ANALYSIS

DANMARKS NATIONALBANK

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OUTLOOK FOR THE DANISH ECONOMY — JUNE 2020

Prospects of gradual economic recovery

Historic setback

Danish and international economy is hit by a historic setback. Danish GDP is expected to contract by 4.1 per cent this year, and the recovery, both in Denmark and abroad, is expected to be gradual over several years. By the end of 2022, the Danish economy will experience a mild recession.

Sound fiscal policy measures

The agreed fiscal policy measures contribute to a smooth business cycle when the relief packages are terminated. Additional fiscal stimulus may be needed in 2021 and 2022. The fiscal stimulus should retain the good structures that have helped to provide a healthy foundation for the Danish economy.

International cooperation is needed

It is essential for Danish growth and prosperity that Denmark supports international coordination and cooperation. Access to efficient export markets with strong purchasing power for Danish corporations increases Danish prosperity and employment.

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Highlights

THE GLOBAL ECONOMY

The global spread of the coronavirus has caused a sharp and simultaneous contraction of activity in many countries. Forecasts from international organisations paint a bleak picture with a severe recession in the 1st half of 2020 followed by a gradual and prolonged recovery of the global economy.

DANISH ACTIVITY

Behavioural changes and measures to contain the spread of infection have hit the Danish economy hard, and prospects are for a record economic downturn in the 1st half of 2020. Since mid-April, the economy has gradually reopened and based on e.g. payment card turnover, activity has picked up.

LABOUR MARKET

The severity of the crisis is also reflected in the labour market, with unemployment rising by almost 45,000, while 300,000 people have received compensation for wages or lost profits. This implies that 16 per cent of private sector employment is affected by the crisis.

WAGES AND PRICES

Currently, a steep drop in oil prices at the beginning of the year is putting downward pressure on consumer prices. Increased spare capacity in the labour market implies a subdued pressure on prices and wages in the coming years.

GROWTH OUTLOOK

GDP is expected to contract by 4.1 per cent this year, driven primarily by developments in the first half of the year. The recovery is likely to be sluggish, especially because of subdued foreign demand. As a result, the economy is expected to remain in a mild recession by the end of 2022.

RISK OUTLOOK

The growth outlook is subject to exceptionally high uncertainty. The economy is driven by the evolution of the virus outbreak, treatment options and resulting responses by households, corporations and authorities – both in Denmark and abroad.

Key economic variables

Real growth relative to the previous year, per cent	2019	2020	2021	2022
GDP (real), per cent	2.4	-4.1	4.2	1.6
Employment, 1,000 persons	2,998	2,958	2,969	2,993
Gross unemployment, 1,000 persons	104	143	132	123
Current account, per cent of GDP	7.8	6.5	6.1	6.0
Government balance, per cent of GDP	3.7	-5.8	-2.0	-1.8
House prices[1], per cent year-on-year	3.0	-2.3	2.0	5.4
Consumer prices, per cent year-on-year	0.7	0.2	0.9	1.2
Hourly wages[2] (manufacturing), per cent year-on-year	2.5	2.3	2.0	2.3

1. Nominal prices of single-family houses.
2. Statistics Denmark's implicit wage index.
Source: Statistics Denmark and own calculations.

"The fiscal stimulus agreed in Parliament contributes to a smoother business cycle"

Outlook and economic policy

Historic economic downturn in the 1st half of 2020

When the coronapandemic struck in February and March, the outlook for the Danish and international economy changed fundamentally. Behavioural changes and measures to contain the spread of infection sent many countries into lockdown, severely affecting economic activity. The pandemic and highly restrictive measures have taken a particular toll on the large euro area member states France, Italy and Spain. Here, the gross domestic product, GDP, contracted by more than 5 per cent in the 1st quarter.

Over a few months, the national lockdowns have caused unemployment to soar – in some countries to record levels – and led to a sharp increase in both private and public debt. In many countries, the spread of infection is now under sufficient control to allow a new phase of staged reopening of the economies to start. This is gradually increasing activity, and countries have started the long haul of reducing unemployment.

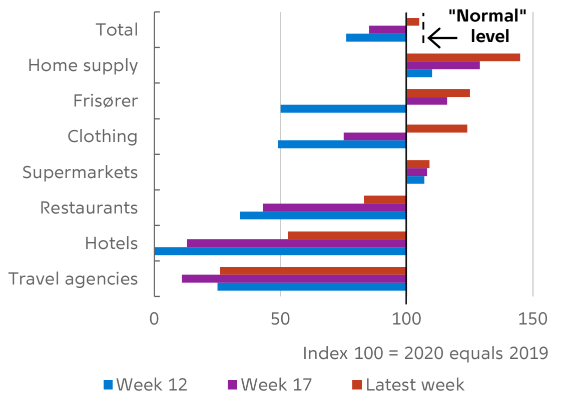
Denmark took early action to contain the infection. Parts of the economy entered lockdown in mid-March. Although only a small part of the 1st quarter was impacted by the lockdown, GDP contracted by 2.1 per cent. Since mid-April, the economy has gradually reopened and based e.g. on payment card turnover, activity has grown. But the lockdown affects a larger portion of the 2nd quarter, and for the quarter overall, prospects are for a substantial decline in activity.

The virus outbreak has also left its mark on the labour market. Unemployment surged during the first few weeks of lockdown, but since April the unemployment rate has been relatively flat. The total number of unemployment registrations has increased by almost 45,000 since mid-March. At the same time, about 300,000 people have received compensation for wages or lost profits. This means that the jobs of more than 340,000 people are affected, equivalent to 16 per cent of total private sector employment.

Large revenue losses, especially in the service sector

Most industries are affected by the pandemic, but a few industries have been hit especially hard, particularly sectors directly impacted by measures taken to contain the spread of infection. These sectors include many service sectors such as parts of the transport sector, sporting events, concerts, restaurants, travel and general tourism, etc. Here, real-time indicators such as the payment card turnover using Danish payment cards showed an abrupt slowdown in activity when the measures to contain the infection were implemented in March, see Chart 1.

