

## RISK OUTLOOK JUNE 2020



### **Risk Outlook**

Finanstilsynet analyses and assesses stability in the Norwegian financial system. Its assessments are published in the report *Risk Outlook* twice yearly, in June and December.

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Cut-off date: 8 June 2020.

### SUMMARY

The outbreak of covid-19 and measures to limit the spread of the virus caused extensive financial turmoil and a steep decline in economic activity in a number of countries within a short period of time. There was a pronounced fall in oil prices. Norway and several other countries have not experienced a similar decline in production since the 1930s, and unemployment very quickly increased to historically high levels.

In recent weeks, the authorities, both in Norway and in other countries, have gradually reduced their comprehensive containment measures. Businesses have been able to reopen, and many have returned to work. Nevertheless, significant uncertainty attends future economic developments, which will be influenced by factors such as the spread of the virus and government measures to contain infection, the possibility of a vaccine being developed and the duration of behavioural changes triggered by the pandemic.

The corona crisis has already caused a significant loss of income for many individuals and businesses. This is also the case in Norway, although the income loss has largely been borne by the government through its compensation schemes for individuals and businesses. Norway has considerable room for manoeuvre in fiscal policy that can be used to mitigate the economic downturn. Nevertheless, the government cannot be assumed to maintain activity levels and compensate for loss of income in sectors that face lasting production and income losses due to structural changes. Continuing record-low interest rates will make it easier to service loans. In spite of this, many borrowers who experience a lasting shortfall in income will fail to meet their payment obligations.

Although the depth and duration of the crisis are uncertain, it must be taken into account that banks may suffer substantial loan losses in the period ahead when households and businesses do not have sufficient income to service their loans parallel to a fall in collateral values. In the first quarter of 2020, Norwegian banks recorded the highest losses since the banking crisis about 30 years ago.

Norwegian banks are well positioned to absorb higher loan losses. The banks record strong earnings before

losses, which represent their first line of defence, and they are well-capitalised after building up equity in the years following the international financial crisis. In order to avoid that the economic setback is reinforced by restraints on borrowing, it is important that banks have enough equity to cope with large loan losses while being able to extend new loans to creditworthy firms and households.

The banks' capital determines their ability to bear risk. Lower capital requirements may contribute to increasing banks' risk appetite and thus their willingness to lend. However, if lower capital requirements prompt dividend payments and other distributions of equity, the banks' ability to provide new loans will be impaired. In light of the high level of uncertainty and the significant loan losses that may arise, it is therefore crucial that the banks retain their equity in the period ahead rather than make distributions in the form of dividends, etc. The capital requirements should not be further reduced unless this is combined with a requirement that banks retain all capital.

The shock that has now hit the economy and the markets is of a different nature than the shocks that have triggered financial crises in the past. While the international financial crisis led to a strong demandside shock, the world is now also facing supply-side disruptions due to shutdowns and broken supply lines on a scale that has never been seen before. Once again, however, the preceding period has been characterised by strong debt accumulation, increased asset prices and low risk premiums. Government finances are weak in a number of countries, household debt is high, in Norway as well as in certain other countries, and an increasing proportion of corporate debt is taken out by businesses with poor debt servicing capacity.

Global stock markets reacted immediately to the negative outlook. Bank shares were among the most severely affected, including those of Norwegian banks, despite the fact that they were better capitalised and had a stronger liquidity position than prior to the financial crisis in 2008. In the bond markets, the risk premium increased significantly, especially in the highyield segment. For several enterprises it was, in effect, impossible to raise new debt capital. The market reaction in the first weeks of the crisis was stronger than during the international financial crisis in 2008. However, the decline in securities prices has largely been reversed over the past few weeks. The coronavirus crisis and the fall in oil prices will probably affect the Norwegian economy for quite some time. As the consequences spread throughout the economy, a growing number of enterprises are likely to experience payment problems. The number of bankruptcies and liquidations will increase in several industries. Banks provide loans to most industries, and the situation will affect Norwegian banks in the form of lower current earnings and higher loan losses. Loans secured by commercial property represent a significant proportion of banks' corporate loan portfolios. For their part, commercial property companies are exposed to tenants in a number of different industries. Some of these, such as hotels and restaurants, are directly affected by temporary restrictions, while shopping centres and some categories of retail trade may be particularly vulnerable in the somewhat longer term. Increased use of e-commerce may also change the need for commercial premises.

A large proportion of enterprises in the oil service, transportation and other shipping sectors recorded negative operating results even before the onset of the crisis. Several of the largest Norwegian banks have a significant loan exposure to these industries. Low oil prices over a protracted period will further weaken earnings in the oil service industry and increase banks' loan losses.

As a result of strong debt growth over many years, households' debt burden was very high at the start of the crisis, and their vulnerability to declining income was equally high. In addition, housing prices have risen sharply, heightening the potential fall if the crisis eventually causes a turnaround in the housing market. Developments in the financial markets have also reduced the value of household savings in securities, both directly and through pension products, as well as the value of non-financial firms' securities portfolios. Although the authorities' extensive measures and a generally well-developed financial safety net will dampen the consequences of the crisis, a number of households may be strongly affected.

There has been a significant shift in the consumer loan market over the last couple of years. At end-March 2020, the volume of consumer loans to Norwegian customers in the institutions included in Finanstilsynet's survey was almost 10 per cent lower than a year earlier. At the same time, the volume of non-performing consumer loans has increased markedly. The income shortfall resulting from the coronavirus crisis increases the risk that vulnerable households have or will take out consumer loans that they will not be able to service. This could result in a heavy personal burden for these borrowers and in significant loan losses and an impaired reputation for the banks.

The largest Norwegian banks have a high level of debt in the international capital markets and are dependent on well-functioning markets. New liquidity requirements and effective government measures help to reduce the refinancing risk, but increased turmoil may lead to higher funding costs and, at worst, difficulties in raising new capital and refinancing maturing debt.

Finanstilsvnet's stress test for 2020 is based on the challenges faced by the Norwegian economy in the wake of the pandemic and the fall in oil prices. Two possible scenarios have been worked out based on different assumptions about the progress of the pandemic and the design of measures. In the first scenario, it is assumed that the shutdown of Norwegian businesses largely will be lifted at the start of the third quarter. In the second scenario, the consequences for the Norwegian economy are more serious and last longer. Both scenarios show significant losses for the banks. In the most severe scenario, there is a sharp decline in banks' common equity Tier 1 capital ratios, and a number of banks will not meet the regulatory capital adequacy requirements at the end of the stressed period. Consumer loan banks will be particularly hard hit.

The coronavirus crisis affects the insurance industry in various ways. Lower interest rates and a decline in the value of investments contribute to a weaker solvency ratio. Earnings may also be affected as a result of higher claims payments and lower premium income. The insurance industry as a whole has a strong solvency position. The crisis requires that the solvency capital that has been built up is retained in the undertakings for the time being.

Life insurers and pension funds have large securities holdings and were immediately affected by the market turmoil. The value of their equity portfolios fell sharply and quickly during the first quarter, while higher credit risk premiums gave an immediate reduction in the value of corporate bonds. Several pension funds and insurance undertakings chose to scale back their

#### SUMMARY

investment risk, and some pension funds received capital injections to enable them to meet the capital requirement. The weak growth prospects are a factor behind the very low long-term interest rates, which give an increase in the present value of future liabilities and will make it more difficult in the longer term to achieve excess returns for pension funds and life insurers with a large proportion of guaranteed products sold to the private sector.

The market turmoil also caused significant investment losses for non-life insurers during the first quarter of the year. Non-life insurers will also be affected by the coronavirus crisis through increased claims payments in certain lines of business, partly related to travel insurance. In addition, the economic setback may contribute to lower premium income.

The low interest rates heighten the risk that private individuals will be offered savings in more complex products with high underlying risk. Finanstilsynet will focus particular attention on how alternative savings products are marketed in the period ahead.

1.1 Developments in the global economy (GDP)

## CHAPTER 1 ECONOMIC DEVELOPMENTS AND RISK AREAS

The ongoing coronavirus pandemic has led the Norwegian economy into the deepest recession since the Second World War, and the downturn is reinforced by a significant fall in oil prices. Great uncertainty attends future developments. There has been a sharp drop in earnings in vulnerable industries, and unemployment has risen to a very high level. The authorities have implemented massive fiscal policy measures, and the key policy rate has been reduced to zero. Credit growth has slowed. House prices have been relatively stable, but the number of start-up permits for new homes has plummeted. During April and May, there were signs that the steep decline in activity had stopped, both in Norway and in several other countries.

#### **GLOBAL ECONOMY**

#### Abrupt fall in economic activity

In consequence of the coronavirus pandemic in the spring of 2020, the global economy plunged into the deepest recession since the Great Depression in the 1930s. In order to protect vulnerable individuals and ensure that the health care system was able to cope with the increased influx of patients, many countries implemented a number of containment measures that had very negative consequences for the economy. A large number of people were required to stay home, businesses shut down and borders were closed. This resulted in major disruptions to international trade and global production chains. Over the past few weeks, the restrictions have gradually been eased. Economic activity is starting to pick up again, but capacity utilisation is still far below normal levels.

In the face of increased uncertainty and major disruptions in the economy, a large number of investors have looked for safer and more liquid



investments. The risk premiums in the securities market have increased. Many firms have experienced a rise in borrowing costs and reduced access to credit. Unemployment has risen sharply, and corporate earnings have declined. This has heightened the risk of a high level of defaults among households and firms, which may result in credit not being increased or extended. The situation has been exacerbated by a fall in commodity prices, which has a particularly negative effect for commodity exporters.

# Historically sudden and deep decline in economic activity

From January to April 2020, the IMF downgraded its global growth forecast by as much as 6.3 percentage points. Under the assumption that the pandemic peaks in the second quarter and that the recovery starts in the second half of the year, the IMF expects global output to decline by a total of 3 per cent in 2020. This is an unprecedented reduction in output in such a short period of time. The IMF emphasises that there is extreme uncertainty around the forecasts. The most severe collapse in growth has taken place in advanced economies, and the IMF expects total GDP in these countries to fall by as much as 6.1 per cent this year (chart 1.1) in spite of significant fiscal and monetary support measures. See Box 1 for a description of the support measures. With respect to emerging market and developing economies, the IMF estimates a 1 per cent decline in output in 2020.



**1.2 Unemployment in selected countries** 

Source: Refinitiv

Economic developments were weak in several of the countries that are most severely affected by the pandemic even before the pandemic hit. While the IMF expects US GDP to contract by 5.9 per cent in 2020, a decline of as much as 7.5 per cent is expected in the euro area. The steepest reductions are expected in Italy and Spain at 9.1 and 8 per cent, respectively. Output in Germany is assumed to fall by 7 per cent. In both the US and the euro area, unemployment is expected to average 10.4 per cent for 2020. In the euro area, there are wide differences between countries (chart 1.2). The IMF assumes that the unemployment rate in Spain will increase to over 20 per cent in 2020, while unemployment in Germany is expected to rise to 3.9 per cent.

The IMF expects a significant contraction in emerging market and developing economies in 2020, although there are significant variations also among these countries. In China, where the pandemic started, preliminary national accounts figures show that GDP fell by 6.8 per cent during the first quarter of 2020 compared with the same period the year before. Shortterm indicators suggest that activity is starting to pick up in the second quarter. The IMF estimates Chinese economic growth of 1.2 per cent in 2020. This is considerably lower than expected at the turn of the year, but China, together with India, is one of the few countries with an expected rise in output this year. In all other regions, major reductions in GDP are expected.



Figures as at 8 May 2020. Sources: IMF and Ministry of Finance

#### Box 1:

# Government measures to counter the negative consequences of the coronarvirus pandemic

The authorities in most countries have taken strong measures to limit the negative economic impact of the pandemic. In some respects, the design of the measures varies greatly, which to some extent reflects the countries' government finances prior to the crisis. Countries with strained public finances have largely provided support in the form of loans and guarantees, while countries with a more favourable starting point have also applied budgetary measures (chart 1.A).

#### Fiscal policy measures

- Government loan or guarantee schemes Most advanced economies have introduced loan and guarantee schemes to ensure vulnerable firms access to credit.
- Compensation schemes for the most severely affected firms Several countries have introduced comprehensive compensation schemes aimed at industries that are strongly affected by the crisis, especially small and medium-sized enterprises.

- *Temporary tax deferral and relief* A number of countries have introduced tax deferral and/or relief to ease firms' liquidity constraints.
- Income support scheme for employees who have been laid off or made redundant
   Many countries have implemented or expanded schemes to compensate affected employees. In addition, a number of countries have removed qualifying days of sickness and introduced means-tested cash transfers.
   Some measures also reduce firms' costs by making it easier to customise production.

#### Monetary policy and liquidity measures

- Lower key policy rates Several central banks have lowered their key policy rates in recent months, including central banks in the US, UK, Australia and Canada. In the euro area, the key policy rate has long been negative, and the European Central Bank (ECB) has not lowered it further.
- Increased securities purchases
   The ECB has announced that it will increase
   securities purchases through established
   programmes and undertake temporary
   pandemic-related auctions. The Federal
   Reserve has stated that it will buy an un limited number of Treasury securities and
   secure the supply of credit through various
   central bank lending facilities.
- *Collateral easing for central bank loans* Among other things, the ECB has expanded the scope of securities accepted as eligible collateral. In order to mitigate the negative effects of rating downgrades, the ECB will, until September 2021, accept securities rated below BBB-.

#### Macroprudential measures

- Reductions in banks' capital and liquidity requirements
   The ECB Banking Supervision has temporarily reduced the capital (Pillar 2 capital, capital conservation buffer) and liquidity (LCR) requirements for systemically important banks.
- Change in requirements for impairment losses The ECB has temporarily suspended the general requirement for banks to record provisions on non-performing loans with respect to loans that are under public guarantees as a result of the pandemic or under the public moratorium related to Covid 19.
- Request to refrain from dividend and bonus distributions
   The European Banking Authority (EBA), the ECB and several national authorities have urged banks to refrain from making dividend distributions and performing share buybacks in order to increase their ability to absorb large losses and still be able to offer loans to creditworthy firms and households.
- *Relief in countercyclical buffer* Several countries have reduced their countercyclical capital buffer requirement.

In its main scenario, the IMF assumes that the pandemic will peak in the second quarter of 2020 and that economic growth will rebound to 5.8 per cent in 2021. As containment measures are scaled down, activities will resume in most areas. For advanced economies, the IMF expects GDP growth of 4.5 per cent in 2021, while growth in emerging market and developing economies are forecast at 6.6 per cent. The IMF estimates a combined output shortfall in the global



#### 1.3 10-year government bond yields

Source: Refinitiv





Source: Refinitiv

economy of USD 9,000 billion for the years 2020–2021. This represents approximately 10 per cent of global GDP.

The IMF expects GDP growth of 4.7 per cent in 2021 for both the US and the euro area. A fall in unemployment to 8.9 per cent is anticipated in the euro area, but there will still be large differences between countries. In Germany, unemployment is estimated at 3.5 per cent, while unemployment in Spain is expected to be 17.5 per cent. In the US, the IMF expects unemployment to reach 9.1 per cent in 2021.

# The pandemic has profound impacts on financial markets

The year 2020 started with optimism in the financial markets as a result of a more expansionary monetary policy in many countries, less tensions in international trade and an impending upturn in the global economy. However, as the coronavirus spread, market uncertainty increased parallel to a sharp drop in prices of equities and corporate bonds and rising volatility.

Ever since the international financial crisis ten years ago, the financial markets have been characterised by very low interest rates. The room for manoeuvre in monetary policy was therefore limited when the pandemic hit the global economy. Nevertheless, several central banks lowered their key policy rates in March. At the same time, massive liquidity and fiscal policy measures were implemented; see the account in Box 1.

The pandemic led to a significant increase in uncertainty in the financial markets. The risk premium on corporate bonds increased sharply, especially for firms in sectors that were believed to become severely affected by the pandemic and the containment measures, and for firms with weak underlying earnings. The public support measures contributed to heightened concern about developments in public debt and pushed up yields on long-term government bonds in the first half of March (chart 1.3). However, as risk appetite declined, secure government bonds became more attractive. This contributed to an increase in the price of US, German and UK government bonds, causing renewed downward pressure on yields from mid-March. During the spring, yields on long-term government bonds have been relatively stable.

Investors' need to reduce portfolio risk resulted in a sudden and sharp stock market fall (chart 1.4). At the same time, volatility rose to around the same level as during the 2008 financial crisis. The fall in equity prices was particularly pronounced for the sectors that were hardest hit by the pandemic, such as aviation, transportation, tourism and hotels and restaurants. The prices of bank shares also declined significantly more than the market in general. The fall in oil prices also contributed to a major reduction in equity prices of companies in the petroleum industry. From mid-March, equity prices have risen. See a further account of the financial markets in chapter 4.

#### **Plunging commodity prices**

The significant decline in production and demand has resulted in falling prices of a range of commodities. There has been a particularly large reduction in the price of oil, which was exacerbated in early March by the disagreement on production cuts between the OPEC countries and Russia. Most of the oil storage capacity is land-based and gradually became very limited in various parts of the distribution chain. During the spring, ever more expensive storage facilities had to be taken into use, and storage costs, for example on tankers, increased significantly. There are extensive costs associated with production shutdowns, and some contractors for deliveries in the US chose to sell the oil at negative prices in order to maintain production. In April, agreement was reached between OPEC and a number of other countries to reduce production. This has somewhat improved the balance in the oil market, and prices are on the rebound (chart 1.5).

The prices of other commodities of significance to the Norwegian economy are also affected by lower production and demand in many countries. Thus far this year, the price of aluminium is down close to 12 per cent. After a sharp fall in mid-March, salmon prices have risen significantly in recent weeks and were some 15 per cent lower at the beginning of June than at the beginning of the year.

#### High risk of a deeper and more prolonged setback

The IMF's baseline scenario assumes that international growth will start to pick up in the second half of 2020. At the same time, the IMF points out the high risk of a more prolonged decline. The economic effects of the pandemic, measures to limit infection and uncertainty about its future pathway may cause increased pessimism, public unrest and a lack of confidence that the measures will have an adequate effect to contain the virus. This may affect the behaviour of households and businesses, leading to lower than expected investments and consumption.

#### 1.5 Prices of oil, aluminium and salmon



Source: Refinitiv

In order to quantify the uncertainty, the IMF has designed three scenarios, all of which provide weaker growth than the baseline scenario. In the first scenario, it is assumed that the measures taken to contain the pandemic will last roughly 50 per cent longer than in the baseline alternative. The second scenario assumes a new, somewhat milder wave of infection in 2021. The third scenario is a combination of the first two.

In the IMF's first scenario, global output is assumed to bottom out in 2020, and economic activity will be 3 per cent lower than in the baseline forecast. The decline is broadly similar for advanced and emerging market economies. In the longer term, developments in emerging economies will be somewhat less favourable due to weaker government finances. If there is a second outbreak of the virus in 2021 (scenario 2), global output is forecast to reach a low in 2021, and economic activity will then be around 5 per cent below the baseline. In the third scenario, global output is estimated to be about 8 per cent below the baseline at its lowest point in 2021.

#### **Global economy is highly vulnerable**

The pandemic has struck at a time of high vulnerability in the global economy. The low interest rate level over the past ten years has encouraged borrowing in both the public and private sector and risk taking among investors. Total global debt is at a very high level by historical standards, and higher than before the financial crisis. In advanced economies, debt levels



Source: Bank for International Settlements (BIS)

1.7 Global issuance of loans to firms with high debt and low creditworthiness



were relatively stable from 2011 to 2019, while there was a sharp increase in emerging market economies (chart 1.6).

