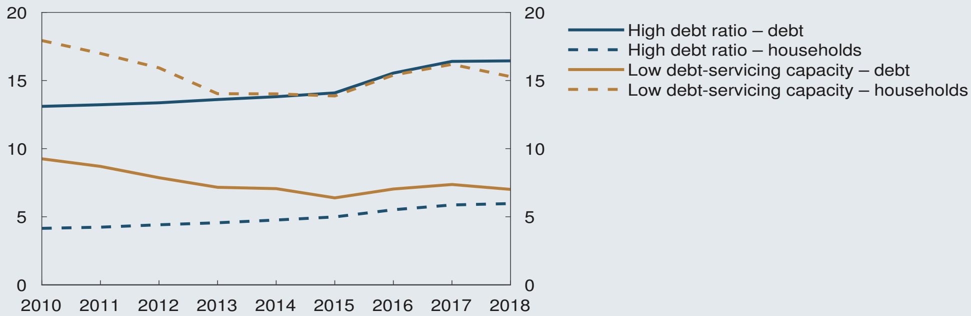
Source: Finanstilsynet (Financial Supervisory Authority of Norway)

The share of households that fall into one or more of the categories edged down overall in 2018, which is the latest year for which complete tax data are available for the Bank's analyses.[4] The share of households with high DTI ratios has risen over time but levelled off in 2018 (Chart 5.D). Even though these households only make up 6% of the total number of households, they hold more than 16% of total household debt. The share of households with low debt-servicing capacity fell for a long period as a result of solid income growth, a moderate rise in consumer prices and lower interest rates. After some increase in the two preceding years, this share fell back somewhat in 2018.

Preliminary tax data indicate that the attenuation continued in 2019 and that vulnerability in the household sector may have declined further.[5] The contraction caused by the Covid-19 pandemic has resulted in higher unemployment and loss of income, particularly among low-income earners. This may imply that the share of vulnerable households will rise in 2020. The effect is dampened by lower interest rates, which increase households' debt-servicing capacity.

Chart 5.D Slower rise in vulnerability in 2018

Share of households with high DTI ratios/low debt-servicing capacity and the share of debt held by these households



Sources: SIFO, Statistics Norway and Norges Bank

4 Since the June *Report*, tax data for 2018 have become available for analysis. Under the new Central Bank Act, which entered into force in January 2020, Norges Bank is able to obtain access to these statistics more quickly.
5 Figures from pre-completed tax returns.

Annex

Detailed tables of projections

Table 1 International projections

Change from projections in *Monetary Policy Report* 2/20 in brackets	Weights[1] Percent	Percentage change from previous year				
		2019	2020	2021	2022	2023
GDP						
US	10	2.3 (0)	-4.5 (1.1)	3.6 (-0.5)	3 (0)	2.5 (-0.1)
Euro area	35	1.3 (0.1)	-8.3 (0.6)	5.3 (0.2)	3.4 (0.1)	2.4 (-0.2)
UK	11	1.5 (0.1)	-10.4 (-0.2)	5.7 (-0.5)	3.6 (0.1)	2.8 (-0.2)
Sweden	13	1.3 (0.1)	-3.5 (1.2)	3.9 (-0.2)	2.9 (-0.2)	2.2 (-0.2)
China	6	6.1 (0)	2 (1)	7.9 (1.3)	5.7 (-0.1)	5.6 (-1.2)
13 trading partners[1]	100	2	-5.9	4.9	3.4	2.7
5 trading partners[2]		2 (0.1)	-6.1 (0.7)	5.2 (0.1)	3.5 (0)	2.8 (-0.3)
Prices						
Underlying inflation[3]		1.4 (0)	1.2 (0.2)	1.1 (0.2)	1.3 (0.1)	1.7 (0)
Prices for consumer goods imported to Norway[4]		1.7 (0)	0.6 (-0.3)	0.3 (0)	0.6 (0)	0.7 (0)

1 The aggregate includes: Euro area, China, UK, Sweden, US, Brazil, Denmark, India, Poland, South Korea, Singapore, Thailand and Turkey. Export weights.
2 The aggregate includes: China, Euro area, Sweden, UK and US. Export weights.
3 The aggregate for underlying inflation includes: Euro area, Sweden, UK and US. Import weights.
4 In foreign currency terms. Including compositional effects.

Sources: IMF, Refinitiv Datastream and Norges Bank

Table 2a Consumer prices. Twelve-month change. Percent

	2020						
	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Consumer price index (CPI)							
Actual	1.4	1.3	1.7				
Projections MPR 2/20	1.4	1.4	1.9	2.1			
Projections MPR 3/20				2.1	2.3	2.1	2.5
CPI-ATE							
Actual	3.1	3.5	3.7				
Projections MPR 2/20	3.2	3.2	3.2	3.0			
Projections MPR 3/20				3.6	3.7	3.4	3.5
Imported consumer goods in the CPI-ATE							
Actual	3.3	3.8	4.6				
Projections MPR 2/20	3.1	3.2	3.8	3.5			
Projections MPR 3/20				4.5	4.5	4.5	4.6
Domestically produced goods and services in the CPI-ATE							
Actual	3.1	3.2	3.2				
Projections MPR 2/20	3.3	3.3	3.0	2.7			
Projections MPR 3/20				3.0	3.2	2.8	2.9