Revenue dive in many sectors Chart 1



Note: Payment card turnover covers transactions made by Danish payment cards processed by Nets. The consumer goods categories are broadly defined and comprise related goods as well as services related to the goods. The observations show consumption in that week compared to the same week last year. Latest week is from Friday, June 5, through Thursday, June 11, 2020. Data for latest week is affected by holidays in 2019 and 2020. "Normal" level indicates card turnover corrected for less use of cash and an underlying increase in consumption.
Source: Nets Denmark A/S and own calculations.

Since the gradual reopening began after Easter in mid-April, some industries have seen activity return in full or in part. This applies to hairdressers and clothing stores, among others. In other industries, revenue remains far below the level at the beginning of the year. Total payment card turnover remains below the level one would expect when taking into account increased use of card payments and an underlying increase in consumption.

However, some sectors have recorded increased revenue and activity during the lockdown, especially supermarkets and DIY stores. E-commerce has also fared well compared with physical stores. These sectors have benefited from the temporary shutdown of competitors, or from many employees being laid off temporarily or changing consumption patterns to do their shopping where there is less risk of infection.

Initially, construction and manufacturing were less severely affected, reflecting e.g. deliveries of orders placed before the virus outbreak. Some countries have shut down production, which may have generated additional demand for Danish goods, thereby keeping manufacturing activity afloat. But both construction and manufacturing will be adversely affected by lower investment and demand in export markets.

Short-term turmoil in financial markets

In March, the global spread of infection and resulting uncertainty caused considerable turmoil in the financial markets, leading to plunging equity and oil prices and rising risk premiums. In Denmark, equities dropped by 28 per cent from 20 February until 23 March, while mortgage and government bond yields gained 75-90 basis points over the course of two weeks in mid-March.[1]

As a result of comprehensive monetary policy measures by especially the Federal Reserve, Fed, and the European Central Bank, ECB, and a gradual reduction of the spread of infection, financial market stress has abated. Over the last few months, equity prices and interest rates have partly reversed. In Denmark, interest rates are close to their pre-outbreak levels from early March, and markets expect interest rates to remain low in the coming years. Overall, financial conditions are assessed to support economic activity throughout the projection period.

Outlook for gradual economic recovery

The economy is now in the second phase and is gradually reopening. As the restrictions to contain the spread of infection are eased, the economy will enter a third phase in which economic recovery will be driven by normal supply and demand dynamics.

Although the reopening is progressing according to plan without increasing spread of infection, activity will continue to be affected by a number of dampening factors such as social distancing recommendations and behavioural changes.

The reopening is gradually expanding household consumption options, but how households will respond to the shock and whether they will change behaviour is subject to great uncertainty. Relief packages have bolstered household income[2], but consumer behaviour may still be affected by the risk of infection until a vaccine or effective treatment is found. This means that consumption of goods and services where the risk of infection is believed to be high could remain subdued. However, early indicators suggest that activity in reopened sectors such as restaurants and hairdressers has quickly recovered.

Value creation in Denmark is highly dependent on production and sales abroad. In other words, Danish activity and prosperity rely on access for Danish corporations to efficient, international markets with strong purchasing power. Danish exports of goods and services dropped by 10 per cent from March to April, while expected new export orders contracted at a record pace in the 2nd quarter. Therefore, the decrease in foreign demand and prospects of a subdued global recovery will severely affect Danish exporters.

Corporate investment appetite is dampened by weaker domestic and foreign demand and by considerable uncertainty about the future. Furthermore, the sharp drop in revenue has eaten into corporate savings and liquidity and increased corporate indebtedness. So although corporations entered the crisis relatively well-cushioned, the corporate room for manoeuvre has been reduced. This could also dampen business investment going forward. On the other hand, new requirements and guidelines could induce further investment in some industries, for instance investment in online sales or technology to underpin social distancing in the service sector.

1 See Danmarks Nationalbank, Stabilisation of financial markets after COVID-19 turmoil, *Danmarks Nationalbank Analysis (Monetary and financial trends),* No. 11, June 2020.

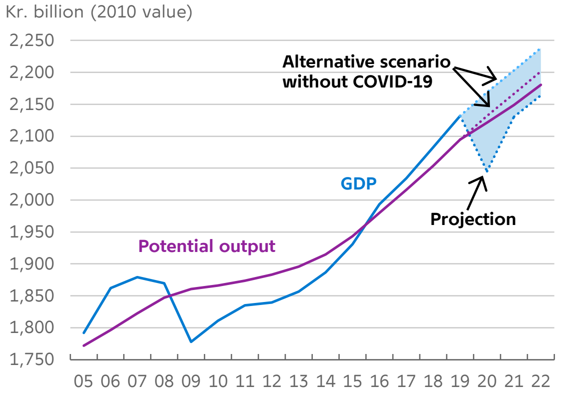
2 See Mikkel Bess and Morten Werner, Husholdningernes disponible indkomst understøttes af de økonomiske hjælpepakker til erhvervslivet, (Households' disposable income is supported by compensation schemes for the corporate sector, in Danish only), *Danmarks Nationalbank Economic Memo,* No. 6, June 2020.

In the 2nd half of 2020, activity is expected to rebound, primarily driven by a gradual recovery of consumption and exports, while investment growth is more subdued. Overall, Danish GDP is expected to contract by 4.1 per cent this year. In 2021, the economy is expected to grow by 4.2 per cent, reflecting continued partial recovery of economic activity. Recovery will continue in 2022. Employment is assumed to decline by approximately 40,000 this year, but will rise over the coming years as activity rebounds. But by 2022, employment will still be about 5,000 persons lower than the 2019 level.

The pandemic and the severe contraction in activity this year will lead to a sharp cyclical reversal. While the economy experienced a moderate boom in 2019, activity is expected to be about 4 per cent below the cyclically neutral level of output this year, see Chart 2. The sluggish economic recovery means that, without further stimulus, the Danish economy will still be in a mild recession by the end of the projection period.

The economy is expected to operate below its potential in 2022

Chart 2



Note: Potential output is the long-term level of sustainable real output in the economy. The alternative scenario is a technical projection of activity and potential output by the average quarterly growth rate of the projection from September 2019.
Source: Statistics Denmark and own calculations.

The economic costs of the downturn are substantial. Relative to an alternative scenario without COVID-19, the accumulated loss of activity is estimated to amount to close to kr. 275 billion by the end of the projection period.