The quality of debt in non-financial firms has deteriorated over the past three years. This must be viewed in light of a sharp increase in lending to and bond issues in firms whose debt servicing capacity has been poor for years (chart 1.7). In view of significantly lower economic activity and increased risk premiums, financial institutions that have extended the loans and investors who have bought the bonds may have to record sizeable losses. The IMF expresses strong concern about the debt levels of non-financial firms, especially in the US and China. 1.8 Public debt



In advanced economies, public debt as a share of GDP increased significantly in the years after the financial crisis (chart 1.8). This contributed to the debt crisis in several European countries. Over the past few years, most of these countries have succeeded in stabilising their public debt. However, the measures initiated in 2020 to counteract the economic setback resulting from the containment measures will cause a new strong increase in public debt. Nevertheless, there are wide differences between countries. The IMF expresses particular concern about the public debt in the euro area and in a number of emerging economies.

Unlike the crisis in 2008-2009, which originated in the financial sector, the immediate effect of the pandemic has been a sudden halt in output and demand in a number of industries in several countries. This has had a pronounced effect on the commodity and financial markets. If the problems in the real economy spread to the financial sector, the crisis may be deeper and last longer than expected. High debt levels in both households and firms in many countries has increased the vulnerability of the global economy. At the same time, banks are better capitalised and more liquid than prior to the financial crisis. However, the IMF points out that substantial losses in the securities markets and on loans may force banks in some countries to curb lending growth. This may contribute to amplifying and prolonging the economic downturn. The concern relates mainly to China, but also to some countries in the euro area.

In recent years, the international economy has been marked by trade conflicts, especially between the US and China. The US has also introduced trade restrictions that affect a number of other countries and regions. Towards the end of 2019, there were signs that trade tensions had eased somewhat, but the pandemic has triggered an escalation in the level of conflict between the US and China. In addition, disruptions in global production chains have highlighted that the production of vital input factors by a small number of countries, including China, represents a significant vulnerability. Several countries are debating whether national self-sufficiency should be increased. This debate has led to uncertainty about the further development of global production chains and international trade.

#### The Norwegian economy may be strongly affected

Norway has an open economy that is vulnerable to disruptions in the global economy. Close to 80 per cent of Norwegian exports goes to the EU, and the pandemic has hit several EU countries hard. Thus far this year, there has been a significant decline in exports of traditional goods. In addition, there are major disruptions in the supply chains, which will have a negative effect on Norwegian production, exports and imports.

The IMF expects international trade to decline by 11 per cent in 2020. Norwegian exports accounted for close to 43 per cent of GDP for mainland Norway in 2019. A reduction in international trade will result in a major weakening of Norwegian exporters' earnings and have a negative impact on many industries, including oil service, shipping and seafood. Low oil prices will give a substantial reduction in income for Norwegian businesses and the Norwegian government. A sharp drop is expected in North Sea investments, resulting in lower activity in the oil service industry, which is already under pressure.

Owing to the coronavirus pandemic, the krone exchange rate depreciated sharply from an already weak level. Although the exchange rate has appreciated somewhat lately, it remains weaker than at the start of the year. This is positive for export industries and import-competing firms, and may help to alleviate the setback, for example in the tourism industry when the travel restrictions are removed. However, it is uncertain how interested foreign tourists will be in travelling in the future. Norway also imports large volumes of both investment and consumer goods, and the weaker krone exchange rate contributes to pushing up prices of such goods. The fall in energy and commodity prices drives down import prices. In aggregate, however, prices of imported consumer goods must nevertheless be expected to increase in the period ahead. Just over 60 per cent of the goods purchased by Norwegian households are imported.

Overall, the serious consequences of the pandemic for the global economy will provide a strong negative impetus to the Norwegian economy, although there will be varying effects for different sectors. A major decline is expected in the petroleum and supplier industries. Disruptions in the supply chains will have scarring effects on parts of the industry. Tourism, transportation and hotels and restaurants are likely to be severely affected.

#### NORWEGIAN ECONOMY

#### Abrupt turnaround in the economy

Even before the outbreak of the virus, growth in mainland GDP had slowed somewhat, and overall growth in 2019 was 2.3 per cent (chart 1.9). In the first quarter of this year, mainland GDP fell by 2.1 per cent, seasonally adjusted, compared with the previous quarter. The outbreak of the virus, combined with wide-reaching measures to contain its spread, has taken a severe toll on economic activity. Coupled with the sharp fall in oil prices, there has been a double shock for the Norwegian economy.

The sudden slowdown in the economy has affected industries in very different ways. Some industries experienced that their operations were almost completely shut down for a period, while others were able to maintain activity levels and turnover to a greater extent. A moderate increase was recorded in the turnover of products for home entertainment as well as house and garden upgrades.



**1.9 Growth in GDP for mainland Norway** 

\* Average of the forecasts. Sources: Statistics Norway, Norges Bank and Ministry of Finance

#### 1.10 Registered unemployment



Number of registered unemployed as a proportion of the workforce. Source: NAV

In spite of the powerful measures implemented by the authorities, the economic crisis is likely to lead to an increase in the number of liquidations. At end-May, no rise had been registered in the number of initiated liquidation proceedings. However, there is normally a considerable lag from the time a firm experiences problems until it becomes insolvent and eventually goes into liquidation.

Parallel to the shutdowns, there has been a very sharp increase in the number of laid-off and unemployed persons. At end-May, unemployment registered by the Norwegian Labour and Welfare Administration (NAV) was 6.4 per cent of the labour force, which is high by Norwegian standards (chart 1.10). The high number of layoffs is due to containment measures, whereby some firms were ordered to close, parallel to an abrupt fall in turnover in a number of firms. In addition, the authorities introduced measures that made it easier for firms to resort to layoffs faster than would otherwise have been the case. This year's wage settlement has been postponed until August. Weaker profitability and high unemployment indicate that real wage growth will be low in the period ahead. Growth in consumer prices is dampened by falling energy prices, while the weak krone exchange rate has the opposite effect.

A number of the containment measures have recently been scaled down. A gradual reopening of society is expected to give a boost to economic activity in a number of industries in the coming period.

#### Powerful government measures curb the setback

Strong fiscal and monetary policy measures help to mitigate the economic consequences of the virus outbreak. Although it will be severe, effective countermeasures may limit the scale and duration of the economic downturn as viable businesses will weather the crisis and the rise in long-term unemployment will be curbed. This may mitigate the risk of more prolonged and negative consequences for future production capacity.

The government has implemented a wide range of economic measures and measures targeting special industries, firms and individual groups that are particularly hard. The measures are organised in three phases. The first phase was about solving acute financial challenges at an early stage of the crisis, such as securing income and liquidity for workers and firms to avoid mass dismissals and bankruptcies. Phase two included a new compensation scheme for businesses, as well as an extension of the guarantee scheme for loans to small and medium-sized enterprises. Phase three includes broader measures to increase the level of economic activity once the spread of the virus is slowing and restrictions are lifted.

In Proposition 127 (2019-2020), presented on 29 May, the structural oil-adjusted budget deficit in 2020 is

1.11 Norges Bank's key policy rate

estimated at NOK 424.6 billion. The budget stimulus corresponds to 5.3 per cent of value creation in the mainland economy. New government loan and guarantee schemes have also been established with a total limit of NOK 130 billion, aiming to improve businesses' access to liquidity.

Norges Bank has reduced its key policy rate by a total of 1.5 percentage points, to 0 per cent (chart 1.11). The Norwegian key policy rate has never before been at such a low level. Norges Bank has also implemented various measures to improve liquidity in the Norwegian money market and to ensure that the key policy rate passes through to money market rates and banks' lending rates. Among other things, Norges Bank offers banks extraordinary F-loans, fully allotted at preannounced interest rates. Norges Bank has also offered banks F-loans in US dollars and entered into an agreement with the Federal Reserve to establish temporary liquidity arrangements (swap lines) to improve US dollar liquidity in the markets.

The Norwegian krone depreciated sharply in March as a consequence of significant economic uncertainty and lower oil prices, reaching a record-low level against several other currencies. In order to promote a wellfunctioning NOK market, Norges Bank has made extraordinary NOK purchases. In addition, NOK purchases on behalf of the government have increased significantly. The exchange rate has gradually appreciated during the spring, but remains weaker than at the turn of the year.

On the advice of Norges Bank, the Ministry of Finance has reduced the countercyclical capital buffer requirement from 2.5 per cent to 1 per cent; see account of capital adequacy in chapter 2.

#### **Forecasts downgraded**

The uncertainty surrounding the economic outlook is unusually high. Norges Bank's latest estimate entails a fall in mainland GDP of 5.2 per cent in 2020. Statistics Norway expects a decline of 3.9 per cent, while the Ministry of Finance estimates a reduction of 4.0 per cent. Economic activity is expected to pick up as the containment measures are scaled back. For 2021,



Source: Norges Bank

Norges Bank expects an increase in mainland GDP of 3.0 per cent, while Statistics Norway estimates growth at 4.3 per cent. It will probably take a long time for the economy to return to normal capacity utilisation.

Even though more restrictions will gradually be lifted and society once again will approach normal activity levels, parts of the business community are likely to remain exposed to the longer-term effects of the pandemic. Strong dependence on international production chains, combined with low inventories, will expose a number of industries to delivery problems and disruptions in international trade patterns. Although Norway has relatively good control of the contagion, a number of its trading partners are more severely affected. Prolonged shutdowns in other parts of the world could have a major impact on Norwegian exports and imports. The pandemic may also lead to lasting changes in consumer behaviour and consumption patterns. Fiscal policy measures will not be sufficient to keep up activity levels in sectors that are facing more fundamental structural challenges.

The Norwegian economy is strongly influenced by developments in the petroleum industry. Lower demand and the fall in oil and gas prices affect oil companies' investment plans, and petroleum investment looks set to decline significantly. This has a negative impact on activity in all oil-related industries. Production cuts of 250,000 barrels per day have been announced for June. This corresponds to 13 per cent of



1.12 Growth in households' debt and disposable income

Source: Statistics Norway





Sources: Statistics Norway and Finanstilsynet

total oil production in Norway and is the first production cut in 18 years. For the rest of the year, the cut in production will amount to 134,000 barrels per day. In addition, production starts at several fields will be postponed until next year.

#### Continued high household debt burden

For many years, the increase in household debt has far outstripped the growth in household income (chart 1.12). A high and rising household debt burden has long been regarded as one of the greatest vulnerabilities of the Norwegian economy (chart 1.13). Unlike many other countries, the debt burden has risen further in Norway over the past decade. Over the past couple of years, households' debt burden, measured by





Debt in households with debt exceeding five times income after tax, measured as a proportion of households' total debt. Distributed by the age of the main income earner. Sources: Statistics Norway and Finanstilsynet

the ratio of debt to disposable income, has levelled off at 232 per cent. Owing to the low interest rate level, the interest burden is nevertheless low (chart 1.13).

There has been an increase in the proportion of households with a high debt burden. In 2018, 11.5 per cent of households had debt exceeding five times net income, and the debt of these households accounted for one third of total household debt. There has been an increase in all age groups (chart 1.14). A natural consequence is that many households are currently in a situation where they are particularly vulnerable to income declines and increased borrowing costs. Due to a record number of layoffs and weak prospects for the Norwegian economy in the near future, a large number of borrowers may have trouble servicing their debt in spite of lower average lending rates. This is especially true for borrowers with high consumer debt. The proportion of non-performing loans in consumer loan banks has risen substantially lately. Read more about consumer loans in chapter 2.

Lower wage growth and high unemployment indicate a weaker development in households' disposable income in the period ahead. When the containment measures were introduced, there was a sudden drop in household consumption. In spite of the fact that both Statistics Norway and Norges Bank expect strong consumption growth in 2021, it may take time for consumption to be back at pre-virus levels. Containment measures and increased financial uncertainty may prompt increased saving.

# Continued growth in house prices, but lower activity

Over the last couple of years, there has been a moderate rise in house prices, which were up 2.6 per cent in 2019. Deflated by disposable income per capita, the price level is high compared with other countries (chart 1.15). In the wake of the significant measures to contain the spread of the virus, seasonally adjusted house prices fell somewhat in both March and April this year. However, house prices rose again in May, probably helped by the gradual reopening of society, fiscal stimulus and record-low interest rates.

However, there has been a sharp drop in activity in the housing market over the past few months. Thus far this year, the reductions in the number of homes sold and the number of homes put up for sale are 5.5 and 7.3 per cent, respectively, compared with the corresponding period of 2019. A significant drop in the sale of new homes could contribute to a significant decline in housing investment this year. The number of startup permits for new homes fell by more than 21 per cent in April.

Forecasts for house price developments vary. Increased unemployment and greater concern about personal finances may reduce the demand for loans and housing. Surveys from Prognosesenteret show that a large proportion of households believe that prices will decline ahead and want to sell before they buy. On the other hand, the government compensates for much of households' loss of income, and interest rates look set to remain very low, which stimulates households' borrowing and house purchases.

Norges Bank's lending survey for the first quarter showed that households' demand for loans declined slightly already in the first three months of the year. Banks expect overall demand for residential mortgages in the second quarter to show the most pronounced decline since the financial crisis. A certain



1.15 House prices deflated by disposable income per capita. Selected countries



tightening of banks' credit standards was also expected. The housing market is important for the banks, as residential mortgages represent more than 60 per cent of their total lending to Norwegian customers.

In order to better enable banks to help vulnerable customers through the crisis, the Ministry of Finance, on the advice of Finanstilsynet, decided to temporarily increase the flexibility quotas in the residential mortgage regulations to 20 per cent. Furthermore, banks have been allowed to grant deferral of interest and instalment payments for up to six months without this being considered a new loan.

#### **Greater uncertainty for commercial property**

Commercial property accounts for the largest proportion of banks' lending to non-financial firms, and developments in this industry are therefore of vital importance to the banks.

Commercial property prices have risen significantly in recent years. Companies that own commercial property are often exposed to a number of other sectors through the rental of shop premises, offices and warehouses. Lower economic activity could impair these firms' earnings, thereby reducing the value of banks' collateral. Companies with a high exposure to sectors that are most severely affected by the coronavirus crisis, such as hotels, tourism and parts of retail



1.16 Commercial real estate. Transaction volume and average cost per transaction

1.17 Interest-bearing debt (IBD) and net operating earnings in per cent of operating income. Norwegian non-financial firms excl. 'oil and gas extraction' 2018





trade, are particularly at risk. Changes in consumer behaviour, for example more people resorting to e-commerce, may also influence the need for commercial premises. Other core activities, such as government buildings, rental apartments and grocery stores, are less affected. In response to the negative market developments, some commercial property companies have already written down property values in their accounts.

Commercial property sales remained high in 2019 (chart 1.16). Activity was brisk at the start of 2020, but is expected to slow somewhat in the second quarter. There are extraordinarily large variations in expectations for the future. As a result of substantial uncertainty about the economic outlook, some property investments will be postponed. In addition, access to financing could be a limiting factor. Higher risk contributes to a rise in required rates of return on investments, although this is partially offset by lower interest rates. See the next paragraph and chapter 2 for a further account of commercial property.

#### **Reduced earnings in non-financial firms**

The Covid-19 pandemic and the fall in oil prices have resulted or will result in a substantial reduction in earnings in many industries in Norway. Earnings from ordinary operations are of vital importance to firms' long-term financial performance. Earnings from ordinary operations can be defined as operating income less expenses for the purchase of goods and services, wage costs and other operating expenses. Net interest expenses must also be paid. In addition, the firm must invest in production equipment or other assets.

Recorded ordinary depreciation and write-downs are an indication of annual investment needs, assuming roughly unchanged future activity levels. Investment needs must be financed either through operations, by new equity and/or through borrowing. Loans must usually be repaid in whole or in part over time. Operating income minus operating expenses, net interest expenses and ordinary depreciation and write-downs is hereafter referred to as net operating earnings.

#### Major challenges in a number of industries

There were significant inter-industry differences in net operating earnings at year-end 2018 (chart 1.17). In 'oil service' and 'shipping', net operating earnings were negative in 2018, while they were just on the positive side for 'land and air-based transport' and at relatively low levels in relation to operating income in some other industries. However, several industries recorded strong positive net operating earnings in 2018. Developments in the Norwegian economy, selected interim accounts and other information indicate that, on average, the situation did not change much for most industries through 2019. The figures in chart 1.17 can therefore be roughly regarded as the

Source: Finanstilsynet

industries' starting point at the onset of the coronavirus pandemic and the oil price crisis.

# High debt in the weakest firms in exposed industries

Creditors' risk of losses is largely related to the financial position of the weakest firms. Chart 1.18 shows the proportion of interest-bearing debt in firms with negative net operating earnings for various industries. The chart also shows the proportion of interest-bearing debt in firms with both negative net operating earnings and negative recorded equity.

At year-end 2018, firms with negative net operating earnings accounted for 63 per cent of interest-bearing debt in the 'oil service' industry, while firms with both negative net operating earnings and negative recorded equity accounted for 31 per cent. The preliminary financial statements of a selection of listed oil service companies showed continued weak debt servicing capacity in 2019, with the exception of seismic companies, whose debt servicing ability improved.<sup>1</sup> Oil investments on the Norwegian shelf are expected to fall sharply over the coming years.<sup>2</sup> It is therefore realistic to assume that the proportion of interestbearing debt in firms with negative net operating earnings and negative recorded equity within 'oil service' will increase further. 'Oil service' is also facing significant long-term challenges as a result of various climate measures.

The proportion of interest-bearing debt in firms with negative net operating earnings is also high in a number of other industries. Approximately 19 per cent of interest-bearing debt in all industries is in the three weakest industries: 'oil service', 'shipping' and 'land and air-based transport'. At year-end 2018, the proportion of interest-bearing debt in non-financial firms with negative net operating earnings totalled 20 per cent.

Finanstilsynet has developed an indicator of default that captures important elements of the firms' debt servicing capacity, liquidity and financial position. This indicator forms the basis for the distribution of 1.18 Proportion of interest-bearing debt (IBD) in firms with negative net operating earnings and negative equity. Norwegian non-financial firms excl. 'oil and gas extraction' 2018



■ IBD in firms with negative net operating earnings in per cent of IBD in the industry

■ IBD in firms with negative net operating earnings and negative equity in per cent of IBD in the industry Source: Finanstilsvnet

# 1.19 The default indicator is weighted by the industry's debt to Norwegian banks and branches of foreign banks. Norwegian non-financial firms excl. 'oil and gas extraction'. As at 31 Dec. 2019



Source: Finanstilsynet

total loan losses in Finanstilsynet's stress test; see chapter 5.

This default indicator gives a slightly different classification of credit risk than the indicators in charts 1.17 and 1.18. However, 'oil service' is still by far the most risk-exposed industry, while 'fishing and hunting' and 'electricity and water supply' are the least riskexposed industries (chart 1.19).

It is highly uncertain how firms in the various industries have developed so far in 2020 and will develop in the future. Some industries appear to be doing well, such as 'food and consumer staples'. However, this industry represents a small proportion of total interest-bearing debt. The largest industry in terms of interest-bearing debt is 'commercial real estate'. This industry, whose main business is property rental, is is dependent upon tenants' ability to pay rent. If the negative trend experienced by many tenants continues, an increasing number will gradually have difficulty paying rent. Furthermore, many tenants may go bankrupt or be liquidated, while others may be forced or want to reduce their demand for commercial property. Such a development could result in a sharp fall in rental management companies' rental income and property values. If most industries, including 'commercial real estate', are severely affected and the situation persists, loan losses may turn out to be very high. See chapter 5 for a more detailed analysis.

