FINANSTILSYNET
THE FINANCIAL SUPERVISORY
AUTHORITY OF NORWAY

RISK OUTLOOK
DECEMBER 2019

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.

RISK OUTLOOK DECEMBER 2019

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SUMMARY

High debt levels among households and high property prices are vulnerabilities posing a significant risk to financial stability in Norway. Since the mid-1990s, growth in household debt has exceeded income growth. The debt burden, measured by the ratio of debt to disposable income, has reached a historically high level and is higher than in the majority of other countries.

Many households have a very high debt burden and limited financial buffers. Finanstilsynet's residential mortgage lending survey for 2019 shows that as much as 45 per cent of new instalment loans were taken out by borrowers with debt above 400 per cent of gross annual income, versus 41 per cent in 2018. First-time homebuyers and borrowers in the younger age groups have the highest debt-to-income and loan-to-value ratios and are particularly vulnerable to rising interest rates and declining incomes.

On 15 November 2019, the Ministry of Finance adopted new residential mortgage lending regulations that will remain in force for one year as of 1 January 2020. The requirements of the current residential mortgage lending regulations have largely been retained in the new regulations.

In September 2019, the European Systemic Risk Board (ESRB) published a warning to the Norwegian authorities, stating that the high debt burden of households and high house prices are vulnerabilities posing the greatest risk to financial stability in Norway. The growth in household debt has gradually abated and is now roughly in line with the increase in households' disposable income. If the level of interest remains low, there is a risk that vulnerabilities will build up in households and firms in the period ahead.

High debt levels mean that even a moderate rise in interest rates will lead to a significantly higher interest burden. As most of the debt carries a floating interest rate, there will be a rapid increase in the interest burden.

The debt levels of Norwegian non-financial firms have increased significantly since the mid-1990s and are now far higher measured as a share of GDP for Mainland Norway than before the Norwegian banking crisis in the early 1990s. Many Norwegian firms will be severely affected by a sharp rise in interest rates and risk premiums, for example as a result of international financial turmoil, or a reduction in income in consequence of an economic setback.

Internationally, both public and private debt has increased, and there is a high debt burden in a number of countries. Recent years have seen particularly strong growth in emerging economies. Household debt has risen in several countries over the last few years, and an increasing proportion of corporate loans is taken out by entities with a weak financial position and earnings. Low profitability in the banking sector also contributes to financial vulnerability in a number of European countries.

Global economic growth has abated during the current year. Central banks in several countries have cut their key policy rates, and market rates have declined. The IMF now expects the interest rate level to remain lower over a protracted period. Global economic growth is expected to pick up slightly in 2020. However, great uncertainty attends international developments. An escalation of the trade conflicts between the United States and other countries could trigger an economic setback and financial market turmoil. The consequences of a UK exit from the EU are still difficult to foresee.

Low key policy rates and extraordinary monetary policy measures undertaken by several central banks have probably contributed to reduced risk premiums and high prices on equities, corporate bonds and real estate. If global economic developments turn out to be considerably weaker than expected, there could be strong price corrections. This will have a pronounced impact on investors and could make it difficult and expensive for both financial institutions and non-financial firms to raise new capital in the money and capital markets.

There is a great risk that vulnerable households will take out consumer loans at high interest rates that they are subsequently unable to service. This could result in a heavy personal burden for the individual borrower and loan losses and loss of reputation for the banks. The concentration of unsecured debt in vulnerable households may also contribute to systemic risk. Based on a proposal from Finanstilsynet, the Ministry of Finance adopted regulations on requirements for financial institutions' consumer lending practices on 12 February 2019. The regulations will remain in force up to and including 31 December 2020. The regulations include requirements on the borrower's debt servicing capacity, maximum debt relative to income and monthly instalment payments.

The growth in households' consumer loans has slowed somewhat during the past few years, with the most pronounced decline in 2019. At end-September 2019, the twelve-month growth in consumer loans, including defaulted loans sold to finance companies for recovery, was on a level with the increase in total household debt.

The first debt information undertakings started operations in 2019. Improved information about customers' overall consumer debt will ensure a better basis for banks' credit assessments and help to provide a more complete picture of developments in household consumer debt.

Defaults on consumer loans are higher than for other types of loans, and there has been a marked increase in the default level in recent years. At end-September 2019, the level of default was 9.4 per cent for the undertakings included in Finanstilsynet's survey, whereas it was 0.9 per cent for banks' total loans. The actual level of default for consumer loans is higher, since banks also sell defaulted loans to finance companies.

Due to profitable operations, Norwegian banks have been able to meet higher capital requirements largely through retained profits. The banks' Tier 1 capital as a share of total assets has increased over the past ten years, and the banks meet the liquidity requirements. The share of long-term market funding has risen. Norwegian banks are thus better positioned to provide credit in the event of an economic setback and increased loan losses. Norwegian banks' common equity Tier 1 capital ratios and leverage ratios are slightly above the average for European banks.

Net interest income constitutes the predominant part of Norwegian banks' operating income and is thus vital to the banks' profitability. Figures from the European Banking Authority (EBA) for the largest banks in each country show that Norwegian banks' net interest income as a share of total income is considerably higher than in many other European countries, where negative interest rates have put pressure on the interest margin.

A number of Norwegian banks, especially the largest ones, obtain a significant share of their funding in the Norwegian and international money and capital markets. The banks are thus vulnerable to market turbulence. There has been an appreciable increase in banks' residential mortgage lending in recent years, both in absolute terms and as a share of total lending. This increase is largely financed through the issue of covered bonds. In addition, banks have invested heavily in covered bonds issued by other banks. Developments in house prices thus have a strong bearing on the banks' credit and liquidity risk.

The Ministry of Finance has adopted regulatory changes that implement the EU's capital requirements directive (CRD IV) and regulation (CRR) in Norwegian law with effect from 31 December 2019. Seen in isolation, the measured capital adequacy ratio will consequently increase, although the banks' financial soundness will remain unchanged. In Finanstilsynet's opinion, it is important to ensure that the implementation does not contribute to a general weakening of Norwegian banks' financial strength. When approving and following up internal models, Finanstilsynet will attach importance to robust calibration with satisfactory safety margins, and will, when setting Pillar 2 requirements, emphasise that these requirements should also capture risk that is not fully covered by the Pillar 1 requirement. When assessing banks' financial

soundness, Finanstilsynet gives emphasis to the leverage ratio. In Finanstilsynet's view, the banks' financial position on his measure should not be impaired in the period ahead.

The capital adequacy of life insurers has been strengthened in recent years, and they are compliant with the Solvency II requirements. The low interest rate level poses a challenge to institutions' ability to achieve the guaranteed return on their investments. The risk of declining equity prices and higher risk premiums in financial markets is of particular consequence to insurers with a large proportion of paid-up policies in their portfolios. New solvency requirements for pension funds came into force on 1 January 2019. Pension funds meet the new solvency requirements, although there are wide variations in their financial soundness.

The transition from defined-benefit to defined-contribution pension schemes with no guaranteed rate of return entails that the return risk is transferred from employers or pension institutions to the individual member covered by the pension scheme. It is important that institutions give their customers detailed information about expected returns, risk and costs related to the defined-contribution schemes.

Both physical climate change and the transition to a low emission society will have an impact on financial markets and financial institutions. The risk of financial instability depends on how suddenly climate change occurs and how quickly the transition to a low-emission economy takes place. The integration of climate risk in supervisory activity is high on the agenda of financial supervisory authorities in a number of countries, and work is in progress to develop supervisory tools to monitor firms' handling of climate risk. Good reporting of relevant information from the firms is of significance to financial institutions' risk assessments and the supervisory authorities' assessment of the financial soundness of individual firms and in the financial system as a whole. The Ministry of Finance has announced that the need for Norwegian regulatory changes will be assessed in light of how the recommendations of the Task Force on Climate-related Financial Disclosures are followed up in the market and on the basis of new EU regulations reflecting the follow-up of the action plan on sustainable finance.

CHAPTER 1 ECONOMIC DEVELOPMENTS AND RISK AREAS

There is strong growth in the Norwegian economy, driven by an increase in investments, exports and private consumption. Estimates from Norges Bank, Statistics Norway and the Ministry of Finance indicate slightly lower growth in the mainland (non-oil) economy in the period ahead. Employment growth is expected to slow, while unemployment is expected to remain low.

High and rising household debt poses a significant risk to the financial stability of the Norwegian economy. Price growth in the Norwegian housing market has been moderate since the summer of 2018, but prices are still at a very high level. The debt levels of Norwegian non-financial firms are historically high relative to gross domestic product (GDP).

Global economic growth has abated during 2019. There is a high risk of a weaker-than-expected trend. The trade conflicts between the US and other countries are continuing, and the UK exit from the EU is unresolved. An international setback will also affect the Norwegian economy.

Ever since the international financial crisis ten years ago, the financial markets have been characterised by very low interest rates. After a period where central banks in some countries increased their key policy rates, the trend has been reversed in 2019. Norges Bank has signalled that its key policy rate is likely to remain at the current level in the near future.

Market participants' expectations concerning the level of key policy rates in the coming years have been revised down significantly. Persistently low market rates may increase the incentives for borrowing and elevate the vulnerability of countries that are already burdened by debt. Household debt is high in many countries and poses a considerable risk. Debt levels have also risen in the corporate sector, while the quality of the debt has deteriorated.

GLOBAL ECONOMY

Declining growth in a number of countries

After a long upturn in large parts of the global economy, GDP growth receded through the first half of 2019. The slowdown was particularly pronounced in Europe, and there was a slight decline in GDP in Germany and the UK in the second quarter of the year. Preliminary figures show positive growth in all EU countries in the third quarter. Growth has remained relatively high in most countries in Southern and Eastern Europe. The divergence must be viewed in light of the fact that demand has remained high within the euro area, while demand from key export markets has declined. This mainly affects countries with extensive export-oriented manufacturing, such as Germany. Unemployment has been reduced for the euro area as a whole and is close to the level prior to the financial crisis. However, there are wide differences between countries. Wage growth has picked up in most EU countries, and inflation is moderate, resulting in an increase in households' purchasing power.

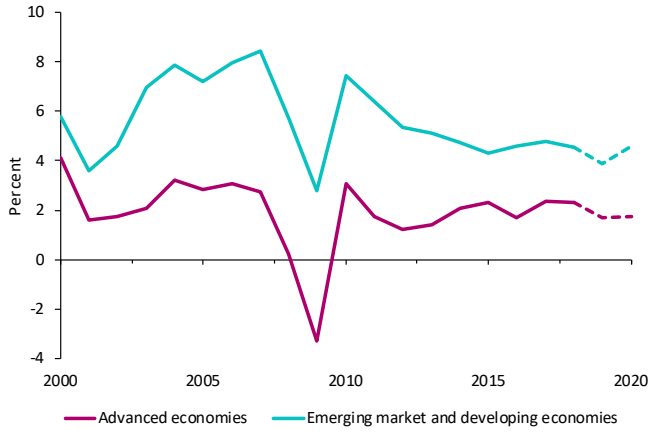
Economic growth in the US slowed during the first three quarters of the year, but remains relatively high. Strong fiscal stimulus in 2018 and ample access to credit for both households and enterprises have contributed to the growth. Unemployment is at its lowest level since the 1960s, and growth in real wages has picked up.

In China, GDP growth has receded further. Projections for the current year are close to the lower end of the government's growth target. Both fiscal and monetary policy measures have been adopted to stimulate economic activity.

Forecasts adjusted down further

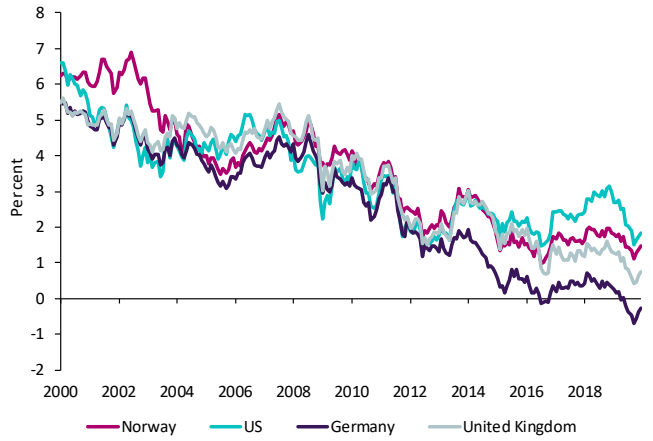
The large international forecasting institutions have revised down their estimates for global economic growth. The IMF expects global GDP to increase by 3 per cent in 2019 and 3.4 per cent in 2020. Growth

1.1 GDP growth and forecasts



Source: IMF

1.2 10-year government bond yields



Source: Refinitiv

has thus been downgraded by 0.3 and 0.2 percentage points, respectively, compared with projections six months back. Growth is expected primarily in emerging market and developing economies (chart 1.1), and especially in previously crisis-ridden countries such as Argentina, Iran, Venezuela and Turkey. However, the recent rise in geopolitical tensions fuels uncertainty about future developments in these countries.

The EU is Norway's most important trading partner. In the euro area, growth is expected to be just over 1 per cent over the next couple of years. Nevertheless, unemployment is expected to decline somewhat during this period, although there are differences between the countries. In Germany, a slight increase in unemployment is expected, while a further reduction is anticipated in the other major euro area countries. Higher tariffs and tariffs on new groups of commodities are expected to dampen exports and investments, while increased private consumption will have the opposite effect.

China and the US are also expected to experience lower growth. In the US, the fiscal stimulus will gradually be withdrawn, while increased trade barriers will have an adverse effect on the production of goods and services in both countries. US business executives have become more uncertain about the future, and surveys indicate a reduction in industrial production.

Financial markets are characterised by lower interest rates and recovering stock markets

Ever since the international financial crisis ten years ago, the financial markets have been characterised by very low interest rates. After a period where central banks in some countries increased their key policy rates, the trend has been reversed in 2019. Market participants' expectations regarding the level of key policy rates in the coming years have been revised down significantly. In addition to interest rate reductions, some central banks, including the European Central Bank, have resumed the quantitative easing of monetary policy.

Thus far in 2019, there has been a decline in international yields. This is especially true for long-term bonds, where 10-year government bond yields are now negative in several European countries (chart 1.2). At the same time, short-term market rates have been relatively stable, whereby long-term bond yields are lower than money market rates in a number of countries. Developments must be seen in light of great uncertainty among market participants due to geopolitical tensions, ongoing trade conflicts and Brexit.

Uncertainty surrounding international economic developments has at times also taken its toll on stock markets (chart 1.3). After a significant fall towards the end of 2018, the stock markets recovered during the

first half of 2019. Since the summer, equity prices have remained fairly stable. In the US and Norway, equities have yielded strong returns over the last ten years. The IMF has questioned whether price developments on the US and Japanese stock markets reflect developments in the real economy and corporate earnings prospects.

Significant vulnerabilities and heightened risk in the international economy

High debt and lower credit quality constitute key vulnerabilities in the global economy. According to the IMF, the risk of an international economic downturn has increased over the past six months. This is primarily due to weaker growth in several countries over the last few quarters, as well as the risk of further tightening of the US trade policy. Expectations of a more normalised interest rate level have been replaced by expectations of a new decline and a protracted low interest rate level.

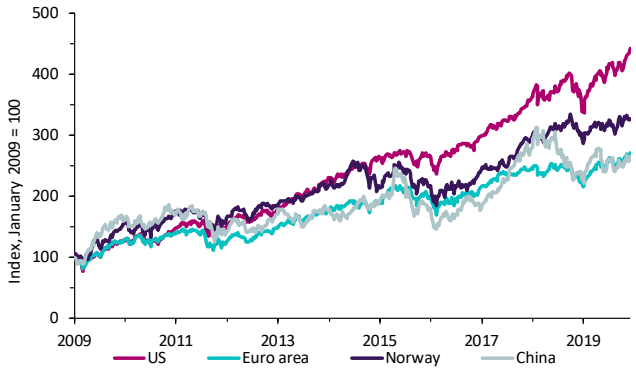
Persistently low interest rates may contribute to greater imbalances

The low interest rate level over the past ten years has encouraged increased borrowing in both the public and private sector and greater 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 have remained relatively stable since 2011, while there has been a sharp increase in emerging market economies (chart 1.4).

Public debt has increased in some countries

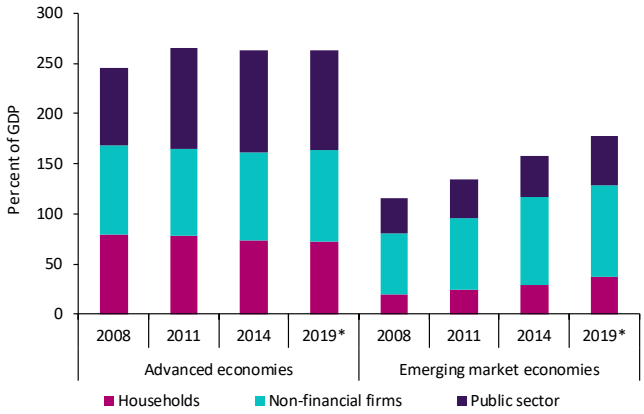
In relation to GDP, public debt is now higher than prior to the financial crisis in both advanced economies and emerging market economies. The IMF estimates the vulnerability of the public sector to be unchanged globally over the past year and emphasises that it has been slightly reduced in the euro area. However, it is pointed out that debt has increased relative to GDP in some countries, and that the fiscal policy space has narrowed. At the same time, the monetary policy space has been constrained after ten years of expansionary monetary policy.

1.3 Total return index, equities in selected countries (MSCI)



Source: Refinitiv

1.4 Global debt



* End-March 2019. Source: Bank for International Settlements

Persistently high debt in the household sector

The vulnerability of the household sector remains high, especially in some industrial countries and in China. In many of the countries that fared the best during the financial crisis, household debt and house prices have increased in the wake of the crisis. However, the vulnerability of the hardest hit countries has been reduced as a result of lower household debt and house prices.

High vulnerability in the corporate sector in several countries

In emerging market economies, total debt in the corporate sector has increased over the last ten years, with particularly strong growth in China. Developments are largely driven by high demand for loans due to low interest rates. At the same time, investors are seeking higher returns, partly by lending more to enterprises with weaker creditworthiness. This contributes to greater vulnerability.

The IMF has analysed developments in the corporate sector of the G7 countries and China. One of the things analysed in the study is the volume of debt issued by enterprises whose operating profits are insufficient to cover interest expenses (debt-at-risk). The analysis shows that the overall profitability of US small and medium-sized enterprises is very poor, and that debt-at-risk has increased to a high level. In the UK and some euro area countries, debt-at-risk in small and medium-sized enterprises remains at a high level, although there is a reduction from 2009. Debt-at-risk in large enterprises has declined to relatively low levels in Japan and the US, but remains elevated in the UK and to some extent in China. According to the IMF, one-fourth of corporate debt in the UK and the US has been raised by enterprises whose earnings are insufficient to cover interest expenses.

Estimates from the IMF show that debt-at-risk in the corporate sector may increase significantly during a severe recession. The analysis is based on a scenario with roughly half the decline in GDP growth and a rise in interest expenses at half the level during the international financial crisis. In France and Spain, enterprises' debt-at-risk increases to the levels seen during the financial crisis, while in China, the UK and the US, it exceeds these levels. Overall, 40 per cent of all corporate debt in these countries is estimated to be at risk in the stress scenario.

Prolonged trade tensions

Despite repeated signals that a new trade agreement between the US and China will soon be concluded, the increase in tariffs has not been reversed, and the US threat to further raise tariffs in December 2019 still stands. In addition to imposing tariffs, the US has also banned trade with a number of Chinese technology companies and introduced restrictions on public procurement of technology from selected Chinese companies and is in the process of working out stricter rules for export controls on sensitive technology. China has responded by raising tariff barriers on US imports in several rounds and has also indicated that it will resort to measures other than tariffs to prevent trade and investment.

In October 2019, the World Trade Organisation (WTO) authorised the US to impose tariffs on the EU in consequence of the EU's subsidies to Airbus. The US announced that it will impose tariffs on some agricultural and industrial products from Europe. In April, the EU won a similar case against Boeing and has drawn up list of products that may be subject to tariffs. These measures have not yet been implemented.

In addition to the special measures against China and the EU, the US has levied tariffs on imports of steel and aluminium from all countries. The US has also announced that tariffs may be imposed on cars and car parts. If such steps are taken, a number of countries are likely to respond by introducing trade restrictions against the US. Trade barriers and uncertainty about the introduction of additional measures have contributed to a reduction in international trade and significant slowdown in industrial production (chart 1.5).

Thus far, the growth in service industries has held up in most advanced economies. If the subdued growth in global industrial production persists, it is likely to eventually have negative consequences for service production.

Brexit-related uncertainty continues

After 2.5 years of negotiations, the withdrawal agreement between the UK and the EU has still not been adopted. In October, the UK Parliament approved the principles of the negotiated agreement. At the same time, the government's timetable for implementing all parts of the agreement into UK law was rejected. Thus, it became impossible to retain the 31 October 2019 exit deadline. The UK applied to the

EU for an extension, whereby the exit deadline will be 31 January 2020. The likelihood of a no-deal Brexit has probably been reduced, but the general election on 12 December contributes to uncertainty about the way forward.

Several calculations have been made of the economic effects of a no-deal Brexit. The estimates vary considerably. In September, the OECD presented an analysis concluding that most of the negative effects will materialise in 2020, and that the slowdown will be most pronounced in the UK, although growth in the EU will also abate.

A hard Brexit and new trade barriers will also affect the Norwegian economy

The UK is Norway's largest trading partner, and the Norwegian authorities have taken a number of precautions to dampen the impact of a no-deal Brexit. The Norwegian economy will still be affected, both indirectly through lower growth among its trading partners and directly through barriers to trade with the UK. The Ministry of Finance estimates that, in isolation, subdued activity among Norway's trading partners will have a moderate effect on the Norwegian economy. However, there is great uncertainty surrounding the overall effect, since it is difficult to predict how financial market participants will react, which adaptations will be made by households and enterprises and whether market participants' expectations will be negatively affected.

An escalation of the ongoing global trade conflict poses a significant risk to the Norwegian economy. Statistics Norway's estimates of the effect of elevated tariffs show that GDP will decline somewhat compared with a situation with no trade barriers. If this is accompanied by a fall in oil prices as a result of more sluggish growth in the global economy, the negative effects will be amplified. In addition, further barriers to trade may also result in financial market turmoil, higher risk premiums, lower asset prices and increased funding costs for both financial and non-financial firms.

1.5 Growth in international trade and industrial production

Source: Refinitiv

New barriers to trade and lower international growth will have varying effects on sectors of the Norwegian economy. Since exports will be most severely affected, the manufacturing industry in particular will experience a setback. If oil prices fall, the petroleum and supplier industries will be hit the hardest. This will also have a negative effect on the services sector, since Norway is a major exporter of petroleum services. At the same time, the decline in international trade is expected to result in weaker earnings in the Norwegian shipping industry. Norwegian banks have a significant exposure to these industries.

NORWEGIAN ECONOMY

Sound growth in the Norwegian economy

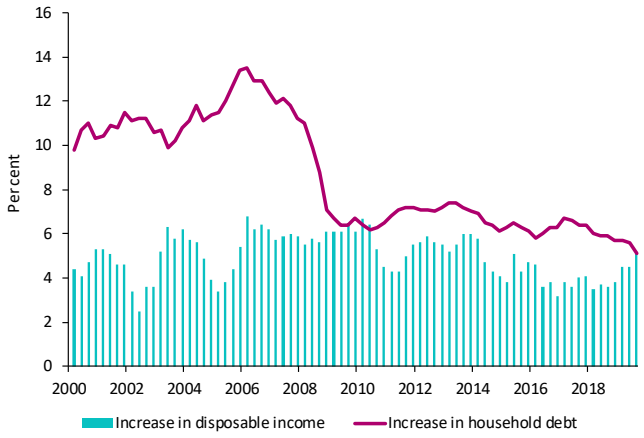
Norwegian economic growth has accelerated over the past three years. The rise is partly due to higher international economic growth, rising oil prices, low interest rates, an expansionary fiscal policy and improved competitiveness owing to the depreciation of the Norwegian krone. Employment has risen and unemployment has gradually receded to a historically low level.

The Norwegian economy is strongly affected by developments in petroleum investment. After falling sharply from 2013 to 2017, petroleum investment

1.6 Growth in GDP Mainland Norway

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

1.7 Growth in households' debt and disposable income



Source: Statistics Norway

increased in 2018, and a substantial rise is anticipated during the current year. Corporate investment has also increased markedly from 2016, while housing investment has grown moderately over the last two years. Private consumption has shown healthy growth in recent years, with the most pronounced increase in service consumption.