The outlook for the Danish economy is subject to exceptional uncertainty

The performance of the economy is driven by the outbreak of the virus, treatment options, containment measures and the resulting response of households and corporations, both in Denmark and abroad. The uncertainty surrounding these factors poses a substantial downside risk, but some factors could also boost activity more than expected.

Downside risks are linked, for instance, to factors such as possible resurgence of infections in Denmark or abroad, more pronounced restraint among consumers and corporations and, last but not least, a slower-than-expected recovery abroad. Moreover, sovereign debt crises in highly indebted countries and increased protectionism could further detract from growth. A new wave of infection could further reduce risk appetite in the financial markets and lead to new sudden tightening of financial conditions as seen in mid-March.

But activity could also be boosted more than assumed in the projection, for example if an effective cure or vaccine for the virus is developed relatively quickly. Simultaneous reopening of many economies could potentially lead to general optimism and increased appetite for consumption and investment. Finally, fiscal stimulus could be greater than assumed. Only fiscal measures already adopted are included in the projection.

The agreed fiscal policy measures contribute to a more smooth business cycle

Before the coronapandemic, the Danish economy was robust without considerable imbalances. This supports the economic recovery. Still, it could take years for the economy to recover, not least because of weak foreign demand.

Especially this year and in 2021, there was a prospect of the economy being significantly below its potential. Therefore, the Danish Parliament has concluded agreements on a number of fiscal measures that support activity and employment temporarily and contribute to a more smooth business cycle. A total of more than kr. 50 billion in fiscal stimulus has been agreed in 2020. That includes the release of the holiday allowance and green housing agreement.

There is considerable uncertainty about developments abroad and, for example, the effect of the released holiday savings on the activity. If the recovery becomes significantly weaker than expected, more fiscal stimulus will be needed in 2021 and 2022. The Government should be prepared for this, but the decision should await a clearer picture of the strenght of the recovery. It is essential to organise the fiscal stimulus to retain the good structures that have helped to provide a healthy foundation for the Danish economy. This applies, for instance, to the gradual expansion of the labour force through previously adopted retirement reforms and access to foreign labour. Measures, that are highly distorting or provide an uneven economic development are not recommended, e.g. a temporary VAT reduction.

A significant portion of Danish output is sold abroad. Therefore, the Danish economy depends on access for Danish corporations to efficient export markets with purchasing power. It is key that Denmark supports international coordination and cooperation.

Economic policy

It is positive that the relief packages are terminated. They have supported the Danish economy during the shut down. But they can also increase the overall cost of the crisis as they hamper adaptation to changes in consumption and production patterns.

The agreed fiscal policy measures are assessed, both in design and scope, to contribute to a more smooth business cycle. If recovery becomes significantly weaker than expected, further fiscal stimulus is needed in 2021 and 2022. The fiscal stimulus should be organised to retain the good structures that have helped to provide a healthy foundation for the Danish economy.

It is essential for Danish growth and prosperity that Denmark supports international coordination and cooperation to ensure a healthy and robust international economy.

The Danish economy – trends

Sharp decline in private consumption

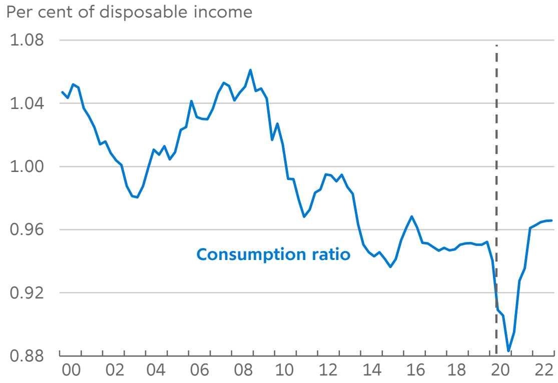
The virus outbreak and sudden lockdown of parts of the economy in March caused private consumption to fall sharply. The drop was due, in part, to restrictions of household consumption options, but demand was also dampened by general uncertainty and risk of infection. This is seen in that countries with less restrictive measures, for instance Sweden, also experienced sharp decreases in private consumption.[3]

During the first few weeks of lockdown, turnover for payment cards issued in Denmark, an early indication of patterns in parts of private consumption, dropped sharply. Overall, payment card turnover was about 30 per cent below its 2019 level. Since then, payment card turnover has gradually reversed as more and more sectors have reopened, and since mid-May aggregate payment card turnover has largely returned to its 2019 level. However, it remains below the expected level when considering card payment substitution and underlying consumption growth.

Following reopening, household demand will be a key driver of overall private consumption going forward. Demand depends on growth in household disposable income. This year, disposable income is dampened partly by lower employment and higher unemployment, partly by more subdued growth in the rate of wage increase. Conversely, household income is increased by fiscal measures, including the payment of holiday allowance. Overall, disposable income is expected to increase by 5.5 per cent this year and decrease by 0.5 per cent in 2021. Growth in income over the two years is somewhat less than in the previous four years when disposable income on average rose by 3 per cent annually.

Besides income, household consumption also depends on household behaviour, i.e. the proportion of income spent or saved, respectively. Already before the economic downturn, Danish households were spending a record-low proportion of their disposable income on consumption. In recent years, households with high gross debt, in particular, have been spending a large proportion of their income gains on consolidation.[4] As a result, the consumption growth in previous years has not led to substantial accumulation of debt among households, as opposed to the years leading up to the financial crisis.

Consumption ratio is set to drop temporarily over the coming years Chart 3



Note: 4-quarter moving average. Disposable income is adjusted for the restructuring of capital pensions and savings in LD Pensions, in 2013 and 2015.
Source: Statistics Denmark and own calculations.

Due to lockdown and considerable uncertainty, the consumption ratio is expected to drop to a record-low level this year, see Chart 3. As the economy reopens and household restraint eases, the consumption ratio will increase gradually towards the end of the projection period, at which time it will more or less have returned to its pre-coronavirus level.

3 See Asger Lau Andersen, Emil Toft Hansen, Niels Johannesen and Adam Sheridan, Pandemic, Shutdown and Consumer Spending: Lessons from Scandinavian Policy Responses to COVID-19, *Working paper*, 2020.