# DIGITALISATION AND FINANCIAL INFRASTRUCTURE

The digitalisation of financial services has significant benefits for users and society, but can also give rise to new risk areas affecting financial stability. The scale of cyberattacks is increasing year by year and comes in addition to vulnerabilities related to unintentional information leaks and ICT-related operational incidents. The coronavirus crisis has further highlighted the security aspects of the use of ICT and new payment solutions. As a consequence of extensive home office arrangements and social distancing, the use of digital communication channels has increased, as have both e-commerce and contactless payments.

In 2019, a 28 per cent increase in losses from payment card fraud was registered compared with 2018, with the most pronounced increase in fraudulent use of card details in online transactions. There has also been a significant increase in social engineering fraud, such as CEO fraud, change of payee account and investments in fake companies.

The Norwegian financial infrastructure is robust, and so far there have been no major incidents related to ICT with consequences for financial stability. Firms have reinforced their defences against cybercrime, and attacks are generally averted before they have serious consequences. During the coronavirus crisis, Finanstilsynet and the Financial Infrastructure Crisis Preparedness Committee (BFI) have paid particular attention to firms that support critical social functions. Good emergency response plans have enabled firms to maintain good control of their operational situation and to quickly take the required measures.

For more information, see <u>Risk and Vulnerability</u> <u>Analysis</u>, published on 14 May 2020.

### **CHAPTER 2 BANKS**

The coronavirus pandemic and measures to limit contagion caused substantial financial market turmoil in March and an abrupt and sharp fall in economic activity in both Norway and several other countries. In the first quarter of 2020, Norwegian banks recorded the highest losses since the banking crisis about 30 years ago. Pre-tax profits were almost halved compared with the same quarter last year. Every seventh Norwegian bank recorded a net loss for the first quarter.

At the onset of the coronavirus crisis, Norwegian banks were profitable and fulfilled capital adequacy and liquidity requirements. They were therefore well positioned to face market turmoil and increased losses. Considerable uncertainty attends future economic developments, but the possibility of a deep and prolonged economic downturn must be taken into account. In such case, banks may suffer extensive loan losses. Operating profits before loan losses may also decline during the coming quarters. Among other things, the low interest rate level will put pressure on banks' net interest income, which constitutes the pre-dominant part of Norwegian banks' operating income.

Banks' financial soundness is crucial to their ability to absorb large loan losses while providing loans to creditworthy firms and households. Finanstilsynet therefore stresses the importance of banks not paying dividends or making other distributions that will impair their financial strength.

# THE BANKS ARE BETTER POSITIONED THAN BEFORE

#### BANKS' CAPITAL RATIOS HAVE IMPROVED

Banks have strengthened their capital ratios since the financial crisis a decade ago in keeping with stricter regulatory requirements. Norway has seen a strong





Source: Finanstilsynet

economic trend for several years. The banks have enjoyed good profitability, with low loan losses and high net interest income. Their level of capital has improved, mainly through retained profits. A reduction in risk-weighted assets as a result of higher growth in lending to the personal customer market than to the corporate market over a protracted period, and increased use of internal risk models, are other factors behind the higher risk-weighted capital adequacy ratios.

At end-December 2019, the total CET1 capital ratio for Norwegian banks was 18.0 per cent (chart 2.1). The incorporation of the European solvency framework into the EEA Agreement on 31 December 2019 entailed the removal of the Basel 1 floor for banks using the internal ratings based (IRB) approach and the introduction of the SME supporting factor for the calculation of capital requirements for exposures to small and medium-sized enterprises. These two rule changes did not affect banks' actual financial soundness, but contributed to raising their measured CET1 capital ratio by 1.5 percentage points at the end of 2019. The banks had a leverage ratio of 8.0 per cent at year-end 2019, which is a slight increase from the time the leverage ratio requirement was introduced in 2017.

#### CHAPTER 2 BANKS



#### 2.2 CET1 capital ratios as at 31 December 2019

Source: EBA Risk DashboardOBS

2.3 Leverage ratios as at 31 December 2019



Source: EBA Risk Dashboard.

While CET1 capital ratios have contracted in the other large Nordic banks in recent years, Norwegian banks' ratios have widened somewhat and thus were at approximately the same level at year-end 2019 (chart 2.2)<sup>3</sup>. Measured by the leverage ratio, where the exposure measure is not risk-weighted, Norwegian banks' capital adequacy ratios are higher than in the other Nordic countries. Norwegian banks' CET1 capital ratios and leverage ratios are higher than average ratios in the EU. This is partly due to the fact that some major European banks have relatively low capital adequacy ratios, which pulls the average down.

#### LOW LOSSES IN 2019, BUT A HIGH DEFAULT RATE IN SOME INDUSTRIES

Norwegian banks have recorded low loan losses in recent years. In many industries, losses in 2019 were lower than the average for the years 2016–2018 (chart 2.4). The losses were relatively high in oil and offshore-related industries, but low in several of the other industries that are now severely affected by the coronavirus pandemic.

In some industries, the proportion of non-performing loans<sup>4</sup> was relatively high even before the coronavirus crisis (chart 2.5). In the retail trade and oil and offshore-related industries, this share was 7 and 19 per cent, respectively, at the end of 2019. For professional, financial and business services and oil and offshore-related industries, impairment losses came to 39 and 38 per cent of non-performing loans, respectively, in 2019, which is slightly higher than the average for the previous three years for both industries. Loans to these industries are particularly exposed due to the economic downturn and low oil prices.

#### BANKS' RESILIENCE TO MARKET TURMOIL HAS IMPROVED

The banks are required to maintain liquidity reserves sufficient to enable them to honour their commitments in a brief period of limited access to fresh funding. The liquidity reserve, measured by the liquidity coverage ratio (LCR), shall constitute at least 100 per cent of the net liquidity outflow over a given stress period of 30 days, both in total and for each significant currency. At end-February 2020, all Norwegian banks fulfilled the liquidity reserve requirements, both in total and for each significant currency.

A high share of stable funding is important in reducing refinancing risk in the longer term. The banks have increased their share of stable funding measured by the net stable funding ratio (NSFR), and the weighted average NSFR for Norwegian banks was 119 per cent at year-end 2019 (chart 2.6). This is the highest level since the reporting was introduced in 2014. The increase over the period indicates that Norwegian credit institutions have a higher level of stable funding than before. Along with increased liquidity reserves, this makes banks better equipped to face financial market turmoil.

#### THE CORONAVIRUS OUTBREAK CAUSED GREAT MARKET TURMOIL

#### VOLATILE BANK FUNDING MARKET

The banks obtain a substantial share of their funding in the debt securities market in the form of commercial paper and bonds. The financial turmoil triggered by the coronavirus pandemic contributed to a sharp rise in risk premiums on the banks' bond funding in March, to roughly the same level as during the global financial crisis in autumn 2008 (chart 2.7). There was a lower increase in premiums for covered bonds than for senior bank bonds.



#### 2.4 Losses on loans to individual industries





Non-performing exposures 
Impairment losses on non-performing exposures (RHS)

Source: Finanstilsynet









#### 2.7 Risk premiums on bank bonds

#### Source: DNB Markets

#### 2.8 Pre-tax profit and return on equity



Source: Finanstilsynet



### 2.9 Net interest income, operating expenses and loan losses

# MEASURES TO STRENGTHEN MARKET LIQUIDITY

The European solvency framework allows national authorities a certain degree flexibility during particularly volatile periods. As far as the liquidity reserve requirement, LCR, is concerned, institutions in a stressed situation may use the liquidity reserve to cover their liquidity outflow, also in cases where this will make the institution's LCR fall below the minimum requirement. In March, Finanstilsynet announced that this could be accepted in the current situation. If an institution fails to meet the LCR requirement, it must immediately notify Finanstilsynet.

In order to help to ensure sufficient liquidity in the Norwegian money market, Norges Bank has made extraordinary allotments of F-loans to banks since 13 March. The loans are offered with a maturity of up to twelve months, which is longer than normal. The collateral requirements for F-loans have been temporarily changed to facilitate increased use of the scheme. On 19 March, Norges Bank also established a temporary liquidity arrangement with the Federal Reserve to meet the demand for US dollars in the international financial markets.

Finanstilsynet has closely monitored the banks during the coronavirus crisis, and from the second half of March, some Norwegian banks have been required to report their liquidity situation more frequently. Reports from the banks in the sample confirm the impression that Norwegian banks were well prepared to face the market turmoil in March. All banks have met prevailing liquidity requirements and reported stable deposit-to-loan ratios. The monthly reporting of LCR conducted by all credit institutions in Norway has so far shown that all Norwegian credit institutions comply with the statutory requirements.

Risk premiums in the credit market narrowed in late April. In mid-May, they had been roughly halved compared with mid-March. This was partly attributable to the liquidity supply from Norges Bank and other central banks, and the fiscal policy packages targeting firms and households.

# RISE IN LOSSES IN THE FIRST QUARTER OF 2020

# BANKS' PROFITS NEARLY HALVED IN THE FIRST QUARTER OF 2020

There was a sharp reduction in banks' profits in the first quarter of 2020 (chart 2.8). This was primarily due to increased loan losses as a result of the coronavirus crisis and low oil prices (chart 2.9). Another contributing factor was negative (unrealised) changes in the value of equities and fixed-income securities as a result of the market turmoil. Total pre-tax profits came to 0.7 per cent<sup>5</sup> of average total assets (ATA), which was close to half the figure for the corresponding period one year earlier. Return on equity was 6.9 per cent in the first quarter of 2020, down 6 percentage points compared with the year-earlier period. Every seventh Norwegian bank recorded a net loss for the first quarter, including a number of small savings banks.

#### SIZEABLE IMPAIRMENT LOSSES ON LOANS

The reduced activity in many industries has already resulted in significantly higher recorded impairment losses on loans than in the preceding years. For the banks overall, the losses represented 0.9 per cent of loans (annualised) in the first quarter. The fall in oil prices has resulted in weaker profitability in the petroleum sector and affected activity levels in oilrelated industries. The situation is particularly serious in industries that were struggling with overcapacity and weak profitability even before the coronavirus pandemic, such as the supply and rig sectors. Several of the largest banks in Norway still have significant exposures to oil-related industries, although they have been scaled back in recent years, and recorded significant impairment losses on these in the first quarter of 2020. If oil prices remain low, further impairment losses are expected in the period ahead.

As from 2020, all banks are required to assess the need for impairment losses on their loan portfolios in accordance with the international accounting standard IFRS 9. Up until 2019, the standard was followed by banks that present full financial statements according to the IFRS rules, as has been the case for the majority of large and medium-sized Norwegian banks. Figures



#### 2.10 Gross loans distributed according to IFRS 9

Source: Finanstilsynet

#### 2.11 Impairment losses in per cent of loans





for this group of banks show that there was a 3 percentage point rise in the proportion of loans considered to entail increased credit risk in the first quarter, i.e. loans at stages 2 and 3 in IFRS 9, to 10 per cent of total loans (chart 2.10). The sharpest rise was registered for stage 2 loans, i.e. loans with a significant increase in credit risk, but no objective evidence of impairment at the reporting date. This reflects the general uncertainty as to what effects the coronavirus crisis will have on borrowers' debt servicing ability ahead, see box 2. There was a certain decline in accumulated impairment losses as a percentage of stage 3 loans in the first quarter, to 35 per cent (chart 2.11).

# Box 2: IFRS 9 and Covid-19: Banks' accounting treatment of expected credit losses

One of the lessons learned after the international financial crisis was that the banks recorded too low losses and that this was done too late. There has been agreement that banks' impairment losses should be based on expected losses in order to highlight the quality of banks' loan portfolios. IFRS 9, which provides a framework for banks' loss recognition, requires that banks account for expected losses based on the relevant circumstances at the reporting date and expected economic developments. Norwegian banks issuing listed instruments have been required to comply with IFRS as from 1 January 2018; see discussion in Financial Outlook, November 2017. Other Norwegian banks are required to apply IFRS 9 as from 1 January 2020.

Great uncertainty currently attends economic circumstances and prospects. Nevertheless, there is no doubt that Norway, like other countries, has been hit by a severe economic downturn as a result of Covid-19. This means that banks' impairment losses must be based on new scenarios and assumptions. The banks must specifically consider whether the credit risk of individual loans has increased and whether additional impairment losses are required.

In consequence of the coronavirus pandemic and powerful government measures, there is unusually high uncertainty surrounding the future course of the Norwegian and international economy. Consequently, it is challenging to prepare scenarios for use in banks' loss calculations. Forecasts should generally be based on available information from external sources, such as macroeconomic forecasts from Norges Bank, Statistics Norway or other well-reputed institutions. The projections must be unbiased, which means that both a more positive and a more negative development than in the baseline forecast must be taken into account.

Uncertainty about future prospects and assessments of the consequences of the crisis has led to considerable variations in banks' impairment losses in the first quarter of 2020. Finanstilsynet emphasises that the financial statements shall give a true and fair view of the situation and expects banks' boards of directors to make thorough assessments of the need for increased impairment losses in light of the economic situation.

Finanstilsynet also expects the banks to provide transparent information to the market about the assumptions used and how provisions may be affected if assumptions are changed.

# STABLE UNDERLYING OPERATIONS IN THE FIRST QUARTER

Banks' operating profits before loan losses were at roughly the same level in the first quarter of 2020 as in the first quarter of 2019. There was an increase in net interest income, which constitutes about threequarters of total operating income. This was mainly attributable to wider lending spreads and higher lending volumes. The reductions in Norges Bank's key policy rate since mid-March and the sharp fall in money market rates resulted in lower funding costs for banks, but also lower lending rates. Many banks quickly cut their interest rates for personal customers, also for existing loans (banks are obliged to give six weeks' notice of interest rate increases and have traditionally done the same for interest rate cuts).

In recent years, banks' deposit spreads have widened, which has been a key factor behind the rise in net interest income. The level of net interest income has been relatively high in Norwegian banks compared with banks in other European countries. As Norway now also has a very low interest rate level, it may be challenging for the banks to maintain their level of net interest income. The banks' deposit spreads will be particularly vulnerable as market conditions make it difficult to introduce negative deposit rates for customers (chart 2.12). More sluggish lending growth will also contribute to lowering banks' income in the period ahead. Moreover, higher risk premiums on market funding will put net interest income under further pressure.

Commission and fee income from other banking services has increased in line with the general level of activity in recent years and has accounted for about 15 per cent of operating income. Reduced economic activity could contribute to a drop in earnings from payment services, card operations and real estate broking. Norwegian banks have a limited direct exposure to the stock markets, but the sharp fall in equity prices in the first half of March led to capital losses in the first quarter. Parallel to this, higher risk premiums resulted in capital losses on bonds. After the end of the quarter, risk premiums have declined and stock markets have recovered somewhat, whereby the capital losses have been partially reversed.

#### BANKS' PROFITABILITY IS THE FIRST BUFFER AGAINST INCREASED LOSSES

Banks' current earnings represent their first line of defence. Over the past decade, Norwegian banks' average profits before loan losses have represented 1.2 per cent of total assets. This is slightly lower than in the first quarter of 2020 (1.45 per cent). Based on pre-tax profits on a level with the average for the past ten years and stable business volumes, banks will be able to absorb loan losses of around NOK 60 billion before the industry as a whole records net losses and a reduction in equity.

Loan losses of NOK 60 billion correspond to 1.6 per cent of loan volume. In comparison, Norwegian banks recorded loan losses of 0.5 per cent in 2009, triggered by the international financial crisis. We have to go back to the Norwegian banking crisis to find loan losses in excess of 1.6 per cent of loan volume. For the years 1988 to 1993, banks' losses averaged 2.5 per cent of total lending.

#### 2.12 Lending and deposit spreads



Lending spread for banks and mortgage companies. Source: Statistics Norway.

There are wide differences between the banks with respect to both their financial soundness prior to the crisis and how they are affected by the severe downturn. Some banks will draw on equity even if losses represent less than 1.6 per cent of lending. Based on the 2019 results, loan losses equivalent to 1.2 per cent of lending would have resulted in net losses for half of the Norwegian banks.

#### LOWER CET1 CAPITAL RATIO

At-end March 2020, the CET1 capital ratio was 17.4 per cent, compared with 18.0 per cent at the beginning of January. The decline during the threemonth period can largely be explained by an increase in risk-weighted assets, partly due to the weaker krone exchange rate.

Despite the decline in the total CET1 capital ratio in the first quarter of 2020, there was a widening gap between banks' measured capital adequacy and the capital requirements. This is primarily due to the fact that the Ministry of Finance reduced the countercyclical capital buffer requirement from 2.5 to 1.0 per cent in March; see the account in box 3.

The banks' leverage ratio was 7.4 per cent at end-March 2020, down 0.6 percentage points compared with year-end 2019. The reduction can largely be explained by an increase in banks' total assets in reflection of the weaker krone (higher NOK value



#### 2.13 Payout ratio\* in Norwegian banks, 2019

\*Dividends and other distributions (including donations). Source: Finanstilsynet

of loans in foreign currency) and a rise in central bank deposits.

Financial soundness is a prerequisite for enabling the banks to absorb rising losses while providing loans to creditworthy customers. In the current situation, marked by considerable uncertainty about future economic developments, Finanstilsynet believes it is vital that banks' capital level is not impaired by dividend payments, the repurchase of own capital instruments or other distributions.

Several Norwegian banks proposed substantial dividend payments and other distributions based on their sound performance in 2019, referring, among other things, to the fact that they fulfilled the capital requirements by an ample margin due to regulatory changes. In light of the uncertain situation and prospects of significant losses, Finanstilsynet sent a letter to the banks on 16 March, stressing the importance of retaining profits for 2019 and, against this background, asking the banks' boards of directors to reconsider their proposals for dividend payments and other distributions. When most of the banks nevertheless chose to propose dividend payments, Finanstilsynet sent a letter to the Ministry of Finance on 25 March, proposing that the Ministry adopt regulations on a temporary ban on distributions. The Ministry chose not to observe the proposal. In its response letter to Finanstilsynet, however, it clearly stated that it expects financial institutions to postpone the distribution of dividends, etc. until the great uncertainty attending economic developments has been reduced. On 31 March, the European Banking Authority (EBA) urged banks to refrain from dividend distributions and share buybacks in response to the coronavirus crisis. The EBA further stated that, in light of the situation, banks should review their internal remuneration policies and, in particular, ensure that variable remuneration is set at a conservative level.

Several Norwegian banks decided to reduce dividend payments and other distributions for 2019, and some banks postponed the decision to pay dividends, etc. until a later date (chart 2.13). Some banks chose to maintain their original dividend proposal, but have postponed payment due to the uncertainty surrounding economic developments. A total of NOK 5.6 billion has been paid in dividends, etc. thus far this year.

#### Box 3: Countercyclical capital buffer

On the advice of Norges Bank, the Ministry of Finance reduced the countercyclical capital buffer requirement from 2.5 per cent to 1.0 per cent in the first quarter of 2020. In a letter to the Ministry of Finance, Finanstilsynet did not endorse Norges Bank's recommendation and recommended that the countercyclical capital buffer be kept unchanged at 2.5 per cent.