Subdued growth outlook

Both Norges Bank, Statistics Norway and the Ministry of Finance expect a continued balanced development in the Norwegian economy (chart 1.6). The impetus from petroleum investment is assumed to weaken in the period ahead. Lower growth among trading partners is expected to curb growth in corporate investment over the next few years, and forecasts also point to a slight rise in housing investment. Consumption growth is expected to roughly equal the trend rate of growth of just below 2 per cent. A substantial weakening of the krone exchange rate through 2019 may contribute to enhanced growth in traditional exports, although weaker growth among trading partners pulls in the opposite direction. Employment growth is assumed to become somewhat lower, and unemployment looks set to increase slightly up to 2022.

According to the National Budget for 2020, the fiscal policy stance will be more or less neutral. In September, Norges Bank raised its key policy rate to 1.5 per cent. At its executive board meeting in October, Norges Bank signalled that its key policy rate is likely to remain at the current level in the near future. The low interest rates have contributed to house prices rising to a very high level. Thus far this year, the increase in prices has been moderate, and forecasts from Statistics Norway and Norges Bank indicate moderate growth in house prices in the coming period.

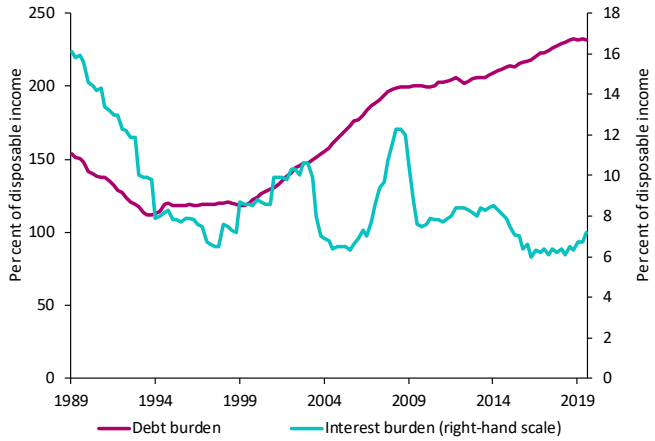
Household debt

High household debt burden

In the third quarter of 2019, Norwegian household debt came to 119 per cent of GDP for Mainland Norway, an increase of 12 percentage points over the past five years. Debt growth has subsided in recent years and was 5 per cent in October 2019[1] (chart 1.7). During the same period, growth in households' disposable income has picked up, and the twelve-month growth rate was 5.2 per cent in the third quarter of 2019.

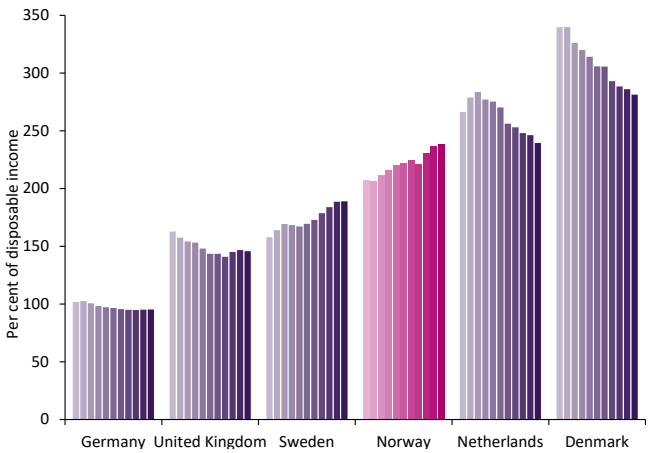
Households' debt burden, measured by the ratio of debt to disposable income, has risen to a high level (chart 1.8). At the end of the third quarter of 2019, the debt burden was 232 percent. In many countries, the debt burden has declined in the years following the financial crisis, while it has continued to increase in Norway. In Denmark, households have a higher debt burden than in Norway, while it is roughly the same in the Netherlands. In both of these countries, the

1.8 Households' debt burden and interest burden



Sources: Statistics Norway and Finanstilsynet

1.9 Households' debt burden in selected countries 2008–2018



Source: OECD

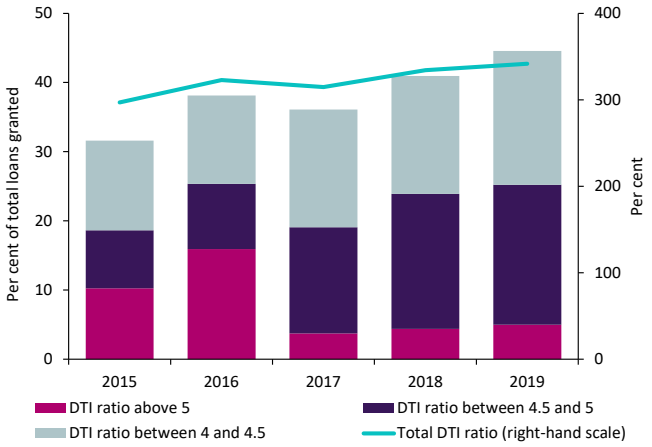
debt burden has subsided in recent years (chart 1.9). Based on a continued steady growth in the Norwegian economy and low interest rates, there is a risk that the debt burden of Norwegian households will increase further.

A large share of new mortgages granted to households with a high debt-to-income ratio

The residential mortgage lending regulations have contributed to somewhat tighter lending practices. The volume of new loans to borrowers with particularly high debt relative to gross annual income (DTI ratio) was markedly reduced after the introduction of a maximum DTI ratio as of 1 January 2017. At the same time, borrowers' average DTI ratio has risen considerably, and an increasing proportion of the loans is taken out by borrowers with a high DTI ratio.

Close to half of new instalment loans in the residential mortgage lending survey 2019 were taken out by borrowers with a DTI ratio above 400 per cent (chart 1.10), an increase of 4 percentage points from 2018. The survey shows a higher share of instalment loans to borrowers with a DTI ratio above 500 per cent and borrowers with a DTI ratio between 400 and 500 per cent. The total DTI ratio increases most for the youngest and oldest age groups taking out new

1.10 Share of new instalment loans by borrower's DTI ratio and total DTI ratio



Source: Finanstilsynet

residential mortgages. See the residential mortgage lending survey 2019 for further details.[2]

Many households are vulnerable to rising interest rates or declining incomes

Households' interest burden has been low for a long time due to very low interest rates (chart 1.8). After the interest rate hikes implemented during the past year, the interest burden has also increased somewhat, but remains at a historically low level. Figures from Statistics Norway show that lending rates on new and existing residential mortgages have increased by

Box 1: Increase in defaults on consumer loans

Just as other types of debt, consumer debt is very unevenly distributed. Most consumer loans are relatively small, but a few borrowers have very large loans. According to Norges Bank*, 5 per cent of borrowers had loans totalling more than NOK 500 000 at end-September. These borrowers accounted for 40 per cent of total consumer debt. Consumer loans often come in addition to residential mortgages, and on average, borrowers with consumer loans have a high interest and debt burden. A high debt burden makes borrowers particularly vulnerable to interest rate increases, declining incomes or drops in property prices. Default rates on consumer loans have increased in recent years (chart 2.14).

Unsecured debt represent just under 4 per cent of total household debt. However, consumer loans carry very high interest rates, and the interest payments on these loans account for about 13 per cent of households' total interest payments. According to Norges Bank, 26 per cent of the loans carry an interest rate of over 20 per cent. Just over one-fourth of the Norwegian population had outstanding consumer debt at end-September 2019. Finanstilsynet is keeping a close watch on consumer lending. See further account in Chapter 2.

The debt registers that were established in the summer of 2019 provide data on households' unsecured debt. A very large number of borrowers with consumer debt also have residential mortgages or other secured debt, such as car loans. When assessing households' financial vulnerability and the credit risk of individual customers, it is important to take all types of loans into account, not just consumer loans.

*See Norges Bank's 2019 Financial Stability Report

approximately 0.5 percentage points over the past year. According to calculations made by Norges Bank, households' debt servicing capacity, defined as the percentage of income used to pay interest and normal instalments, is now roughly the same as during the banking crisis, when the nominal interest rate level was far higher.

Overall, households have positive net financial wealth. However, wealth and debt are very unevenly distributed, and a large proportion of financial wealth is fairly illiquid. In 2017, households with a very high debt burden accounted for a total of 32 per cent of total household debt.[3] Through a prolonged period of low interest rates, brisk house price growth and strong income growth, households have accumulated a debt level that is higher than ever before. For the most vulnerable households, even small changes in interest rates or income may significantly impair their finances. This could contribute to amplifying a future economic setback.

Housing market

Moderate increase in house prices

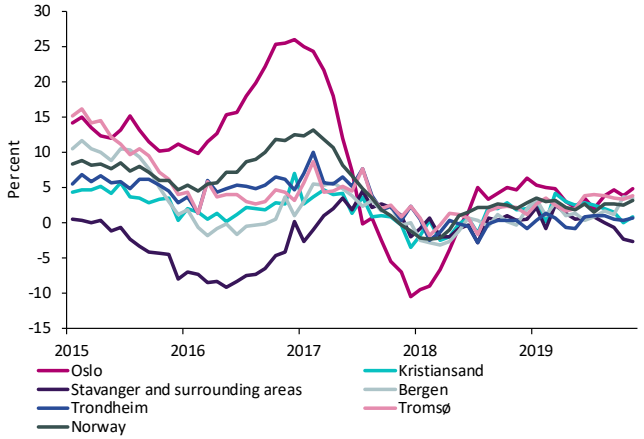
After the price correction in 2017, house prices in Norway have grown moderately. In November 2019, the twelve-month growth rate was 3.1 per cent. The regional differences in price inflation have also been less pronounced than during the last few years (chart 1.11).

House prices deflated by disposable income per capita was 5 per cent lower in the second quarter of 2019 than at the beginning of 2017, when the price level on this measure reached a peak. Compared with the first quarter of 2015, the price level is close to 7 per cent higher. However, the ratio of house prices to income remains high, also compared to other countries (chart 1.12).

High number of transactions in the housing market

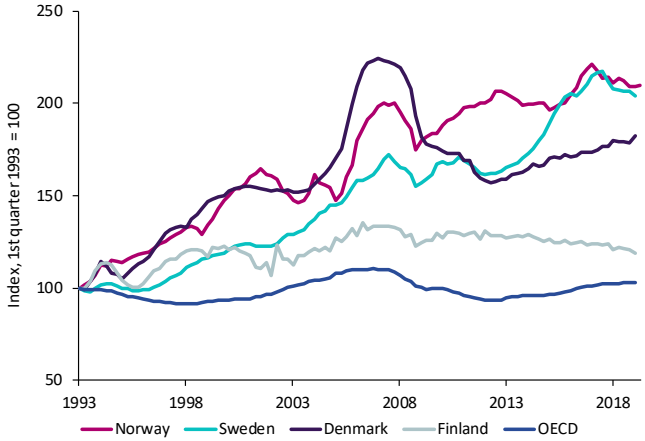
A high level of activity persists in the housing market. The number of homes sold is record high, while the number of homes put up for sale so far this year is the highest since 2007. At the same time, there are a large

1.11 House prices in selected towns and in Norway, twelve-month growth



Source: Refinitiv

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



Source: OECD

number of unsold homes compared with the last five years, although there has been a decline in recent months. Owing to the extensive offering of residential properties, the average selling period has increased.

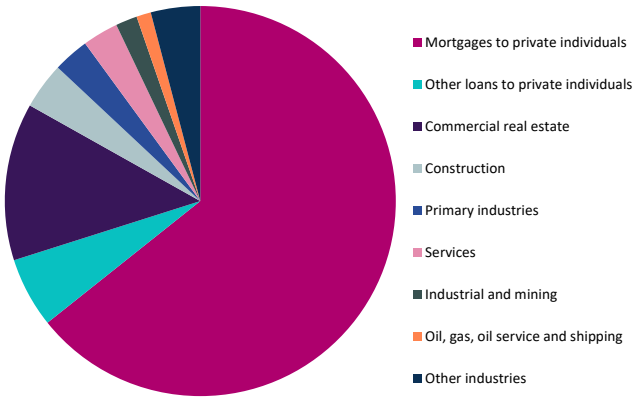
The record number of housing completions in 2018 exceeded the increase in the number of households. Many housing completions are also expected in 2019. Lower growth in the number of households may contribute to curbing house price growth in the period ahead.

The housing market is important for banks

Just over 60 per cent of banks' lending to Norwegian customers represents residential mortgages (chart 1.13). Developments in the housing market and in household debt are closely interconnected. Increased property values provide a basis for taking out larger loans, while the rise in credit contributes to higher house prices.

In September 2019, the European Systemic Risk Board (ESRB) published a warning to the Norwegian authorities, stating that the vulnerabilities in the Norwegian housing market constitute a source of systemic risk. According to the ESRB, high household debt and high house prices are vulnerabilities posing the greatest risk to financial stability in Norway. Banks' losses on residential mortgages have historically been limited, but there are indications that the

1.13 Banks' lending to Norwegian customers at end-September 2019



Source: Finanstilsynet

credit risk associated with mortgages has increased somewhat. Households' debt burden is higher than ever, and low interest rates and a healthy income trend over a long period have fuelled debt growth.

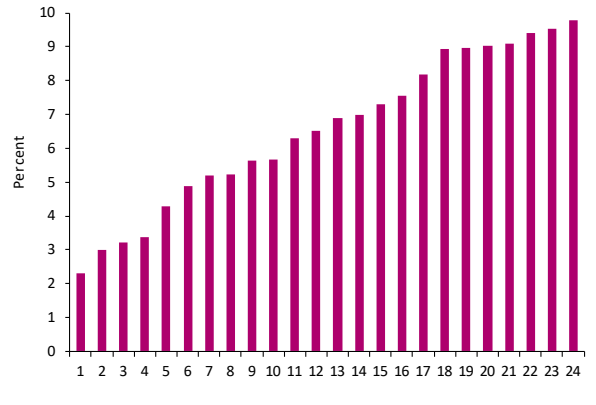
Box 2: Banks' compliance with the residential mortgage lending regulations

According to the residential mortgage lending regulations, each quarter, banks are required to report to their Board of Directors the proportion of approved loans deviating from the regulations' provisions on debt servicing capacity, DTI ratio, loan-to-value (LTV) ratio and instalments. Finanstilsynet receives copies of the board reports from the 24 largest mortgage banks and branches each quarter.

There has been a slight increase in loans secured on residential property outside Oslo failing to meet one or more of the requirements over the past year, to 7.1 per cent in the third quarter of 2019. Failure to meet the requirement for a maximum LTV ratio were most prevalent. For residential mortgages in Oslo, the percentage of non-compliant loans has been relatively stable and stood at 6.3 per cent in the third quarter of 2019. Failure to meet the requirement for a maximum DTI ratio were most prevalent.

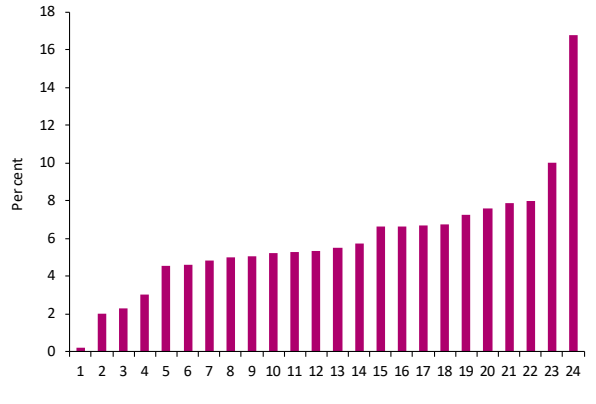
The proportion of loans that do not meet the requirements of the regulations varies among banks (charts 1.A and 1.B). Of the 24 banks, eight banks had a total rate of non-compliance of less than 5 per cent for lending in Oslo in the third quarter, while five banks had a rate of more than 7.5 per cent. For loans outside Oslo, nine banks recorded a rate of non-compliance in excess of 7.5 per cent.

1.A Use of the flexibility quota, excluding Oslo



Sources: Board reports from the 24 largest mortgage banks and branches and Finanstilsynet

1.B Use of the flexibility quota, Oslo



Sources: Board reports from the 24 largest mortgage banks and branches and Finanstilsynet

Commercial real estate

Brisk activity and high price level

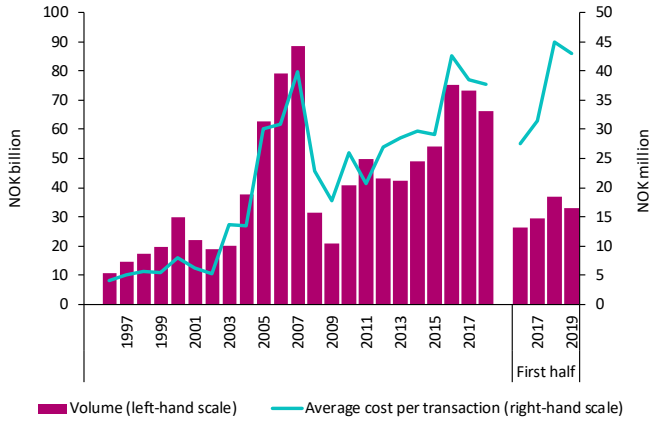
Prices of high-quality commercial properties at prime locations have increased significantly over a long period and are at a historically high level. The direct return has reached a record low level, and according to Entra's consensus report, the direct return will remain low over the coming years. There is a high level of activity in the market. Transaction volume in the first half of 2019 was slightly lower than in 2018, but high compared with previous years (chart 1.14). Estate agents in Oslo were responsible for the sale of about two-thirds of the total volume of commercial properties, while estate agents in other large towns accounted just under 20 per cent.

According to Entra, transaction volume across Norway is likely to hold up also in the years to come. This may contribute to further raising the prices of commercial real estate. On the other hand, extensive new office space is expected to become available in Oslo over the next two years, which in isolation will help to curb price inflation.

Commercial property prices are more cyclical than house prices

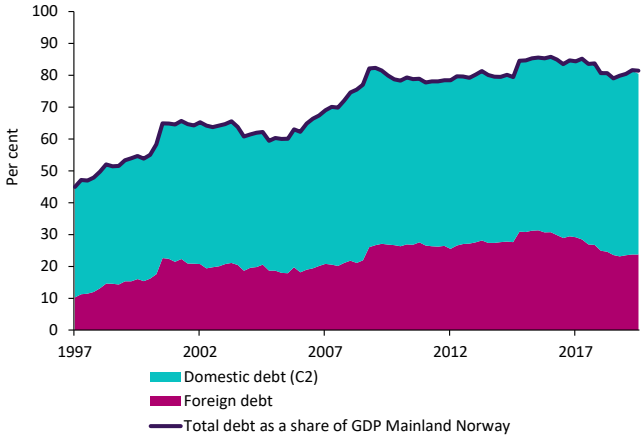
Residential and commercial mortgages are the two major lending segments for Norwegian banks, and price developments in the property markets are therefore of great significance to the banks. Commercial property prices have been more cyclically sensitive than house prices. This is probably due to the fact that commercial properties are more in the nature of an investment object. During past crises, banks' losses on loans to commercial real estate have far exceeded losses on residential mortgages. Prices of commercial properties of high standard at prime locations have increased significantly over a long period. A continued low interest rate level and a strong development in the Norwegian economy may contribute to higher prices and further heighten the potential fall in the commercial property market.

1.14 Transaction volume and average cost per transaction for commercial real estate



Source: Finanstilsynet

1.15 Non-financial firms' debt as a share of GDP Mainland Norway



Sources: Statistics Norway and Finanstilsynet

Corporate debt

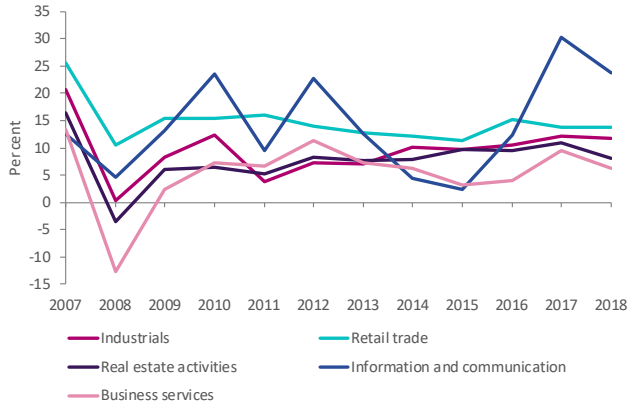
Alongside commercial property loans, Norwegian banks have significant exposures to a number of other industries (chart 1.13). To be able to pay interest and instalments on their debt, enterprises must create long-term value. The debt levels of Norwegian non-financial firms are historically high relative to gross domestic product (GDP) (chart 1.15). More than half of the debt has been raised in Norwegian banks, and a relatively large proportion of the debt is in enterprises with a weak debt servicing capacity.

The debt servicing capacity of non-financial firms in Mainland Norway, measured as operating profits before depreciation and write-downs (operating

1.16 Debt servicing capacity and return on equity. Non-financial firms, Mainland Norway

Sources: Statistics Norway and Finanstilsynet

1.17 Return on equity in selected industries



Sources: Statistics Norway and Finanstilsynet

earnings) as a percentage of external interest-bearing debt, has remained relatively stable subsequent to the financial crisis (chart 1.16). During the financial crisis, there was a sharp drop in operating earnings, while debt levels were virtually unchanged. The latter indicates that it takes time to reduce debt. In the wake of the financial crisis, operating earnings have increased marginally more than debt levels. There was little change in the debt servicing capacity of non-financial firms in Mainland Norway in 2018. The industries 'information and communication' and 'business services' experienced a significant improvement in debt servicing capacity in 2018, while there was a major weakening in the industries 'retail trade', 'manufacturing' and 'construction'. In the other main industries, there were relatively small changes in debt servicing capacity in 2018.

Return on equity, defined as profit after tax as a percentage of recorded equity, in non-financial firms in Mainland Norway weakened in 2018, but remained at a relatively high level. 'Information and communication', 'real estate activities' and 'business services' were the main industries behind the decline (chart 1.17). 'Retail trade' stands out by having a relatively stable and high return on equity over the last decade.

An improvement in debt servicing capacity parallel to a weakening of return on equity are not necessarily incompatible. For example, if an enterprise converts debt to equity, its debt servicing capacity, all else equal, will improve as there will be less debt to service, while return on equity will decline as interest will be payable on a higher amount of equity.

CLIMATE RISK

Financial markets and financial institutions are affected by physical climate change and by the transition to a low emission society. Financial institutions are exposed to climate change through loans, insurance obligations and investments in equities, bonds and real estate. In isolation, climate risk entails enhanced financial risk, which should be addressed by building up sufficient capital buffers in financial institutions.

Good reporting of relevant information from the firms forms the basis for financial institutions' risk assessments and the supervisory authorities' assessment of the financial soundness of individual firms and in the financial system as a whole. In 2015, the Task Force on Climate-related Financial Disclosures (TCFD) published a framework for voluntary, consistent climate-related financial risk disclosures for use by investors, lenders, banks and insurers to enable them to understand significant risks in the enterprises. The recommendations have received widespread support, and a number of large enterprises in Norway and internationally have taken the framework into use.

In June this year, the European Commission published guidelines on corporate disclosure of climate-related information. The guidelines are based on the TCFD's recommendations and deal with both the disclosure of enterprises' environmental footprint and the effects of climate change on corporate activities.[4] The guidelines are a guide to reporting according to the NFRD[5] (amending directive to the accounting directive). Neither the accounting directive nor the amending directive has yet been incorporated into Norwegian law.

The Norwegian government has announced that the need for changes in the regulatory framework for corporate disclosure of climate-related information will be considered in the Financial Markets Report 2020. The review will be based on the EU's follow-up of the action plan on sustainable finance, as well as the follow-up of the TCFD's recommendations in the market.

Investors in the securities markets place increasing emphasis on criteria related to sustainability in their investment strategies. This has contributed to a significant increase in the offering of green investment products in recent years. Green investments may be less exposed to transition risk than less green alternatives. At the same time, the risks associated with investments in new technology, often in newly established enterprises, may be higher than investments in known technology and established companies.

Internationally, there are different standards for green and sustainable investment products. The lack of common criteria and limited access to relevant information give rise to uncertainty about the real content of green investment products. Combined with strong growth in demand for such products, the risk of so-called green laundering in the securities markets has increased. For example, reviews of green investment funds have shown that a number of the funds are considerably less environmentally friendly or green than indicated.[6] The significant increase in demand for green investment products has also raised the risk of incorrect pricing in these markets. See more details on green investment products in chapter 4.