Sources: Statistics Norway and Norges Bank

Table 2b GDP for mainland Norway. Quarterly change. Seasonally adjusted. Percent

	2020			
	Q1	Q2	Q3	Q4
Actual	-2.2	-6.3		
Projections MPR 2/20		-6.1	5.0	
Projections MPR 3/20			5.2	1.3

Sources: Statistics Norway and Norges Bank

Table 2c GDP for mainland Norway. Monthly change. Seasonally adjusted. Percent

	2020						
	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Actual	3.7	1.1					
Projections MPR 2/20	2.8	1.0	1.0	0.9			
Projections MPR 3/20			0.9	0.5	0.3	0.3	0.1

Sources: Statistics Norway and Norges Bank

Table 2d Registered unemployment (rate). Percent of labour force. Seasonally adjusted

	2020						
	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Actual	5.0	4.7	4.2				
Projections MPR 2/20	5.0	4.6	4.2	4.0			
Projections MPR 3/20				3.8	3.8	3.7	3.7

Sources: Norwegian Labour and Welfare Administration (NAV) and Norges Bank

Table 3 Projections for main economic aggregates

Change from projections in *Monetary Policy Report 2/20* in brackets	In billions of NOK 2019	Percentage change from previous year (unless otherwise stated) 2019	Projections 2020	2021	2022	2023
Prices and wages						
CPI		2.2	1.6 (0.0)	3.1 (-0.2)	1.9 (-0.1)	1.6 (-0.1)
CPI-ATE		2.2	3.1 (0.1)	2.3 (-0.3)	1.7 (-0.1)	1.5 (-0.1)
Annual wages		3.5	1.9 (0.0)	2.1 (0.1)	2.3 (0.0)	2.8 (0.0)
Real economy						
Gross domestic product (GDP)	3549	1.2	-1.8 (-0.1)	3.8 (0.0)	2.9 (0.1)	1.9 (-0.1)
GDP, mainland Norway	3039	2.4	-3.6 (-0.1)	3.7 (0.0)	2.7 (0.2)	1.8 (-0.2)
Output gap, mainland Norway (level)		0.2	-3.4 (0.2)	-1.8 (0.0)	-0.6 (0.2)	-0.2 (0.0)
Employment, persons, QNA		1.6	-2.0 (-0.2)	0.5 (0.4)	1.7 (-0.2)	1.0 (-0.3)
Registered unemployment rate (level)		2.3	5.0 (0.0)	3.2 (0.0)	2.7 (-0.1)	2.5 (-0.1)
Demand						
Mainland demand	3209	2.2	-4.9 (-1.6)	5.0 (0.4)	3.8 (0.5)	2.6 (0.1)
– Household consumption	1598	1.6	-7.5 (-2.3)	7.7 (1.4)	5.4 (1.1)	3.2 (0.1)
– Business investment	335	5.6	-12.6 (1.7)	-7.6 (-3.7)	5.8 (-0.2)	5.4 (0.7)
– Housing investment	196	-0.9	-5.7 (3.7)	5.3 (3.1)	4.1 (-0.7)	3.3 (0.1)
– Public demand	1079	2.8	1.7 (-2.3)	4.5 (-0.2)	0.8 (-0.3)	0.9 (-0.2)
Petroleum investment	178	12.9	-3.0 (1.0)	-12.0 (-2.0)	-2.0 (3.0)	8.0 (3.0)
Mainland exports	707	5.4	-8.7 (0.4)	2.6 (-2.0)	5.5 (-1.0)	4.2 (-1.2)
Imports	1252	5.2	-12.5 (-3.4)	4.7 (-0.8)	6.7 (0.4)	4.8 (0.0)
House prices and debt						
House prices		2.6	3.7 (1.0)	5.2 (1.2)	3.7 (0.8)	2.6 (0.4)
Credit to households (C2)		5.0	4.8 (0.8)	4.3 (0.0)	4.2 (0.0)	4.2 (0.0)
Interest rate, exchange rate and oil price						
Policy rate (level)		1.1	0.4 (0.0)	0.0 (0.0)	0.1 (0.0)	0.5 (0.0)
Import-weighted exchange rate (I-44) (level)		107.6	115.0 (-1.0)	113.4 (-1.5)	112.3 (-2.0)	111.4 (-2.1)
Money market rates, trading partners (level)		0.5	0.0 (0.0)	-0.2 (-0.1)	-0.2 (-0.1)	-0.1 (-0.1)
Oil price, Brent Blend. USD per barrel		64.4	41.6 (2.1)	45.7 (4.0)	47.9 (3.8)	49.6 (3.4)
Household income and saving						
Real disposable income		2.8	1.5 (1.5)	1.1 (-0.9)	2.0 (-0.6)	2.4 (0.3)
Saving ratio (rate, level)		7.6	14.5 (3.4)	9.1 (1.7)	6.2 (0.3)	5.4 (0.3)
Saving ratio excl. dividend income (rate, level)		3.2	11.0 (3.9)	5.2 (2.0)	2.2 (0.4)	1.6 (0.6)
Net lending excl. dividend income (rate, level)		-2.5	6.4 (3.4)	0.4 (1.2)	-3.1 (-1.2)	-4.0 (-1.5)
Fiscal policy						
Structural non-oil deficit as percentage of GPFG		3.0	3.8 (-0.5)	3.5 (-0.3)	3.4 (-0.3)	3.3 (-0.2)

Sources: Eiendomsverdi, Finn.no, Norwegian Labour and Welfare Administration (NAV), Real Estate Norway, Refinitiv Datastream, Statistics Norway and Norges Bank

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