In Finanstilsynet's opinion, Norwegian banks' financial strength and level of profits provided a sound basis for maintaining a satisfactory credit offering to vulnerable customers, even if losses increase substantially. A reduced capital requirement in the form of a lower countercyclical capital buffer does not contribute to improving the banks' financial strength. On the contrary, a lower capital requirement may contribute to gradually weakening banks' financial position as dividends and other repurchase of equity will be higher than in a situation where the capital requirement is not reduced. This would impair the banks' ability to absorb losses.



#### 2.14 Norwegian banks' exposure to various industries (share of total exposure) at year-end 2019

Source: Finanstilsynet

Situations may arise where banks' adjustment to binding capital requirements may cause them to tighten their lending criteria during an economic downturn, thus contributing to exacerbating the setback. In such situations, it is important that the authorities give the banks the opportunity to draw on their capital buffers and, in a worst-case scenario, reduce the buffer requirements.

In Finanstilsynet's assessment, however, Norwegian banks were not in a situation where a reduced buffer requirement was necessary to ensure customers access to credit and necessary payment deferrals. The countercyclical capital buffer requirement may be reduced at any time with immediate effect. In Finanstilsynet's opinion, however, the requirement should be reduced only when such a reduction is necessary to counteract an unfortunate tightening of credit supply, while ensuring that banks' equity is not impaired through dividend payments, share buybacks and other distributions.

### A SEVERE ECONOMIC DOWNTURN MAY CAUSE MAJOR LOSSES

#### A LARGE PROPORTION OF BANK LOANS IS TO EXPOSED INDUSTRIES

At year-end 2019, about 90 per cent of Norwegian banks' exposures granted by (drawn loans, unutilised credit facilities and guarantees) were to non-financial firms in industries that are particularly strongly affected by the coronavirus crisis. There are wide variations in banks' exposure to these industries (chart 2.14). The classification of the individual industries is based on uncertain assessments, and the industries that are believed to be most severely affected were hit hard already from the outset of the crisis. For most industries, the consequences will depend on the duration of the period of restrictions and containment measures.

Commercial real estate loans represent a significant share of banks' lending to non-financial firms. Favourable economic developments in Norway over a long period of time have resulted in high property prices and low losses on banks commercial real estate lending. However, the commercial real estate market is sensitive to fluctuations in economic activity. Finanstilsynet has previously pointed out that a sharp downturn in the Norwegian economy could cause a significant fall in prices of commercial property and



2.15 Market funding of banks and covered bond entities, by type of funding

Source: Finanstilsynet

increased losses in the banks, see also chapter 5 on stress testing of the banks.

Oil-related industries are affected by a sharp fall in oil prices; see chapter 1. Lower activity and profitability heighten the risk of losses. At the end of 2019, the seven largest banks accounted for the major part of the loans granted by Norwegian banks to oil-related industries, and these are thus particularly exposed to losses on loans to this industry.

The very strong monetary and fiscal policy measures that have been implemented reduce the risk of losses in the banks in the short term. Among other things, the guarantee scheme for loans to enterprises and the compensation scheme for businesses that experience a drop in turnover of more than 30 per cent as a result of the coronavirus crisis, will help to mitigate banks' credit risk and to maintain lending to viable businesses. Norges Bank's reduction in its key policy rate from 1.5 per cent to zero per cent provides the basis for reduced borrowing costs for both households and firms.

This year's stress test of the Norwegian economy and Norwegian banks is based on two scenarios for the Norwegian economy from the second quarter of 2020 to the fourth quarter of 2024; see chapter 5. The scenarios present a range of outcomes, from a severe downturn of relatively short duration (scenario 1) to a deeper and more prolonged downturn (scenario 2) and show estimated effects on banks' financial performance and capital adequacy. In scenario 1, only a small number of banks will experience that their CET1 capital falls below the total capital requirement, including buffer requirements<sup>6</sup> and Pillar 2 requirements, during the projection period. In scenario 2, just over half of the banks will have a CET1 capital ratio below the CET1 capital requirement including buffer requirements and Pillar 2 requirements, at year-end 2024. For the banks overall, higher losses on loans to non-financial firms is the main factor behind their impaired financial strength, although increased losses on loans to households (including consumer loans) and a reduction in net interest income also have an impact.

#### DEVELOPMENTS IN THE HOUSING MARKET ARE OF IMPORTANCE TO BANKS' REFINANCING CAPACITY

After the financial crisis, covered bonds have become an increasingly important source of funding for Norwegian banks, and in recent years have accounted for approximately 50 per cent of banks' total market funding (chart 2.15). The use of covered bonds has ensured the banks stable funding with longer maturities at favourable prices. At the same time, housing market developments now have a stronger bearing on banks' liquidity risk. For most banks, covered bonds make up more than 50 per cent of their liquidity reserve.

If the coronavirus crisis triggers a fall in house prices, the value of the cover pool of covered bonds will be reduced, and the banks may, depending on the degree of over-collateralisation and the size of the house price fall, have to replenish the cover pool in order to remain compliant with the asset coverage requirement for the outstanding covered bonds. A fall in house prices could also weaken investors' confidence in covered bonds as an investment object. In turn, this may cause an increase in risk premiums for covered bonds and make it more difficult for banks to use covered bonds as a source of funding in a situation where new funding is needed.

#### Box 4: New resolution tool – MREL

After the financial crisis in 2008, it became more apparent that in order to solve future crises, a redistribution of the burden would be required. Crises should not force bailout, whereby the authorities save banks from collapse by using taxpayers' funds. An alternative solution would be to use bail-in (internal recapitalisation), whereby losses are carried by investors and creditors by writing down or converting their claims into equity. The EU's introduction of bail-in as a possible resolution measure is part of the Bank Recovery and Resolution Directive (BRRD). Pursuant to Section 20-9 of the Financial Institutions Act, Finanstilsynet shall set a minimum requirement for the sum of an institution's own funds and eligible liabilities (MREL). The requirement is set as part of Finanstilsynet's preparation of resolution plans for the institutions.

Pursuant to Section 20-7 of the Financial Institutions Regulations, eligible liabilities shall in their entirety consist of debt instruments with lower priority than ordinary unsecured debt (senior debt), i.e. subordinated debt (Tier 3 or senior non-preferred). Finanstilsynet set nominal MREL requirements for eight institutions in December 2019. No Norwegian banks had issued subordinated bonds at end-May 2020, but some foreign banks have issued subordinated bonds in Norwegian kroner. Prices have ranged between the prices of ordinary senior bonds and subordinated loans. The requirement to use subordinated debt to meet the MREL was originally supposed to be fulfilled by the end of 2022. In light of the demanding market conditions triggered by the coronavirus crisis, Finanstilsynet announced in May 2020 that the deadline for meeting this requirement would be postponed to 1 January 2024. Up until the deadline, senior debt (with a remaining maturity of more than one

year, issued before the decision was made) will be eligible to meet the MREL.

After rising sharply in March, risk premiums in the bond market have been strongly reduced thus far in the second quarter. It is difficult to assess future developments, but risk premiums must be expected to be higher in the period ahead than at the beginning of 2020 for both senior loans and subordinated debt. Internationally, several subordinated debt issues were completed in March and April. An increase in the number of issues in combination with a significant reduction in risk premiums indicates that market conditions have improved. Finanstilsynet also notes that Norwegian banks issued subordinated loans and additional Tier 1 instruments in May. Consequently, there seems to be a basis for issuing subordinated debt.

#### REDUCTION IN CONSUMER LOANS, BUT HIGHER DEFAULT RATES

After several years of strong growth and good profitability, the consumer loan market is now characterised by reduced lending volumes, higher default rates and lower earnings. The 34 institutions included in Finanstilsynet's survey of the consumer loan market experienced a 9.5 per cent decline in lending during the twelve-month period up to end-March 2020 (chart 2.16). The decline became steeper during the coronavirus crisis, and several institutions report a substantial reduction in the number of applications for new consumer loans following the outbreak of the virus. From year-end 2019 until end-March 2020, lending volume was down 6.3 per cent. Adjusted for portfolios sold in the first quarter of 2020, the decline is 5.3 per cent.

Norwegian consumer loan banks included in Finanstilsynet survey had a share of about 30 per cent of lending in Norway at end-March 2020. Other Norwegian banks in the selection had a 34 per cent share, while the share of foreign branches in Norway was 31 per cent (chart 2.17).



2.16 Twelve-month growth in the Norwegian consumer loan market

Sources: Finanstilsynet and Statistics Norway (C2)

### 2.17 Distribution of consumer loans in Norway as at 31 March 2020



Source: Finanstilsynet

There has been a distinct rise in banks' non-performing consumer loans in recent years, despite increasing sales of non-performing loans to finance companies. At end-March 2020, 12.5 per cent of the consumer loans of the institutions in the selection (i.e. institutions providing consumer loans) were non-performing. For the group of Norwegian consumer loan banks, nonperforming loans have increased by 7.1 percentage points over the past year, and by 2.3 percentage points since year-end 2019, to 18.1 per cent of loans at end-March 2020 (chart 2.18). In comparison, 1.0 per cent of all the banks' total loans were non-performing on the same date.



#### 2.18 Gross non-performing loans, 90 days past due\*

\* Gross non-performing loans are total consumer loans in the institutions, including Norwegian institutions' exposures abroad. Source: Finanstilsynet

#### 2.19 Profit trend, consumer lending (annualised)\*



\* The trend in profits refers to total consumer loans in the institutions, including Norwegian institutions' exposures abroad. Source: Finanstilsynet

In recent years, banks that provide consumer loans have sold significant portfolios of non-performing loans to finance companies. From the end of 2019, various market participants have reported that portfolio prices are on their way down. However, there has been no reduction in the volume of portfolios sold in the first quarter of 2020 compared with the first quarter of last year.

Earnings in the consumer loan market have been reduced, and several institutions report net losses. Compared with previous years, lower net interest income and higher loss levels have resulted in a reduction in profits (chart 2.19). Loan losses for all institutions in the sample came to 4.1 per cent (annualised) in the first quarter of 2020, while Norwegian consumer loan banks recorded losses of 5.7 per cent. In comparison, aggregate loan losses for all banks came to 0.9 per cent.

Higher unemployment and lower income as a result of the ongoing coronavirus crisis could mean that more borrowers will be unable to service their consumer loans, thus inflicting additional losses on the banks. The combined effect of more sluggish growth, higher default rates and reduced prices on the sale of nonperforming portfolios could cause a substantial reduction in consumer loan banks' earnings ahead.

### CHAPTER 3 INSURANCE AND PENSIONS

The market turmoil triggered by the coronavirus crisis has caused significant losses for insurance and pension undertakings. Their profit performance and solvency position have been impaired due to a decline in investment values. Falling interest rates are another factor with a negative impact on pension institutions' solvency, contributing to an increase in pension obligations.

Over the past few years, life insurers, pension funds and non-life insurers have strengthened their solvency by increasing their buffer funds and retaining profits. Figures for the first quarter of 2020 show that the coronavirus crisis has a significant negative impact on the pension institutions' returns, profits and solvency. The insurance-related operations of non-life insurers are less affected, although these undertakings have also seen a reduction in financial revenues. There are significant differences between the undertakings. Some pension funds did not meet the solvency capital requirement. After receiving capital injections or scaling back their investment risk, however, they now satisfy this requirement.

There is still considerable uncertainty associated with developments in the Norwegian and international economy and the financial markets. The crisis may result in persistently low interest rates and a fall in the value of the undertakings' investments that will weaken their solvency position. Finanstilsynet and a number of other European financial supervisory authorities have therefore stressed the importance of insurers not making allocations that impair their financial strength in the form of dividend payments or other distributions of profits. The large majority of Norwegian insurers have complied with this request.



### 3.1 Adjusted return on pension institutions' collective portfolios

\*Non-annualised in the first quarter of 2020. Source: Finanstilsynet

#### INSURERS' AND PENSION FUNDS' PROFITABILITY AND FINANCIAL SOUNDNESS

The sharp decline in stock markets in the first quarter of 2020 had a negative effect on pension institutions' profits and buffer capital. Increased credit risk premiums on bond investments was another factor behind the decline in profits. Due to the pension funds' large proportion of equities, profits and adjusted returns were weaker than those of life insurers in the first quarter of 2020 (chart 3.1). Pension funds and life insurers recorded negative adjusted returns of 6.0 and 2.7 per cent (non-annualised), respectively. There was a pre-tax loss of NOK 3.6 billion (-4.0 per cent of average total assets) for pension funds, which is a NOK 6.3 billion reduction in profits compared with the previous year. Overall, life insurers also experienced a significant reduction in pre-tax profits compared with 2019 and recorded a pre-tax loss of NOK 1.5 billion (-0.3 per cent of average total assets).<sup>7</sup>

Thus far in 2020, the risk-free market rate, represented by the 10-year Norwegian government bond yield, has declined from an already low level and was 0.75 per cent as at 5 June 2020. This is significantly lower than insurers' and pension funds' guaranteed rates of return, which were 2.6 and 2.5 per cent,

### 3.2 Developments in the 10-year government bond yield and average guaranteed rate of return



Sources: Finanstilsynet and Norges Bank

respectively, at the end of 2019 (chart 3.2). The lower interest rate level makes it more demanding to achieve the guaranteed rate of return on the collective portfolio. In the first half of 2020, the book returns of life insurers and pension funds were 0.7 and -0.1 per cent (non-annualised), respectively.

The decline in equity prices and increase in credit risk premiums on bond investments also contributed to a negative overall profit performance for non-life insurers (chart 3.3), which recorded a pre-tax loss representing -18.2 per cent of premium income for own account in the first quarter of 2020. In comparison, pre-tax profits in the first quarter of 2019 came to 43.3 per cent of premium income. The coronavirus pandemic has thus far had limited effects on insurance-related operations. The total claims and cost ratio (net combined ratio) improved somewhat in the first quarter, standing at 93.1 per cent, compared with 97.1 per cent in the corresponding quarter last year. More favourable weather conditions during the first months of the year helped to lift profitability.

The financial soundness of insurers and pension funds was impaired in the first quarter of 2020. The solvency ratios of life insurers and non-life insurers were 217 and 221 per cent, respectively, as at 31 March 2020, down 19 and 14 percentage points from 31 December 2019 (chart 3.4). For the pension funds combined, the







#### 3.4 Financial soundness of insurers and pension funds\*



\*Prior to 1 January 2019, there was no requirement for a solvency ratio above 100 for pension funds. The basis of the calculations has also been changed. Source: Finanstilsynet

solvency ratio was 179 per cent, which is 8 percentage points lower than at 31 December 2019.<sup>8</sup>

# IMPACT OF THE CORONAVIRUS CRISIS ON PENSION INSTITUTIONS

#### **INCREASED FINANCIAL MARKET TURMOIL**

At year-end 2019, pension institutions had a total of NOK 2 087 billion under management. The coronavirus pandemic, the shutdown measures implemented by a number of countries and uncertainty about the future led to a sharp decline in equity prices and lower dividend payments, higher credit risk premiums, a



#### 3.5 Life insurers' collective portfolio investments







Source: Finanstilsynet

## 3.7 Life insurers' proportion of equities and share price developments on Oslo Børs



\*Share of total assets prior to 2008. Sources: Finanstilsynet and Oslo Børs. Source: Finanstilsynet and Oslo Børs



### 3.8 Breakdown of pension funds' solvency capital requirement for market risk

lower general interest rate level, a weaker krone exchange rate and tighter liquidity in the currency and securities markets in the first quarter. The proportion of equities in the collective portfolio was reduced in the first quarter of 2020 (charts 3.5, 3.6 and 3.7). When equity prices fell in March, several institutions sold equities to mitigate portfolio risk. Some institutions with sufficient risk-bearing capacity retained their equities during the market volatility in the first quarter.

The solvency capital requirement for equity risk for pension funds was reduced by NOK 15 billion to NOK 31 billion in the first quarter of 2020, constituting 45 per cent of the solvency capital requirement for market risk at the end of the quarter (chart 3.8). Owing to declining values, the sale of equities and a less severe stress assumption in the calculations, the solvency capital requirement for pension funds has been lowered. The solvency capital requirement for equity risk is designed to be reduced after a period of falling prices, thus aiming to limit institutions' sale of equities during an economic downturn, which could otherwise have amplified the fall in prices. In the calculation of the solvency capital requirement as at 31 December 2019, it was assumed that prices of listed equities in OECD countries could fall by 39 per cent during a period of severe stress. In consequence of the sharp drop in prices in the first quarter, the stress assumption for the solvency capital calculation as at
31 March 2020 was reduced to 29 per cent, which in isolation led to lower capital requirements at the end of the quarter.

Strong monetary policy measures to counteract the coronavirus crisis have contributed to markedly lower interest rates; see chapters 1 and 4. Low interest rates give a rise in the value of pension obligations, as future obligations are discounted at lower interest rates. When valuing insurance obligations, insurers can use interest rate curves subject to volatility adjustment. The volatility adjustment, which is one of several measures introduced to ease the transition to the Solvency II framework, gives an increase in the interest rate used to calculate insurance obligations. Seen in isolation, this results in a higher solvency ratio. Chart 3.9 shows the estimated interest rate curve for Norwegian kroner subject to volatility adjustment. For maturities of up to 10 years, the volatility-adjusted interest rate curve was 40 basis points higher than the basic risk-free interest rate curve at year-end 2019 and 71 basis points higher at end-March 2020. Eight of twelve life insurers used volatility adjustment at the end of the first quarter. The volatility adjustment has been reduced thus far in the second quarter, to 37 basis points as at 31 May.

Solvency II includes a transitional measure on technical provisions that partly offsets the effect of lower interest rates in solvency calculations. The transitional measure means that the value of insurance obligations in part are calculated according to the former regulations and that the weighting of the former regulations will be gradually reduced during the transitional period, which extends up to 2032. When applying the transitional measure on technical provisions, life insurers' and pension funds' total solvency ratios were 217 and 179 per cent, respectively, as at 31 March 2020. Without the transitional measure, the solvency ratios were 173 and 167 per cent, respectively.

Changes in the interest rate level affect both the value of undertakings' investments and their insurance obligations, but the guaranteed benefits have significantly longer maturities than the investments.



3.9 Estimated interest rate curve in Norwegian kroner subject to volatility adjustment



Source: EIOPA

3.10 Life insurers' investments in different rating classes as a share of total investments in rated bonds



Consequently, there is high interest rate risk. The average durations of life insurers' obligations (excl. unit linked contracts) and bond portfolios (excl. unit linked contracts) were 14 and 5 years, respectively, at the end of 2019. For pension funds, the average durations of insurance obligations and bond portfolios were 16 and 3 years, respectively, at end-March 2019. Lower potential returns are particularly challenging for undertakings with a high proportion of paid-up policies (non-premium paying policies) and high guaranteed rates of return.

The coronavirus crisis raised credit risk premiums on bonds. In isolation, this reduces the value of the undertakings' bond portfolios, and consequently their



3.11 Pension funds' investments in different rating classes as a share of total investments in rated bonds\*

\* Bonds excluding government bonds in own currency. Source: Finanstilsynet

solvency ratios. The undertakings typically manage risk inherent in fixed-income securities by setting maximum exposure limits per rating class. Life insurers' combined bond investments are generally of good credit quality (chart 3.10). Investments in government bonds are predominantly rated AAA and AA, while investments in corporate bonds are spread over more risk classes. Pension funds have a somewhat higher proportion of corporate bonds with a weaker rating than life insurers (chart 3.11).