In the EU, a number of processes are underway to improve the quality of information relating to the environmental impacts and sustainability of investments. The establishment of a classification system (taxonomy) will improve investors' decision making and may contribute to better functioning markets for sustainable investments. At the same time, it is important that a rating system is dynamic. A rigid system that does not capture technological developments and new knowledge about climate change can be counterproductive. The EU is examining a regulation that describes the framework for establishing which and to what extent economic activities can be considered to be environmentally sustainable. One of the proposals is that economic activities must meet at least one of six identified environmental targets without having a major negative impact on any of the other five in order to qualify as environmentally sustainable. In addition, the activity shall meet the minimum criteria for social and governance factors established by the International Labour Organization (ILO). The assessment criteria for 67 different activities within various sectors have been reviewed. The work on these regulations is expected to be completed by the EU by end-June 2020. See box below for other relevant regulatory processes in the EU.

Box 3: Some ongoing regulatory processes in the EU related to climate and sustainability

The EU is considering a proposal for a regulation on disclosures relating to sustainable investments and sustainability risks. The provisions target investment firms providing investment advice and insurance intermediaries providing insurance-based investment products, and set out requirements for how they should disclose the sustainability-related impact of the investment in their advisory and investment decision processes.

The EU has adopted a regulation* on benchmarks for sustainable investments as well as ESG** disclosure requirements for benchmark providers. The regulation introduces two new

types of reference values, the "EU Climate Transition Benchmark" and the "EU Paris-aligned Benchmark". The regulation sets standards that will help investors to obtain relevant information about the carbon footprint of different investments. The regulation is EEA-relevant and will be incorporated in Norwegian law.

The EU's Technical Expert Group on Sustainable Finance has prepared a proposals for supplementary guidelines for green bonds.

The guidelines will be linked to the classification of sustainable economic activity and will define the activities that qualify for financing via the EU green bond programme. It has not been decided whether the guidelines will become a voluntary standard or be adopted as a regulation.

The European Commission is in the process of establishing criteria for awarding the EU Ecolabel to financial products. The EU Ecolabel functions in approximately the same way as the Swan ecolabel in Norway. See chapter 4 for further details.

* Regulation of the European Parliament and of the Council amending Regulation (EU) 2016/1011 on low carbon benchmarks and positive carbon impact benchmarks
** Environmental, Social and Governance

CHAPTER 2 BANKS

Due to low loan losses and profitable operations, Norwegian banks have been able to meet higher capital requirements largely through retained profits. The banks' Tier 1 capital as a share of total assets has increased over the past ten years, and the banks meet new liquidity requirements. Norwegian banks' common equity Tier 1 capital ratios and leverage ratios are close to the average for European banks.

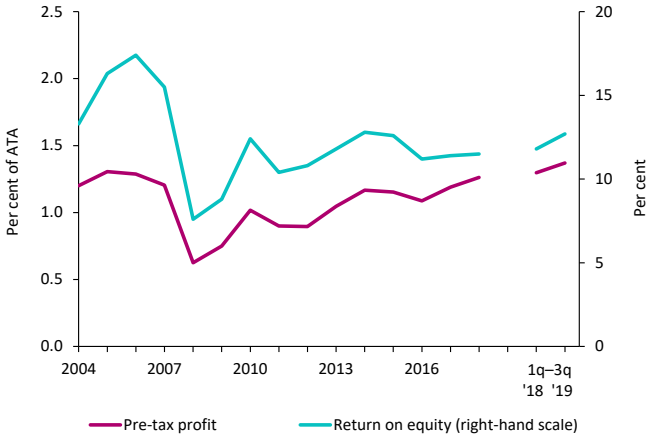
Net interest income constitutes the predominant part of Norwegian banks' operating income and is thus vital to the banks' profitability. Figures from the European Banking Authority (EBA) for the largest banks in each country show that Norwegian banks' net interest income is considerably higher than in many other European countries, where negative interest rates have put pressure on the interest margin.

The growth in households' consumer loans has slowed somewhat during the past few years, with the most pronounced decline in 2019. At end-September 2019, the twelve-month growth in consumer loans, including defaulted loans sold to finance companies for recovery, was on a level with the increase in total household debt.

PROFITABILITY AND FINANCIAL SOUNDNESS

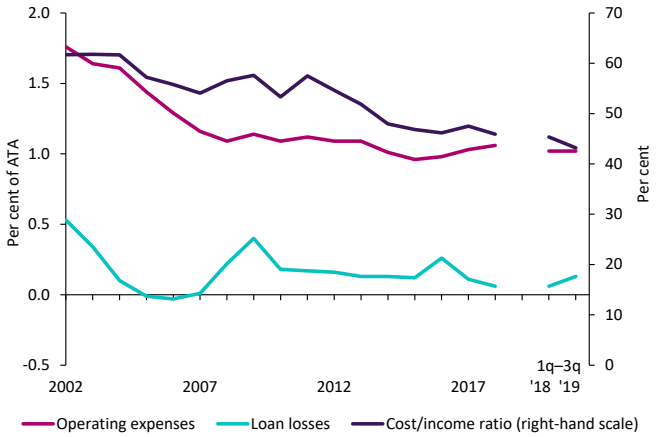
Favourable economic developments in Norway have contributed to sound profitability for the Norwegian banking industry in the years following the international financial crisis. Loan losses have been low and, coupled with strong income growth, have enabled the banks to maintain a combined return on equity of just over 11 per cent. The return on equity for the first three quarters of 2019 was 12.7 per cent (annualised) (chart 2.1), bolstered by certain positive one-time effects. The banks have also reduced their cost levels in relation to both total assets and operating income. The total cost/income ratio has thus declined to a historically low level (chart 2.2).

2.1 Banks' profitability



Source: Finanstilsynet

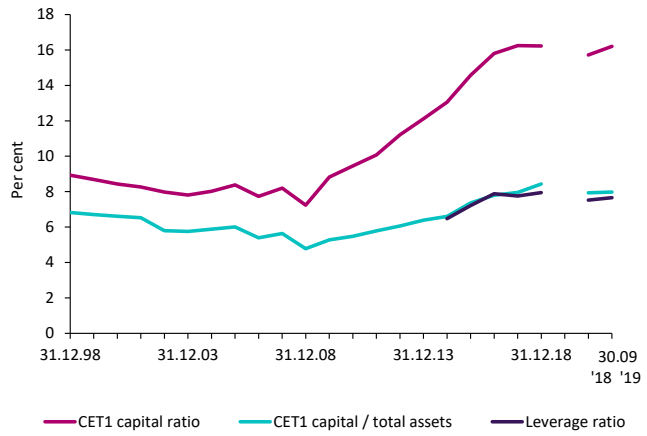
2.2 Banks' operating expenses and loan losses



Source: Finanstilsynet

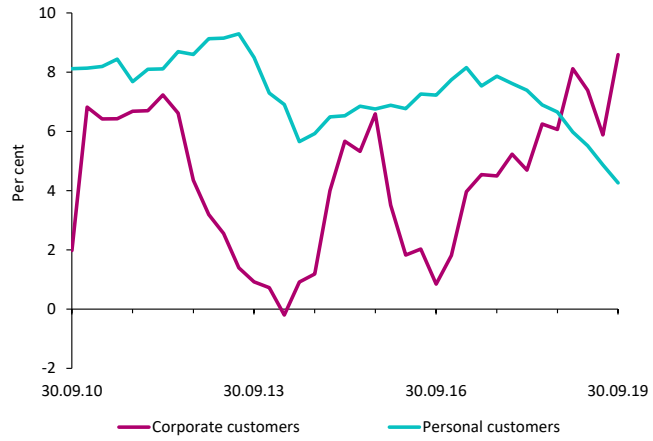
Sound profitability has helped banks to improve their financial strength in step with increased capital requirements, mainly through profit retention. A reduction in risk-weighted assets as a result of higher growth in lending to the personal customer market than to the corporate market over a protracted period, and increased use of internal risk models, are other factors behind the higher capital adequacy ratios. The increase in the common equity Tier 1 (CET1) capital ratio in the years following the financial crisis has now levelled off (chart 2.3). At end-September 2019, the total CET1 capital ratio for Norwegian banks was 16.2 per cent. The leverage ratio stood at 7.7 per cent, which is a slight increase since the leverage ratio requirement was introduced in 2017.

2.3 Banks' capital ratios



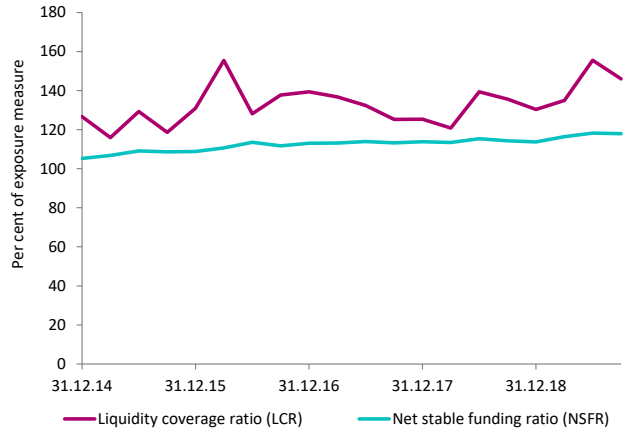
Source: Finanstilsynet

2.4 Banks' lending growth



Source: Finanstilsynet

2.5 Liquidity reserves and stable funding



Source: Finanstilsynet

Growth in lending to domestic personal customers has been brisk for a long time, but has receded somewhat over the past two years (chart 2.4). Over time, there is a close connection between the increase in lending to personal customers and developments in house prices, see the account in Chapter 1. Recent years have seen very high growth in consumer loans, although there has been a sharp decline over the last few quarters. New regulations have contributed to this, see further details below.

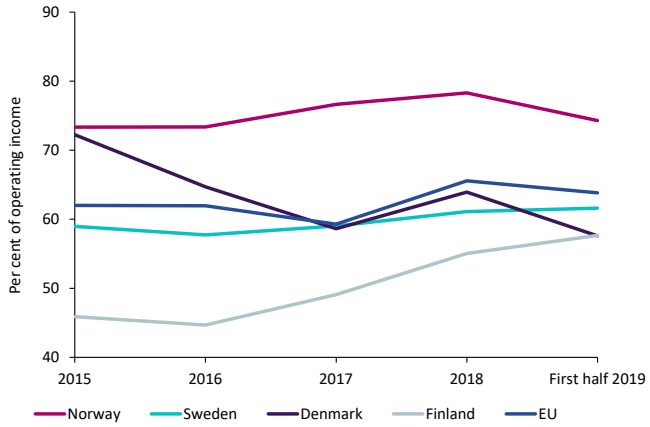
The banks are required to maintain liquidity reserves sufficient to enable them to honour their commitments in a brief period of limited access to fresh funding. A high share of stable funding is important in reducing refinancing risk in the longer term. Norwegian banks have increased their liquidity reserves in recent years and meet the minimum liquidity coverage ratio (LCR) requirement. The banks have also increased their net stable funding ratios (NSFR) (chart 2.5), thus improving their ability to withstand market stress. However, the high share of funding from international markets and the reliance on covered bonds (OMF), both as a source of funding and as part of the liquidity reserve, still represent vulnerabilities.

Banks' profitability, financial soundness and funding are discussed in further detail in separate reports from Finanstilsynet.[7]

NET INTEREST INCOME

Net interest income constitutes the predominant part of Norwegian banks' operating income and is thus vital to the banks' profitability. For the banks as a whole, net interest income as a share of total operating income (excl. net gains on financial instruments) has increased slightly in recent years, to close to 78 per cent. Norwegian banks have a high share of net interest income compared with most other European countries. Figures from the EBA for the largest banks in each country show that net interest income in Norwegian banks is considerably higher than for the banks in the other Nordic countries (chart 2.6).

2.6 Banks' net interest income, selected countries



Source: EBA Risk Dashboard

2.7 Banks' net interest income

Source: Finanstilsynet

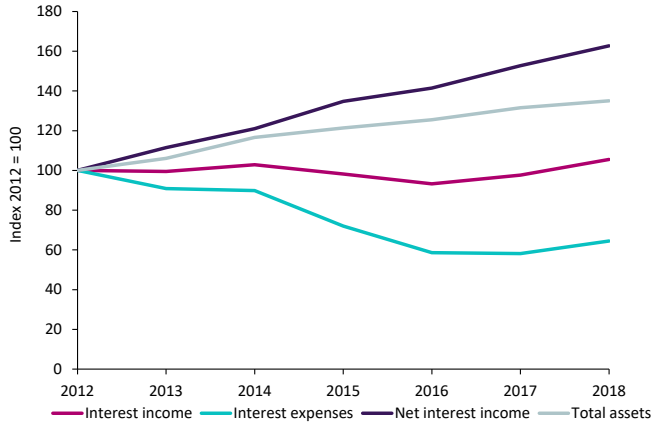
Up until 2012, Norwegian banks' net interest income declined relative to average total assets (ATA) (chart 2.7). In the years after 2012, however, net interest income has increased and represented 1.8 per cent of ATA at end-September 2019, on a level with 2005.

Banks' funding costs have decreased considerably

Net interest income is defined as banks' gross interest income less interest expenses, and is often seen in relation to banks' average total assets. Changes in net interest income will thus be influenced by developments in these three components and how they have developed relative to each other. The banks' assets are dominated by loans, while interest-bearing debt constitutes the major part of their liabilities. Since 2012, total assets have increased by more than one-third (chart 2.8). However, banks' gross interest income has risen by a mere 6 per cent during the same period, partly as a result of lower lending rates.

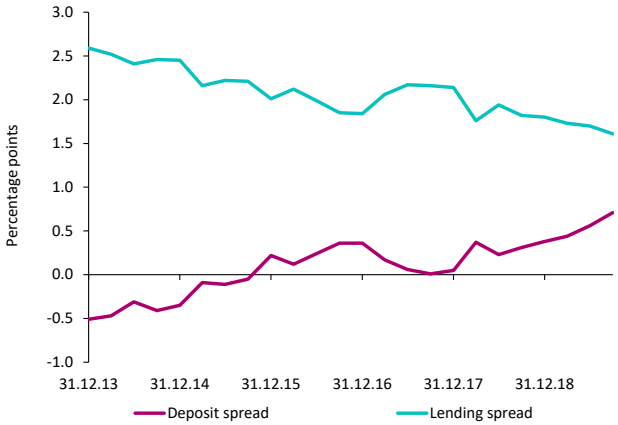
Banks' interest expenses, which were reduced by one-third during this period, were the key factor behind the rise in net interest income. Deposits from customers represent about half of banks' debt financing. From 2012 onwards, there has been a significant reduction in deposit rates, whereby the deposit spread, i.e. the difference between the average deposit rate and the money market rate (3-month Nibor) has

2.8 Banks' net interest income, decomposed



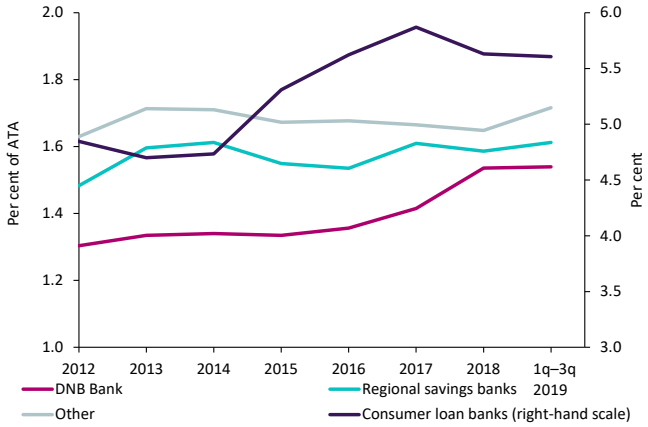
Source: Finanstilsynet

2.9 Lending and deposit spreads



Source: Statistics Norway

2.10 Net interest income in DNB Bank and groups of banks



Source: Finanstilsynet

increased (chart 2.9). The cost of funding through the issuance of bonds has also declined. In addition to the reduction in market rates up to the end of 2017, risk premiums on both senior bonds and covered bonds have been reduced in recent years. The increase in banks' equity as a share of assets (equity ratio) has reduced the need for debt financing and, all else equal, has also driven down interest expenses relative to total assets. Although the decline in interest expenses is the main reason behind the overall increase in net interest income in recent years, the different groups of banks have shown divergent trends.

Divergent trends in banks' net interest income

At end-September 2019, there were 122 Norwegian banks, in part with different business models and geographic ranges. Chart 2.10 shows developments in net interest income for three groups of banks and for DNB Bank since 2012, when Norwegian banks' net interest income was at a historically low level.[8] As can be seen, there has been a major improvement in net interest income for DNB Bank and the group of consumer loan banks, while there has been only a slight increase for the six large regional savings banks.

DNB Bank accounts for approximately 50 per cent of Norwegian banks' consolidated assets, and thus has a strong bearing on the banks' aggregate accounting variables. Just like DNB Bank, the large regional savings banks are also universal banks, with significant activity in most areas of business. Unlike DNB Bank, however, they have little activity aimed at customers abroad. In recent years, a number of specialised consumer loan banks have been established. In terms of volume, these banks still hold only 5 per cent of Norwegian banks' total assets. As these banks in many cases have very high lending rates, their net interest income amounts to as much as 17 per cent of Norwegian banks' aggregate net interest income. The greatest number of banks in the 'other banks' category are medium-sized and small savings banks, but also certain commercial banks, several of which primarily target the personal customer market.

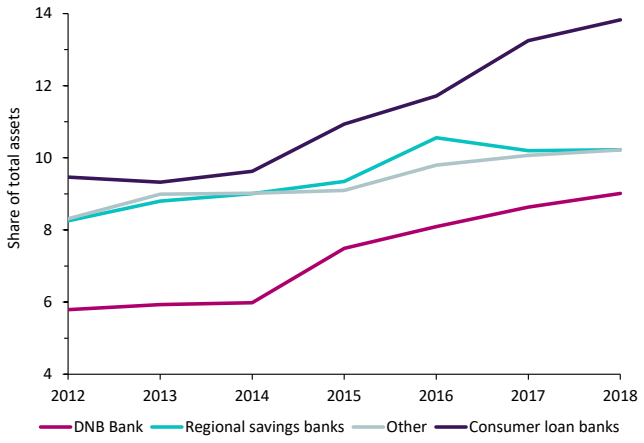
The group of consumer loan banks has largely maintained the level of interest income relative to lending volume since 2012, while the other groups of banks have experienced a reduction in step with declining market rates. The consumer loan banks have attracted deposits by offering higher deposit rates than other banks. Since 2012, however, the consumer loan banks have experienced a stronger reduction in interest expenses as a percentage of interest-bearing debt than the other groups.

Since the financial crisis, banks have increased their equity ratios in line with higher capital requirements, mainly through profit retention. There has been a particularly strong increase in the equity ratios of DNB Bank and the group of consumer loan banks (chart 2.11). All else equal, a higher equity ratio in banks reduces interest expenses as a share of total assets as a consequence of less need for debt financing.

The improvement in net interest income in recent years has been particularly evident for DNB Bank and the group of consumer loan banks. The main reason for the improvement has been lower funding costs, primarily as a result of reduced risk premiums on bond funding and reduced market rates up to 2017, as well as lower deposit rates.

The consumer loan banks have largely been able to maintain very high lending rates in spite of the

2.11 Equity



Source: Finanstilsynet

reduced interest rate level and have also significantly increased their equity ratios.

CONSUMER LENDING

The growth in consumer lending over several years has far outstripped general credit growth. The strong market growth has largely been driven by specialised consumer loan banks established over the past ten years. Access to unsecured credit may cause problems for individuals that for various reasons take out larger loans than they are able to service. For Norwegian households, the increase in consumer debt comes in addition to very high and increasing housing debt levels. Consumer loans represent just below 4 per cent of total household debt in Norway, compared with just over 2 per cent ten years ago.

Finanstilsynet runs a survey of a sample of 34 banks and finance companies offering consumer finance. Both Norwegian entities and foreign branches in Norway are included in the sample. Consumer loans include both credit card loans and other unsecured consumer loans to personal customers. Unsecured loans in finance companies that purchase portfolios of non-performing loans, and loans from foreign institutions that engage in cross-border activities, are not included in Finanstilsynet's statistics. The institutions included in Finanstilsynet's survey had consumer loans in Norway totalling NOK 114 billion at end-September 2019.

Box 4: Loans registered in the debt information undertakings

The Debt Information Act came into force on 1 November 201 and aims to facilitate the establishment of debt information undertakings that will ensure safe and efficient registration and disclosure of debt information.

The Ministry of Children and Family Affairs has given Gjeldsregisteret AS, Norsk Gjeldsinformasjon AS and Experian Gjeldsregister AS a licence to start operating as debt information undertakings. All financial institutions are required to make debt information available to the debt information undertakings. The new debt registers will also give banks and finance companies an effective tool to obtain information about the amount of consumer debt held by loan applicants, thereby contributing to more thorough credit assessments and preventing debt problems among individuals.

As of 1 July 2019, the debt information undertakings have established registers with information about both unsecured loans and certain other types of loans. Unsecured loans in finance companies that purchase portfolios of non-performing loans, and loans granted by foreign institutions that engage in cross-border activities are included in the debt registers' statistics, but not in Finanstilsynet's survey of the consumer loan market. In addition, the debt registers include loans that are only secured by third-party security (collateral that does not belong to the debtor) and car loans with a vendor's fixed charge older than five years. Loans with two or more borrowers will be registered in full in the debt registers for each of the borrowers. Total loans in the statistics from the debt registers will therefore be higher than the figures published by Finanstilsynet.

Gjeldsregisteret AS has published figures showing a total volume of approximately NOK 170 billion at-end September 2019. Adjusted for the effect of loans with co-borrowers, the loan volume is NOK 154 billion.

The following data are registered by the debt information undertakings, but are not included in Finanstilsynet's statistics:

- loans secured by third-party security (NOK 19.6 billion estimated by Gjeldsregisteret AS)
- loans in finance companies that purchase portfolios of non-performing loans (approx. NOK 10 billion)
- loans from foreign institutions that engage in cross-border activities (approx. NOK 8 billion)
- loans from the remaining banks and finance companies (approx. NOK 3 billion)
- car loans with a vendor's fixed charge older than five years (not quantified)

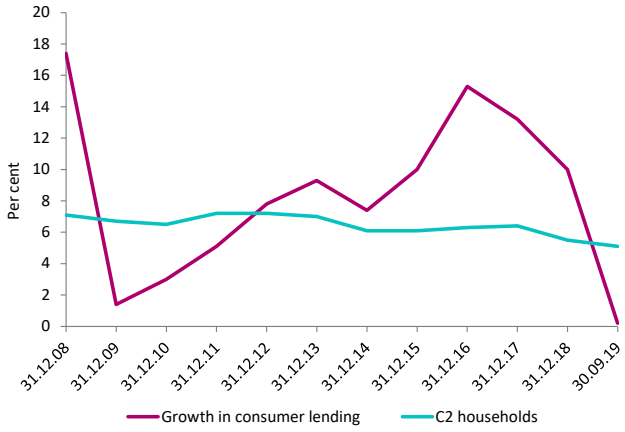
The estimates are attended by uncertainty.

Subdued growth in consumer lending

The authorities have introduced several measures to limit the growth in consumer loans over the past few years. Based on a proposal from Finanstilsynet, the Ministry of Finance adopted regulations on requirements for financial institutions' consumer lending practices on 12 February 2019. The banks are assumed to comply with the regulations as of 15 May 2019. The regulations replaced Finanstilsynet's guidelines and set out requirements for debt servicing capacity, debt-to-income ratio and instalment payments.

The regulations on requirements for financial institutions' lending practices for consumer loans allow institutions to grant consumer loans that deviate from one or more of the requirements for up to 5 per cent

2.12 Consumer lending, twelve-month growth in Norway



Sources: Statistics Norway and Finanstilsynet.

of the value of total loans granted each quarter (flexibility quota). Finanstilsynet has obtained variance reports from the banks included in the sample referred to above, plus some foreign banks that engage in cross-border activities. With the exception of a few minor deviations, the institutions confirm that they stayed within the flexibility quota in the third quarter of 2019. Finanstilsynet follows up entities that have exceeded the flexibility quota. The institutions' compliance will be monitored in the period ahead through both off-site supervision and on-site inspections in selected banks.