4 See Svend Greniman Andersen, Stine Ludvig Bech, Simon Juul Hviid and Andreas Kuchler, Forbruget dykker midlertidigt på grund af corona, (Coronavirus temporarily lowers private consumption, in Danish only), *Danmarks Nationalbank Economic Memo*, No. 7, June 2020.

But considerable uncertainty surrounds future household consumption behaviour. The sudden and deep shock to the economy could lead to more permanent household behavioural changes. For instance, households may opt to increase savings if they wish to protect themselves against similar shocks going forward. However, a comprehensive social safety net with unemployment benefits reduces the need for higher "self-insurance" by households.

Trying times for Danish exporters

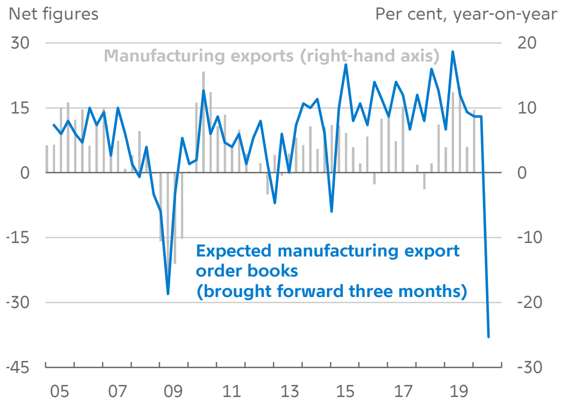
The pandemic has caused a sharp, simultaneous decline in activity in virtually all countries. The OECD projects a 6 per cent drop in global GDP in 2020, but stresses that it could be worse. World trade has shrunk dramatically, and international organisations expect it to decrease by 10 per cent or more in 2020.

The global economic downturn led to a pronounced 10 per cent decline in Danish exports of goods from March to April. However, the decline in exports is somewhat smaller than in other European countries. There could be several explanations for this, for instance deliveries of orders already placed or hoarding of Danish pharmaceutical products. Production lockdown in some countries may also temporarily have increased demand for Danish goods. Finally, Danish exports of goods largely comprise less cyclical product groups[5] such as pharmaceutical products and food. But a strong deterioration in corporate expectations of new export order inflows in the 2nd quarter heralds trying times for Danish exports, see Chart 4.

The sharp drop in global activity has already left its mark on services exports. Infection fears and border closures have reduced travel activity, while factory shutdowns and supply chain disruptions have caused exports of transport services to decline. In value terms, exports of services decreased by a total of almost 10 per cent in April.

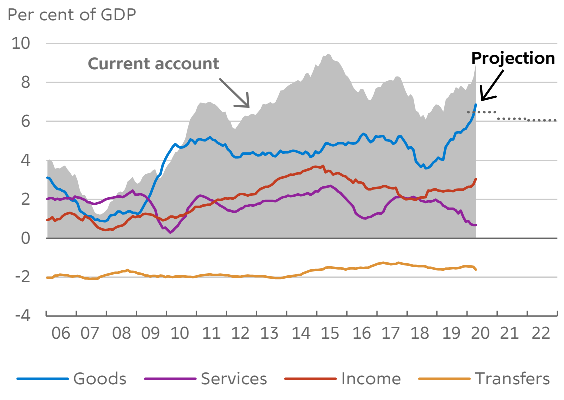
For a number of years, Denmark's current account surplus has been exceptionally large. Last year, the surplus increased to just under kr. 180 billion, or

Contraction in export orders paints a bleak picture for exports Chart 4



Note: Manufacturing exports are in volumes.
Source: Statistics Denmark and own calculations.

Large current account surplus Chart 5



Note: 12-month moving sums as a percentage of GDP until and including April 2020.
Source: Statistics Denmark and own calculations.

5 See Adrian Michael Bay Schmith and Helle Eis Christensen, Stort fald i dansk eksport, men sammensætningen kan være en stødpude, (Large drop in Danish exports, but the composition might ease the fall, in Danish only), *Danmarks Nationalbank Economic Memo*, No. 8, June 2020.

about 8 per cent of GDP, see Chart 5, driven by strong export growth and a high return on foreign assets. This year, the current account surplus is expected to decline to approximately 6.5 per cent of GDP. One reason is expectations of a more pronounced downturn abroad than in Denmark. Consequently, Danish imports are not expected to fall in tandem with exports. The current account surplus is likely to stabilise around 6 per cent of GDP level in 2021 and 2022.

Prospects of a sharp drop in business investment
In recent years, corporations have increased their investment as spare capacity has been absorbed. In response to plummeting domestic and foreign demand, along with considerable uncertainty as to future earnings, corporations are largely either postponing or altogether cancelling investment in new production facilities or equipment. In addition, the scope for business investment may be reduced by liquidity challenges and increased indebtedness.

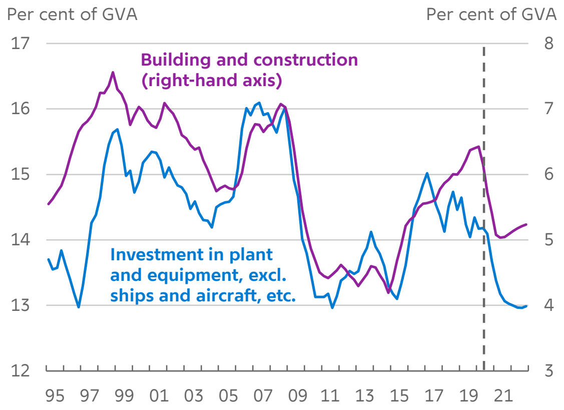
Investment in both plant and equipment and buildings is likely to plunge this year – also more than value added in the private non-primary sector. This will result in a substantial decline in investment ratios, see Chart 6.

Corporate investment appetite is assumed to remain subdued throughout the projection period, reflecting prospects of slower demand growth – especially from abroad. For some companies, sudden liquidity pressures and increased indebtedness may induce consolidation over the coming years. So, investment ratios are likely to remain low towards the end of 2022.