In consequence of the coronavirus crisis, rating agencies have downgraded some government and corporate bonds, and an increase in downgrades can be expected. Capital requirements for credit spread risk reflect the undertakings' ratings. Extensive downgrading may result in higher capital requirements for credit spread risk. There is a particularly strong focus on downgrading to the high-yield segment (BB and lower). A total of 13 per cent of life insurers' investments in corporate bonds had a BBB rating at year-end 2019. All else equal, a downgrading of all these bonds to BB will result in a loss in value of 0.9 per cent of life insurers' total investments and a loss in value of 2.4 per cent of their investments in corporate bonds. The downgrades will also result in higher solvency capital requirements.

Pension institutions have a large exposure to commercial property, and major revaluations of their property portfolios have helped to generate strong returns in recent years. Greater uncertainty and higher risk aversion in the recent period have contributed to higher return requirements for commercial property, but this increase is partially offset by lower risk-free interest rates. There were relatively small net changes in the value of pension institutions' commercial properties in the first quarter of 2020. Life insurers have real estate investments valued at NOK 260 billion, representing 20 per cent of investments in their Solvency II balance sheets. The largest proportion of the investments comprises shares in subsidiaries (real estate subsidiaries) that own and operate commercial properties (52 per cent of real estate investments), followed by mortgages (25 per cent) and real estate bonds (19 per cent). The pension funds have both real estate subsidiaries, directly owned properties and real estate funds.

# LIQUIDITY RISK IS LIMITED, BUT INCREASED SOMEWHAT

Pension institutions generally have limited liquidity risk. Most of their pension obligations are of a longterm nature, and their liquidity needs are normally largely covered by ongoing premium payments from policyholders. However, the institutions need liquid funds for their daily operations, exit of policyholders and margin payments on derivative contracts. At the same time, illiquid securities and assets constitute a significant share of the pension institutions' investments.

Some life insurers and pension funds have reported a rise in liquidity risk associated with derivatives in connection with the coronavirus crisis. Significant market turmoil and a sharp fall in oil prices contributed to volatile currency markets and a weaker krone exchange rate in March, resulting in stricter collateral requirements in derivative contracts. This gave a more challenging liquidity situation in the short term, and some undertakings therefore took out short-term liquidity loans (repos) to meet the tightened collateral requirements.

Derivatives are an integral part of life insurers' asset management and are extensively used to hedge equity

## 3.12 Underlying assets in derivative contracts, measured by Solvency II value as at 31 March 2020



Source: Finanstilsynet

and fixed-income investments abroad. The total notional value of the derivatives was NOK 627 billion at end-March 2020, which corresponds to 38 per cent of the life insurers' total investments. The total notional value of foreign currency contracts was NOK 457 billion. The Solvency II value (market value) of the contracts is shown in chart 3.12. The market value of currency derivatives was -7.7 per cent of the notional value of these contracts at end-March, while it was 2.2 per cent of notional value at year-end 2019. On the whole, the derivative counterparties are of good credit quality (chart 3.13).

Life insurers have invested heavily in mutual funds, most of which are managed by Norwegian management companies. The coronavirus outbreak resulted in a significant fall in value of the funds and requirements for the redemption of fund units. In March 2020, there were large net redemptions in Norwegian and foreign equity and fixed-income funds. The markets normalised somewhat towards the end of April.

There was lower than normal liquidity in the bond markets in the first quarter of 2020, which made it difficult to value certain bonds. Pension institutions also invest in illiquid or less liquid assets, such as loans, real estate, unlisted equities and some alternative investment funds. Charts 3.14 and 3.15 show the pension institutions' balance sheet composition broken down on different types of assets and an











Source: Finanstilsynet

associated liquidity indicator. The liquidity indicator indicates how liquid the pension institutions' portfolio is in a normal market situation. A high level indicates a more liquid portfolio. Pension funds had a more liquid portfolio than life insurers at year-end 2019, and the total liquidity indicators were 76 and 62 per cent, respectively. The difference is partly due to the fact that the life insurers have a higher proportion of mortgages and a lower proportion of listed equities. Access to liquid assets helps to reduce liquidity risk.

For life insurers, the need for a stable return and a long-term perspective on investment entails that



## 3.15 Pension funds' liquid investments as at 31 December 2019

about one-half of investments in the collective portfolio are carried at amortised cost. This proportion has risen over the last few years. Investments that are eligible for inclusion in this category are bonds for which there is no market and bonds held to maturity.

In practice, this portfolio is less liquid.

A high number of policyholder exits is probably less of a problem in Norway than in some other European countries. In Norway, the majority of unit-linked contracts are pension contracts, and the policyholder cannot withdraw funds until retirement. However, the policyholder may transfer the policy to another insurer, which may result in liquidity challenges for the undertaking the policy is transferred from. Still, transfer activity is limited in Norway and has been relatively stable over time. No increase has been observed in recent months.

In connection with the ongoing Solvency II review, EIOPA has proposed adjustments with respect to liquidity risk and the introduction of liquidity indicators in the Solvency II reporting.

#### **GREAT UNCERTAINTY AHEAD**

### PERSISTENTLY LOW INTEREST RATES AND POTENTIAL DOWNGRADE OF BONDS

The low interest rate level is challenging for pension institutions with a high proportion of guaranteed liabilities. In the short term, declining interest rates result in higher bond prices and increased gains on bonds carried at fair value. In the longer term, however, ongoing interest income is reduced. Extensive downgrades of investment grade bonds will also have a negative impact on pension institutions.

In connection with the ongoing review of the Solvency II framework, EIOPA has proposed higher stress factors for the calculation of interest rate risk. In EIOPA's opinion, the current method does not take adequate account of actual interest rate risk in a low interest rate environment. If the regulations are changed in line with EIOPA's proposal, there will be a significant reduction in the solvency ratios of some Norwegian life insurers with a large proportion of guaranteed liabilities in private occupational pension schemes.

### **RISK OF NEW DECLINE IN EQUITY PRICES**

There have been major fluctuations in the stock markets thus far in 2020, and there is considerable uncertainty about the future development of these markets. A new fall in equity prices may require pension institutions to draw on their buffers. After the share price collapse during the financial crisis, only one small life insurer had capital left in its fluctuation reserves at year-end 2008, and several insurers used large parts of their supplementary provisions to cover policyholders' guaranteed rate of return Over the last few years, pension institutions have recorded strong profits overall. This has provided scope for increasing buffer funds and strengthening the institutions' solvency ratios and means that pension institutions are able to withstand greater recorded losses on their securities portfolios than in 2008. However, the interest rate level is considerably lower now than in 2008, which made it challenging for pension institutions to achieve excess returns on guaranteed pension products even before the onset of the coronavirus crisis.

### UNCERTAINTY SURROUNDING FUTURE TREND IN COMMERCIAL PROPERTY PRICES

The coronavirus crisis may gradually have a restraining effect on the commercial property market. Lower economic activity and changes in consumption,

31.12.18

31.03.20

production and travel patterns may result in reduced rental income, and some segments could be more severely affected than others; see chapter 1. The low interest rate level will dampen the effect of lower rental prices and higher vacancy rates on commercial property values. However, experience from previous crises shows that there might be extensive losses.

# POTENTIAL INCREASE IN LIFE INSURANCE RISK

The impact of the coronavirus crisis on pension institutions' life insurance risk is unclear. Life insurance risk in pension institutions includes mortality and disability risk, as well as lapse risk. Lapse risk, which is relevant for products where the funds available to the policyholder when transferring to another insurer are higher than the technical provisions, constitutes the greatest insurance risk for pension institutions.

In the longer term, rising unemployment may lead to a higher disability rate and a need to increase the provisions for disability. As a consequence of layoffs and higher unemployment, some customers may not be in a financial position to pay future premiums. On 14 April 2020, the Storting (Norwegian parliament) decided that enterprises may allow laid-off employees to remain members of the occupational pension scheme and that the obligation to pay contribution no longer applies. This helps to avoid extensive issues of pension capital certificates and paid-up policies.

# IMPACT OF THE CORONAVIRUS CRISIS ON NON-LIFE INSURERS

### THE MARKET TURMOIL CAUSED A SHARP FALL IN PROFITS FOR NON-LIFE INSURERS

The fall in equity prices and increased credit risk premiums on bonds had a strong bearing on the financial performance of non-life insurers in the first quarter (chart 3.3). However, the equity price drop has had a limited effect on non-life insurers' solvency ratios, partly due to the symmetric adjustment mechanism for equities. Non-life insurers' stock market exposure represented 11 per cent of total investments as at 31 March 2020, down from 13 per cent at yearend 2019 (chart 3.16).

## 60 50 40 20 10

31.12.16

Financial assets carried at amortised cost

Equities and mutual fund units Fixed-income securities carried at fair value

3.16 Non-life insurers' investments

31.12.14

Subsidiaries, etc.



🗖 Claims ratio 🗖 Cost ratio

31.12.12

Source: Finanstilsynet

# UNCERTAIN HOW PROFITABILITY WILL BE AFFECTED IN THE FUTURE

The coronavirus pandemic has thus far had limited effects on non-life insurers total insurance-related operations. In the major lines of business, with the exception of insurance against fire and other property damage, insurance-related operations improved in the first quarter of 2020 compared with the same period in 2019 (charts 3.17 and 3.18). This is partly due to a mild winter in large parts of the country. However, some smaller lines of business, such as income protection insurance, credit insurance and assistance insurance, which includes travel insurance, experienced a major deterioration in profitability. In the travel insurance segment, there has been a significant



3.18 Lines of business in in per cent of gross earned premiums

increase in compensation claims following the coronavirus outbreak. The net combined ratio for assistance insurance has increased by 95 percentage points to 186 per cent from the same period last year. According to Finance Norway, almost half of the travel insurance cases in the first quarter concern cancellations. Credit insurance is little used in Norway.

It is uncertain how claims payments in various lines of business within non-life insurance will be affected in the period ahead. Insurers may also have different exposures to lines of business that are most likely to experience higher claims payments, including travel, pandemic and business interruption insurance. Socalled pandemic insurance is not widespread in Norway. Business interruption insurance falls under the line of business 'insurance against fire and other property damage'. In order to qualify for claims payments, there must be physical damage to the insured property resulting from, for example, fire, water leakage or power outage. Losses related to the coronavirus pandemic are generally not covered by this type of insurance. Insurance covering losses related to the closure of a business due to government requirements (so-called 'business closure insurance') is less common in Norway. Whether such insurance covers coronary-related costs may vary from policy to policy.

Personal risk insurance generally does not provide coverage for elderly people. Workers' compensation insurance will, with effect from 1 March 2020, cover illness caused by the coronavirus. There is uncertainty about possible long-term complications of Covid-19 and how they may affect insurers' claims payment expenses in the longer run. The coronavirus pandemic may have a certain impact on marine insurance, especially passenger ship insurance, but figures for the first quarter of 2020 show a healthy level of profits in this line of business. In general, a number of activities subject to insurance, such as travel, have been scaled back and may remain at a low level in the period ahead. This will lower claims payments, but to some extent also premiums. At the same time, more people stay at home and will spend their holidays in Norway, which may affect other insured activities.

Non-life insurers' reinsurance programmes limit the impact of the pandemic for individual insurers. However, the coronavirus pandemic may lead to changes in the reinsurance market or solvency challenges for reinsurance undertaking, which in turn may affect Norwegian non-life insurers.

Source: Finanstilsynet

## **CHAPTER 4 SECURITIES** MARKETS

The coronavirus outbreak and measures to contain the spread of the virus had a pronounced impact on international securities markets. Risk premiums increased significantly during the most turbulent period in February and the first half of March. Market liquidity tightened, it became difficult for some firms to obtain financing, and redemption of mutual fund units was suspended during certain periods. Strong monetary and fiscal policy measures in a number of countries helped to improve the situation. In early June, risk premiums had been reduced and financial markets functioned close to normal. However, there is still considerable uncertainty about the further pathway of the pandemic and its long-term effects. Significant losses are expected on loans to and bonds issued by firms in the most exposed industries. Very low interest rates may also lead to further build-up of financial imbalances, which entails a risk of a subsequent major correction.

### THE CORONAVIRUS OUTBREAK HAD A **STRONG MARKET IMPACT**

The outbreak of the coronavirus and the subsequent containment measures introduced across much of the world led to sharp declines in international stock markets. The fall in the value of bonds with low credit ratings (high-yield bonds) was almost as strong as in the equity markets (chart 4.1). Financing costs increased, especially for borrowers with weak creditworthiness, see developments in yields on US and European high-yield bonds in chart 4.2. The pronounced effects in late February and large parts of March must be viewed in light of the abrupt and sharp fall in activity in several countries in the wake of business closures. There was also considerable uncertainty surrounding the evolution of the pandemic and its impact on various countries, markets and sectors.

4.1 Price trend for equities and high-yield bonds\*



\* MSCI World Index (equities), high-yield bond index for the US and the euro area (average). Source: Refinitiv

#### 4.2 Corporate bond yields



Weaker market liquidity contributed to amplifying the fall in the prices of equities and high-yield bonds. In situations of significant market turmoil, investors and financial institutions seek safe and liquid investments. In March, there was rising demand for secure government bonds, especially US and German bonds. This contributed to lower yields on long-term government bonds issued by countries with good credit ratings.

Price-to-earnings ratios, which are commonly used to assess equity prices, increased in the years following the financial crisis. Prior to the coronavirus outbreak, the risk premiums in the markets were low, which may have heightened the potential fall at the outset of the pandemic.



#### 4.3 Implicit volatility in US stock and bond markets

The debt burden of public authorities, businesses and households was at a historically high level in many countries before the coronavirus pandemic. This has made the global economy and financial markets more vulnerable to economic setbacks.

States and central banks quickly introduced support measures to mitigate the negative effects of the coronavirus crisis. Central banks in a number of countries have reduced their key policy rates, provided liquidity by extending loans and purchased bonds issued by private firms, see the account in chapter 1. The measures helped to reduce banks' liquidity risk and liquidity premiums in the bond markets. Global stock markets rose by more than 30 per cent from 23 March till end-May. There has been a significant reduction in risk premiums in the bond markets for investment-grade bonds, and volatility in the equity and bond markets has declined from the very high levels at the start of the crisis (chart 4.3).

After falling steeply during the first phase of the crisis, stock markets have risen more than during previous crises (chart 4.4). A number of analysts have pointed to a possible discrepancy between the stock market upturn since mid-March and forecasts from the IMF and others about a severe and long-term reduction in economic activity. Earnings expectations in many industries have been revised down substantially in recent months, and many firms have a high debt burden. Since the outbreak of the crisis, the rating

#### 4.4 The Dow Jones Index through four crises



Source: Macrotrends

agencies have downgraded companies more quickly than during the financial crisis. Both in Europe and the US, a high proportion of corporate bonds is rated in the lowest investment grade category. There is concern that a large proportion of these could be downgraded to high-yield bonds, and that this may trigger extensive sales of bonds, e.g. from pension institutions and mutual funds. Several of these have mandates according to which they cannot invest in bonds with lower credit ratings than investment grade. Extensive downgrading may result in a significant increase in risk premiums on bonds.

Oil service companies have struggled with high debt levels and poor profitability since the fall in oil prices in 2014. In 2020, equity prices in this sector have declined by approximately 35 per cent (chart 4.5). Default rates in the bond market have risen, and banks have increased their impairment losses for the current year, see account in chapters 2 and 5. Due to the sharp krone depreciation in March this year, some Norwegian financial institutions encountered liquidity problems, see box 5.

### Box 5: Liquidity effects of the weaker krone exchange rate for Norwegian financial institutions and mutual funds

The krone exchange rate depreciated by 20 per cent against the euro during two weeks in March

Source: Refinitiv

this year. Norwegian financial institutions both obtain funding from and invest in markets outside Norway. Various forms of currency hedging agreements are used to mitigate exchange rate risk. However, in order to limit counterparty risk, such agreements normally include a requirement for daily margin payments. When the krone depreciates, Norwegian banks and mortgage companies that hedge foreign currency borrowing will receive margin payments from, for example, cross-currency swap counterparties. Several Norwegian banks were counterparties in currency hedging agreements entered into by mortgage companies and had to set margins during this period.

Norwegian insurance undertakings and mutual funds that enter into currency hedging agreements on investments in foreign securities markets must make margin payments if the krone depreciates. Several were forced to sell assets to meet increased margin requirements when the krone weakened in March. The depreciation of the krone coincided with large redemptions in several mutual funds and portfolio adjustments in life insurance undertakings to limit downside risk. This may have exacerbated the depreciation of the krone and the fall in prices in the stock and bond markets during the period, see the account in chapter 3.

Many countries have cut their key policy rates in response to the coronavirus crisis, and central banks have signalled low interest rates for a protracted period. Quantitative easing from central banks in a number of countries also helps to keep long-term interest rates low. There is a danger that expectations of very low interest rates will lead to further debt accumulation in many countries and sectors, and that the search for yield once again will result in higher risk exposures in the financial markets. There are indications that risk premiums were unrealistically low prior to the coronavirus crisis.



## 4.5 Oslo Børs, changes in indices in 2020 up to and including 5 June. Per cent

Source: Refinitiv

The fall in the value of high-yield bonds and high-yield funds in March 2020 roughly corresponded to the stock market decline even though risk is assumed to be lower. As in the international financial markets, the volume of high-risk products in Norway has increased in recent years, see box 6.

#### **Box 6: High-risk products**

Low interest rates have given investors an incentive to move funds from government bonds and bank deposits to investments with expected higher returns, but also higher risk. This is why some Norwegian and international banks and investment firms have marketed various alternatives to bank deposits. Their common denominator is that they have a defined maximum return potential, but also a significant loss potential.

Finanstilsynet has uncovered several cases where products have been distributed to retail investors without adequate risk guidance. Some of these products are described below.

*High-yield funds* invest in bonds issued by companies with low credit ratings that provide higher yields than issuers of investment grade bonds. Up until the end of February, returns were high. Finanstilsynet's calculations show that the average return on ten high-yield funds\* over the past three years was 5.4 per cent as at 27 February. When the market hit a trough on 23 March, returns for the year to date were negative at 18.6 per cent, while there was a negative of 2.5 per cent for the past three years. This demonstrates that high-yield funds may experience a significant drop in value during crises, and that they have greater similarities with equities than high-yield bonds during such periods.

Mini-bonds is the term used by the UK Financial Conduct Authority (FCA) for direct loans and bonds with a principal between NOK 30 million and NOK 200 million. The instruments are issued to finance acquisitions, construction and project development, mainly within real estate, but there are also examples of projects within wind power, manufacturing and trade. The issuers are small and medium-sized enterprises in need of venture capital that are not eligible for bank loans due to a too low equity ratio. The bonds can in many cases be compared with equity because the debtto-income ratio is so high that the bondholders in reality carry risk that is otherwise borne by equity. On 26 November 2019, the FCA banned the promotion of mini-bonds to consumers.\*\* In Finanstilsynet's experience, investors have suffered losses on these types of bond loans offered to retail clients. Norwegian investors and consumers have invested in this type of bonds issued in Norway and in some cases in Sweden and Denmark. In 2019, Finanstilsynet revoked the authorisation of a firm offering mini-bonds.

Autocallables are a structured product category with a defined maximum profit potential if prices on the underlying instruments increase and a loss potential of up to 100 per cent if the prices decline. Issuers of autocallables are international investment banks such as Goldman Sachs and UBS. The Nordic region's leading distributor of these products is the investment firm Garantum FK, which distributes the products through agents in Norway. Nordea is also a key issuer and distributor.