The growth in consumer loans has slowed somewhat during the past few years, with the most pronounced decline in 2019. Finanstilsynet's survey shows twelve-month growth of 0.2 per cent in the Norwegian market at end-September 2019 (chart 2.12). Adjusted for the sale of these institutions' portfolios of non-performing loans in the period 30 September 2018 to 30 September 2019, the increase would have been 4.8 per cent. In comparison, households' total loan debt increased by 5.1 per cent during the same period.

Twelve-month growth in lending from Norwegian consumer loan banks to Norwegian customers, measured at the end of each quarter, has declined from 20 per cent at end-May 2018 to 2 per cent at end-September 2019 (chart 2.13). For foreign branches, growth has fallen from 13 per cent to just over 1 per cent. For the other Norwegian banks, there has been an overall decline in outstanding consumer loans.

Defaults on consumer loans are higher than for other types of loans, and there has been a marked rise in the default level in recent years, in spite of increasing sales of portfolios of non-performing loans. At end-September 2019, 9.4 per cent of the consumer loans of the institutions in the selection were non-performing (chart 2.14). In comparison, 0.9 per cent of banks' total loans were non-performing at the same time.

Institutions offering consumer loans still enjoy sound profitability, although somewhat lower net interest income and higher losses have resulted in a decline in profits compared with previous years (chart 2.15). Reversals of previous losses recorded by individual institutions affect overall loss figures. Loan losses for the institutions in the selection came to 2.2 per cent in the first three quarters of 2019. In comparison, losses on banks' total loans to personal customers were 0.1 per cent during the same period.

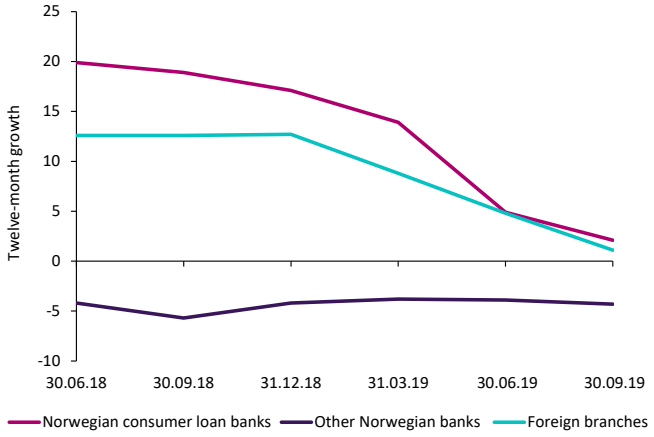
Increasing sales of portfolios of non-performing loans to finance companies

Sales of portfolios of non-performing loans to finance companies have increased in recent years. In the period 30 September 2018 to 30 September 2019, the institutions in Finanstilsynet's survey sold portfolios for a total of NOK 9.0 billion, of which NOK 5.2 billion represented loans in Norway. In comparison, portfolios of non-performing loans totalling NOK 5.2 billion were sold in 2017 and NOK 7.7 billion in 2018.

Portfolios have traditionally been sold in individual transactions, and the loans have normally been in default for several years. In recent years, there has been a trend towards selling portfolios closer to the date default is identified, and claims relating to consumer loans have largely been based on so-called forward flow agreements, that is agreements on ongoing sales of non-performing loans. For institutions that sell portfolios, a forward flow agreement implies that risk is mitigated as non-performing loans can quickly be sold at a pre-agreed price.

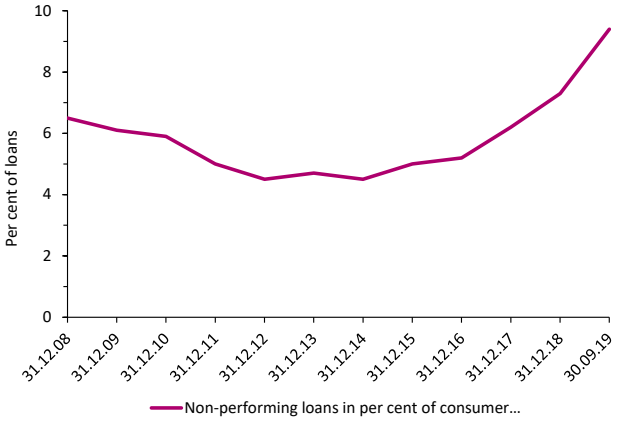
In recent years, several finance companies have been established for the purpose of purchasing portfolios of

2.13 Consumer lending, twelve-month growth in Norway for various groups of institutions



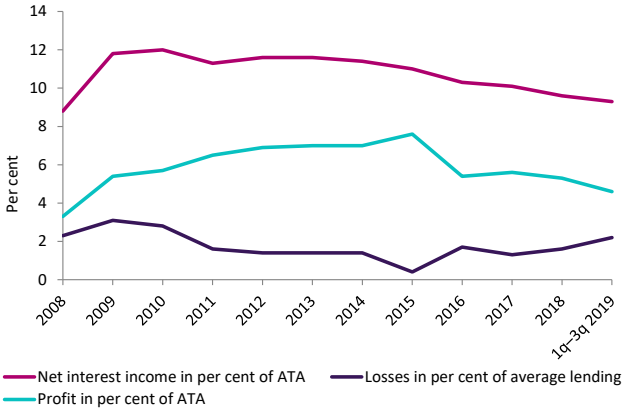
Source: Finanstilsynet

2.14 Gross non-performing consumer loans, 90 days past due*



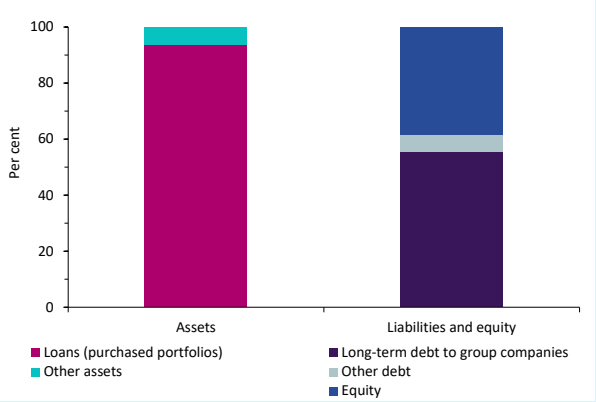
* Total consumer loans in the institutions, including Norwegian institutions' exposures abroad. Source: Finanstilsynet

2.15 Profit trend, consumer lending*



* Total consumer loans in the institutions, including Norwegian institutions' exposures abroad. Source: Finanstilsynet

2.A Balance sheet of finance companies that buy non-performing consumer loans



Source: Interim financial statements

Box 5: Purchase of portfolios of non-performing consumer loans

Finance companies that purchase non-performing loans are both Norwegian-owned institutions and institutions owned by large foreign groups. Finance companies are largely funded by intra-group loans (chart 2.A). Some of the holding companies that extend the loans obtain the main part of their funding through the issuance of bonds with a high interest rate mark-up. The parent companies also have loans/lines of credit in Norwegian and foreign banks.

The total loan volume in Norway for Norwegian finance companies that buy portfolios was just over NOK 10 billion at end-September 2019. Finance companies that buy portfolios leave the recovery of the acquired claims to debt collection agencies that are often part of the same group. Even if the debt collection agency is part of the same group as the finance company, it is still considered to be a third-party debt collector, which entitles it to charge debt collector's fees. When choosing such a recovery model, the group's total earnings on a purchased claim will increase as it will receive a debt collector's fee as well as revenues from recovering the principal and accrued (high) interest payments.

non-performing consumer loans. These institutions often enter into forward flow agreements for a period ahead where they undertake to buy non-performing loans. Finanstilsynet has pointed out that the finance companies, pursuant to the capital adequacy framework, must set aside capital to meet the obligations set out in these agreements. Finanstilsynet has also emphasised that acquired non-performing loans must be assigned a risk weight of 150 per cent.[9]

Revision of the Debt Collection Act

On 17 October 2018, the Ministry of Justice and Public Security appointed a working group that will consider various aspects of the Debt Collection Act. The working group is chaired by the Ministry of Justice and Public Security and draws representatives from Finance Norway, the Norwegian Consumer Council, Virke Inkasso (trade organisation for debt collection agencies) and Finanstilsynet. The working group will, among other things, take a closer look at the distribution of responsibility for risk management, internal control and professional responsibility for debt collection. The rules on the coverage of costs incurred in connection with out-of-court recovery in the Debt Collection Act and the Debt Collection Regulations will be reviewed. The working group will examine whether the distinction between the recovery of own claims and recovery through a third-party debt collector should be regulated by law or regulations and consider whether such distinction may be of consequence to the recovery of intra-group claims. Its mandate also includes reviewing the rules on the treatment of client funds, whether generally accepted debt collection practice should be further specified, the debt collector's right to outsource tasks, and whether a legal basis should be created in the Debt Collection Act for imposing other types of administrative sanctions than today. The working group will also look at debt collection agencies' right to demand coverage of costs in the form of fees for preparing complaints to the conciliation board pursuant to the Dispute Act, and regulations on the defendant's liability to pay costs in connection with legal enforcement. The working group will submit its report by 1 January 2020.

CAPITAL ADEQUACY

The banks' level and quality of capital have been strengthened

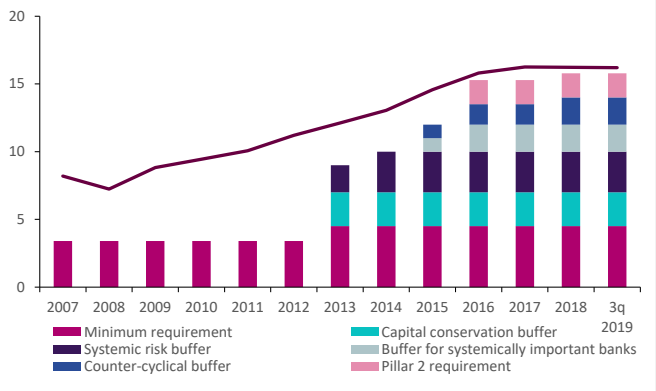
Subsequent to the financial crisis, Norwegian banks have adapted to the new and higher capital requirements, and there has been a significant increase in CET1 capital measured in Norwegian kroner (chart 2.16). The increase in CET1 capital is primarily due to the fact that a large share of the banks' profits has been retained. Over the past few years, however, the proportion of retained profits has been reduced. As a weighted average, 49 per cent of profits in the seven largest Norwegian banks was retained in 2018, which is a significant reduction from the first years of capital build-up in the banks after the financial crisis.

Parallel to the increase in capital adequacy ratios, the quality of banks' own funds has improved, partly due to changes in regulatory requirements. The proportion of CET1 capital increased from 69 to 84 per cent from year-end 2008 to year-end 2012. Since year-end 2012, CET1 has represented just over 80 per cent of banks' own funds.

Credit risk represents the predominant share of risk-weighted assets

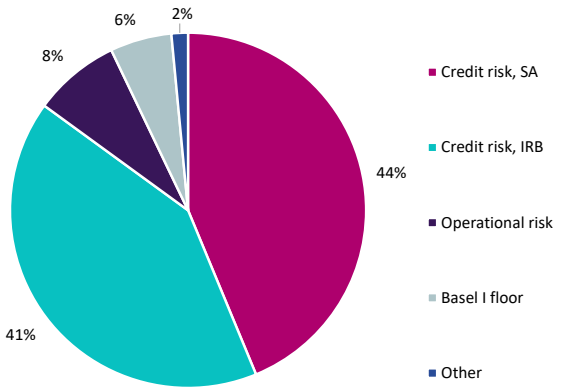
The basis for calculating capital adequacy is a risk-weighted measure of the institution's exposure to credit risk, counterparty risk, market risk and operational risk. Credit risk is the key risk and is arrived at by weighting loans by the counterparty's assumed risk. Credit risk can be determined by using one of two approaches, the standardised approach (SA) and the internal ratings based approach (IRB). Credit risk calculated using the standardised approach and internal measurement tools (incl. the additional floor for IRB institutions (Basel I floor)) represents the predominant share of risk-weighted assets (chart 2.17). The Basel I floor is a requirement whereby risk-weighted assets used to calculate the capital and buffer requirements cannot fall below 80 per cent of the previous Basel I requirement). At end-September 2019, the Basel I floor accounted for approximately 6 per cent of total risk-weighted assets. The floor requirement will no longer apply when the EU's solvency framework (CRR/CRD IV) is incorporated into Norwegian law as of 31 December 2019. Operational risk accounted for 8 per cent of risk weighted assets at end-September 2019, while other risk types (counterparty risk and market risk) came to only about 2 per cent.

2.16 CET1 capital and CET1 capital requirement for Norwegian banks[10]



Source: Finanstilsynet

2.17 Total risk-weighted assets of Norwegian banks as at 30 September 2019

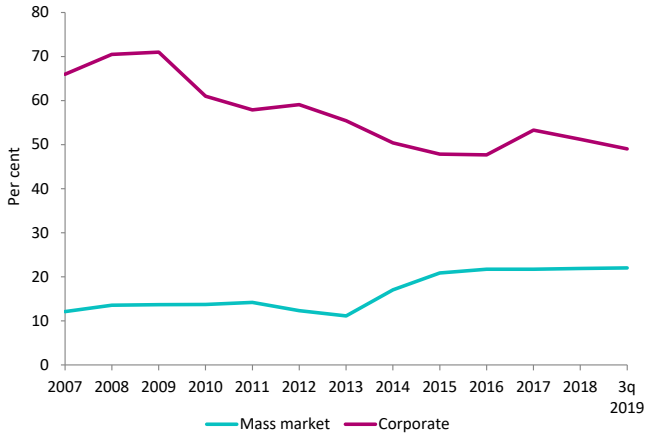


Source: Finanstilsynet

Lower risk weights contribute to an increase in measured capital adequacy

The increase in banks' capital adequacy, measured by their CET1 capital ratios, exceeds the rise in CET1 capital relative to total assets (without risk weighting).

2.18 Average risk weights in IRB banks, performing loans



Source: Finanstilsynet

The divergent trend is primarily due to a shift in banks' lending from corporate loans with relatively high risk weights to residential mortgages with lower risk weights. In addition, the use of IRB models has resulted in lower risk weights.

Institutions wishing to use IRB models to calculate the minimum own funds requirement must meet set requirements[11] and obtain permission from Finanstilsynet. At end-September 2019, nine banks had permission to use internal models. Their total assets came to 74 per cent of the total assets of Norwegian banks. The average risk weight for IRB banks' performing corporate loans has declined from 66 per cent at the end of 2007 to 49 per cent at end-September 2019 (chart 2.18). However, the average risk weight for retail exposures (mainly mortgages secured on real estate, see section 9-1 of the Capital Requirements Regulations) has risen from 12 to 22 per cent, primarily as a result of the increase in the lower limit for loss given default (LGD floor) from 10 to 20 per cent with effect from 1 January 2014.

Box 6: Capital adequacy requirements

Norway's capital adequacy framework is aligned with the EU Capital Requirements Directive (CRD IV) and Capital Requirements Regulation (CRR). These legal acts build on the Basel Committee's standards. The Norwegian parliament decided to incorporate the directive and the regulation into the EEA Agreement on 29 March 2019. Following constitutional consent, most recently from Iceland in November 2019, CRD IV and CRR have now been included in the EEA Agreement. The Ministry of Finance has announced that it will approve regulatory changes whereby the new regulations will enter into force as of 31 December 2019.

The implementation in Norwegian law entails that loans to small and medium-sized institutions will be subject to reduced capital requirements (SME supporting factor) and that the additional floor for IRB institutions (Basel I floor) will no longer apply. In consequence of this, the CET1 capital ratio of, in particular, the IRB banks will improve, although their financial soundness will remain unchanged.

In a consultation note dated 25 June 2019, the Ministry of Finance proposed an increase in the systemic risk buffer to 4.5 per cent as of 31 December 2019 and the introduction of a floor on average risk weights in IRB for residential and commercial mortgages. The ministry has announced that it will shortly revert to how the consultation will be followed up, but that there will be no changes in the banks' systemic risk buffer requirement as of year-end 2019.

The changes resulting from the incorporation of CRD IV and CRR into the EEA Agreement do not affect the principal provisions on capital requirements under Pillar 1, as Norwegian requirements have already been adapted to these provisions. According to the Financial Institutions Act, banks, mortgage companies and finance companies are required to maintain a minimum of 4.5 per cent

Table 2.A Capital requirements

	Current requirement		Requirement as of 31 December 2019	
	System-ically important institutions	Other institu-tions	System-ically important institutions	Other institu-tions
CET1 capital ratio	14.0	12.0	14.5	12.5
Tier 1 capital ratio	15.5	13.5	16.0	14.0
Capital adequacy ratio	17.5	15.5	18.0	16.0

Source: Finanstilsynet

CET1 capital, 6 per cent Tier 1 capital and 8 per cent own funds, measured against risk-weighted assets. Institutions must in addition maintain a capital conservation buffer of 2.5 per cent, a systemic risk buffer of 3 per cent and a counter cyclical capital buffer between 0 and 2.5 per cent. Systemically important institutions are required to maintain an additional buffer of 2.0 per cent. The buffer requirements must be met by CET1 capital. The requirements apply at both entity level and at consolidated level.

The countercyclical capital buffer requirement is set by the Ministry of Finance each quarter. As from 31 December 2017, this requirement has been 2.0 per cent for Norwegian exposures. In December 2018, the Ministry of Finance decided to raise the requirement to 2.5 per cent with effect from 31 December 2019. The requirement is entity-specific and is a weighted average of the rates applying in the countries in which the entity has credit exposures. For countries that have not established a counter-cyclical capital buffer, the Norwegian rate is used when calculating the weighted average for the relevant bank.

Banks, mortgage companies, finance companies and financial holding companies that are not insurance groups, and investment firms that are licensed to provide specified investment services, must have a leverage ratio of 3 per cent. All banks are also required to maintain a buffer on top of the requirement of at least 2 per cent. Systemically important banks are subject to an additional buffer requirement of at least 1 per cent.

Finanstilsynet sets Pillar 2 requirements for the individual bank based on its assessment of risks and capital requirements (Supervisory Review and Evaluation Process, SREP). Circular 12/2016 accounts for the SREP process.* In October 2019, Finanstilsynet updated three appendices and added two new appendices to the circular. The two new appendices describe Finanstilsynet's assessment of capital needs under Pillar 2 related to ownership in insurance undertakings and Finanstilsynet's use of stress tests when assessing financial institutions' risk levels and capital needs (SREP) and the Pillar 2 capital guidance (P2G).

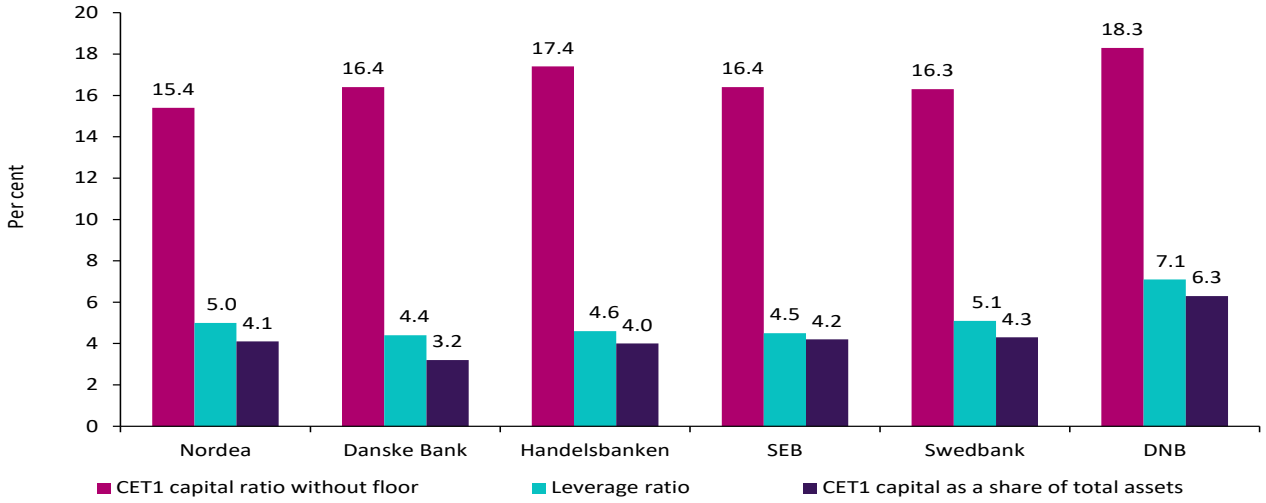
Each year, the Ministry of Finance decides, based on Finanstilsynet's advice, which financial institutions are to be regarded as systemically important in Norway. Institutions are defined as systemically important if their total assets exceed 10 per cent of Mainland Norway's GDP or their market share of lending to the private non-financial sector in Norway exceeds 5 per cent.

The Basel Committee has presented a proposal for new standardised approaches to credit risk and operational risk along with a revised output floor for internally modelled capital requirements. The floor is set at 72.5 per cent of risk-weighted assets calculated using the revised standardised approach. The EBA's proposed implementation of the new Basel standard was circulated for comment by the European Commission on 11 October 2019. The deadline for response is 3 January 2020.

There will be higher capital requirements for non-performing exposures than for other

*https://www.finanstilsynet.no/nyhetsarkiv/nyheter/2019/kapitalkrav-for-avtaler-om-kjop-av-misligholdte-lan/ (in Norwegian only)

2.19 CET1 capital ratio (excl. floor) and leverage ratio in Nordic banking groups, 30 Sept. 2019



Source: The banks' quarterly reports

exposures. On 22 October 2018, Finanstilsynet submitted a proposal to the Ministry of Finance to clarify the definition of non-performance.

Under the current rules, an exposure should be defined as non-performing if the amount is significant and the claim is more than 90 days overdue. Finanstilsynet has, within the framework of EU regulation 2018/171, proposed materiality thresholds for exposures. The proposal has been circulated for comment and is under consideration by the Ministry of Finance.

In April 2019, Finanstilsynet emphasised how entities that have entered into agreements on the purchase of non-performing loans should handle these agreements when calculating capital adequacy**. Regulation (EU) 2019/630 amends Regulation (EU) 2013/575 as regards minimum loss coverage for non-performing exposures, which entails a new deduction from CET1 capital for non-performing or problem exposures that are not sufficiently covered by write-offs. The legal act is under consideration for incorporation into the EEA Agreement. The Ministry of Finance has circulated a consultation document prepared by Finanstilsynet for comment, with the deadline for response set at 31 January 2020.

**https://www.finanstilsynet.no/contentassets/6f0fad50638a46feadae5d4a1880ef02/finanstilsynets-praksis-for-vurdering-av-risiko-og-kapitalbehov.pdf (in Norwegian only)

Capital adequacy in Norwegian and other European banks

As of 30 June 2017, the banks have been subject to a leverage ratio requirement that comes in addition to the CET1 capital requirement. The leverage ratio is defined as Tier 1 capital divided by the exposure measure, including certain off-balance sheet exposures. This requirement is not risk sensitive and can therefore be used as the lower limit for capital in the event of an unacceptable decline in risk weights. Finanstilsynet gives strong emphasis to the leverage ratio when assessing banks' financial soundness. At end-September 2019, Norwegian banks' total CET1 capital ratio, calculated as a weighted average, was 16.2 per cent, while the leverage ratio was 7.7 per cent.

Chart 2.19 shows the CET1 capital ratio excluding the Basel I floor and the leverage ratio of banking groups at end-September 2019. DNB has both a higher CET1 capital ratio and a higher leverage ratio than the other major Nordic groups, with the greatest differential for the leverage ratio. This must be viewed in light of the fact that DNB has higher risk weights on exposures than the other major Nordic banks, even when excluding the Basel I floor.

Figures from the EBA for the largest banks in each country (a total of 183 banks) show that the CET1 capital ratios and leverage ratios of the Norwegian banks in the selection are slightly higher than the average for the EU (charts 2.20 and 2.21). This is partly due to the fact that some major European banks

have relatively low capital adequacy ratios, which pulls the average down.

LIQUIDITY

Norwegian banks are vulnerable to turbulence in international financial markets.