Large government deficits ahead
The strong economic reversal and the relief packages implemented will be reflected in a large deficit on the government budget balance this year and increased government indebtedness. However, Denmark's fiscal starting point is favourable due to its sound and sustainable fiscal policy. Prior to the crisis, Denmark had several years of substantial government budget surpluses, reducing government debt from 46 per cent of GDP in 2011 to 33 per cent of GDP in 2019, see Chart 7. This is low by international standards and contributes to Denmark's AAA rating and resulting low interest costs. The fiscal starting point provides the scope for temporary fiscal easing to stimulate domestic demand.

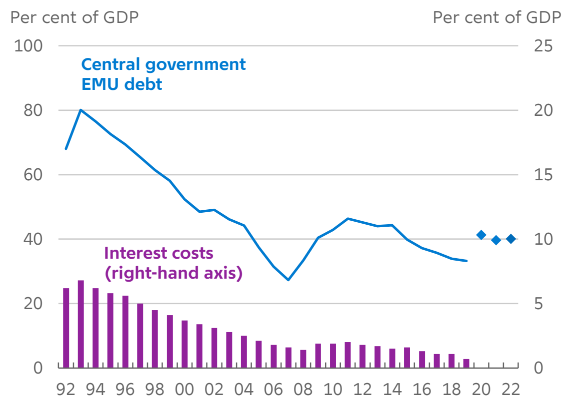
This year, the government budget deficit is estimated to be in the order of kr. 130 billion, equivalent to about 6 per cent of GDP. The balance effect of relief packages alone amounts to approximately kr. 110 billion. In 2021 and 2022, deficits are expected to account for just under 2 per cent of GDP, reflecting weaker cyclical conditions. Gross government debt will rise to around 40 per cent of GDP in 2022.

Corporate investment ratios are expected to remain low over the coming years Chart 6



Note: 4-quarter moving averages.
Source: Statistics Denmark and own calculations.

Government debt is set to increase Chart 7



Source: Statistics Denmark and own calculations.

Many employees are affected by the virus outbreak
The virus outbreak and the measures to contain the infection have left their mark on the labour market. Especially during the first few weeks of restrictions, unemployment surged, and in March alone payroll

employment dropped by 25,000. Since then, the unemployment rate has flattened. Overall, the number of unemployment registrations has increased by close to 45,000, totalling about 175,000 in early June.

But the number of jobs affected is considerably higher than indicated by unemployment and employee figures. The reason is that more than 235,000 employees have been laid off temporarily with wage compensation, while some 60,000 self-employed people have received compensation. This means that more than 340,000 jobs are affected by the crisis, equivalent to 16 per cent of private sector employment. Employees in trade and hotels and restaurants are most severely affected, see Chart 8. In these sectors, 17 and 46 per cent, respectively, of those employed in the 4th quarter of 2019 are either affected by unemployment or are receiving wage compensation.

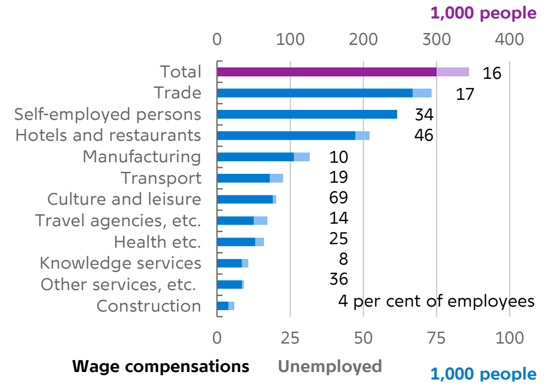
A high degree of flexibility with a large number of "hirings and firings" each year is a hallmark of the Danish labour market. Flexibility helps to ensure that corporations can adjust output and employment relatively rapidly in case of an economic downturn or demand shifts, while households are protected from large reductions in income through unemployment benefits. The current relief packages protect household income to an even greater extent, but also restrict flexibility because employment is retained in the sectors affected.

Over the coming months, employment will be affected by two opposite effects. The reopening of the economy has a positive impact on activity and, by extension, employment, and some unemployed workers will find jobs. On the other hand, the phasing out of relief packages means that several recipients of wage compensation will be laid off, which will increase unemployment. Redundancies are expected to exceed the number of unemployed finding jobs, and in the 4th quarter employment is estimated to have declined by about 70,000 since the beginning of the year. Subsequently, employment will slowly recover, and unemployment will stabilise as activity both in Denmark and abroad returns. However, by the end of 2022, employment is still expected to be about 10,000 lower than in the 4th quarter of 2019, see Chart 9.

Structural employment is expected to increase by around 50,000, assuming e.g. that the retirement

340,000 jobs have been cut or are covered by compensation schemes

Chart 8



Note: The rise in unemployment is defined as the number of unemployed persons on 8 June relative to 8 March 2020. The number of persons covered by wage compensation schemes and selfemployed was most recently updated on 8 June, and covers all persons who have been covered by the schemes during the period. The number of persons affected, broken down by industry, has also been calculated as the proportion of private sector payroll employment in the 4th quarter of 2019. The proportion of self-employed persons affected is stated relative to the national accounts calculation in 2019.

Source: Danish Business Authority, Danish Agency for Labour Market and Recruitment, Statistics Denmark and own calculations.

Drop in employment and increased unemployment will be only partly reversed towards 2022

Chart 9

Source: Statistics Denmark and own calculations.

age is gradually raised in line with reforms adopted. By the end of 2022, employment is estimated to be about 15,000 persons below the structural level.

Spare labour market resources dampen the rate of wage increase

Danish wage growth was generally modest in the years leading up to the virus outbreak – especially seen in the context that unemployment was slightly below the structural level for a long period of time. But subdued consumer price growth means that employees have recorded a fair improvement of purchasing power, see Chart 10.

New private sector collective agreements point to slightly higher wage growth over the coming years, see Chart 11, reflecting the favourable cyclical position of the Danish economy prior to the coronavirus outbreak, among other factors.

However, central collective agreements determine wages only within the standard wage area, comprising about 20 per cent of private sector employees. For the main part of other employees, only the minimum wage is determined by central collective agreements. The actual wage is subsequently negotiated locally. The negotiation system contributes to the flexibility of the Danish labour market by enabling corporations to adjust costs to changes in demand relatively rapidly.