The underlying instrument in autocallables is a basket of equities or equity indices. The buyer carries the risk if the value of the instruments falls below defined threshold values. As compensation, the buyer is entitled to periodic payments from the issuer. Finanstilsynet has been informed that the average return for 391 autocallables in the period from 2009 till year-end 2018 was 12.8 per cent. Finanstilsynet's calculations show that the value of positions in a selection autocallables in the period from 2018 to 23 March 2020 declined by 57 per cent on average in relation to face value.

The target group for these types of products is typically customers who want to receive predictable ongoing payments. When the real return after tax on bank deposits becomes negative, many investors look for alternatives with higher expected returns. For investors who consider the risk in the stock market to be too high, high-yield funds, direct loans and autocallables may appear to be good alternatives. Market trends in March have revealed significant risk in these products despite reports on stable returns prior to the Covid-19 crisis. In May this year, the European Securities and Markets Authority (ESMA) emphasised that distributors of such products must ensure that investors have sufficient knowledge and experience to understand the risk associated with the products, and that the risk is presented in a realistic and transparent manner.\*\*\*

\*\*<u>https://www.fca.org.uk/news/press-releases/fca-ban-promotion-speculative-mini-bonds-retail-consumers</u>
\*\*\*<u>https://www.esma.europa.eu/sites/default/files/library/esma3</u>
<u>5-43-2391 esma\_statement\_on\_covid-19\_retail\_investor\_activity.pdf</u>

<sup>\*</sup>Alfred Berg Høyrente, Arctic High Return, Carnegie Corporate Bond, DNB High Yield, Eika Kreditt, Fondsfinans Kreditt, Holberg Kreditt, Nordea Global High Yield, Landkreditt Extra, Odin Kreditt

	US	UK	Sweden	Spain	Norway	Japan	Italy	Ireland	Germany	France	Denmark
January 1996–May 2020	5.2	1.4	10.5	2.9	15.7	-6.1	-0.9	-16.1	-4.7	5.0	6.7
Last 15 years	0.2	-5.3	6.0	-5.0	9.1	-3.0	-8.1	-33.4	-11.6	-2.2	-1.9
Last 10 years	6.7	-3.7	7.7	-7.5	11.1	2.6	-7.2	-28.7	-14.1	-0.9	-0.7
Last 5 years	3.1	-10.3	-4.0	-18.0	3.1	-10.1	-15.1	-31.2	-20.4	-9.1	-12.2
Last 3 years	-1.1	-17.1	-10.3	-26.2	0.7	-8.6	-12.7	-39.4	-22.2	-19.9	-26.6
Last 12 months	-15.2	-41.1	-7.0	-44.9	-10.9	-9.7	-16.9	-69.0	0.2	-27.4	-25.0
Year to date	-34.0	-42.6	-11.5	-44.7	-19.4	-19.7	-34.2	-67.3	-4.2	-43.8	-23.1

#### Table 4.1 Geometric annual return for different periods, bank shares

Source: Refinitiv

#### Box 7: Norwegian bank shares

The return on Norwegian bank shares has been high for several years, well above the level for bank shares in a number of other countries, see table 4.1. This can partly be explained by a strong trend in the Norwegian economy for many years. Based on the high return, there are no indications that the regulatory framework for Norwegian banks has been unfavourable, neither compared with other industries in Norway nor with other countries.

Thus far this year, there has been an average decline in the price of Norwegian bank shares of 19 per cent. This is a larger reduction than for Swedish and German bank shares, while there has been a steeper decline for banks in the other countries in table 4.1. Norwegian banks are affected by both the shutdown of the economy as a result of the coronavirus crisis and a sharp fall in oil prices.

On average, Norwegian banks' equity ratio ranges between 7 and 8 per cent. This is higher than in several other countries, although banks in some countries have a higher equity ratio. Non-financial firms in Norway generally have equity ratios of between 30 and 50 per cent. All else equal, the high debt-to-income ratio ratio in the banking sector gives a high leverage ratio when the economy is doing well. In bad times, high debt levels

## Table 4.2 Decline in share prices during crises,bank shares. Per cent

	US	UK	Sweden	Norway	Germany
Russia (1998)	-24.2	-30.0	-29.1	-36.1	-34.9
Dot-com (2000–2003)	-23.4	-34.3	-40.7	-40.1	-70.1
Financial crisis (2007–2009)	-79.5	-74.1	-68.7	-71.7	-83.9
Europe (2011–2012)	-36.2	-30.6	-25.5	-33.6	-50.6
Coronavirus (spring 2020)	-34.0	-42.6	-11.5	-19.4	-4.2

Periods during which bank shares experienced a larger price reduction than all sectors combined are marked in red. Source: Refinitiv

are a major disadvantage. Since banks also have relatively narrow margins compared with several other industries, the return on equity during a crisis could be highly negative.

Over the past 25 years, a number of crises have hit the global economy. During these crises, apart from the dot-com crisis, the price decline for bank shares in several countries was greater than the fall in the stock market in general in the respective country, see table 4.2.

The standard deviation for the return on shares is a common risk measure and is used to describe

the 'normal variation'. The standard deviation for the return on bank shares is significantly higher than for shares in general in most of the countries in the analysis. Calculations also show that the return on bank shares has been negative during more calendar years than is the case for the stock market in general. Analyses also indicate that in the empirical distribution of the return on bank shares, there is more weight in the tails than for shares in general, which means that there is a greater upside and downside risk associated with bank shares.

The banking sector is usually well diversified. Banks provide loans to most industries. Loans secured by commercial property represent a significant proportion of banks' corporate loan portfolios. Commercial property companies, for their part, are exposed to tenants, which are often public enterprises and enterprises in a range of different industries. Non-financial firms invest in businesses and projects that are normally associated with significantly higher risk than banks' lending to the same businesses. The other large sector banks provide loans to is the household sector, and most of these loans are secured on residential property. The main financial risk factors for households are loss of income, interest rate increases and falls in property values. The banks are thus exposed to the entire economy. Nevertheless, the risk associated with investments in bank shares seems to be greater than for investments in the stock market in general. This must be seen in the context of the significantly higher debt ratio of banks compared with non-financial firms.

## PRIMARY MARKET FOR EQUITIES IN NORWAY

Share issues vary considerably over time and are largely dependent on prevailing conditions in the secondary market. According to figures from Oslo Børs, there were a total of 40 share issues on Oslo Børs, Oslo Axess and Merkur Market in the



4.6 Share issues in companies listed on Oslo Børs, Oslo Axess and Merkur Market. Total

eriod from 13 March to 31 May

period from 13 March to 31 May this year, totalling NOK 10 billion. This is 43 per cent lower than in the same period in 2019 in terms in volume and 17 per cent lower in terms of number of issues.

The reported share issues at Oslo Børs, Oslo Axess and Mercury Market include both new issues, initial public offerings (IPOs) and the issuance of dividend shares (chart 4.6). New issues represent capital raised by listed companies. According to figures from Oslo Børs, the companies listed on the three marketplaces issued shares (including equity certificates) for close to NOK 602 billion from year-end 2004 to May 2020.

Of this, new issues amounted to roughly NOK 511 billion. In comparison, holdings of outstanding fixedincome securities listed on Oslo Børs and Nordic ABM increased by NOK 1,634 billion from year-end 2004 to April 2020. The companies listed on the three marketplaces paid dividends to shareholders of NOK 1,128 billion in the period from 2005 to 2019.

The 'energy' sector accounted for 40 per cent, while 'industrials' and 'finance' each accounted for 12 per cent of total share issues at Oslo Børs, Oslo Axess and Mercury Market in the period from year-end 2004 to May 2020 (chart 4.7). Of the total volume issued from the turn of the year to May 2020 of about NOK 14 billion, 'industrials' and 'IT' accounted for 37 and 17 per cent, respectively.

#### FOREIGN OWNERSHIP AT OSLO BØRS

Oslo Børs has a high share of foreign ownership. A frequent observation is that foreigners reduce their exposure to the Norwegian stock market in times of turmoil and crises in global financial markets. This may cause greater volatility in the Norwegian stock market and have an impact on the required rate of return in this market.

The largest owner sectors on Oslo Børs are Norwegian public administration (central government/municipalities) and foreign investors. The statistics do not specify which sectors the foreign investors belong to. There is greater variation in the holdings of these sectors than for other sectors (chart 4.8). All ten owner sectors are included in the chart, but only the six largest are specified.

From 2004 until the international financial crisis in 2008, foreigners' ownership increased parallel to a reduction in government ownership (chart 4.9). When the financial crisis hit, there was an abrupt and significant reduction in foreign ownership from 40 to 33 per cent at its lowest. There was an opposite effect for government ownership, which showed an immediate and significant increase. This may be a reflection of Folketrygdfondet's rebalancing strategy, which entails that the fund buys equities when the proportion of equities in the portfolio falls below the proportion in its benchmark portfolio. From February 2009 to yearend 2019, foreign investors again increased their holdings, while the government's holdings were reduced. At the end of April 2020, foreign investors' ownership interests at Oslo Børs were down less than 1 percentage point compared with the turn of the year.

Households' (private investors') holdings have been fairly stable since the financial crisis (chart 4.10). Households' exposure to the stock market has nevertheless increased as a result of a significant rise in the value of equities during the period. In addition, households are exposed to the stock market through mutual fund units. During the same period, pension institutions' ownership interests were reduced from just below 3 to just below 1 per cent. This development could be a consequence of adaptation to regulations

4.7 Share issues in companies listed on Oslo Børs, Oslo Axess and Merkur Market. By industry



Source: Oslo Børs











Sources: Oslo Børs and Finanstilsynet



4.10 Ownership interests of private investors, pension funds/life insurers, mutual funds and banks. Oslo Børs

Sources: Oslo Børs and Finanstilsynet

#### 4.11 Risk premiums in the Norwegian bond market



Source: Nordic Bond Pricing



#### 4.12 Bond issues in the Norwegian market

and diversification of what was initially a Norwegian equity portfolio into a more global equity portfolio.

Mutual funds had ownership interests of approximately 4 per cent in December 2004, which had increased to 7 per cent in February 2020. At end-March, the funds' holdings had been scaled back to 5 per cent, which could be a result of the redemption of mutual fund units. At end-April 2020, the funds' ownership interests had again increased to just below 7 per cent.

In March, government ownership increased by 2 percentage points, while foreign investors' holdings fell to just below 1 percentage point. There were few changes in April, whereby it can be concluded that ownership interests changed far less this spring than during the financial crisis.

#### THE NORWEGIAN BOND MARKET

Following the outbreak of the coronavirus pandemic, risk premiums in the bond market increased sharply parallel to a deterioration in liquidity in the secondary market and a reduction in turnover. Issue activity practically came to a halt. Short-term municipal bonds were issued and in some cases covered bonds (OMF) that were purchased by the parent banks of mortgage companies.

Most banks fund themselves in the bond market. Since the coronavirus outbreak, there has been limited new funding activity among Norwegian banks, apart from covered bond issues. Norges Bank has provided liquidity in the form of F-loans throughout this period. In addition, it has temporarily eased the collateral requirements for loans from Norges Bank. These measures have reduced banks' need for bond market funding during this period. The purpose of establishing the Government Bond Fund is to contribute to increased liquidity and capital in the bond market through the purchase of bonds issued by Norwegian enterprises.

In April and in May, risk premiums in the bond market declined, but are still significantly higher than in the period before the coronavirus outbreak (chart 4.11).

	Danka		Non- financial		Mutual	Public sector	Foreign	Tatal
	Banks	Folketrygatonaet	tirms	Insurers	funds	entities	Investors	Iotal
Finance 2014	42	3	2	26	18	1	8	100
Finance 2020	41	3	10	2019	16	0	10	100
Central government 2014	12	3	0	10	2	12	60	100
Central government 2020	13	2	2	4	1	8	69	100
Municipalities 2014	21	0	2	44	20	1	12	100
Municipalities 2020	26	0	2	37	14	0	20	100
Non-financial firms 2014	3	4	13	37	16	1	24	100
Non-financial firms 2020	1	3	7	38	17	1	31	100
Total 2014	27	3	3	25	14	4	23	100
Total 2020	27	3	7	20	13	2	28	100

Table 4.3 Norwegian bond market. Outstanding bonds by issuer sector (rows) and owner sector (columns). 2014 and2020. Per cent

Sources: Stamdata, VPS and Finanstilsynet

During the same period, issue activity picked up somewhat, but was generally limited to secure borrowers such as municipalities and issuers of covered bonds (chart 4.12). The total issue volume in the first five months of 2020 was higher than in the corresponding period last year.

In May 2020, turnover in the bond market returned to more normal levels for both covered bonds and other investment grade bonds. The turnover in senior bank bonds was still somewhat lower than prior to the coronavirus crisis.

Compared with other countries, the Norwegian bond market has a high proportion of high-yield bonds<sup>9</sup>. One of the reasons for this is that many issuers are not credit rated, and their issues are therefore classified as high-yield bonds. The proportion of high-yield bonds has been around 50 per cent of corporate bonds for several years. Industries with a high proportion of high-yield bonds include oil and gas, shipping, telecom, IT and seafood. The risk premium on a selection of high-yield bonds in the Norwegian market increased from just over 3 percentage points in January this year to almost 9 percentage points at the end of April.

The structure of the Norwegian bond market has changed significantly over the past five years. The oil





and gas sector's share of outstanding debt has been halved, while property companies' share has more than doubled. Following the fall in oil prices in 2014, there was a sharp drop in issues by the supplier industry related to the oil and gas sector (chart 4.13). For these companies, the market for high-yield bonds was in effect closed. Property companies now account for nearly one-fourth of outstanding bond debt from nonfinancial firms. However, the growth in property companies' bond debt has slowed over the past year.



4.14 Ownership structure for bonds of different credit quality\*

\*Insurance includes insurers and pension funds. For a definition of credit rating, see footnote 9. Sources: Stamdata, VPS (Norwegian Central Securities Depository) and Finanstilsynet

The fall in oil prices and the effects of the coronavirus crisis have exacerbated the situation for oil-related companies, shipping companies and airlines. The yield on bonds issued by several of these companies rose to between 10 and 20 per cent in March, reflecting significant credit risk associated with the companies.

#### **OWNERSHIP STRUCTURE**

The largest owner sectors in the Norwegian bond market are foreign investors, Norwegian banks, Norwegian insurers and Norwegian mutual funds, see table 4.3 and chart 4.14. Foreign investors have increased their ownership interests by 5 percentage points, which primarily reflects an increase in holdings of Norwegian government bonds from 60 to 69 per cent. Insurers have reduced their holdings of Norwegian bonds by 5 percentage points.

Bonds with poor credit ratings, i.e. high-yield bonds, are largely owned by foreign investors (chart 4.14). High-yield bonds are issued by Norwegian and foreign non-financial firms and firms that provide various types of financing services. Half of the outstanding high-yield bonds are issued by foreign enterprises. Foreigners' holdings in the high-yield bond segment has increased from 51 per cent in 2014 to 57 per cent in June 2020. Norwegian insurers have also increased their holdings of high-yield bonds, while mutual funds and non-financial firms have reduced their holdings. Bonds in the investment grade segment are owned primarily by Norwegian financial institutions and mutual funds. For this type of bonds, foreign ownership has also increased over the past five years, while insurers' holdings have been somewhat reduced.

### LIQUIDITY RISK IN THE MUTUAL FUND MARKET

The sharp fall in equity prices and rise in bond yields in March this year underlined the importance of the mutual funds being liquid. Net redemptions of fund units have never been higher. According to the Norwegian Fund and Asset Management Association, fund units totalling NOK 63 billion were redeemed in March. There were net sales of units in all categories of mutual funds, with NOK 38 billion in equity and balanced funds and NOK 25 billion in various types of fixed-income funds. The total reduction in assets under management in March was 12 per cent, of which redemptions accounted for about one-third. For currency hedged mutual funds, the depreciation of the Norwegian krone also resulted in large margin payments related to currency hedging agreements, see box 5.

# UCITS FUNDS<sup>10</sup> (AND NATIONAL MUTUAL FUNDS)

Mutual funds shall as a rule be open for redemption at least twice a month, and unit holders are generally entitled to redemption on every business day. Liquidity requirements are set for the funds' investments and for the management companies' risk management. The liquidity profile of the investments must be consistent with the redemption rules for each mutual fund. Fund management companies must ensure that liquidity risk is identified, measured, monitored and managed effectively to enable unit holders to redeem their units in a timely manner and to meet any other obligations. The companies must, among other things, take account of the liquidity risk associated with the investments and the composition of the unit holders.

Parts of the bond market, especially the high-yield segment, have proved to be fairly illiquid in turbulent times. In such circumstances, uncertainty associated with the correctness of valuations combined with extensive redemptions may pose a risk of differential treatment of unit holders if investors exiting the fund are given a redemption price that turns out to deviate from fair market value. In order to safeguard unit holders' interests Finanstilsynet may therefore, at the request of the management company, consent to temporary suspension of valuations and redemption rights.

During the coronavirus crisis, Finanstilsynet has agreed to suspend valuations and redemption rights for nine mutual funds. The reason for eight of these suspensions was lack of prices for foreign suspended exchange-traded funds (ETFs). These eight Norwegian mutual funds had significant investments in the suspended funds, and correct valuation was therefore not possible for short one-day periods. The final mutual fund is in liquidation.

In February 2020, Finanstilsynet conducted a survey on liquidity management in mutual funds as part of a joint European supervisory survey conducted by ESMA. Finanstilsynet chose to include national mutual funds in the survey.

In the reporting, the criterion for characterising a company's shares as liquid is that the average daily turnover has been at least NOK 1 million over a sixmonth period. The liquidity requirement for bonds is that they have been given a credit rating by a recognised credit rating agency, or that they have been classified by Nordic Bond Pricing.

Data from the survey show that investments in Norwegian mutual funds are generally liquid (chart 4.15). Overall, the funds have sufficient liquidity to meet redemption requirements during normal times. However, there is a risk that some of the investments will prove to be fairly illiquid under turbulent market conditions.

Equity funds investing in emerging economies, or in (mainly Nordic) small and medium-sized enterprises hold a somewhat larger proportion of shares that are not actively traded compared with other equity funds (chart 4.16).



4.15 Norwegian mutual funds – investments

Source: Finanstilsynet, reporting from management companies

4.16 Equity funds with investments in markets with the lowest proportion of liquid investments



Source: Finanstilsynet, reporting from management companies





Unrated bonds, not in the universe of Nordic Bond Pricing
 Bonds rated by or in the universe of Nordic Bond Pricing
 Source: Finanstilsynet, reporting from management companies

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#### 4.18 Net asset value by type of fund

#### 4.19 Net liquidity in per cent of net asset value



Source: Finanstilsynet (AIFMD 2019)

#### 4.20 Proportions of net asset value that are open to or closed for investor redemptions, by type



Source: Finanstilsynet (AIFMD 2019)



#### 4.21 Redemption frequency for funds that are open to redemptions as a share of net asset value

Source: Finanstilsynet (AIFMD 2019)

Bond funds investing in investment grade bonds generally have low liquidity risk. High-yield funds, on the other hand, hold a significant proportion of investments that are either not rated or not classified in the liquidity indicator of Nordic Bond Pricing. 17 per cent of the portfolios of high-yield funds investing in European bonds are not covered by the liquidity indicator (chart 4.17). For high-yield funds that have a geographical investment mandate beyond Europe, the corresponding share is 37 per cent.