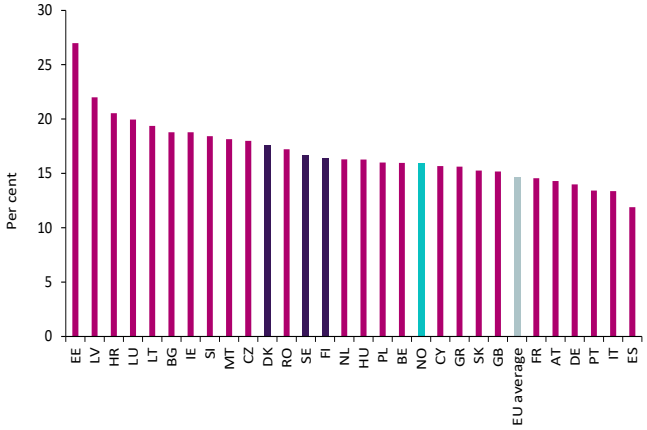
International market turmoil may influence both prices of and access to funding for Norwegian banks. 55 per cent of Norwegian banks' total market funding at end-September 2019 had been raised abroad. Just under half of the market funding has a maturity of less than one year. On the other hand, the banks' assets, which mainly consist of loans, have considerably longer maturities and are generally denominated in Norwegian kroner.

When banks and covered-bond-issuing entities fund their NOK-denominated assets in foreign currencies, an exchange rate risk arises along with a need to convert foreign currency to Norwegian kroner. Norwegian banks are therefore dependent on a well-functioning market for currency swaps. During normal times, it will be relatively easily for banks to exchange assets in Norwegian kroner to foreign currency. In a stressed situation, however, it may be much costlier and more difficult to exchange currency in the market. In order to reduce the vulnerability to turbulence in international financial markets and curb the dependence on a well-functioning currency exchange market, the minimum requirement of 100 per cent for all currencies combined has been supplemented by a minimum requirement of 100 per cent for LCR in significant currencies other than Norwegian kroner. Banks' vulnerability to turbulence in international financial markets is described in further detail in the Risk Outlook reports from December 2018 and June 2019.

Banks are dependent on a well-functioning covered bond market

Covered bonds account for approximately 50 per cent of Norwegian banks' market funding. Covered bonds also account for a large portion of banks' liquidity reserve. For most banks, covered bonds make up more than 50 per cent of their liquidity reserve.

2.20 CET1 capital ratio, 30 June 2019



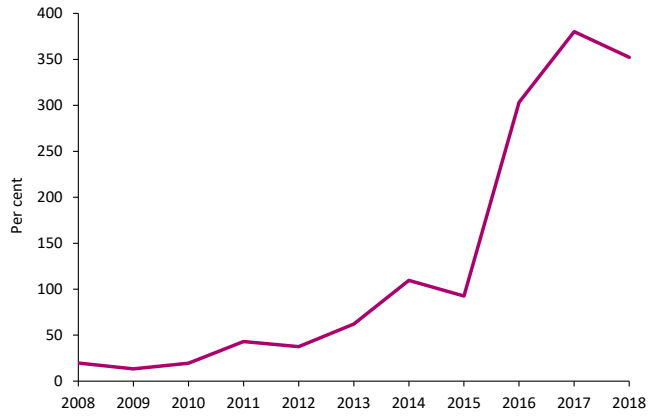
Source: EBA Risk Dashboard

2.21 Leverage ratio, 30 June 2019

Source: EBA Risk Dashboard

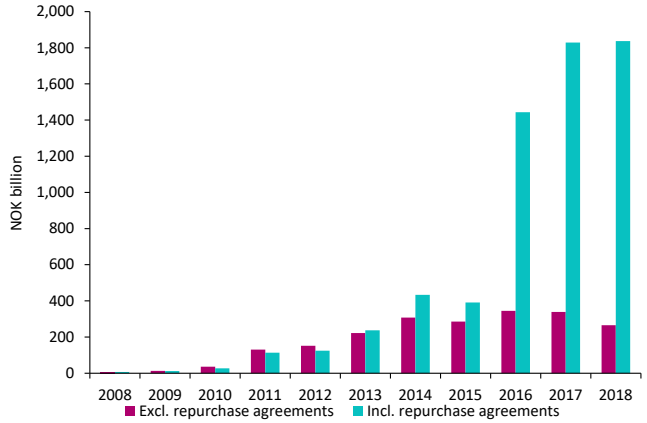
The high proportion of covered bonds, both as a source of funding and as part of the liquidity reserve, brings increased systemic risk through cross-ownership and also links banks' liquidity risk to developments in the housing market. A fall in house prices will reduce the value of the cover pool of covered bonds. The banks may, depending on the degree of overcollateralisation and the size of the house price fall, have to replenish the cover pool in order to remain compliant with the coverage requirement for the outstanding covered bonds. A house price fall may reduce investors' confidence in covered bonds as an investment object, which could make it costlier and more difficult for banks to use covered bonds as a funding source. The interconnectedness arising between market participants via cross-holdings of

2.22 Annual turnover of covered bonds including repurchase agreements on Oslo Børs and ABM as a percentage of outstanding volume



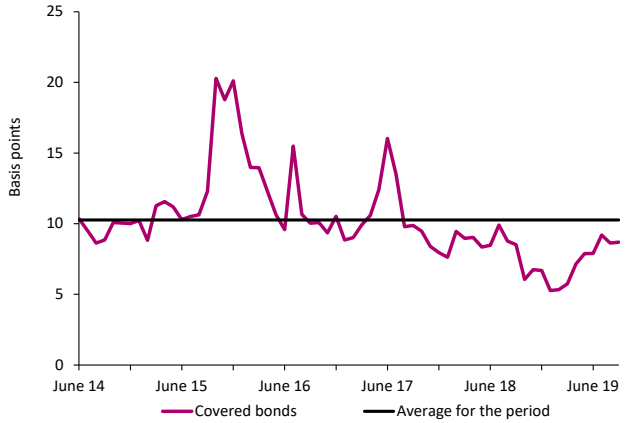
Source: Oslo Børs

2.23 Annual turnover of covered bonds



Source: Oslo Børs

2.24 Relative bid-ask spread for covered bonds, monthly average



Sources: Oslo Børs and Finanstilsynet

covered bonds increases the risk of problems at one entity spreading to others. The banks' large holdings of covered bonds could also create problems in a situation in which all are in need of liquidity and wish to dispose of covered bonds.

Due to their strong reliance on covered bonds, both as a source of funding and as part of the liquidity reserve, it is vital for the banks that both the market for the issuance of new covered bonds and the secondary market function well.

How is the liquidity situation in the covered bond market?

There has been a rise in annual turnover of covered bonds, including repurchase agreements, as a share of total holdings over the past three years (chart 2.22).[12] In 2018, turnover of repurchase agreements represented 86 per cent of total turnover. Excluding repurchase agreements, the turnover of covered bonds has declined over the past few years (chart 2.23).

For investors, it is important that a bond can be rapidly purchased and sold at low transaction costs. This dimension of liquidity is called width. A measure of width is the difference between the bid and ask price of a bond relative to the mid-market price (the average of the bid and ask price). This ratio is defined as the relatiave bid-ask spread. A high ratio is an indication of high transaction costs and low width in the market, while a lower ratio indicates low transaction costs and greater width.

Developments over the last three years show that the relative bid-ask spread of covered bonds is at a lower level than in the preceding years. This is an indication that the width of the market has improved during this period (chart 2.24).

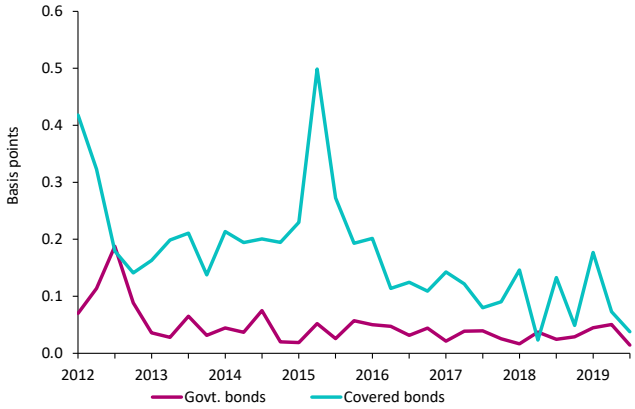
Over a short time horizon and without changes in fundamentals affecting the pricing of a security, the price impact from a trade may be a measure of the depth of the security. In deep markets it will be possible to trade a significant volume without a large change in the price. A much used indicator of market depth is Amihud's measure of illiquidity. The indicator

is a measure of how much the price of a security changes per traded volume. Lower values for the indicator indicate smaller price effects per traded volume, and thereby better depth in the market. In chart 2.25, the indicator is calculated as price effects in basis points per million Norwegian kroner in turnover of government bonds and covered bonds.

The illiquidity measure shows that the price effects are generally higher in the covered bond market than in the government bond market. This indicates that larger volumes can be traded in the market for government bonds without similar price effects, and thus that there is greater depth in the market for government bonds than for covered bonds. The illiquidity measure shows a marked increase for covered bonds in 2015. The minimum LCR requirement came into force on 31 December 2015, and adaptations to new regulations may have contributed to reduced liquidity in the market. The illiquidity measure has been lower in recent years. This indicates that the depth of the Norwegian market for covered bonds has improved somewhat.

The covered bond market is a relatively new market which has not been tested during a period of severe market stress. The indicator for covered bonds shows a more volatile development than the indicator for government bonds, which suggests that the liquidity in the covered bond market is more vulnerable to market turmoil. Banks and mortgage companies own more than half of the bonds issued in NOK themselves. Much of the increase in the turnover of covered bonds comes from repurchase agreements from foreign mutual funds that leverage their positions to increase return on equity. During a stressed period, these funds may disappear from the market. Moreover, all banks will need liquidity and thus may wish to sell covered bonds. In such a situation it could be difficult to find buyers.

2.25 Amihud illiquidity measure for covered bonds and government bonds, quarterly average



Sources: Oslo Børs and Finanstilsynet

CHAPTER 3 INSURANCE AND PENSIONS

As major and long-term investors, pension institutions (life insurers and pension funds) are vulnerable to the heightened risk in the international economy. The financial markets are also characterised by very low interest rates, which creates challenges for the pension institutions. Low interest rates give a rise in the value of pension obligations, as future obligations must be discounted at lower interest rates. Even though the proportion of defined-contribution pension schemes is increasing strongly, contracts with an annual guaranteed return still represent the greater part of pension institutions' obligations.

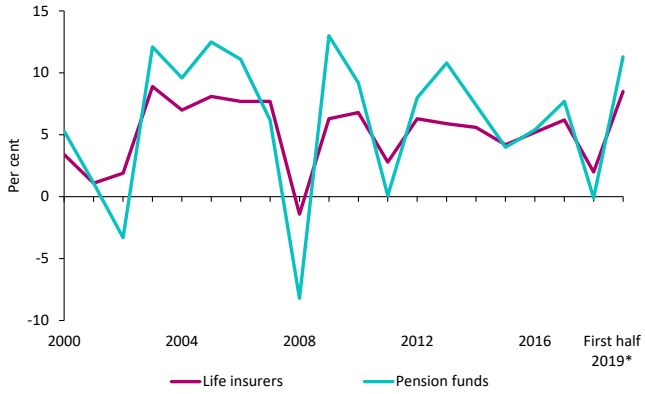
The low interest rate level makes it difficult to achieve an adequate return on investments and may give enterprises an incentive to search for higher returns entailing increased risk. According to the Solvency II framework, more risky investments will normally require more capital than less risky investments. The quantity of own funds, along with the prudent person principle in the Solvency II framework, place restrictions on the institutions' opportunity to take risk. Life insurers have to some degree increased their exposure to alternative investments and fixed-income securities of weaker credit quality in recent years. Pension funds' proportion of bonds of weaker credit quality has also risen somewhat. These investments are often less liquid. The regulatory amendments that came into force in 2019 may trigger an increase in pension institutions' infrastructure investments in the longer term.

PROFITABILITY AND FINANCIAL SOUNDNESS

The stock market upturn in the first half of 2019 contributed to an increase in pension institutions' adjusted return (chart 3.1). The variations in the value-adjusted return, which includes unrealised changes in value, are closely related to stock market fluctuations. Since 2011, the risk-free market rate, represented by the 10-year Norwegian government bond yield, has been lower than pension institutions' average guaranteed return (chart 3.2). This has made it more challenging for the institutions to achieve excess returns on guaranteed pension products. In the first half of 2019, the book returns of life insurers and pension funds were 3.8 and 4.4 per cent, respectively. The average guarantee rates of return were 2.6 and 2.5 per cent, respectively, at year-end 2018.

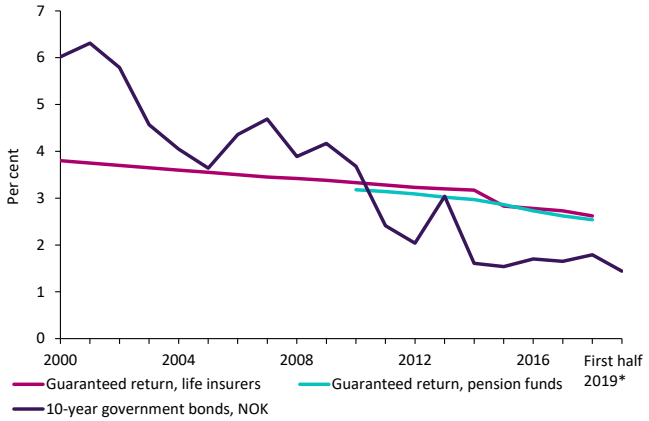
Overall, non-life insurers have recorded strong profits over the past few years, in spite of a somewhat weaker technical result than in the peak year 2015 (chart 3.3). The strong performance in the first three quarters of 2019 is partly due to gains resulting from Gjensidige's sale of Gjensidige Bank and a positive trend in the financial markets.[13]

3.1 Pension institutions' adjusted return



*Annualised. Source: Finanstilsynet

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



Sources: Finanstilsynet and Norges Bank

The financial soundness of life and non-life insurers has improved since the introduction of the Solvency II framework in 2016 (chart 3.4). The solvency coverage ratio was 239 and 228 per cent, respectively, for life and non-life insurers as at 30 September 2019. Pension funds were subject to a new and more risk-sensitive capital requirement as of 1 January 2019. The new solvency capital requirement is based on a simplified version of the Solvency II framework, with some adaptations. The total solvency coverage ratio of pension funds was 184 per cent as at 30 June 2019.[14]

CONSEQUENCES OF LOW INTEREST RATES FOR PENSION INSTITUTIONS

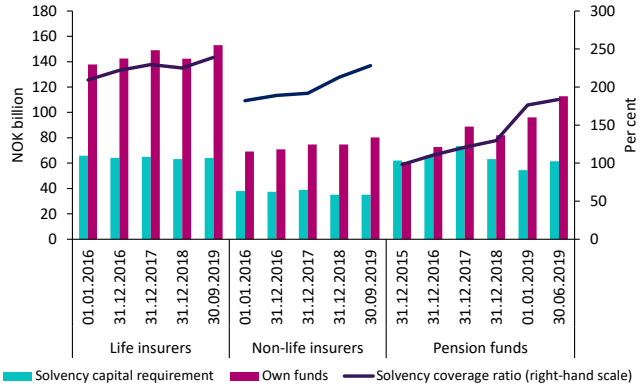
The interest rate level has a strong bearing on values on both the asset and liability side of the balance sheet. The solvency capital requirement for interest rate risk shall cover interest rate risk associated with positions in interest-bearing financial instruments (asset side) and interest rate risk related to technical provisions (liability side). In connection with the ongoing review of the Solvency II framework, the European Insurance and Occupational Pensions Authority (EIOPA) has proposed higher stress factors when calculating interest rate risk.[15] If the proposed changes are implemented, it may have a significant impact on the solvency coverage ratios of Norwegian life insurers. According to EIOPA, the current method fails to make sufficient allowance for the actual interest rate risk when interest rates are low, since the interest rate stress is calculated relative to the prevailing interest rate level and it is assumed that the negative interest rates cannot become more negative.

Pension institutions normally have long-term obligations and will reduce interest rate risk by investing in assets with corresponding maturities. However, the long-term government bonds that are available in the Norwegian market have a maximum maturity of ten years. The considerable duration gap between assets and liabilities entails high interest rate sensitivity. The average duration of life insurers' obligations (excl. unit linked contracts) and bond portfolios were 15 and 5 years, respectively, at the end of 2018. For pension funds, the average duration of insurance obligations and bond portfolios was 17 and 3 years, respectively, as at 30 June 2019.

3.3 Overall profits of non-life insurers as a percentage of premium income for own account*

* Premium income for own account. Source: Finanstilsynet

3.4 Financial soundness of insurers and pension funds*

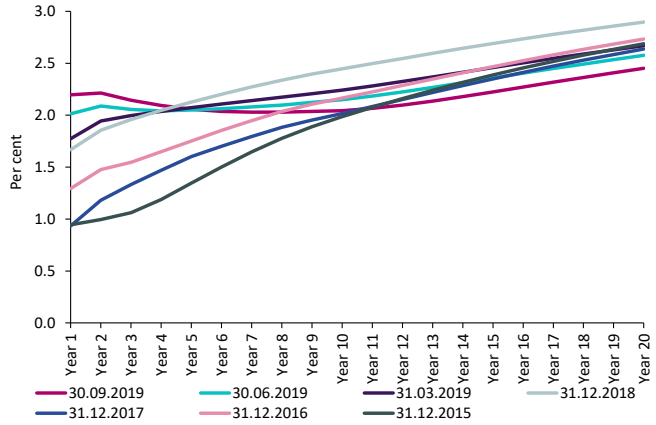


* Prior to 1 January 2019, there was no requirement for a solvency coverage ratio above 100 for pension funds. The basis of the calculations has also been changed. Source: Finanstilsynet

Lower interest rates contribute to higher pension obligations

Lower interest rates contribute to increasing the value of life insurers' future obligations. The contractual obligations of life insurers came to NOK 1 063 billion (69 per cent of total assets) at year-end 2018. The insurance obligations in the unit-linked portfolio totalled NOK 313 billion (20 per cent of total assets). The value of insurance obligations is of great significance for institutions' own funds, and also impacts the solvency capital requirement.

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



Source: EIOPA

The interest rate curve used in Solvency II is rising, which means that obligations that are far into the future are discounted at higher interest rates than obligations that have a short time to maturity (chart 3.5). Several Norwegian life insurers use EIOPA's volatility-adjusted interest rate curve. The volatility adjustment contributes to reducing the value of the insurance obligations. The opportunity to use this interest rate curve is one of several measures introduced to ease the transition to the Solvency II framework. For maturities of up to ten years, the volatility-adjusted interest rate curve was 42 basis points higher than the basic risk-free interest rate curve as at 31 December 2018. For longer maturities, the effect of the volatility adjustment levels off.

Low interest rates have contributed to product mix changes

The low interest rate level has prompted many employers in the private sector to replace defined-benefit schemes by defined-contribution schemes with no guaranteed rate of return. When the defined-benefit schemes are discontinued or when employees change jobs, paid-up policies are issued. Paid-up policies are benefits earned by employees where the pension provider is responsible for the guaranteed rate of return without having the opportunity to collect an interest guarantee premium. Consequently, such contracts are particularly challenging in a low interest rate environment. There has been a sharp increase in paid-up policies as a share of total insurance obligations, although the peak now appears to have been reached. At year-end 2018, 62 per cent of life insurers' obligations related to private collective pensions were contracts with an annual guaranteed rate of return (active defined-benefit schemes and paid-up policies), versus 87 per cent in 2010 (chart 3.6). Paid-up policies alone accounted for 52 per cent of insurance obligations related to private collective pensions at the end of 2018. In private pension funds, paid-up policy polices represented 43 per cent of insurance obligations at the same point in time.

The transition to defined-contribution schemes means that pension institutions over time will be less vulnerable to low interest rates. In recent years,

Box 7: Estimated interest rate curve

When calculating technical provisions under Solvency II, insurers must use the interest rate curve estimated and published for different currencies, including Norwegian kroner, by EIOPA. It is derived from swap rates after deducting an estimated credit risk premium of 10 basis points. For liabilities in Norwegian kroner, the market rate for maturities up to ten years should be used. For longer maturities, for which there is no liquid interest rate market, the interest rate curve should be calculated by extrapolation up to the ultimate forward rate (UFR).

For NOK, the current risk-free interest rate curve is calculated based on an UFR of 3.9 per cent. In EIOPA's assessment, the calculation of the UFR based on expectations of long-term interest rates indicates a UFR of 3.55 per cent. As the UFR for 2017 was set at 4.2 per cent and EIOPA only changes the UFR by 15 basis points annually, the UFR for 2020 is set at 3.75 per cent. In isolation, the reduction in the UFR contributes to an increase in insurance provisions and a lower solvency coverage ratio in institutions with obligations carrying a guaranteed rate of return.

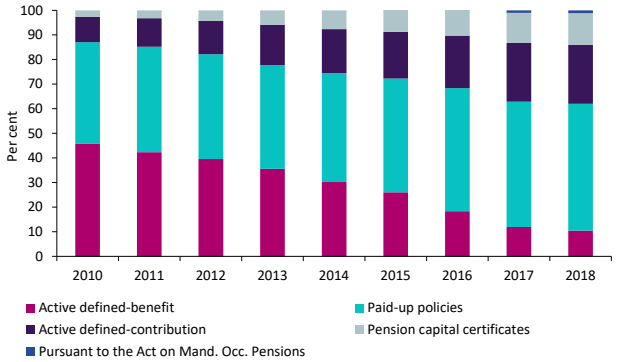
pension institutions have also adapted to the low interest rate level for active defined-benefit pension schemes by reducing the guaranteed rate of return on new contracts and on new entitlements under existing contracts. This has contributed to a reduction in the average guaranteed rate of return (chart 3.2). At the end of 2014, 43 per cent of life insurers' guaranteed benefits had a guaranteed rate of return of more than 3 per cent. At year-end 2018, this share had declined to 22 per cent (chart 3.7). In the pension funds, this share was down from 32 to 21 per cent during the same period. The average guaranteed rate of return is somewhat higher for paid-up policies than for active pension schemes. In the paid-up policy portfolio, the average guaranteed rates of return were 0.6 and 0.2 percentage points higher than the average guaranteed rates of return of life insurers and pension funds at the end of 2018.

The transition from defined-benefit to defined-contribution pension schemes means that the return risk is transferred from the institutions to the members of the pension schemes. When future pensions and savings are increasingly based on individual choices, it is vital that the individual member has the necessary insight into the risks attending the various investment options[16] and the costs associated with the pension savings. Furthermore, it is important that the institutions safeguard policyholders' interests when managing their funds.

Low interest rates may contribute to the search for yield

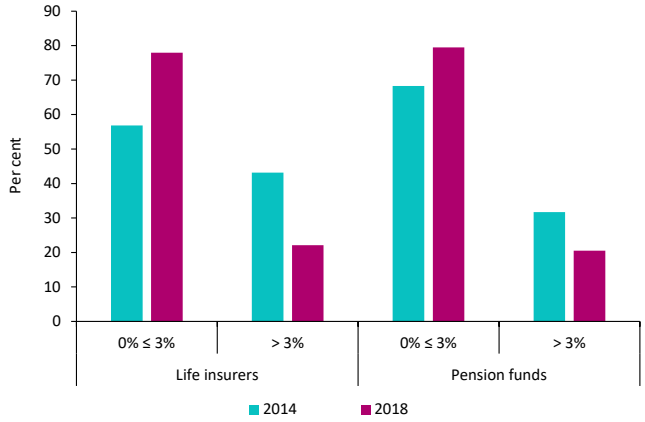
A protracted low interest rate environment may trigger pension institutions to increase their share of risky and less liquid investments in order to increase the expected return in the portfolio. Higher demand for risky asset classes may contribute to pushing prices up and risk premiums down. This heightens the risk of financial instability. If the institutions' buffer capital is insufficient to cover the market risk in a low interest rate environment, the institutions must reduce overall risk. Dynamic risk management, which entails continuous adaptation of risk in the portfolio, is prevalent. Such adaptation means, among other things,

3.6 Insurance obligations, private defined-benefit and defined-contribution pensions, life insurers



Source: Finance Norway

3.7 Intervals for guaranteed rates of return, measured as a proportion of technical provisions for products with profit sharing (incl. public service pensions)



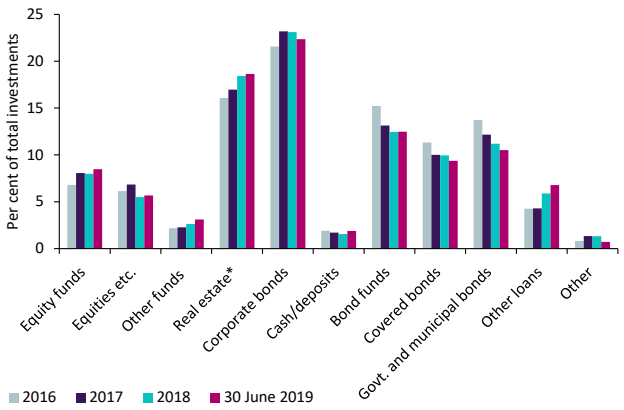
Source: Finanstilsynet

that the proportion of equities varies along with the institution's available buffer capital.