The economic downturn dampens demand for labour, exerting downward pressure on the rate of wage increase. This means that actual wage increases could be lower than provided for in central collective agreements. This year, manufacturing wages are expected to increase by 2.4 per cent, before falling to about 2.3 per cent in 2021 and rising to 2.8 per cent in 2022.

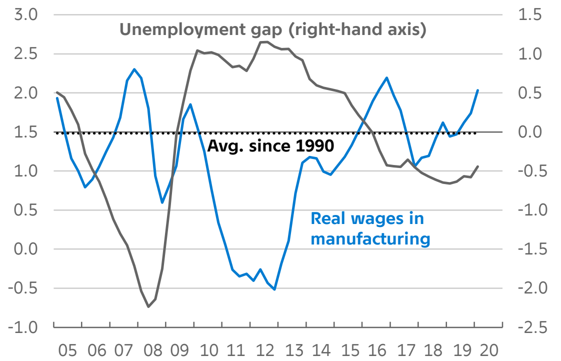
Weak price pressure in the economy

Consumer price increases have been subdued for a number of years and declined at the beginning of the year. In April and May, the EU Harmonised Index of Consumer Prices (HICP) was slightly lower than the previous year, see Chart 12.[6] Currently, plunging oil prices at the beginning of the year exert down-

6 The price index is subject to considerable uncertainty because prices have not been available for industries in lockdown due to the coronavirus outbreak.

Solid increase in real wages despite subdued wage growth

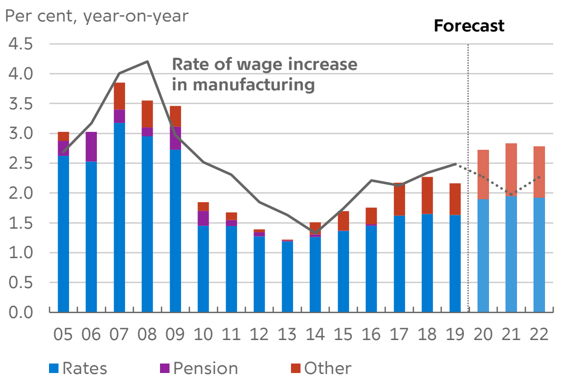
Chart 10



Note: 4-quarter moving averages for real wages.
Source: Statistics Denmark and own calculations.

Central collective agreements include slightly higher wage increases

Chart 11



Note: The rate of wage increase in manufacturing is Statistics Denmark's implicit wage index. The reference scenario includes rates, pensions, free choice schemes, etc. and has been calculated excl. inconvenience supplements. The reference scenario includes the Industrial Agreement (*Industriens Overenskomst for arbejdere*), Collective Agreement for the Construction and Civil Engineering Sectors (*Bygge- og anlægsoverenskomsten*), Collective Agreement for Retail Trade (*Butiksoverenskomsten*), Collective Agreement between 3F Transport and DI (*Fællesoverenskomsten*) and the Transport and Logistics Collective Agreement (*Transport- og Logistikoverenskomsten*). Own forecasts of the cost impacts of the most recent collective agreements based on information about the cost impacts of previous collective agreements. Forecasts are based on the Industrial Agreement and the Collective Agreement between Collective Agreement between 3F Transport and DI.
Source: Statistikudvalget and own calculations.

ward pressure on prices, and the annual rate of price increases could temporarily be negative. But the risk of actual deflation, i.e. a period of general and sustained prices falls, is assessed to be small.

Many prices continue to rise. Core inflation, which excludes energy and unprocessed food, has been stable around 0.7 per cent over the past year, while the index of domestic market-determined inflation, IMI, reflecting domestic pressures, has seen small increase.

While the sharp drop in energy prices and demand is putting downward pressure on prices in general, new corporate guidelines and requirements could cause some prices to rise. As a case in point, increased cleaning requirements and restrictions on customer number could mean higher production costs for many corporations.

This year, the annual rate of increase in consumer prices is expected to decline to 0.2 per cent. The primary driver of the decline is lower oil prices, while higher cigarette taxes are pulling in the opposite direction. In 2021 and 2022, consumer prices are estimated to rise by 0.9 and 1.2 per cent, respectively. Inflation is among other factors liftet by rising oil prices and increased demand.

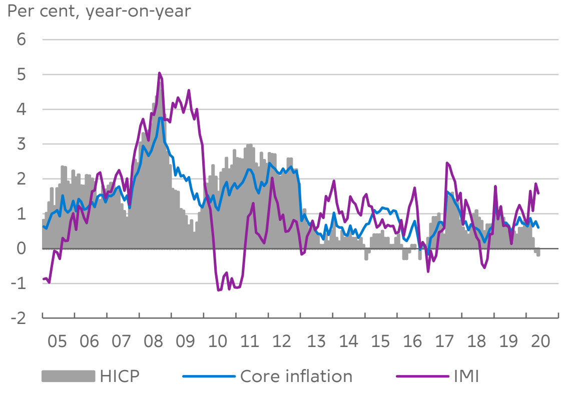
Slowdown in the housing market

House prices have been surging over a number of years but, as opposed to the years leading up to the financial crisis, housing market developments have generally been balanced. During 2019 and in the first few months of 2020, prices of both single-family houses and owner-occupied flats grew nationwide at a steady pace with high trading activity and a stable supply of homes for sale.

Housing market developments suddenly changed in mid-March with the lockdown of large parts of the economy. Trading activity and the supply of homes for sale declined immediately for both houses and owner-occupied flats, see Chart 13. Planned viewings were cancelled, and buyers either cancelled or postponed home purchases because of temporary mortgage bond price falls in the wake of the lockdown, among other factors. Since mid-April, trading activity has returned to its pre-lockdown level.