#### **ALTERNATIVE INVESTMENT FUNDS (AIF)**

Alternative investment funds managed by Norwegian AIF managers have total net assets under management, measured by net asset value (NAV), of approximately NOK 250 billion. Chart 4.18 shows the distribution between different fund types.<sup>11</sup>

A measure of a fund's liquidity risk is its net liquidity, i.e. the difference between how quickly the assets can be turned into cash and how quickly investors are entitled to redeem their fund units. Chart 4.19 shows the net liquidity profile per type of fund, based on reporting from AIF managers. Only equity funds, as a group, have negative net liquidity, and only in the very short term. This is ascribable to two national mutual funds that offer all their investors daily redemption. In the EU, the situation seems more vulnerable. In particular, ESMA points to liquidity risk in real estate funds,

which have negative net liquidity in all intervals from 0 to  $365 \text{ days}^{12}$ .

Several alternative investment funds do not provide redemption rights over the lifetime of the fund. This is especially true for private equity funds and real estate funds (chart 4.20). Funds that are open for redemption over the lifetime of the fund have different conditions for redemption notification periods and redemption frequency. Chart 4.21 shows the most common redemption frequencies for AIFs.

## CHAPTER 5 STRESS TEST OF NORWEGIAN BANKS

Finanstilsynet conducts annual stress tests to assess the impact of a severe economic downturn on the Norwegian economy, Norwegian banks' capital adequacy and banks' ability to provide loans to creditworthy borrowers. As a result of the coronavirus pandemic, both the Norwegian and the global economy are now in an extraordinary situation. Although the authorities have implemented comprehensive mitigating economic policy measures, the economic outlook has deteriorated both in Norway and internationally. This year's stress test shows that in a scenario of a severe and protracted economic downturn, banks' financial soundness will be seriously impaired. In reflection of the great uncertainty surrounding future developments, it is important that banks retain their equity rather than allow it to be reduced through dividend payments, share buybacks and other distributions.

The two scenarios presented in this chapter describe two possible development paths for the Norwegian economy from the second quarter of 2020 to the fourth quarter of 2024. The scenarios present a range of outcomes, from a severe downturn of relatively short duration (scenario 1) to a deeper and more prolonged downturn (scenario 2). In both scenarios, a significantly increase in non-performing loans and losses in the banks' portfolios must be expected.

The coronavirus pandemic and containment measures lead to a sharp contraction in economic activity both in Norway and internationally in both scenarios. The main difference between the two scenarios is the scale and duration of the coronavirus pandemic, which affects the consequences of the pandemic for the Norwegian and international economies. In scenario 1, the shutdown of parts of Norwegian business operations is largely assumed to be over at the beginning of the third quarter of 2020, while in scenario 2 it continues until the end of the year. In scenario 2, the decline in world trade is assumed to be sharper and to last longer due to both the resurgence of the pandemic and the fact that it takes longer to re-establish contracts and production chains in businesses. Another assumption in scenario 2 is that a higher number of employees do not return to work during the projection period. The consequences of weak demand for oil in the global market and low oil prices for Norwegian oil-related businesses are also more severe in scenario 2 than in scenario 1.

Scenario 2 is not an extreme scenario. The very low interest rate level means that the average interest burden for both households and firms remains at a low level throughout the projection period. This is despite the fact that many households experience a loss of income as a result of unemployment and that the turnover of several firms is strongly reduced. The coronavirus crisis is not assumed to lead to an international financial crisis with sizeable loan losses, a sharp rise in banks' funding costs and refinancing problems in the money and capital markets. Both scenarios are therefore based on the assumption that interest rates will not rise. An interest rate hike would have hit Norwegian households and firms hard. If the scenarios in this year's stress test had included a significant interest rate increase, the estimated losses on banks' loans to households and firms would also have been higher.

This chapter starts by describing developments in the Norwegian economy in the two macro scenarios. It then discusses the consequences for Norwegian banks' profits and capital adequacy. The chapter ends by summarising Finanstilsynet's assessments of the stress test results.

#### **SCENARIO 1: SHORT-TERM CRISIS**

There has been a rapid escalation in unemployment since the coronavirus crisis hit Norway; see Chapter 1. In the projections, the LFS unemployment rate is 6.1 per cent in 2020, rising to 7.8 per cent the following year (chart 5.3). Even if the containment measures are scaled back and their consequences become less severe during 2021, unemployment remains high, but decreases somewhat towards 2024. At the end of the stress test period, unemployment is still a fair bit higher than before the onset of the crisis.

In this scenario, there is a decline of approximately 15 per cent in gross output as a result of the shutdown of private services in the second quarter of 2020. The shutdown is eased in the third quarter. Private services accounted for 45 per cent of mainland GDP in 2019, and the shutdown is therefore a key factor behind the decline in GDP. Owing to reduced gross output in several industries, lower incomes in households and firms and heightened uncertainty, both mainland industry investment and housing investment are reduced. There is a significant drop in private consumption, reflecting a temporary increase in saving, a reduction in income, fewer consumption opportunities as a result of business closures as well as lower willingness and ability to buy services secured by residential property or other assets.

GDP for mainland Norway decreases by 5.5 per cent in 2020 and increases by 3.3 per cent the following year (chart 5.3). During the final three years, mainland GDP rises by just under 3 per cent as the situation gradually normalises. In 2020, private consumption falls by 6.5 per cent and mainland investment by 18 per cent, whereafter both show a new increase from 2021. Housing investment does not rise until 2022.

The growth in household demand for credit declines to 3.8 per cent in 2020 and 1.7 per cent in 2021. Lower income growth, high unemployment and heightened uncertainty put a damper on credit growth, while more extensive use of interest-only periods and deferred interest payments have the opposite effect. Credit growth picks up somewhat in the last three years of the projection period, but remains moderate. Households' debt burden has risen since 1993 and remains stable at a high level throughout the projection period.

Money market rates fall sharply in the scenario due to lower international interest rates and a reduction in Norges Bank's key policy rate. As a result, both banks' lending rates and households' interest burden are



5.1 Scenario 1, banks' losses on corporate and personal customer loans

Source: Finanstilsynet

down just over 1 percentage point. The differential between the money market rate and the lending rate is stable throughout the period.

In scenario 1, house prices fall by just over 10 per cent over the first two years, and then grow moderately in the subsequent three years (chart 5.3). Lower household income and substantial uncertainty result in a decline in housing demand, fewer transactions and lower prices.

After a long period of high price growth on commercial properties, there is a significant risk of a potential fall in the market. Commercial property prices are cyclically sensitive and decline by 21 per cent in 2020 in the projections, a key explanatory factor being markedly lower activity in the business sector. Commercial property prices are stable in 2022 and 2023 before picking up during the final two years. A significant share of Norwegian banks' loans is to commercial property companies, which will be severely affected by lower rental income and reduced property prices.

Even if the downturn in the Norwegian economy is short-lived, banks' losses on loans to both firms and individuals will increase markedly as a result of loss of income and lower property prices. Many households have a very high debt burden. The proportion of households whose debt exceeds four times income





Sources: Finanstilsynet and Statistics Norway

has increased in recent years. Several of these become unemployed during the stress period and get problems meeting their debt obligations as they mature. The decline in house prices gives rise to a reduction in banks' collateral values and increased impairment losses. Unsecured consumer debt has grown strongly over a prolonged period. Much of this debt has been taken out by households with low debt servicing capacity, and there is a sharp rise in the rate of default and recorded losses. Non-financial firms' debt has also been on the increase over a long period. Several firms have relatively poor debt servicing capacity, and many of these go into liquidation during the projection period. There is a substantial reduction in the value of inventories, which means that the value of a significant portion of banks' collateral also declines. The greatest losses are recorded during the first few years, accumulating to 4.1 per cent of corporate loans and 1.4 per cent of personal loans during the projection period (chart 5.1).

## SCENARIO 2: PROLONGED CRISIS AND PERSISTENT PANDEMIC

A more prolonged crisis results in a stronger and longer-lasting decline in mainland GDP than in scenario 1. The closure of large parts of the service sector lasts longer, and there is a sharper decline in gross output in the other mainland sectors. GDP for mainland Norway falls by 8.3 per cent in 2020 and remains flat in 2021 before growth rebounds in the last three years of the projection period. Developments in the gross output for service production contributes strongly to the weak trend in GDP (chart 5.2).

The sharp decline in output leads to considerably higher unemployment. LFS unemployment rises more than in scenario 1 and remains high. In 2021, the rate of unemployment is 9 per cent, before declining over the next years to 5.8 per cent in 2024. This is about 2 percentage points higher than in 2019 (chart 5.3).

The crisis leads to a sharp contraction in demand from households and firms. Housing investment declines by 32 per cent in the first three years, while there is a 45 per cent reduction in investment in mainland industries in 2020 and 2021. Both housing and corporate investment (chart 5.3) then picks up somewhat. High unemployment, low income growth, fewer consumption opportunities and a protracted period of increased saving contribute to a significant drop in private consumption. There is an overall decline of 8.9 per cent in 2020 and 2021 before a slight rebound in growth during the final three years (chart 5.3). The level of consumption at the end of the period is significantly lower than when the period started.

The steep decline in household credit demand far exceeds the reduction in scenario 1 as the downturn is more severe. The increase in household debt is 3.4 per



### 5.3 Selected variables in the two scenarios. Annual average

#### B. Corporate investments, mainland Norway. Level\*



#### C. Private consumption. Growth



#### D. Unemployment (LFS). Level



#### E. House prices. Index



#### F. Commercial property prices. Index



\*Fixed 2017 prices. Sources: Statistics Norway, OPAK/Dagens Næringsliv and Finanstilsynet

7 6 5 Per cent of loans 4 3 2 1 0 1989 2009 2014 2019 2024 1994 1999 2004 Personal customer loans Corporate loans

5.4 Scenario 2, banks' losses on corporate and personal customer loans

Source: Finanstilsynet

cent in 2020 and falls to close to zero in 2021. During the rest of the period, debt growth is slightly positive, but lower than the inflation rate. Due to a very weak trend in disposable income, households' debt burden will remain virtually unchanged at around 230 per cent throughout the period. The interest rate assumptions are the same in the two scenarios. Households' interest burden is reduced by just over 1 percentage point.

On average, Norwegian households have a high debt burden and many are vulnerable to a loss of income. In spite of the lower interest rate level, it will be difficult for many households to service their debt when they experience a substantial reduction in income. In a historical perspective, banks have recorded low losses on loans to households. In scenario 2, losses are significantly higher than in scenario 1 and accumulate to 3.8 per cent of loans throughout the period (chart 5.4). During the banking crisis in the early 1990s, accumulated losses on loans to households came to 5.5 per cent of gross loans. In important respects, households' position at the start of scenario 2 is weaker than at the onset of the banking crisis. Their debt burden is now considerably higher, and there has been strong growth in unsecured consumer debt for several years. Relative to disposable income, house prices are also far higher than prior to the banking crisis. In this scenario, unemployment rises to a higher level than has previously been observed. This leads to a significant loss of

income for many households. On the other hand, the interest rate level is expected to remain very low.

In scenario 2, accumulated house prices fall by close to 30 per cent. The economic turmoil persists, and after the same decline in prices in 2020 as in scenario 1, house prices fall by a further 14 per cent in 2021 and 7 per cent in 2022 in this scenario. House prices rise somewhat during the final two years, but from a low level.

The stock market is severely affected in this scenario, falling by a total of 56 per cent in 2020 and 2021, which corresponds to the decline in share prices during the financial crisis.

Commercial property prices, which have risen sharply for many years, are down 54 per cent in the first two years (chart 5.3). The decline is due to low demand for premises as a result of reduced corporate earnings, a steep fall in output, a sharp drop in the stock market, weaker household income and substantial uncertainty about the future. As a result of increased demand for commercial premises, price inflation picks up in 2023 and 2024, from a considerably lower level.

In consequence of the difficult situation for nonfinancial firms, many of them have trouble servicing their debt. Banks' losses on corporate loans therefore increase sharply, especially in 2020 and 2021 (chart 5.4). Banks' accumulated losses on corporate loans throughout the stress test period are estimated at 15.9 per cent of loans. During the banking crisis in the 1990s, accumulated losses on corporate loans were in excess of 20 per cent. The shock in the real economy in scenario 2 is stronger than during the banking crisis. There is a much steeper fall in GDP for mainland Norway, a sharper increase in unemployment and a more pronounced decline in consumption. This leads to a significant drop in corporate earnings.

# EFFECTS OF THE CORONAVIRUS CRISIS FOR NORWEGIAN BANKS

Stress tests are a useful tool for assessing risks present in banks. Stress testing aims to gauge the overall effect of various risks, while making allowance for the possibility that risk factors and imbalances in the economy may reinforce negative demand and supply shocks. The coronavirus pandemic and the fall in oil prices have strong negative spillover effects on the Norwegian economy, and there is considerable uncertainty about developments ahead and the consequences for the financial system. The main purpose of Finanstilsynet's stress tests 2020 is to shed light on how well the banks will cope during two different pandemic scenarios.

Finanstilsynet's extensive data for all Norwegian banks and mortgage companies enable analysis of both individual entities and the entire banking industry. The design of the stress tests seeks to capture the interaction between various risks present in the banks and in the economy as a whole.

A characteristic of banks is their high indebtedness relative to assets. Furthermore, banks' annual profits relative to total assets are much lower than for nonfinancial firms. These factors make banks vulnerable to a shortfall in earnings and reduced equity. In the past, banks have been strongly affected during severe economic downturns.

### ASSUMPTIONS UNDERLYING THE STRESS TESTS

In a severe crisis, banks' income will be reduced parallel to a rapid and strong increase in loan losses. Loan losses will no longer be associated with individual customers' special circumstances, but reflect more general conditions of significance to several borrowers in most industries. Norwegian banks have exposures to practically all industries and a very large share of households. Loan losses will rise even if there is a rapid normalisation of economic activity. In addition, earnings will be impaired as a result of higher funding costs, which cannot be passed on in their entirety to borrowers. This must be seen in light of the fact that a number of firms already experience low earnings and weaker financial strength and that households' debt burden is historically high.

Norwegian banks generally have limited holdings of equities and bonds. In the stress test, however,

the stock market decline and increased credit risk premiums provide a negative contribution to profits (applies only to the twelve largest banks) in 2020 and partly into 2021. Losses arising from operational risk are calculated as an annual percentage of average total assets (ATA), which over the stress period roughly corresponds to the aggregate level in the standardised approach for the stress test from the European Banking Authority<sup>13</sup>. Due to the extraordinary situation, it is assumed that the banks do not pay dividends for the years for which the banks record net profits. Furthermore, it is assumed that no new equity will be injected.<sup>14</sup>

# Box 8: Distribution of loan losses between the banks

The banks' total losses on loans to personal customers and non-financial firms, respectively, are calculated using Finanstilsynet's macro model NAM-FT. In NAM-FT, loan losses are calculated as a percentage of total loan exposure for each of the years 2020–2024. Furthermore, banks' lending to personal customers and non-financial firms is projected. The annual loss rate multiplied by the total loan exposure constitutes the banks' total loan losses in NOK. Aggregate loan losses are distributed among the banks according to the following methodology:

### Distribution of losses on loans to nonfinancial firms

A default indicator ('proxy PD' or PD, probability of default) is calculated for all non-financial firms that are borrowers of Norwegian banks and branches of foreign banks. The calculation is based on the situation at year-end 2019. The borrower's PD is multiplied by the borrower's credit exposure. The exposure amount comprises drawn credit plus 20 per cent of committed, undrawn credit and furnished guarantees. PD multiplied by exposure provides an exposureweighted probability of default for each individual borrower (EW-PD). The sum of borrower-specific EW-PDs constitutes the bank-specific EW-PD.

- The sum of bank-specific EW-PDs constitutes the banks' total EW-PD. Any impairment losses at the end of 2019 are deducted from the loan exposure.
- iii. The bank-specific EW-PD divided by the total EW-PD for all banks constitutes the individual bank's EW-PD share or loss rate.
- iv. The EW-PD share is thereafter multiplied by the total loan losses from the macro model NAM-FT for each year of the stress period to arrive at the individual bank's loan losses in Norwegian kroner.

The individual bank's loss rate is constant throughout the stress period. Only the total loan loss figure changes. The same rate of growth as that calculated in NAM-FT is used for all of the banks' loan exposures.

Banks with a high estimated credit risk (i.e. high EW-PD) are assigned a relatively large share of total losses on loans to non-financial firms. Banks with a large share of loans to non-financial firms are assigned a relatively large share of total loan losses. This is because loan losses are on average far higher in the case of non-financial firms than personal customers.

# Distribution of losses on secured loans to the personal customer market

Total losses on secured loans to personal customers (mainly residential mortgages) are distributed among the banks based on the individual bank's share of total secured loans granted to personal customers by all banks at the start of the stress period. The loss rate is assumed to be unchanged throughout the stress period.

# Distribution of losses on consumer loans (including credit card loans)

Losses on consumer loans (unsecured credit including credit card debt) are not calculated in NAM-FT. History shows that on average, losses on consumer loans have been between 10 and 20 times higher than losses on secured loans to personal customers in recent years. Owing to the strong growth in this market in recent years, however, it is very difficult to estimate the loss potential for consumer loans. A highly uncertain assumption used in the stress test is that total losses on consumer loans equal losses on secured personal customer loans (primarily residential mortgages) multiplied by a factor of 10. This means that if losses in this segment come to, for example, 1 per cent of secured loans, losses on consumer loans are assumed to be 10 per cent. The same factor is used for all banks providing consumer loans and remains unchanged throughout the stress period.

### Collateral

The distribution of loan losses does not take account of differences in the value of banks' collateral for secured loans. This is due to lack of information. There may be wide differences in the realisation value of collateral. In some cases, no loan loss arises on a problem exposure, either because the exposure is returned to current status with no loss being recorded or because the value of the collateral exceeds the loan exposure. In other cases, the bank may lose all or large parts of its exposure.

Box 9: More about loan losses by industry The NAM-FT macro model does not calculate losses on loans to individual industries. However, total losses on loans to non-financial firms using NAM-FT can be distributed on industries according to the method described in box 8. The industry breakdown is made on the basis of risk indicators and loan exposures at year-end 2019. This means that the extraordinarily high credit risk in industries that are particularly hard hit by the coronavirus pandemic and the fall in oil prices will not be reflected in the loan losses that are distributed by industry. Similarly, loan losses estimated for individual banks will not capture the banks' varying degrees of exposure to such industries.

According to this loss distribution method, 'oil service' is subject to the highest loan losses in the most severe stress scenario (chart 5.A)\*. Approximately 35 per cent of banks' loan exposure to this industry is lost during the stress period. Losses on loans to 'oil service' account for about 10 per cent of banks' total losses on loans to non-financial firms in the most severe stress scenario. Other industries with very high loan losses are 'retail trade excl. food and consumer staples' and 'accommodation, food and beverage'.

Losses on loans to 'commercial real estate' are roughly on a par with the average for all industries. However, since this industry has the clearly largest loan exposure, it accounts for the highest share of banks' total loan losses. Industries that are likely to be barely affected by the coronavirus pandemic and the fall in oil prices, including 'agriculture and forestry', 'power and water supply' and 'food and consumer staples', account for a relatively small proportion of banks' total loan exposure. The columns in the chart show average figures, and the industry distribution may vary between banks.

\*The distribution of loan losses by industry is the same in the least severe stress scenario, but the loss levels are lower.

5.5 Profits and main profit components. Norwegian banking groups



Source: Finanstilsynet

# STRESS TEST RESULTS FOR NORWEGIAN BANKING GROUPS

Finanstilsynet performs stress tests of all Norwegian banks. The discussion below focuses on 20 of the largest banking groups<sup>15</sup>, representing approximately 74 per cent of Norwegian banks' combined total assets of at the end of 2019. Branches of foreign banking groups are not included in the sample. Developments for other Norwegian banks and banks specialising in consumer loans are discussed in separate sections.