Norwegian life insurers have increased their investments in real estate and loans

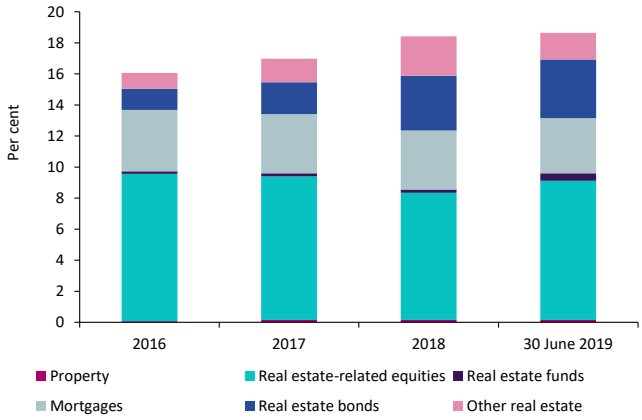
A large proportion of life insurers' investments is placed in in fixed-income securities, although this proportion is lower than in a number of other European countries. Norwegian life insurers' share of investments in bond funds, covered bonds and government and municipal bonds has been slightly reduced since the end of 2016 (chart 3.8). The European Central Bank (ECB) points out that in recent years, insurers have increasingly ventured into

3.8 Life insurers' investments (excl. unit linked)



*Real estate includes 'property ' (asset category CIC 9), 'equity of real estate-related corporations' (CIC 32), 'real estate funds' (CIC 45), 'real estate exposure related to collateralised securities' (CIC 65) and 'mortgages' (84) and NACE codes F41 and L, which inter alia include real estate bonds.
Source: Finanstilsynet

3.9 Life insurers' real estate investments as a share of total investments (excluding unit linked)



Source: Finanstilsynet

various types of alternative assets, such as infrastructure, private equity (PE) funds, loans and real estate.[17] Norwegian life insurers have also increased their share of investments in real estate and loans. The share of investments in equity funds has also risen slightly since 2016. PE funds and other alternative funds not related to real estate constitute a smaller proportion of life insurers' investments at approximately 2 per cent.

Overall, life insurers' real estate investments accounted for 19 per cent of total investments as at 30 June 2019 (excl. unit linked). This is considerably higher than the average for insurers in the EEA. Norwegian life insurers have, among other things, a substantial proportion placed in property-related equities (9 per cent), property-related corporate bonds (4 per cent) and residential mortgages (4 per cent) (chart 3.9). The proportion of property-related corporate bonds has increased the most during the period (by 2.4 percentage points). Significant revaluations of life insurers' property portfolios have contributed to strong returns. Prices of commercial properties have increased significantly over a long period and are at a historically high level. A continued low interest rate level and a healthy economic trend may contribute to higher prices and further heighten the potential fall in the market.

Over the last few years, some life insurers have taken over portfolios of residential mortgages from banks in the same group. Solvency rules may be a factor behind unfortunate arbitrage-motivated transfers of loans between banks and insurers. For residential mortgages with a low loan-to-value ratio, the capital requirement under Solvency II is considerably lower than in the banking legislation (CRD IV/CRR). On 5 December 2019, the Ministry of Finance adopted an amendment to the (Norwegian implementation of the) Solvency II framework, aiming to better align the capital requirements for residential mortgages for insurers and banks.[18] The amendments become effective on 31 December 2019.

Pension funds have a higher proportion of equities and equity funds than life insurers, but also have a substantial proportion of fixed-income securities (chart 3.10). 87 per cent of pension funds' investments in equities and mutual fund holdings (excluding real estate) represents listed equities in EU/EEA and OECD countries. Pension funds' real estate investments are mainly in directly owned properties, equities of subsidiaries and associated entities or mutual fund holdings in property companies. Real estate investments (excluding residential mortgages and real estate bonds) totalled NOK 32 billion, representing 9.3 per cent of pension funds' investments at the end of 2018.

Regulatory changes may increase infrastructure investments

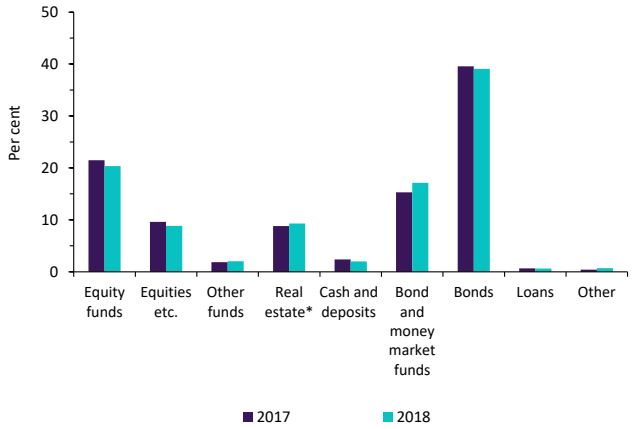
The fact that pension institutions seek long-term investments that, as far as possible, correspond to the duration of their obligations, may contribute to an increase in investments in, for example, infrastructure. On average, these investments are less cyclically sensitive, but also less liquid than more traditional investments, and may help to ensure long-term stable returns.

Life insurers' infrastructure investments (excl. unit linked) have increased from NOK 20 billion at the end of 2017 to NOK 22.1 billion as at 30 June 2019. This represented a stable share of total investments during the period (1.7 per cent). Infrastructure investments primarily comprise unsecured loans, holdings in infrastructure funds and corporate bonds (chart 3.11).

In the Solvency II framework, infrastructure is defined as physical structures or facilities, systems or networks that provide or support essential public services. Norwegian life insurers have invested in infrastructure, including renewable energy projects, both in Norway and abroad. New rules on infrastructure investments were incorporated into the Solvency II framework as of 1 August 2019. The changes entail an easing of the current criteria for the types of infrastructure projects that may qualify for lower capital requirements. In addition, new rules on lower capital requirements for investments in infrastructure enterprises have been introduced, subject to certain conditions.

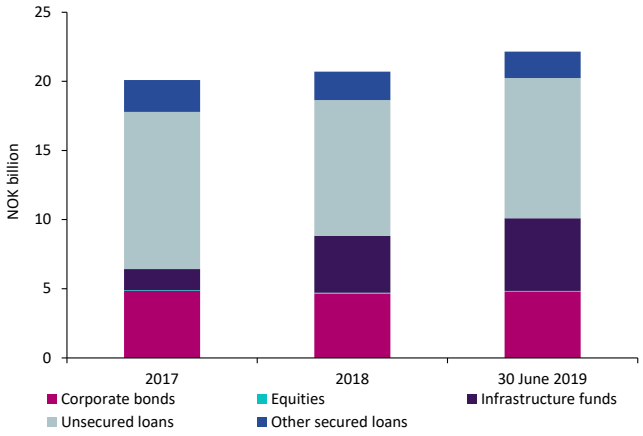
As of 1 January 2019, the rules for insurance and pension undertakings' investments in so-called business unrelated to insurance were changed. The change ensures greater flexibility in asset management by making it easier to invest in infrastructure projects.[19] The prohibition against engaging in business unrelated to insurance will still apply, but the distinction between investing in and engaging in business unrelated to insurance will depend on a qualitative and discretionary assessment.

3.10 Pension funds' investments



*Real estate includes property, real estate-related equities and shares of real estate-related corporations. Source: Finanstilsynet

3.11 Life insurers' infrastructure investments (excl. unit linked)

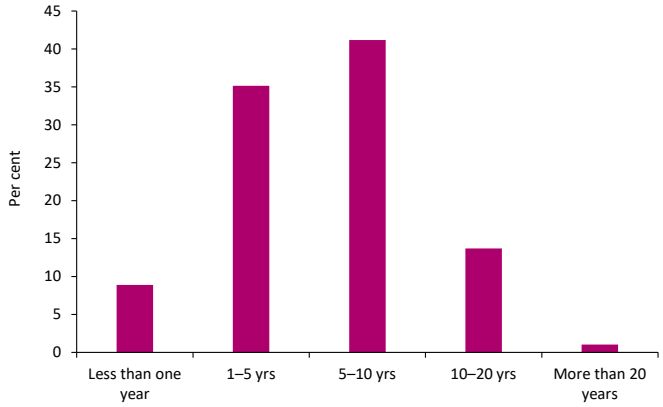


Source: Finanstilsynet

Low interest rates give high reinvestment risk

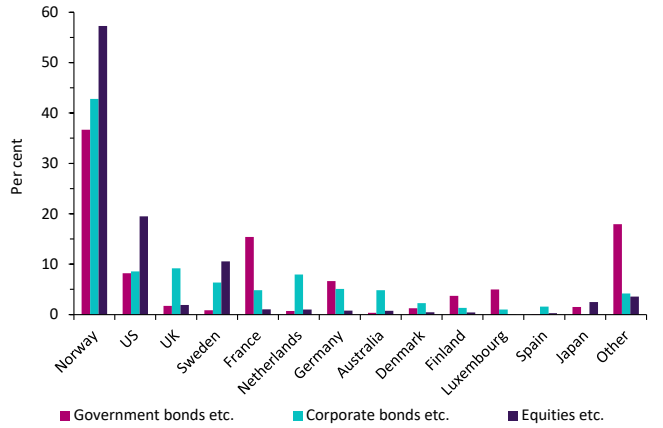
In the short term, lower interest rates result in higher bond prices and increased gains on bonds carried at fair value. As the bonds expire and the funds are to be reinvested in new, lower-yielding bonds, current interest income is reduced. For a number of Norwegian life insurers, protracted low interest rates will entail considerable reinvestment risk. In 2019, bonds for a total value of approximately NOK 53 billion will expire, whereas bonds with a maturity of between one and five years come to NOK 209 billion. These bonds represent just under half of life insurers'' investments in fixed-income securities (chart 3.12). In the future,

3.12 Life insurers' bonds by maturity as at 31 December 2018, measured as a share of total bonds (excl. unit linked)



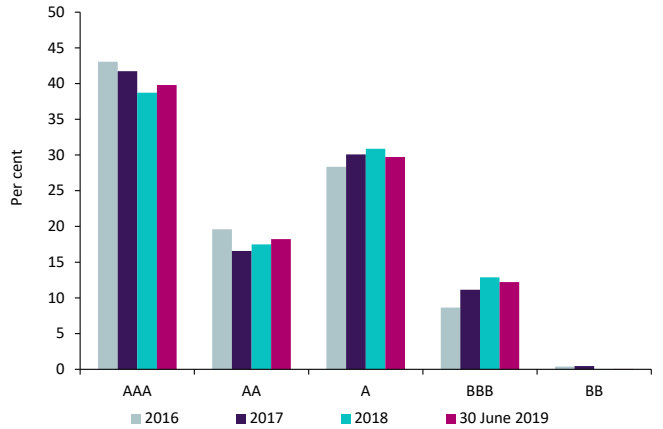
Source: Finanstilsynet

3.13 Life insurers' investments by country as at 30 June 2019 (excl. unit linked)



Source: Finanstilsynet

3.14 Investments in different rating classes as a share of life insurers' total investments in rated bonds



Source: Finanstilsynet

life insurers' investment revenues may be reduced as high-coupon bonds expire and are replaced by lower-yielding newly issued bonds.

The IMF points out that high return guarantees and the duration gap between assets and liabilities have driven an increase in cross-border investments by some international life insurers.[20] A few Norwegian life insurers have also increased their international exposures in recent years, which could facilitate the spillover of shocks across borders. 44 per cent of life insurers' investments are placed in Norway (chart 3.13). A significant share of life insurers' equity investments in Norway represents property-related equities in subsidiaries and associated companies. Investments in listed equities are to a greater extent placed abroad, including the US. Developments in international stock markets, especially in the US, are therefore of great significance to life insurers. Just over 50 per cent of the bonds in the investment portfolio are issued by foreign enterprises, institutions and states. Norwegian life insurers' investments in government bonds in emerging market economies are higher than among insurers in a number of other European countries.[21] The search for higher yields may also lead to increased exposure to emerging market economies.

The share of bonds of weaker credit quality has increased slightly

The ECB points out that insurers in the euro area have increased their exposure to bonds with a rating of BBB or lower from around 35 per cent to 41 per cent of the bond portfolio.[22] This increase may be a reflection of the low interest rate level and the search for higher expected returns. For Norwegian life insurers, bonds of lower credit quality constitute a smaller proportion of total investments in rated bonds, but show a slightly increasing trend (chart 3.14). Compared with other European countries, Norwegian life insurers have a large share of investments in unrated bonds (27 per cent life insurers' total bond portfolio). This is due to the fact that a large proportion of bonds issued in Norway are not credit rated, including bonds issued by municipalities and banks. Pension funds have also increased the proportion of bonds of somewhat

weaker credit quality (chart 3.15).

Investments should be measured at market value

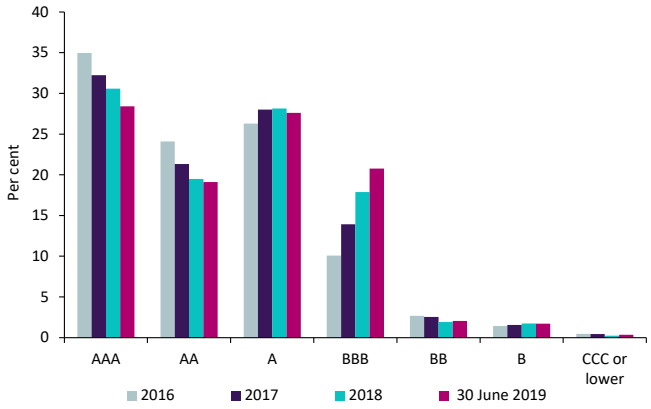
Today, many life insurers record a large share of their investments (36 per cent) at amortised cost. The valuations also form the basis for calculating returns. The opportunity to classify bonds at amortised cost instead of market value reduces the undertakings' risk associated with the annual guaranteed rate of return as the valuation ensures a stable recorded return for the duration of the bond. However, these fixed-income securities are less flexible and provide less leeway in asset management.

Current accounting rules (IAS 39) will be replaced by a new standard, IFRS 9, which will enter into force for Norwegian insurers as of 1 January 2021 at the earliest. The transition to IFRS 9 could mean that bonds that were previously carried at amortised costs must be carried at fair value. The impact on life insurers' accounts will depend on prevailing market conditions and the duration of the bonds.

Finanstilsynet has prepared and sent to the Ministry of Finance a consultation document proposing amendments to the regulations for guaranteed pension products.[23] Here, Finanstilsynet proposes, inter alia, to remove the option to record fixed-income securities at amortised cost. From the policyholders' point of view, it will be unfortunate that large unrealised gains are accumulated in policyholders' accounts over time with respect to ensuring a reasonable distribution of returns on different groups of policyholders and providing incentives for the transfer of policies. In Finanstilsynet's opinion, distributing buffers against return risk on individual policyholders and including such buffers when transferring policies will be a more transparent and better solution for policyholders than the current procedure.

Finanstilsynet proposes that the return for the individual year should be calculated based on the assets' market value and that this should also apply

3.15 Investments in different rating classes as a share of pension funds' total investments in rated bonds



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

to bonds and loans. In order to simplify matters (for both the undertaking and the policyholder), provide incentives for investing in other assets with higher anticipated long-term returns and ensure a well-functioning transfer market, all assets should be measured at market value.

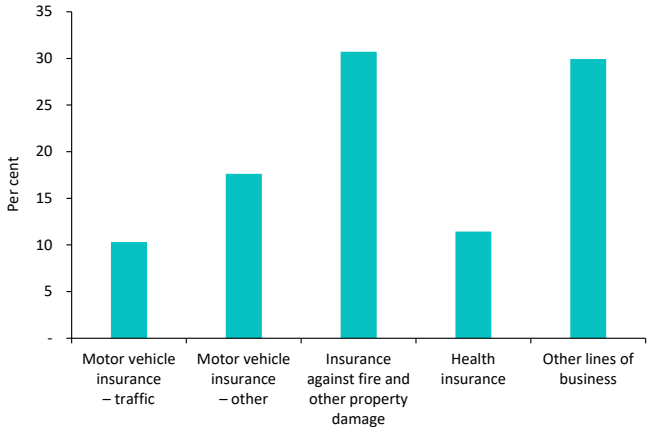
Finanstilsynet's proposed new regulations for guaranteed pension products also includes a proposal for a more flexible and expanded buffer fund. The proposal will give the undertakings very good opportunities to even out returns over time. However, the proposal does not remove the basic challenge associated with the prolonged low interest rate environment and guaranteed returns.

PROFITABILITY OF NON-LIFE INSURERS' LINES OF BUSINESS

Overall, non-life insurers enjoy sound profitability, in spite of a slight decline in profits in recent years. The net combined ratio (claims ratio and cost ratio), i.e. the ratio of net premium income to net costs related to claims payments and operations, was 92 per cent in 2018, up from 89 per cent in 2017 (chart 3.18). Here, and below, it is assumed that reporting is in accordance with Solvency II.

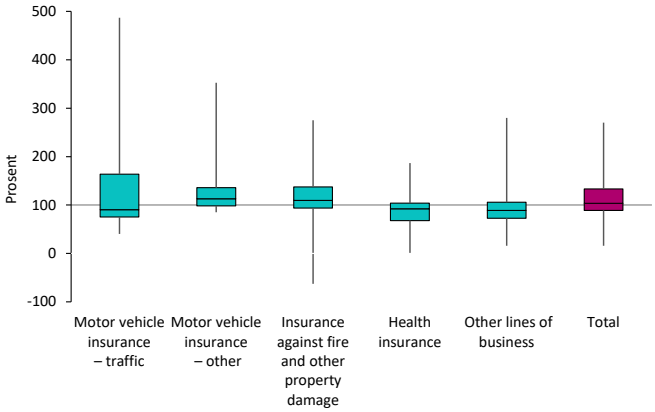
The largest lines of business in the Norwegian non-life insurance market, measured as a percentage of total gross earned premiums, are illustrated in chart 3.16.

3.16 Lines of business in per cent of total gross earned premiums



Source: Finanstilsynet

3.17 Net combined ratio in 2018 for selected lines of business, quartiles

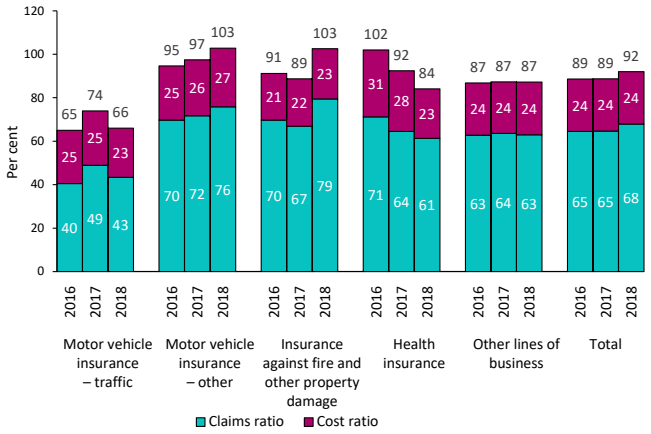


Box plot illustrating the lowest and highest value, the lower and upper quartile and the median of the combined ratios of the four largest lines of business. Source: Finanstilsynet

Motor vehicle insurance is divided into two lines of business: liability insurance (traffic) and other motor vehicle insurance. The collective term 'other lines of business' includes nine smaller segments, including income protection insurance (7 per cent of total gross premiums) and workers' compensation insurance (4 per cent).

There is considerable variation in profitability, both between undertakings and between lines of business (chart 3.17), which shows the spread in net combined ratios for the largest lines of business. Also at aggregated level, there are wide variations between the lines of business (chart 3.18).

3.18 Net combined ratio for selected lines of business, aggregated



The chart shows, for each line of business, the ratio of total claims payment and operating expenses to total premium income. Source: Finanstilsynet

The total combined ratio is markedly below the median value for all major lines of business and for the other lines of business as a whole. This reflects sound profitability in the largest undertakings and weaker profitability in several of the smaller ones. See also Finanstilsynet's report for financial institutions for the first three quarters of 2019 (in Norwegian only) for a further illustration of the correlation between the undertakings' size and profitability.

In terms of the gross combined ratio, the overall profitability of Norwegian non-life insurers is better than for corresponding undertakings in other European countries. On the other hand, a larger proportion of Norwegian undertakings have weak profitability within other motor vehicle insurance and insurance against fire and other damage to property than is the case for the overall European market.

Several undertakings have experienced a marked increase in claims within motor vehicle insurance, which is primarily due to changes in the car fleet. In consequence of an increasing share of electric cars, the frequency of claims and repair costs have increased. Finance Norway has published statistics[24] showing that the claims ratio rises the most within passenger car insurance. Nevertheless, there is sound overall profitability within motor vehicle insurance. The two motor vehicle insurance segments had a net

combined ratio of 89 per cent in 2018. Increasing digitalisation inter alia enables the undertakings to adjust premiums more quickly to meet the increase in claims.

Within the largest line of business, insurance against fire and other damage to property, there was somewhat weaker profitability in 2018. 2018 was characterised by a snowy winter and a warm and dry summer followed by heavy rainfalls in the autumn, which resulted in extensive claims payment expenses related to, snow heaviness, fires and water damage. Claims payment expenses for own account in this line of business increased by more than 20 per cent compared with the previous year. Weather-related damage has increased considerably over the last decade, see Finance Norway's new climate report[25] and the theme chapter on climate risk and financial institutions in the Risk Outlook June 2019. More extreme weather conditions may contribute to escalating and more frequent claims payments for non-life insurers. Just like pension institutions, non-life insurers are also exposed to transition risk through their financial market investments.

CHAPTER 4 SECURITIES MARKET

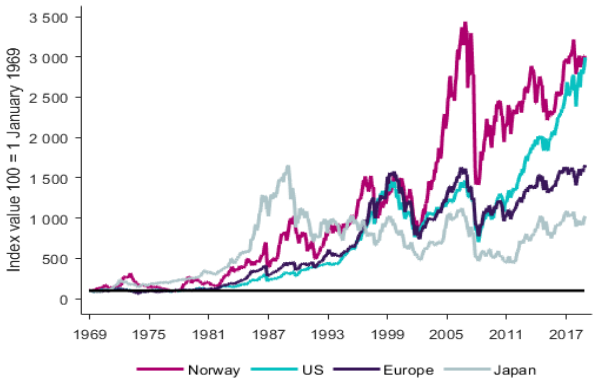
Developments in prices and risk premiums on equities and bonds as well as the ownership and issuer structure affect the financial risk of households, non-financial firms and financial institutions and can have a strong bearing on financial stability. A sharp decline in values and increased risk premiums will reduce household wealth and may put a damper on consumption. Moreover, the level of income and the financial strength of financial institutions and non-financial firms will be impaired.

Global stock markets have enjoyed very high returns thus far this year, while volatility is relatively low. The various national markets are generally moving in tandem. The yields on governments bonds are very low in a number of countries, while risk premiums on corporate bonds have been reduced in some regions during the past year. There are indications that investors are searching for higher yields, and the potential fall has increased in several securities markets.

The international market for so-called green investment products, especially green bonds, is expanding strongly. The growing interest in green investment products heightens the risk that enterprises and securities will be marketed as sustainable without this being adequately documented, so-called green laundering. Classification standards and good information about investment projects are important to ensure a high level of investor and consumer protection and well-functioning markets.

Finanstilsynet's short sale register occasionally shows extensive short sales in some equities in the Norwegian market. According to an analysis from the period after the register was established, large international asset managers in particular are taking short positions.

4.1 Stock market developments



Based on MSCI indices up to November 2019. Source: Refinitiv

Table 4.1 Stock market returns and risks

Per cent	Japan	Norway	Sweden	UK	US	Europe
Return						
– entire period	6.5	10.6	14.0	10.7	10.3	9.7
– last 5 years	5.6	8.6	8.4	5.7	10.9	6.9
– past year	5.9	4.9	19.0	9.3	16.4	16.0
– Jan.-Nov. 2019	17.4	11.1	26.3	13.4	27.9	22.5
Standard deviation						
– entire period	18.3	23.7	21.5	18.8	15.0	14.9
– last 5 years	15.7	11.0	14.2	10.4	12.0	11.1
– past year	16.6	9.9	19.2	10.5	17.3	12.1

Sources: Refinitiv and Finanstilsynet

RETURN, RISK AND VALUATION IN THE STOCK MARKETS

Too high valuations?