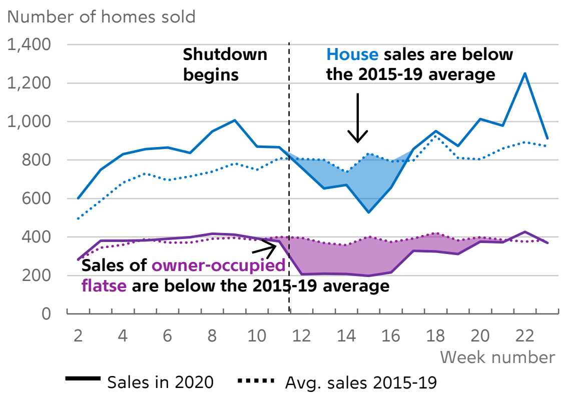
According to the Danish housing portal Boligsiden, prices of both houses and, especially, owner-occupied flats dropped slightly in April, and higher than

Consumer price inflation has declined, while core inflation remains unchanged Chart 12



Note: The HICP is the EU Harmonised Index of Consumer Prices. Core inflation is the HICP excl. energy and unprocessed food. IMI is domestic market-determined inflation.
Source: Statistics Denmark.

Housing market activity has returned Chart 13



Source: Boligsiden and own calculations.

normal price reductions were given on home sales. Despite the decline, prices of owner-occupied flats, especially in Copenhagen, are still higher than warranted by household disposable income and interest rates. However, most owner-occupied homes are relatively lowly mortgaged, and the homeowners have a low housing debt relative to their income.[7]

Housing market developments are driven largely by household income and interest rates. Despite the economic downturn, household income is expected to continue to increase this year, albeit at a slightly lower place than in previous years. Moreover, interest rates remain very low. Overall, this suggests stable housing market growth. Still, prices of single-family houses are estimated to decline by 2.3 per cent this year, reflecting higher uncertainty and a dive in house price confidence that dampens housing demand. At the same time, completion of new construction already started will increase the housing supply and exert further downward pressure on prices.

The drop in house prices thus reflects more than housing market fundamentals, and house prices will pick up again as economic activity recovers and employment and incomes rise. Markets expect interest rates to remain low throughout the projection period. At the same time, changed consumer preferences e.g. with less travel could prompt households to make their homes a higher budget priority. In 2021 and 2022, prices of single-family houses are expected to rise by 1.6 per cent and 5.2 per cent, respectively.

The market for holiday homes has shown a different trend from the rest of the housing market, with high turnover since Easter in mid-April. A surge in prices in early 2020 was followed by price falls in April. The drop in prices is expected to be temporary, driven by compositional effects. Expensive holiday homes have been sold, and the focus has shifted to less expensive holiday homes in poorer condition and in less attractive locations.

Substantial downside risks to the outlook
Developments in the coming years are subject to substantial downside risks because the economy is currently driven by the pandemic and lockdown measures. For instance, the downturn could be more prolonged if the effective reproductive rate increases and a new wave of infection occurs. This could trigger new measures and renewed restraint among households and corporations, hampering activity. If lockdown measures continue for an extended period of time, temporary liquidity challenges for corporations could also lead to solvency issues and affect financial sector stability.

Moreover, a new wave of infections could reduce risk appetite in the financial markets and lead to new sudden tightening of financial conditions as seen in mid-March. Also, rising debt and new vulnerabilities in growth and emerging market economies could cause the downturn abroad to become more severe than expected.

Generally, the pandemic and the economic downturn have created new vulnerabilities and risks that may impact the global economy in the coming years. Firstly, private and public sector debt will rise sharply during the year. High public sector debt may cause concerns about the sustainability of public finances and lead to higher funding costs in countries that were already highly indebted when the pandemic struck.

Moreover, experience of a global pandemic could lead to structural changes in global value chains and consumption patterns. It may also include fundamental changes in international trade and cooperation. For instance, fears of new spread of infection may impact the perception of globalisation and lead to increased protectionism.

The new downside risks appear on top of the risks already associated with the pre-coronavirus growth outlook. They include, inter alia, the still unresolved trade relationship between the EU and the UK. There are also tensions between the USA and China, and the trade conflict could re-escalate.

However, some factors could cause the economic recovery to be faster than expected. First of all, an efficient vaccine or treatment could prevent further

7 See Svend Greniman Andersen, Simon Juul Hviid and Agnete Gad Knudsen, Moderat tilbageslag på boligmarkedet, (Moderate setback on the housing market, in Danish only), *Danmarks Nationalbank Economic Memo*, No. 5, June 2020.

spread of infection and thereby create the conditions for a rapid economic recovery. Secondly, the recovery may happen faster because the downturn is not caused by significant economic imbalances that need to be corrected first.

Key economic variables

Table 1

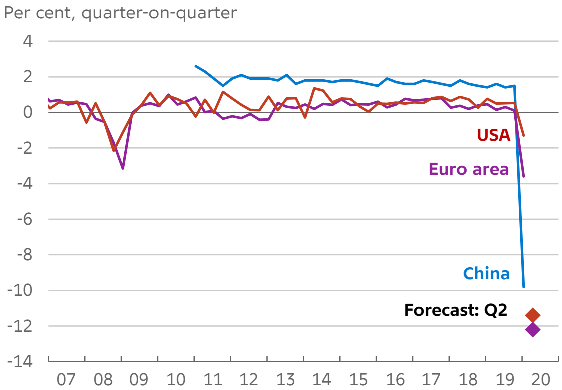
Real growth relative to the previous period, per cent	2019	2020	2021	2022	2019 Q3	2019 Q4	2020 Q1
GDP	2.4	-4.1	4.2	1.6	0.4	0.4	-2.1
Private consumption[1]	2.2	-2.5	7.5	2.3	0.2	1.7	-3.3
Public consumption	0.5	1.8	0.1	1.0	0.2	1.4	-1.5
Residential investment	8.0	-3.7	9.9	-1.4	-4.0	2.5	3.2
Public investment	4.0	0.5	0.9	0.9	0.5	-5.5	5.1
Business investment	1.5	-10.3	-0.2	1.9	2.2	1.1	-2.6
Inventory investment, etc.[2]	-0.4	0.0	0.0	0.0	-0.1	-0.5	0.2
Exports	1.6	-8.0	5.8	5.9	0.8	-0.5	-0.8
Industrial exports	8.3	-5.6	6.5	5.9	2.6	-2.0	3.1
Imports	0.1	-5.6	6.3	6.5	0.3	0.1	-0.1
Employment, 1,000 persons	2,998	2,958	2,969	2,993	3,001	3,009	3,008
Gross unemployment, 1,000 persons	104	143	132	123	105	104	108
Current account, per cent of GDP	7.8	6.5	6.1	6.0	8.7	8.1	7.5
Government balance, per cent of GDP	3.7	-5.8	-2.0	-1.8	2.9	3.5	-5.8
House prices[3], per cent year-on-year	3.0	-2.3	2.0	5.4	3.4	3.7	3.3
Consumer prices (HICP), per cent year-on-year	0.7	0.2	0.9	1.2	0.4	0.7	0.6
Hourly wages[4] (manufacturing), per cent year-on-year	2.5	2.3	2.0	2.3	2.7	2.8	2.8

Source: Statistics Denmark and own calculations.
1. Includes both households and non-profit institutions serving households (NPISH).
2. Contribution to GDP growth (this item comprises inventory investment, valuables and statistical discrepancy).
3. Nominal prices of single-family houses.
4. Statistics Denmark's implicit wage index.