#### **Scenario 1**

Given the very low interest rate level, pressure on deposit spreads is expected, and the banking groups' combined net interest income<sup>16</sup> declines during the projection period, from 1.65 per cent of average total assets (ATA) in 2019 to 1.45 per cent. Due to a generally lower level of activity, banks' net commission and fee income is expected to be reduced by 15 per cent during this period.

Profit after tax falls from 1.0 per cent of ATA in 2019 to -0.3 per cent in 2021 before picking up to 0.5 per cent in 2024 (chart 5.5). Without a supply of new equity, the banking groups' CET1 capital ratio is reduced from 17.7 per cent in 2019 to 16.2 per cent in 2021 (chart 5.6). There is an increase to 17.9 per cent at year-end 2024, but there are significant differences between the banks. Three of the banking groups will either experience that their CET1 capital ratio falls below the over-

#### CHAPTER 5 STRESS TEST OF NORWEGIAN BANKS

#### Total loan losses Oil service Retail trade excl. food and consumer staples Accommodation, food and beverage Construction Building construction Private services Manufacturing and mining Land and air-based transport Communication services Education, health and culture Water transport Food and consumer staples Other industries Commercial real estate Fishing and hunting Power and water supply Oil and gas extraction Agriculture and forestry 0 Δ 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 Losses in the industry as a percentage of loans to the industry Share of loan losses in the stress test Per cent

#### 5.A Accumulated loan losses by industry 2020-2024. Scenario 2

Loan exposure of the industry as a share of total corporate loans

Source: Finanstilsynet

## 5.6 CET1 capital ratio and leverage ratio. Norwegian banking groups



Source: Finanstilsynet

all capital requirement, including buffer requirements<sup>17</sup> and the Pillar 2 requirement, or meet the requirements without maintaining a Pillar 2 capital guidance.

The banking groups' combined leverage ratio<sup>18</sup> declines from 7.4 per cent to 6.8 per cent in 2021, but none of the banks in the sample fall below the regulatory leverage ratio requirement during the period.

#### Scenario 2

In the more severe stress scenario, there is a significant increase in banks' loan losses. More sluggish economic activity is expected to result in a 20 per cent reduction in banks' net commission and fee income. The assumptions for other income items are the same as in the less severe scenario. Increased loan losses are the main reason why the banking groups' aftertax profits decline from 1.0 per cent of ATA in 2019 to a net loss of 2.4 per cent in 2021 before gradually improving to an aggregate net profit of 0.2 per cent in the final year of the period (chart 5.5).

The banks' CET1 capital ratio decreases from 17.7 per cent at the start of the period to 8.5 per cent in 2022. The CET1 capital ratio is estimated at 9.2 per cent in 2024 (chart 5.6). The reduction is due mainly to negative profits, driven by sizeable loan losses. Riskweighted assets for lending to households show the same development as lending growth in the stress scenario, and a reduction in the exposure to nonfinancial firms has a positive impact on capital adequacy. The stress test model does not capture portfolio migration in IRB banks. This means that any migration to higher risk categories due to the coronavirus pandemic and the fall in oil prices, and thus lower risk-weighted capital ratios owing to increased risk weights, are not reflected in the calculations.

# 5.7 Change in CET1 capital ratio from 2019 to the minimum level. Percentage points. Norwegian banking groups. Classified according to reduction in scenario 2.



Source: Finanstilsynet

Chart 5.7 shows changes in the CET1 capital ratio from year-end 2019 to the minimum level during the stress period.

The CET1 capital ratio of practically all of the 20 banking groups will fall below the overall CET1 requirement including buffer requirements and the Pillar 2 requirement in the course of the stress period. The CET1 capital requirement, capital conservation buffer, systemic risk buffer, countercyclical capital buffer, buffer for systemically important institutions and the individually determined Pillar 2 requirements are assumed to remain unchanged throughout the period.

The banking groups' leverage ratio declines from 7.4 per cent in 2019 to 4.0 per cent in 2022 and 4.2 per cent in 2024. Ten of the banking groups do not meet the leverage ratio requirement in scenario 2 (chart 5.8).

The banking groups that fare worst in scenario 2 generally have a relatively large share of loans to nonfinancial firms or a high estimated credit risk on this portfolio. The banks' capitalisation at the beginning of the period is also of great importance. The banks and the rest of the financial industry are severely affected in the stress scenario. It is assumed that the balance

# 5.8 Changes in the leverage ratio 2019 to the minimum level. Percentage points. Scenario 2. Norwegian banking groups.



Note: The turquoise columns are for banks that fail to meet the capital requirement. Source: Finanstilsynet

sheets of the individual banks show the same development as in the banking sector overall under each of the scenarios. Any differences in the rates of growth of individual banks may affect the actual capital adequacy ratio of each bank.

### **OTHER NORWEGIAN BANKS**

Other Norwegian credit institutions (84 institutions) mainly comprise small and medium-sized savings banks. These are stress tested at single company level (parent bank). The macro scenarios, stress test methodology and assumptions are identical to those applied to the banking groups. However, securities holdings of small Norwegian banks are not stressed due to insufficient data.

The overall profit of small Norwegian banks declines steeply in the first two years of scenario 1. This can partly be explained by higher losses on loans to personal customers, while the increase in losses on loans to non-financial firms is the main factor behind the decline. Losses on loans to non-financial firms are generally higher for the smaller banks than for the large banks as they carry higher risk in their corporate market portfolios. Overall, small and medium-sized banks have a higher CET1 capital ratio than the large banks at the start of the stress period (19.5 per cent). In scenario 1, this ratio declines to 18 per cent during the first two years, before rising again and ending at 19.6 per cent in 2024. However, there is considerable variance between the banks. In 2023, ten of the 84 banks will not meet the overall capital requirements, including the buffer requirements and the Pillar 2 requirement.

In scenario 2, there is a much steeper fall in the CET1 capital ratio, which is estimated at 12.5 per cent in 2022 and increases to 13.1 per cent in 2024. At the end of the stress period in 2024, as many as 48 of the 84 banks will not meet the overall capital requirements. At the same time, the leverage ratios of 38 banks are estimated to be below the minimum requirement of 5 per cent. If many smaller banks were to fall below the minimum capital requirement, this could heighten the uncertainty surrounding financial stability.

### **CONSUMER LOAN BANKS**

Since 2019, there has been a sharp slowdown in growth in the consumer loan market after the implementation of a series of targeted measures by the authorities. The default rate is on its way up, as discussed in chapter 2. At the same time, banks cannot expect to sell non-performing loans at the same price or to the same extent as before. Higher unemployment and falling house prices may also give a rise in banks' loss given default (LGD). Analyses of loan losses in normal economic periods show that losses on consumer loans are between 10 and 20 times higher than on other loans to households, which primarily comprise residential mortgages. Hence, it is likely that losses on consumer loans could be very high in a negative scenario.

Seven banks whose main business is consumer lending are included in Finanstilsynet's stress test. In the stress test, Finanstilsynet has included a simplified and highly uncertain assumption that losses on consumer loans will be ten times higher than losses on secured loans to households; see box 8. Credit growth is assumed to be on a level with the general increase in loans to personal customers in the banking sector, including foreign markets in which the consumer loan banks operate. The capital requirements for a given portfolio are not assumed to increase in parallel to the rise in the default rate. The other assumptions in the stress test are concurrent with the general stress for all banks.

Consumer loan banks' accumulated losses in the stress period in scenario 1 total about 17.7 per cent of their aggregate net lending at the start of the period. The losses are at their highest in 2020 and 2021 at just over 5.5 per cent per year. By way of comparison, smaller savings banks' accumulated losses on personal market loans come to about 1,5 per cent of their overall net lending to this market at the start of the period. In scenario 2, losses accumulated over the stress period total as much as 45 per cent of net lending at the start of the period.

Consumer loan banks' overall net interest income came to 9.1 per cent of average total assets in 2019. In both scenarios, average net interest income declines to 7.1 per cent in 2020 and remains at this level until 2024, based on an assumption of stronger competition for customers. Nevertheless, consumer loan banks generate much higher net interest income than traditional banks, which makes them better able to cover loan losses through ongoing earnings.

In scenario 1, the consumer loan banks' total CET1 capital ratio is just above 21 per cent in the first years and starts to rise towards the end of the period. This is primarily attributable to their high level of net interest income. However, there are wide variations within the group, and some of the consumer loan banks will not meet the overall capital requirements including the buffer requirements and the Pillar 2 requirement at the end of the stress period.

In scenario 2, the CET1 capital ratio falls to a low 1.4 per cent in 2022, before rising to 7.9 per cent at the end of 2024. Under these conditions, none of the banks will fulfil the minimum CET1 capital ratio requirement unless they receive an injection of capital.

### OVERALL ASSESSMENT OF THE STRESS TEST RESULTS

After the financial crisis in 2008, Norwegian banks' capital adequacy has risen in keeping with higher capital requirements. Banks' equity ratio (equity capital relative to total assets), which is a traditional measure of financial soundness, has increased, but is nonetheless not significantly higher now than in the early 1990s; see chapter 2.

The accumulated effect on the banks' capital adequacy is considerable in the two scenarios. In a scenario with a prolonged shutdown, 17 of the 20 banking groups will not meet the overall CET1 capital requirement at year-end 2024, even if the countercyclical capital buffer requirement is removed. Higher losses on loans to non-financial firms is the main factor behind the banks' impaired financial strength, although increased losses on loans to households (including consumer loans) and a reduction in net interest income also have an impact.

It is important that the banking industry as a whole is well capitalised in order to avoid uncertainty in the capital markets and insufficient capacity to provide credit to creditworthy customers, which in turn will reinforce the negative economic trend. Banks' financial soundness is crucial to their ability to absorb large loan losses while providing loans to creditworthy firms and households. In the current situation, Finanstilsynet therefore stresses the importance of the banks retaining their equity and not paying dividends or making other distributions that will impair their financial strength; see chapter 2.

## Box 10: Assumptions underlying the scenarios

The scenarios are designed by using the NAM-FT macro model\*. The model generates estimates of important macroeconomic variables (endogenous variables) such as gross domestic product (GDP), consumption, real investments, unemployment, wages, credit growth, banks' average lending rates, property prices and banks' loan losses. In order to project these variables, developments in certain variables that are not determined in the model (exogenous variables) needs to be established. The scenarios are based on different assumptions about developments in the exogenous variables during the projection period.

Norway has not experienced a shutdown of business operations of the current magnitude since World War II. In the projections, it has been necessary to override modeldetermined variables for, among other things, gross output for accommodation, food and beverage, culture, entertainment and other services, and some demand components.\*\* Many industries are strongly affected by reduced consumption and a decline in other demand components. It is challenging to avoid 'double counting' in connection with negative impulses that result from business closure requirements and impulses that result from, among other things, cancellations. The incorporation of impulses from the production and demand sides in the projections is to some extent based on discretion in the model simulations.

The purpose of the stress test is not to assess which fiscal and monetary policy measures should be initiated to help to curb the downturn in the Norwegian economy, but to analyse the consequences for the financial system of a serious economic downturn. Considerable room for manoeuvre in fiscal policy cannot prevent serious setbacks as a result of supply-side shocks and structural changes in the economy. For this reason, fiscal policy is assumed to be the same in both scenarios, and Norges Bank's key policy rate is set to zero throughout the projection period.

Scenario 1 is based on the assumption that developments in the Norwegian economy are largely consistent with the forecasts in Statistics

## Table 5.1: Developments in important exogenous variables common to the scenarios from 2020 to 2024. Percentage growth in annual averages, unless otherwise stated.

	2019	2020	2021	2022	2023	2024
Foreign money market rate (3-month, level)	-0.4	-0.3	-0.4	-0.4	-0.4	-0.3
Consumer prices in the euro area	1.2	1.0	1.0	1.0	1.0	2.0
Foreign producer prices	1.4	1.1	1.7	1.9	2.0	2.0
Public consumption	1.7	3.0	2.0	2.0	2.0	2.0
Gross public real investment	6.9	3.1	10.5	-1.7	3.0	3.0

Sources: Statistics Norway and Finanstilsynet

Table 5.2: Developments in important exogenous variables from 2020 to 2024. Percentage growth in annual averages, unless otherwise stated.

		2019	2020	2021	2022	2023	2024
Export market indicator							
	Scenario 1	3.8	-23.6	-5.4	7.0	4.0	4.0
	Scenario 2	3.8	-23.6	-7.7	3.5	4.0	4.0
Oil price in USD (level)							
	Scenario 1	64.3	32.6	25,0	25,0	30.0	35,0
	Scenario 2	64.3	28.9	20.0	20.0	30.0	35.0
Investments in oil and gas production and pipeline transport							
	Scenario 1	13.0	-9.0	-25.0	-10.0	0.0	0.0
	Scenario 2	13.0	-9.0	-30.0	-5.0	0.0	0.0
Oil and gas exports							
	Scenario 1	-4.3	6.8	7.6	5.1	2.0	-1.0
	Scenario 2	-4.3	3.4	3.8	-2.0	-1.0	-1.0

Sources: Statistics Norway, Norges Bank and Finanstilsynet

Norway's 'Economic Survey 2020/1' and Norges Bank's 'Monetary Policy Update May 2020'.

Developments in international money market rates, measured by the euro rate, are in keeping with the pricing in the futures market as at 12 May 2020; see table 5.1. Among the exogenous variables in scenario 1, developments in the export market indicator, oil prices and investments in oil and gas production and pipeline transport differ the most from Statistics Norway's and Norges Bank's forecasts during the projection period.

The export market indicator, which is a measure of international demand for Norwegian-produced

traditional goods and services, falls by a total of 28 per cent in 2020 and 2021; see table 5.2.\*\*\* This fall is believed to reflect the decline in economic activity among Norway's trading partners as a result of the coronavirus pandemic and the measures taken to combat it. The international economy is assumed to gradually recover towards the end of the projection period, and in the last three years the export market indicator picks up somewhat.

It is assumed that the oil price will be USD 25 per barrel from the second quarter of 2020 through 2022 and rise to USD 30 in 2023 and USD 35 in 2024. The low oil price makes some investment and maintenance projects in the petroleum industry unprofitable. As a result, investments in oil and gas production and pipeline transport are expected to be scaled back by a total of 39 per cent in 2020 through 2022 and to remain at this level throughout the projection period.

The decline in economic activity is stronger in scenario 2 than in scenario 1 both in Norway and internationally. This is reflected in a weaker development in several of the key exogenous variables in the model in scenario 2 than in scenario 1; see table 5.2. In scenario 2, international demand for Norwegian-produced goods and services shows a steeper fall than in scenario 1 in 2021, and growth in 2022 is weaker. Reduced global trade means that oil prices will be lower in 2020 through 2022 in scenario 2 than in scenario 1. Lower oil prices early in the projection period give rise to a more rapid decline in investments in oil and gas production and pipeline transport in scenario 2 than in scenario 1. Norwegian production and exports of oil and gas are assumed to be more adversely affected by the coronavirus pandemic, low oil prices and decisions on cuts in oil production in scenario 2. The reduction in petroleum investment from 2020 to 2022 gradually also contributes to lower production and export of oil and gas in the last years of the projection period.

\*NAM-FT is based on the Norwegian Aggregate Model (NAM) and was developed specifically with a view to stress testing of banks and analysis of financial stability. NAM was developed by Professors Gunnar Bårdsen and Ragnar Nymoen. Documentation of the model can be found at normetrics.no. The model, and Finanstilsynet's use of the model, are also referred to in the Risk Outlook reports from 2014 to 2019. \*\*Things that have not occurred cannot be represented in estimated model equations.

\*\*\* The decline in the export market indicator in 2020 and 2021 is calibrated based on results in the OECD's note 'Evaluating the initial impact of Covid containment measures on activity' dated 27 March 2020 and is close to the strength of the IMF's blue and red scenarios discussed in the 'Scenario Box' on pages 15 and 16 of WEO chapter 1 published on 14 April 2020.

## NOTES

<sup>1</sup> See 'Nye tap på utlån til oljeleverandørnæringen' (New losses on loans to the oil supplier industry) (in Norwegian only) in Norges Bank's blog Bankplassen.
<sup>2</sup> According to the research company Rystad Energy, the level of investment on the Norwegian continental shelf looks set to be almost halved in 2022 compared with 2019; see

https://finansavisen.no/nyheter/olje/2020/04/15/7517 614/rystad-norske-oljeinvestments-will- naer-halvedfrom-2022 (in Norwegian only)

<sup>3</sup>The figures from the EBS are for the largest banks in each country (189 banks in total).

<sup>4</sup> Total for exposures more than 90 days past due and other non-performing (problem) exposures

<sup>5</sup> Profits and return on equity for the first quarter of 2020 are shown as annualised percentage rates.

<sup>6</sup> The capital requirements are based on full CRD IV/CRR implementation, the new systemic risk buffer and the reduced countercyclical capital buffer.

<sup>7</sup> For a more detailed description of the profit performance of insurers and pension funds, see <u>Finanstilsynet's quarterly reports on financial</u>

<u>institutions' performance.</u> (in Norwegian only). <sup>8</sup> For further information about the solvency of insurers and pension funds, see <u>Finanstilsynet's solvency reports.</u> (in Norwegian only).

<sup>9</sup> The usual practice is that bonds with a credit rating below BBB from Standard and Poor's or below Baa3 from Moody's are classified as high-yield bonds. The remainder are investment grade. Non-credit-rated issues are grouped in the high-yield category.

<sup>10</sup> UCITS is a type of mutual fund that complies with pan-European rules and is subject to extensive requirements concerning risk diversification, what the fund may invest in and frequent opportunities for unit holders to redeem the units. UCITS funds are intended to be an investment option for retail investors. Some mutual funds are referred to as national mutual funds and do not meet one or more of the main rules that apply to UCITS funds. <sup>11</sup> National mutual funds are included in the alternative investment fund category. National mutual funds constitute a large proportion of the equity fund, funds of funds and hedge fund (specialised funds) categories <sup>12</sup>

https://www.esma.europa.eu/sites/default/files/library /esma50-165-1006 asr-aif 2020.pdf

<sup>13</sup> The EBA's stress test spans three years. In Finanstilsynet's model, a similar effect is distributed over five years and therefore constitutes a weaker stress factor.

<sup>14</sup> The stress test is based on the banks' reporting to the authorities at 31 December 2019 through COREP, FINREP and ORBOF. Any changes in year-end adjustments after the reporting date are not reflected.

<sup>15</sup> DNB Bank (the banking group), SpareBank 1 SR, Sparebank 1 SMN, Sparebanken Vest, SpareBank 1 Østlandet, SpareBank 1 Nord-Norge, Sparebanken Sør, Sparebanken Møre, Sparebanken Sogn og Fjordane, Gjensidige Bank, Sparebanken Øst, Sbanken, Storebrand Bank, Helgeland Sparebank, Landkreditt Bank, BN Bank, Sandnes Sparebank, Fana Sparebank, Totens Sparebank and Aurskog Sparebank.

<sup>16</sup> Total interest income less the sum of interest expenses in per cent of average total assets (ATA).

<sup>17</sup> The capital requirements are based on full CRD IV/CRR implementation, the new systemic risk buffer and the reduced countercyclical capital buffer.

<sup>18</sup> Some of the central banks' liquidity measures will affect the leverage ratios of the largest banks. The stress test does not include such effects.

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