Chart 4.1 shows developments in equity prices in Norway, the US, Europe and Japan from January 1970 to the present day.[26] There are wide variations in returns over time, and prices plummeted during several periods.

During the period 1970–2018, the return in the Norwegian market was negative in 19 out of 49 years, compared with ten years in the US market.[27] The average annual return in the Norwegian market was 10.6 per cent for the entire period, whereas the average annual return for the last five-year period is 8.6 per cent (chart 4.1).[28] In the US, the returns for the two periods were 10.3 and 10.9 per cent, respectively.

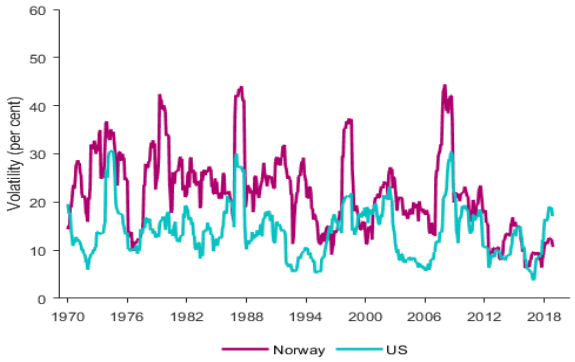
In 2018, there was a low return on equities in several countries due to a weak market trend towards the end of the year.[29] 2019 saw a reversal of this trend. Returns have been very high in countries such as the US, Germany, France, Italy, Sweden and Denmark thus far in 2019, and also relatively high in the UK, Spain, Norway and several emerging market economies.[30] High returns thus far in 2019 push up the average return for the last five years.

Although the likelihood of achieving the expected return increases the longer the time horizon, returns may also be weak for longer investment horizons. Returns vary over time, and accumulated returns are heavily influenced by the price level at the time of investment.

Return volatility (measured by the standard deviation) has been reduced in recent years. During the last five-year period, the standard deviation for Norway was approximately 11 per cent, which is significantly lower than the standard deviation for the period 1970–2018 (24 per cent). Several other countries also show less variation in returns over the past five years than during the last 50 years. The recent low volatility may be due to investors' belief that signs of market turbulence will prompt central banks to quickly adjust their monetary policy, hence implicitly providing insurance against significant declines in equity prices.[31] Over the past year, there has once again been a slight increase in volatility in a number of markets. Stock market volatility varies over time and increases significantly in times of crisis, for example during the international financial crisis (chart 4.2).

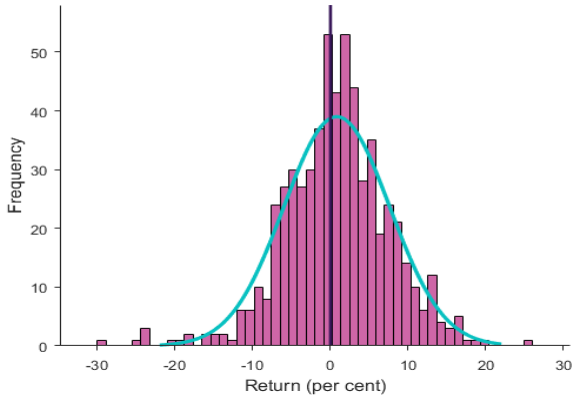
During several periods, there have been massive stock market drops over a relatively short period of time (chart 4.1). From the summer of 1990 to the autumn of 1992, Norwegian equity prices declined by approximately 52 per cent. From early autumn 2000 to February 2003, prices were down close to 50 per cent, while there was a 59 per cent reduction from October 2007 to February 2009. During the dot com crisis in the stock market, equity prices in the US were reduced by 48 per cent before rising anew, while the accumulated decline during the financial crisis was 52 per cent.

4.2 Stock market volatility (standard deviation)



Sources: Refinitiv and Finanstilsynet

4.3 Monthly return in the Norwegian stock market*

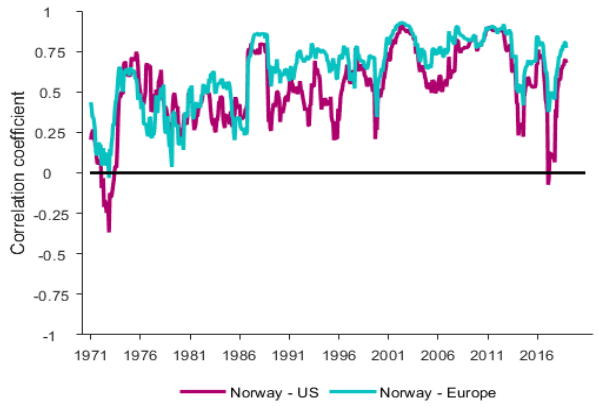


*January 1970–November 2019. Sources: Refinitiv and Finanstilsynet

Empirical data show that there is no normal distribution of stock market returns, but rather that it is skewed with heavier tails. Chart 4.3 shows the empirical distribution for Norwegian equities. In the chart, the normal distribution is represented by the turquoise curve.[32] The return on stock indices for most countries is skewed and has more weight in the tails than the normal distribution. This type of empirical observations is important for decisions concerning equity trading, risk modelling, portfolio management and capital adequacy.

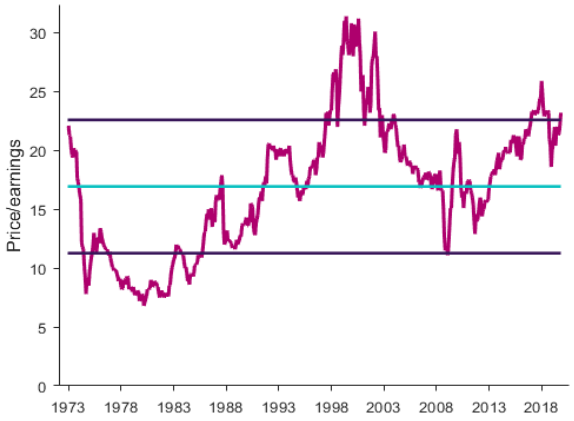
In about 40 per cent of all months (and the equivalent for all years) in the period from 1970 up to the autumn of 2019, there was a negative return in the Norwegian stock market.

4.4 Correlation between stock market returns



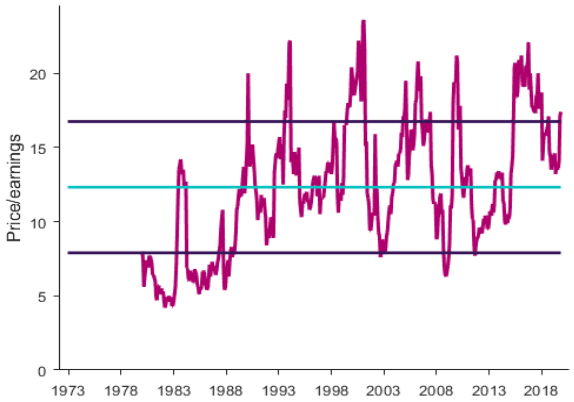
Sources: Refinitiv and Finanstilsynet

4.5 Price-earnings ratio in the US



Sources: Refinitiv and Finanstilsynet

4.6 Price-earnings ratio in Norway



Sources: Refinitiv and Finanstilsynet

The correlation between returns in Norway and the US and in Norway and Europe increased gradually until around 2012 (chart 4.4). After this, the correlation has been somewhat lower.[33] The correlation is higher in times of crisis than during normal periods. Equity prices in different countries are relatively closely correlated in normal times and even more closely correlated during turbulent periods. Diversification of investments between countries will thus to a lesser extent than previously curb the fall in the value of equity portfolios in times of market turmoil.

Several indicators are used when assessing whether equity prices reflect underlying financial aspects, such as expected future earnings and relevant risks. One of these is the ratio of an enterprise's share price to its earnings per share (P/E ratio). When prices are high relative to the enterprise's earnings, the share price may appear high to investors.

In historical terms, PE ratios are relatively high in the US stock market, which might indicate that US equities are priced a bit high[34] (chart 4.5). In the Norwegian stock market, P/E ratios have increased recently. The ratio is higher than the average for the period 1980 to 2019, but lower than it was two to four years ago (chart 4.6). In Western Europe, the P/E ratio is roughly one standard deviation higher than the historical average, but there are relatively large variations between countries. The stock markets in emerging market economies, including the BRIC countries, have ratios that roughly correspond to the historical average.

In the event of an economic turnaround, high prices in key markets may provide the basis for major corrections, which in turn may reinforce a future downturn in the global economy.[35] In recent years, the stock market has been supported by low interest rates, driven by, among other things, extraordinary monetary policy measures.

INTEREST RATE DEVELOPMENTS AND RISKS IN THE BOND MARKETS

Too low interest rates and risk premiums?

Global long-term real interest rates in developed economies have declined since the mid-1980s. This may reflect structural changes in the international economy that could result in continued low long-term interest rates in the years ahead, but also more temporary factors. Among the former are reduced workforce growth, lower productivity growth, a global savings surplus and reduced investment demand. Other explanations emphasise that the prolonged weak development in several countries after the financial crisis can be attributed to negative effects of the crisis that will gradually abate.

Government bond yields in the euro countries have, with the exception of periods of financial turmoil, declined since the early 2000s and were negative in November 2019 (chart 4.7). The Norwegian five-year government bond yield declined up to 2015, but stabilised in the period from 2015 to 2017 before increasing during the first half of 2018. In November 2019, it was considerably higher than the yield on government bonds issued by euro countries.[36] The US Treasury bond yield fell up to 2013, when it once again rose slightly and reached a peak towards the end of 2018 of approximately 3 per cent. In November 2019, however, it was significantly lower than this.[37]

The yield on corporate bonds is also low in a historical perspective (chart 4.8). The yield on Norwegian corporate bonds with a credit rating of BBB has been relatively stable thus far in 2019 and was approximately 2.7 per cent in November.[38] The effective yield on bonds issued by US enterprises with the same credit rating was approximately 0.4 percentage points lower. The yield on corporate bonds issued by enterprises in the eurozone with the same credit rating was 0.4 per cent.

The difference between the yield on Norwegian government bonds and Norwegian corporate bonds (credit spread) was just below 1.5 percentage points

4.7 5-year government bond yields

Source: Refinitiv

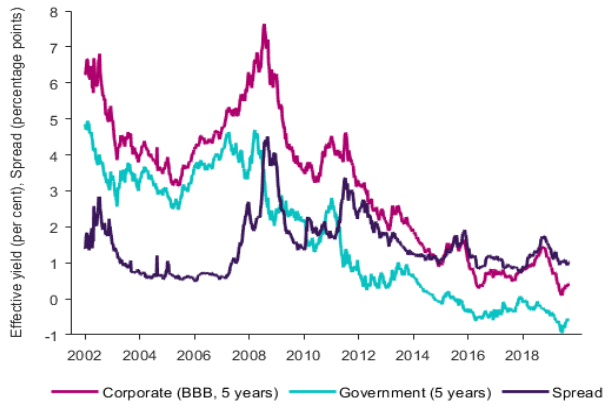
4.8 Corporate bond yields (BBB, 5 years)

Source: Refinitiv

4.9 Norwegian bond yields

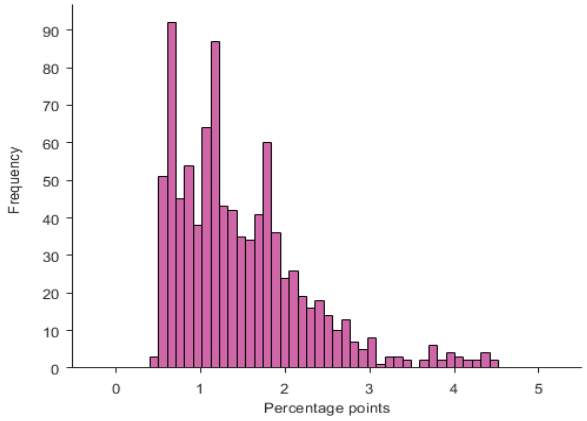
Sources: Refinitiv and Finanstilsynet

4.10 Bond yields in the euro area



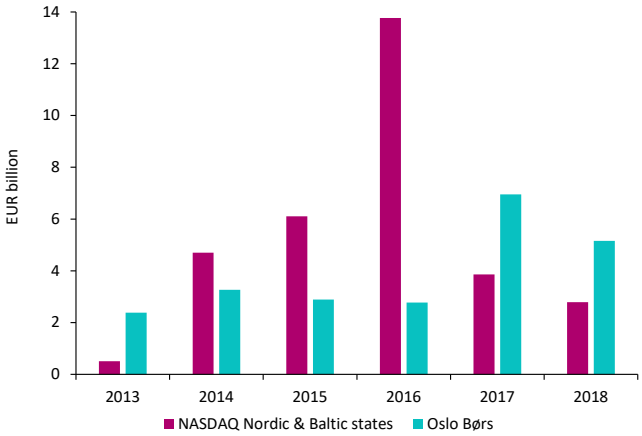
Sources: Refinitiv and Finanstilsynet

4.11 Credit spreads in the euro area – BBB corporate bonds minus government bonds (5 years), 2002–2019



Weekly observations. Sources: Refinitiv and Finanstilsynet

4.12 Total share issues in listed companies



Source: FESE

in November 2019, which is approximately 0.3 percentage points higher than at the beginning of the year (chart 4.9).

In the euro area, the corresponding spread was roughly 1.0 percentage points, which is 0.7 percentage points lower than at the start of the year (chart 4.10). In the US and the UK, the credit spread was also substantially lower in November 2019 than at year-end 2018. In Sweden and Japan, the spread has narrowed in the course of the year, but by considerably less than in the other three regions. The contracting credit spreads may be due to shifts in the portfolio from government bonds to corporate bonds, which in turn may be related to the decline in the general interest rate level and the central banks' completed and announced bond purchases. In the US, the UK and the euro area, the credit spread in November 2019 was lower than the average for the period 2002 to November 2019.

The empiric distribution of credit spreads is strongly skewed (chart 4.11). The spreads are normally not negative, but can be very high. For the euro area, the highest spread during the international financial crisis was measured at 4.5 percentage points.[39] In the US, it increased to 5.5 percentage points, while there was a rise to 4.3 percentage points in the UK. These increases are extraordinary in a historical perspective.

Low long-term interest rates may indicate expectations of prolonged monetary policy stimulus. The low interest rate level may also reflect expectations of low returns on real investments and sluggish future economic growth. Low risk premiums may be driven by the search for yield. In consequence of the continued low interest rate level and low risk premiums, imbalances may build up in the stock and property markets, heightening the potential fall in the global economy. Real economic and financial shocks may trigger significant reductions in the prices of real estate and financial assets, thus posing a risk to financial stability. Investors may suffer major financial losses, and the financing costs of states, financial institutions and non-financial firms may increase. This, in

turn, will put a damper on consumption, investment and future economic growth.

PRIMARY MARKET FOR EQUITIES IN NORWAY

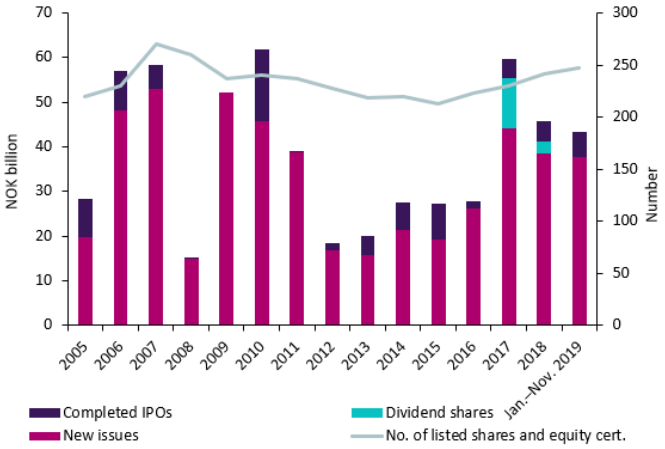
Compared to the other Nordic exchanges, there has been relatively brisk issue activity at Oslo Børs in recent years. According to figures from the Federation of European Securities Exchanges (FESE), share issues totalled EUR 23 billion from 2013 to 2018 (chart 4.12). During the same period, total share issues at the other Nordic and Baltic exchanges came to approximately EUR 32 billion.

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 4.13). New issues represent capital raised by listed companies. Share issues (both including and excluding IPOs) vary considerably over time and are largely dependent on prevailing conditions in the secondary market. According to figures from Oslo Børs, the companies listed on the three marketplaces issued shares (including equity certificates) for close to NOK 580 billion from year-end 2004 to November 2019. Of this, new issues amounted to roughly NOK 492 billion. In comparison, holdings of outstanding fixed-income securities listed on Oslo Børs and Nordic ABM increased by NOK 1 420 billion from the end of 2004 to November 2019. The sectors 'energy', 'finance' and 'industrials' accounted for 41, 12 and 11 per cent, respectively, of total share issues at Oslo Børs, Oslo Axess and Mercury Market in the period from year-end 2004 to November 2019 (chart 4.14). The total issue volume from January to November 2019 was approximately the same as in the corresponding period the preceding year.

PRIMARY MARKET FOR BONDS IN NORWAY

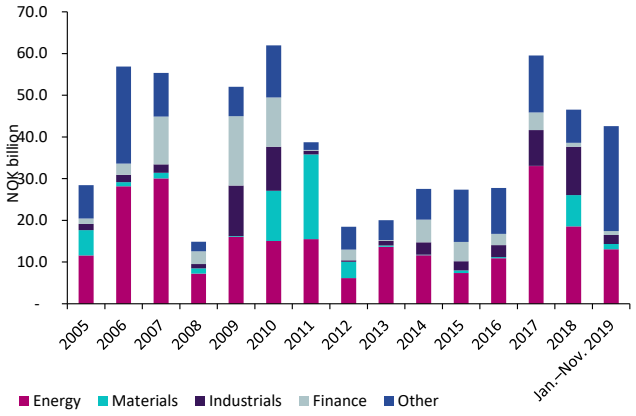
Bonds and commercial paper issued under Norwegian legislation are in all essentials listed/registered on the Oslo Børs and Nordic ABM. Virtually all bonds are registered in the shareholder register of the Central Securities Depository (VPS). Norwegian banks, mort-

4.13 Share issues in companies listed on Oslo Børs, Oslo Axess and Merkur Market – total



Source: Oslo Børs

4.14 Share issues in companies listed on Oslo Børs, Oslo Axess and Merkur Market – by industry



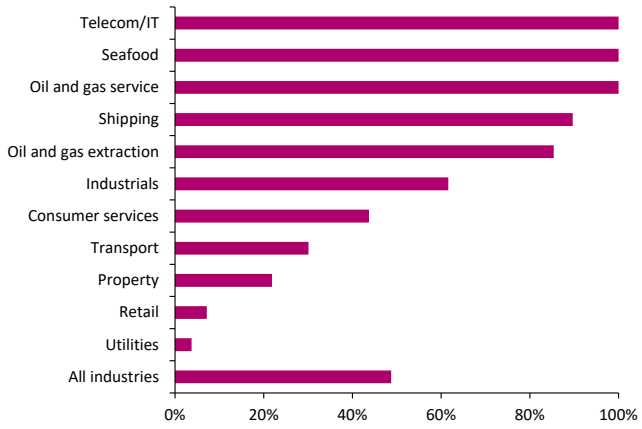
Including issues of dividend shares, e.g. in Equinor in 2017 (NOK 11.3 billion) and 2018 (NOK 2.6 billion). Source: Oslo Børs

gage companies and non-financial firms also issue bonds in markets other than the Norwegian. Roughly half of the covered bonds issued by Norwegian mortgage companies are denominated in euro, primarily targeting foreign investors.

Accounting data for Norwegian non-financial limited companies (excl. oil and gas extraction) show that about 15 per cent of the companies' debt is obtained in the commercial paper and bond markets. This share has increased somewhat in recent years.

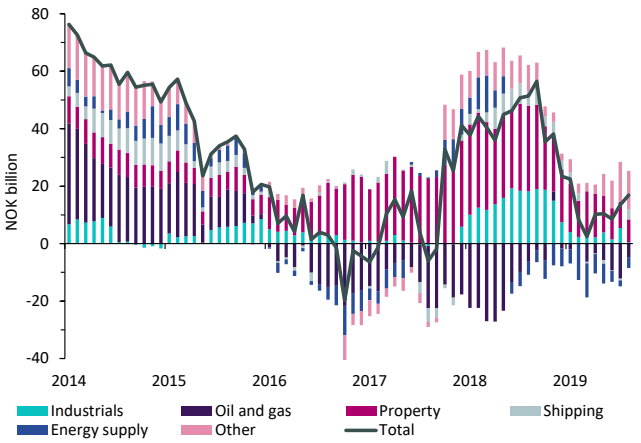
Approximately two-thirds of the outstanding volume of corporate bonds is issued by Norwegian

4.15 Proportion of high-yield corporate bonds in various industries, August 2019



Source: Stamdata

4.16 Increase in corporate bond holdings last twelve months



Source: Stamdata

issuers in Norwegian kroner. In oil-related industries and shipping, there is a relatively high percentage of bond loans in US dollars issued by foreign borrowers.

For a long time, there has been a high proportion of high-yield bonds in the Norwegian bond market. The proportion has been around 50 per cent for corporate bonds for several years. Enterprises in relatively volatile industries have often financed their operations through a combination of secured bank loans and unsecured bond loans. Industries with a high proportion of high-yield bonds include oil and gas, shipping, telecom, IT, seafood and healthcare (chart 4.15).

There was a reduction in issues of corporate bonds after the oil price fall in 2014. The decline was particularly strong for bonds issued by supplier companies to the oil and gas sector (chart 4.16). For a period the market for high-yield bonds was in effect closed to such companies. The outstanding volume of bonds within oil service fell by close to 50 per cent from the beginning of 2015 to September 2019, while the outstanding bonds of enterprises within oil and gas extraction increased slightly during the same period. More than half of the outstanding oil-related bonds are issued by foreign enterprises, and three-fourths are issued in US dollars.

There has been a moderate rise in outstanding corporate bonds in 2019. At the end of September 2019, twelve-month growth was 3.2 per cent. In comparison, non-financial firms' funding from banks and mortgage companies increased by 7.2 per cent during the same period. Measured in NOK, banks and mortgage companies accounted for more than 90 per cent of the rise in enterprises' domestic debt during this period.

There was a significant increase in commercial property companies' bond funding from the end of 2016 to autumn 2018. Measured in NOK, the bond market funding of this industry roughly equalled loans from banks and mortgage companies. Since the autumn of 2018, the increase in bank financing has accelerated, while bond funding has been reduced. Bond issues within commercial real estate are generally of good credit quality (investment grade) with a fixed yield.

The default rate in the Norwegian bond market has declined since 2016. Bond defaults are confined to the high-yield segment. While the default rate for outstanding high-yield bonds was 11 per cent in January 2016, the rate dropped to 4.5 per cent in September 2019. This is on a level with the average default rate for Norwegian high-yield bonds in the years 2008–2013.

The highest default rate was in oil and gas service and industrials. In oil and gas service, the default rate has

declined from close to 20 per cent in 2016 to 11 per cent in the third quarter of 2019. In comparison, the default rate was approximately 8 per cent from 2008 until the oil price drop in 2014. The decline in the default rate must be viewed in light of the fact that several of the issuers have restructured their financing, partly by writing down bond debt.

If developments in the global economy turn out to be significantly weaker than expected, there could be a sharp fall in prices on equities, bonds and real estate. This will have a pronounced impact on investors and make it difficult and expensive for both financial institutions and non-financial firms to raise new capital in the money and capital markets.

GREEN INVESTMENT PRODUCTS

The international market for so-called green investment products, especially green bonds, is expanding strongly. However, the issued volume accounts for less than 1 per cent of the total global market. In the Nordic region, this proportion is about 5 per cent. Swedish issues account for more than half of total issues in the Nordic region.

Growing interest in green securities may reflect the fact that investors and households are looking to finance investments that may contribute to lower greenhouse gas emissions. However, such investment preferences may also be based on expectations that the combination of return and risk on these investments will be more favourable than for other financial investments. In its latest report, the IMF points out that there is little evidence that issuers of green bonds achieve lower costs than issuers of conventional bonds, and that this may reflect the identical credit risk profiles in these two segments of the bond market. The secondary market for green bonds is also characterised by low liquidity, since a large proportion of the bonds are held to maturity.

Greater interest in green investment products heightens the risk that enterprises and securities will be marketed as sustainable without this being adequately documented, so-called green laundering. The preparation of standards defining which financial assets can be classified as green or sustainable is therefore required to enable investors and borrowers to consistently assess climate risk at corporate level. Classification standards and good information about investment projects and activities are important to ensure a high level of investor and consumer protection and well-functioning markets.

Green bonds

Bonds that are classified as green shall fund green projects such as investments in renewable energy. There are a number of international frameworks and labelling schemes for green bonds. The Climate Bonds Standards, issued by the Climate Bonds Initiative in 2013, and the Green Bond Principles, published by ICMA in 2014, are the two best known schemes.

In Norway, Oslo Børs created a list for green bonds in 2015. Green bonds are bonds earmarked to finance environmental projects. Market practice in Norway is based on independent third-party reviews (CICERO etc.) certifying the environmentally friendly nature of the bonds. The reviews shall be made public, and the issuers' disclosure obligations shall be made publicly available through stock exchange statements.

Since 2015, the outstanding volume on Oslo Børs' green list has risen to just over NOK 31 billion distributed on 19 issuers and 30 bond issues. In spite of the strong growth, green bonds constitute less than 1 per cent of total outstanding bonds. The highest proportions of green bonds are within hydropower (9 per cent), energy supply (7 per cent) and property companies (4.5 per cent).[40]

Banks have issued more than half of the green bonds listed on Oslo Børs. These comprise covered bonds for financing residential mortgages, which include requirements for energy labelling, and loans for financing renewable energy projects. Since 2010, Kommunalbanken has had a green bonds programme for financing climate and environmentally friendly investments in the municipal sector. Issues from enterprises within hydropower and electricity supply

account for 20 per cent of the outstanding volume of green bonds on Oslo Børs, while property companies account for 13 per cent.

Green loans

There has been a significant expansion in the market for green loans in recent years. In 2018, green loans for a total of USD 61 billion were granted globally.[41] This corresponds to 45 per cent of total issues of green bonds during the same year. Green loans can be bilateral or syndicated. Just as for green bonds there are different standards in the markets for which types of loans qualify as green loans. In the UK, the Loan Market Association has compiled a list of projects eligible for green loans. It is based on the list of projects eligible for green bond loans compiled by ICMA.

Lenders of green loans seek to fund these by issuing green bonds. A number of Norwegian banks offer green loans. In the personal market, these include residential mortgages with energy label A or B as well as green car loans for the purchase of zero emission cars. Green mortgages are financed through the issuance of green covered bonds. In the corporate market, several banks offer loans for financing and refinancing of green activities. Kommunalbanken provides green loans for climate and environmentally friendly investments in the municipal sector. Projects within seven defined areas may apply for green loans, and interest rates on such loans are 0.1 percentage point lower than on ordinary loans.

Green funds

There are a large number of green equity and bond funds. Green funds range from SRI (Social Responsible Investing) and ESG (Environment, Social and Governance) funds to funds concentrating solely on sustainability and the transition to a low-emission economy.

In Norway, the Swan ecolabel introduced in 2017 also applies to investment funds. The criteria for funds carrying the Swan label include requirements to exclude investments in specified activities (fossil fuels, weapons etc.) and requirements regarding the percentage of the investments that must have achieved a good rating in ESG analysis. Green industries such as renewable energy, water purification, etc. are covered by the scheme. At end-October 2019, there were twelve Swan labelled Norwegian funds, of which nine were equity funds and three fixed-income funds.

MUTUAL FUND INVESTMENTS

Both households and large-scale investors have extensive indirect investments in the stock and fixed-income markets in the form of mutual fund units. Since the financial crisis, total assets under management in mutual funds with Norwegian managers have more than quadrupled, totalling approximately NOK 1 270 billion[42] at end-September 2019. In comparison, deposits in banks from the general public came to approximately NOK 2 700 billion. The increase derives mainly from a rise in capital gains during all years apart from 2011 and 2018 (chart 4.17). In addition, the funds have experienced positive net subscriptions in all years since 2008.

Partly as a result of the strong increase in defined-contribution pensions, households' mutual fund investments are growing at a faster pace than the general market. 36 per cent of total mutual fund investments is now owned by households either directly or through pension products where they determine the allocation, versus 31 per cent in 2008.

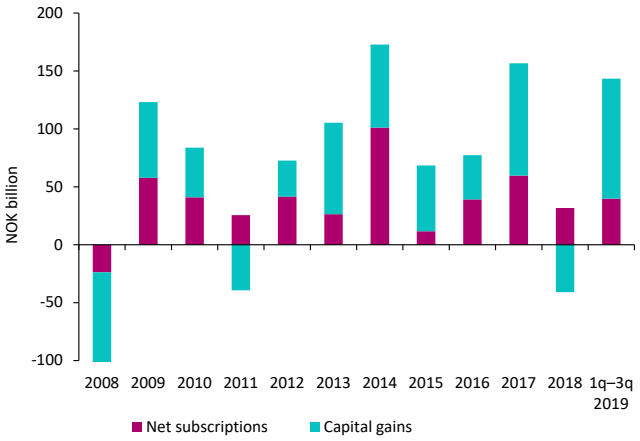
Net subscriptions in fixed-income funds have been positive since the international financial crisis, whereas net subscriptions in mutual funds vary greatly.

The low interest rate level is a factor behind the substantial net subscriptions in fixed-income funds at the global level in recent years. In this connection, a number of international players have expressed concern that mutual funds invest in increasingly illiquid assets in order to achieve the desired return (chart 4.18). The average credit quality of the instruments in the fixed-income funds is lower than in the past (chart 4.19). This heightens liquidity risk and makes the funds more susceptible to price fluctuations in connection with repricing of the risk, which may prompt investors to redeem mutual fund units. In turn,

this may lead to a further decline in prices of the underlying securities and trigger a negative self-reinforcing spiral. In Europe, several major funds had to temporarily close for redemption in the summer of 2019 due to illiquid investments. Some of the funds have subsequently had to be wound up on account of waning confidence. Global stress tests from the IMF indicate that 15 per cent of fixed-income funds and up to 50 per cent of high-yield funds do not have sufficient liquid assets to cope with redemptions at the level of the month with the highest historical redemption figures in the period 2000–2019.

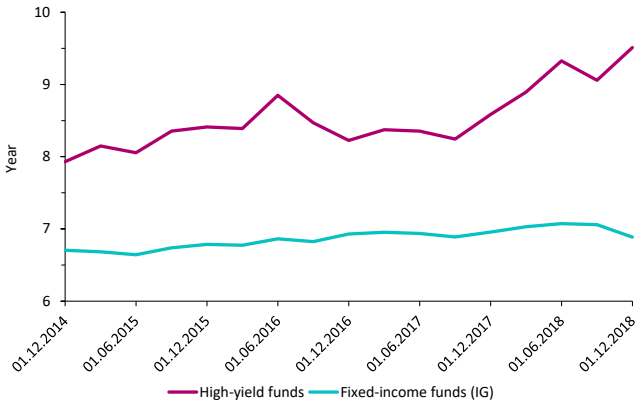
In a stress test[43] conducted by the European Securities and Markets Authority (ESMA), it is estimated that most types of fixed-income funds, apart from some high-yield funds, will be able to meet weekly redemption claims of 5 to 10 per cent of net asset value. Such disinvestment may, however, result in an increase in the required rate of return on fixed-income instruments of 40 basis points for high-quality assets and 320 basis points for government bonds issued by emerging market economies. If the funds choose to sell their most liquid assets first rather than equal shares of liquid and illiquid assets, there will be less disruption to the market. On the other hand, the funds then run a greater risk of not being able to meet further redemption claims. In order to reduce the likelihood of this happening, all asset managers are required to carry out regular liquidity stress tests. Finanstilsynet is planning to conduct a thematic inspection of management companies' liquidity management in 2020.

4.17 Changes in assets in funds managed by Norwegian managers



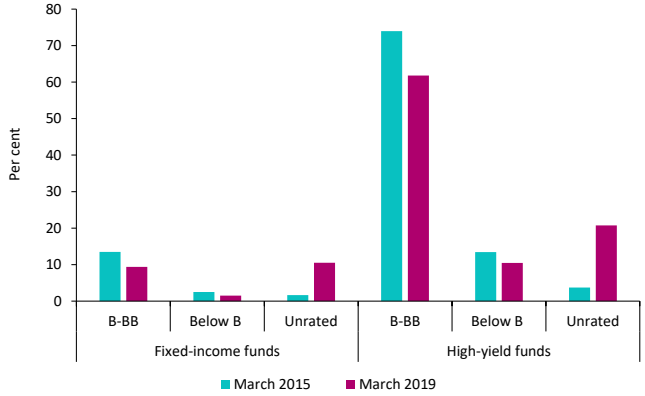
Sources: Norwegian Fund and Asset Management Association and Finanstilsynet

4.18 Effective maturity, global fixed-income funds



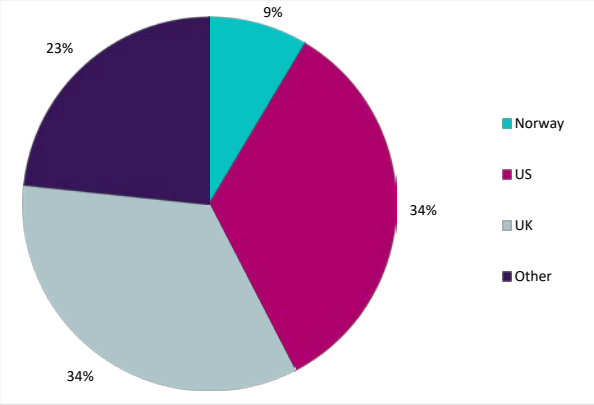
Source: IMF

4.19 Share of investments of lower credit quality in the portfolio, global fixed-income funds



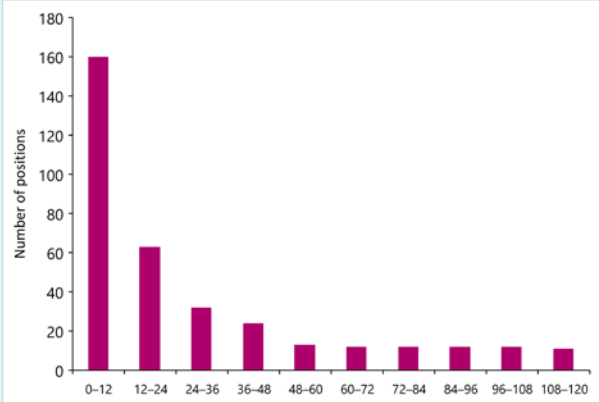
Source: IMF

4.A Position holders in the Norwegian market by country as at 30 September 2019



Source: Finanstilsynet

4.B Number of positions, from the highest decile to the lowest decile of publicly disclosed position holders in the Norwegian market as at 30 September 2019



Source: Finanstilsynet

Box 8: Short selling in the Norwegian stock market

A "short sale" is an ordinary sale of a financial instrument that the seller does not own at the time the sales agreement is concluded. For financial market players, short selling has long been a useful tool to profit on price drops or to secure the price on a financial instrument. Short selling may contribute to curbing price increases on financial instruments, but may also amplify the decline in prices of individual equities and in the stock market in general. Such concerns occasioned several EU member states to introduce measures during the 2008 financial crisis that to varying degrees restricted or banned short selling of certain types of or all securities. The experience gained was that uncoordinated measures were ineffective and caused uncertainty for market players. Against this background, the EU decided to regulate short selling.

The Short Selling Regulation* was implemented in Norwegian law with effect from January 2017. The regulation contains, among other things, a general prohibition against uncovered short selling of equities and sovereign debt.

This means that the short seller must have gained access to the securities on the settlement date so that actual settlement can be effected. For shares, for example, settlement can be ensured by borrowing corresponding shares. To close the short position, a corresponding number of shares must be purchased in the market on a later date and returned to the original owner in accordance with the agreement.

The regulation also requires investors to disclose net short positions exceeding 0.2 per cent of the issued share capital and each 0.1 per cent increment above that. Positions above 0.5 per cent shall be publicly disclosed on Finanstilsynet's website, see ssr.finanstilsynet.no. Before the regulation entered into force in Norway, the common belief among market players was that short selling was relatively limited compared with other countries. The volume of the net short positions proved to be greater than anticipated. On 2 January 2017, 184 active net short positions were registered, while 341 net short positions were registered at the beginning of 2019.

* Regulation (EU) no. 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps

At end-September 2019, 257 active position holders were registered in Finanstilsynet's short sale register, i.e. position holders who had reported at least one net short position. The majority of investors are domiciled in the UK and US, with 88 and 87 position holders respectively, while 22 of the position holders are Norwegian (chart 4.A). A small number of market players account for short positions in a variety of shares (chart 4.B). This trend is also evident in the EU. Figures from the EU show that the largest position holders are hedge funds and professional asset managers, which is also the case in Norway.

Net short positions in a total of 118 companies have been reported in the Norwegian market. In 66 of these companies, one or more positions have been publicly disclosed. Approximately 74 per cent of the positions reported have not been publicly disclosed, as they are below the 0.5 per cent threshold. In the EU, this figure was approximately the same at 71 per cent.

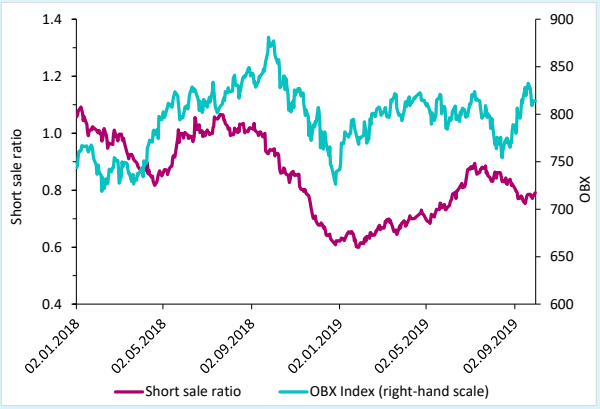
Investors' adaptation and short positions as a market signal

The number of short positions in the Norwegian market decreases in step with the size of the positions. This may be partly due to the fact that public disclosure has an impact on investor behaviour.

In an analysis of net short positions in the EU*, ESMA found that the public disclosure threshold influenced investors seeking to keep their strategy secret from other investors. Many investors avoided crossing the public disclosure threshold by remaining in the interval right below the threshold for as long as possible. In addition, it was observed that investors are less likely to increase their net short positions in the interval just below the public disclosure threshold than

*ESMA Report on Trends, Risks and Vulnerabilities No. 1, 2018, p. 60ff.

4.C Short sale ratio compared with the OBX index



Sources: Finanstilsynet and Oslo Børs

positions which are well below the threshold or which in total exceed the threshold. However, this did not seem to be significant for investors who already had a publicly disclosed position in the share. ESMA's analysis also suggests that the disclosure of positions encouraged herding, as an increase in other investors' net short positions in a share could be observed immediately after a position had been publicly disclosed.

In Norway, great interest is shown in Finanstilsynet's short sale register. On average, more than 2 600 lookups were registered per trading day in 2019, which indicates that market players use the register as a source of market information.

Short sale ratio for shares inn the OBX index

Oslo Børs' OBX index comprises the 25 most liquid shares on the stock exchange. No net short positions above the disclosure threshold of 0.5 per cent have been taken in eight of the shares in the current index. There is a tendency for clustering of short positions in some shares in the OBX index, some of which have been subject to extensive short sales, while there has been no short positions in other shares. The highest registered

short sale ratio for an individual share in the OBX index is 18.7 per cent.

Chart 4.C shows developments in the weighted proportion of shorted shares in the OBX index, the "short sale ratio", compared with the index. The short sale ratio has been calculated by multiplying the percentage of shorted shares in the individual company by the ratio of the company's market value to the index's market value.

The average value for all 25 companies in the index constitutes the short sale ratio. This should provide a representative picture of the percentage of equities on the index that have been shorted relative to market value.

Compared with the OBX index, the weighted short sale ratio declined from the third quarter of 2018 and thereafter increased during the spring of 2019. This might indicate that several position holders chose to realise their gains in the autumn of 2018, and thereafter took relatively few positions following the correction towards the end of 2018 until the market recovered in 2019.

Risk of market disruption in Norway

For most companies listed on Oslo Børs, the short sale ratio is low, while the ban on uncovered short sales helps to reduce the risk of destabilising downward price spirals. This contributes to limiting any effects of short sales.

During certain periods, the short sale ratio for individual companies has been up to 20 per cent. In such cases, a sudden price rise may require investors with short positions to buy securities to cover their loss on the short positions, which in turn will add to the upward price pressure – often referred to as a "short squeeze". The maximum loss on a short position is unlimited, as opposed to normal trading, where the maximum loss is restricted to the amount invested. This is one of the reasons why short sales may entail a certain risk of market disruption also for the Norwegian market.

NOTES

[1] During 2019, the State Educational Loan Fund, Norway changed the month during which student loans are converted into scholarships. This affects the increase in household debt. Statistics Norway estimates that growth would have been 0.2 percentage points higher in the July through October period if this change is disregarded.
[2] https://www.finanstilsynet.no/en/news-archive/press-releases/2019/residential-mortgage-lending-survey-2019/
[3] Calculations based on household income and wealth statistics from Statistics Norway. In this regard, a very high debt burden is defined as more than five times income after tax. Debt burden calculated on the basis of tax statistics from Statistics Norway is not directly comparable to the DTI ratio calculated on the basis of figures from the residential mortgage lending survey, as there are different definitions of both income and debt.
[4] See https://ec.europa.eu/commission/presscorner/detail/en/IP_19_3034
[5] Non-financial reporting directive
[6] See, for example, "The Greenium matters: evidence on the pricing of climate risk", European Commission, Joint Research Centre.
[7] See 'Resultatrapport for finansforetak, 3. kvartal 2019' and 'Soliditet i finansforetak 3. kvartal 2019' (in Norwegian only).
[8] Regional savings banks: SpareBank 1 SR-Bank, SpareBank 1 SMN, SpareBank 1 Østlandet, SpareBank 1 Nord-Norge, Sparebanken Sør, Sparebanken Vest. Consumer loan banks: Santander Consumer Bank, Instabank, Eika Kredittbank, BB bank, BRAbank, Bank Norwegian, MyBank, Optin Bank, Komplett Bank, Easybank. Other: Other Norwegian banks
[9] https://www.finanstilsynet.no/nyhetsarkiv/nyheter/2019/kapitalkrav-for-avtaler-om-kjop-av-misligholdte-lan/ (in Norwegian only)
[10] DNB Bank is the only Norwegian bank subject to the buffer requirement for systemically important banks. Furthermore, the Pillar 2 requirements are entity-specific, and the level in the chart is set at the average requirement for the seven largest Norwegian banks at end-September 2019. The formal decisions about Pillar 2 requirements were introduced in 2016. However, since 2018 Finanstilsynet has assessed the capital targets set by the various banks and clarified its expectations regarding the expected level of CET1 capital.
[11] https://www.finanstilsynet.no/contentassets/a23a05984acc4d0790aa1019e7b2531a/krav-til-banker-som-soker-om-irb.pdf (in Norwegian only)
[12] Due to poor access to data on covered bonds listed abroad, this analysis is based on covered bonds listed on Norwegian stock exchanges. Approximately 60 per cent of the total volume of covered bond issued by Norwegian mortgage companies is issued abroad. Finanstilsynet carried out a similar analysis of the liquidity in the covered bond market in theme chapter II in the Risk Outlook report from June 2016. Check this report for a review of the theory and data sets used in the analysis.
[13] For more information on the profitability of insurers and pension funds, see Finanstilsynet's reports on financial institutions' performance: https://www.finanstilsynet.no/publikasjoner-og-analyser/resultatrapport-for-finansforetak/ (in Norwegian only)
[14] For more details on the solvency situation of insurers and pension funds, see Finanstilsynet's solvency reports (https://www.finanstilsynet.no/publikasjoner-og-analyser/soliditetsrapporter-for-finansforetak/) (in Norwegian only)
[15] EIOPA Consultation Paper on the Opinion on the 2020 review of Solvency II https://eiopa.europa.eu/Publications/Consultations/EIOPA-BoS-19-465_CP_Opinion_2020_review.pdf
[16] Report on information and advice to members of defined-contribution pension schemes, Finanstilsynet, 23 April 2019: https://www.finanstilsynet.no/nyhetsarkiv/nyheter/2019/informasjon-og-radgivning-til-medlemmer-av-innskuddspensjonsordninger--kartlegging-av-livsforsikringsforetakenes-praksis/ (in Norwegian only)
[17] ECB FSR 201905: https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr201905~266e856634.en.html#toc1
[18] https://www.regjeringen.no/en/aktuelt/changes-in-the-capital-requirements-for-insurers-residential-real-estate-exposures/id2681231/
[19] https://www.regjeringen.no/no/aktuelt/lovendringer-om-investeringer-i-forsikringsfremmed-virksomhet-trer-i-kraft-i-2019/id2622713/ (in Norwegian only)
[20] https://www.imf.org/en/Publications/GFSR/Issues/2019/10/01/global-financial-stability-report-october-2019#FullReport
[21] EIOPA FSR 201806: https://eiopa.europa.eu/Publications/Reports/EIOPA_FSR_June2019.pdf

[22] ECB FSR 201905

[23] https://www.finanstilsynet.no/nyhetsarkiv/nyheter/2019/regelverket-for-garanterte-pensjonsprodukter--utkast-til-horingsnotat/ (in Norwegian only)

[24] https://www.finansnorge.no/statistikk/skadeforsikring/bransjeregnskap/ (In Norwegian only)

[25] https://www.finansnorge.no/aktuelt/nyheter/2019/10/klimarapport-klimakostnadene-oker/ (in Norwegian only)

[26] Chart 4.1 shows developments in equity price indices and does not include reinvested dividends, as opposed to total return indices. In November 2019, the MSCI total return index was approximately 45 per cent higher than in October 2007, which was the peak level prior to the financial crisis. In November 2019, the MSCI price index was not yet back at the October 2007 level.

[27] The return has been calculated based on total return indices, which include both price changes and dividend payments. The price indices, which do not include dividend payments, were negative for 21 and 13 years, respectively, for Norway and the US.

[28] Average annual price changes in Norway are estimated at 7.0 per cent for the period 1970–2018 and 4.0 per cent for the last five-year period (November 2014 to November 2019). The differences between the figures in the text and in this footnote reflect the companies' dividend payments. These payments constitute a substantial proportion of investors' total returns.

[29] In the European stock markets, the average total return was negative at 10 per cent, compared with negative returns of 4.8 per cent in North America, 15 per cent in Japan and 2 per cent in Norway.

[30] There was an increase from approximately 24 to 28 per cent for countries with a very high total return and from about 11 to 13 per cent in countries with high returns. For Norway, the total return for the first eleven months of 2019 was 11 per cent.

[31] See the IMF's Global Financial Stability Report, October 2019.

[32] Chart 4.2 is based on monthly changes in indices. The conclusion does not change if the calculations are based on daily or annual rates of return. In a statistical test (Jarque-Bera), the null hypothesis of a normal distribution of return in the Norwegian stock market is rejected at a confidence level of 95 per cent.

[33] The correlation coefficient between returns in the Norwegian and US stock markets averaged 0.45 between 1970 and 1999 and 0.65 between 2000 and 2019. The correlation coefficients for the Norwegian and the European equity markets were 0.52 and 0.76, respectively.

[34] See the IMF's Global Financial Stability Report, October 2019.

[35] See, for example, the IMF's Global Financial Stability Report, October 2019.

[36] The difference was close to 2 percentage points. The Norwegian government bond yield (five years) was approximately 1.2 per cent, while the there was a negative bond yield of 0.6 per cent in the euro countries.

[37] At end-November 2019, the US five-year Treasury bond yield was approximately 1.6 per cent.

[38] BBB bonds are investment grade bonds, which means that credit risk is assessed to be low (by the credit rating agencies).

[39] Measured as the difference between the effective yield on 5-year government bonds and the effective yield on corporate bonds with a credit rating of BBB and a maturity of 5 years.

[40] The percentage applies to bonds registered in Stamdata.

[41] Source: Institute of International Finance.

[42] In addition, investments in alternative investment funds come to approximately NOK 200 billion. They are not a topic here. Reference is made to chapter 5 in Risk Outlook June 2019 for further details.

[43] https://www.esma.europa.eu/sites/default/files/library/esma50-164-2458_stresi_report.pdf

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