The international economy – trends

Global economy in deep recession
The outbreak of coronavirus has led to a dive in global economic activity. Economies around the world have been adversely affected by the pandemic through behavioural changes and measures to contain the spread of infection. In the 1st half of 2020, this has led to a dramatic fall in demand and affected, inter alia, the labour supply, industrial production and world trade. The pandemic has particularly affected activity in the service sector with many industries involving social interaction, including tourism, restaurants and entertainment. The impact on the labour-intensive service sector has entailed a sharp increase in unemployment across countries. In the USA, more than 40 million people have registered as unemployed since mid-March. The drop in activity has occurred faster than during the financial crisis and is also deeper. Against this background, the global economy is in the midst of a deep recession.

Sharp global fall in growth in Q1 Chart 14



Note: The GDP growth forecast for Q2 is based on the European Commission's *Spring Economic Forecast 2020*, May 2020.
Source: OECD and European Commission.

The pandemic has created great uncertainty about the economic outlook. This caused substantial financial market turmoil and led to a marked tightening of financial conditions in mid-March. The extensive fiscal and monetary policy measures implemented since then have tentatively contributed to reducing financial market volatility.

The global economic outlook is still characterised by exceptional uncertainty. Economic development pivots on the development in the pandemic and measures to limit the spread of infection. If the spread of infection is successfully contained, there are prospects of a gradual recovery as economies reopen and activity normalises. But in many countries, lockdown measures have significantly influenced large parts of the economy, which could entail a slower recovery. This applies especially to countries particularly severely affected by infection and restrictions, where the economic scope to support activity is limited. At the same time, the fear of infection and social distancing requirements can lead to subdued demand for a long time to come.

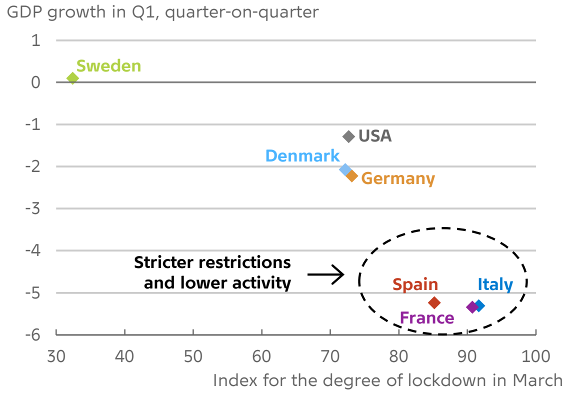
Dive in economic activity
The coronavirus outbreak began in China, where the spread of infection really took off at the beginning of the year. Then the virus spread rapidly to the rest of the world during February and March. Authorities around the world implemented measures to contain the infection, including quarantines and lockdown of large parts of the economy. This had a major impact on economic activity in the 1st quarter. China's GDP fell by 9.8 per cent relative to the 4th quarter of 2019, see Chart 14. In the euro area, the drop was 3.6 per cent and in the USA 1.3 per cent.

The variations in the impact on economic activity reflect, in particular, how the infection has developed and for how long economies have been in lockdown. In addition, the level of restrictions has played a key role in how severely activity has been affected. Thus, GDP fell most in the countries with the most extensive spread of infection and lockdown, see Chart 15. Large euro area member states, in particular, such as France, Italy and Spain implemented tight restrictions such as curfews and lockdown of non-critical industry to limit the spread of infection.

Sweden has not been in lockdown to the same extent as most other European countries. So far, the fall in activity has been less pronounced than e.g. in the euro area. Sweden's GDP thus increased by 0.1 per cent in the 1st quarter.

Emerging market economies have been severely affected by lockdown. In addition to the loss of domestic demand, the lockdown has also led to a loss of tourism revenue, which is key to many of the countries. The drop in commodity prices, including the oil price, is also dampening growth in commodity exporting countries. The combination of great uncertainty, an oil price collapse and lower risk appetite has resulted in capital outflows and currency weakening in a number of countries. Especially countries with high public debt or private external debt, are finding it challenging to attract capital. More than 100 countries have applied for emergency funding from the International Monetary Fund, IMF, since March due to balance of payments problems.

Activity is affected by lockdown measures Chart 15

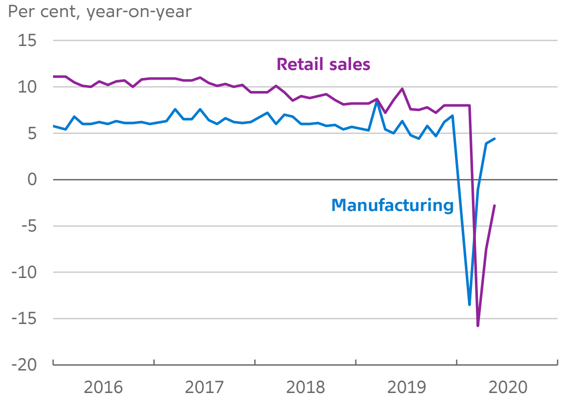


Note: Index prepared by the University of Oxford based on monitoring of country-specific measures to contain the spread of infection during the coronavirus outbreak. The chart indicates the highest index value in March for each country.
Source: Macrobond.

Economic recovery as the reopening continues

In China, the spread of infection was contained to the extent that several factories began to reopen in February and March. This is reflected in increased output after a sharp fall at the beginning of the year, see Chart 16. However, activity in China remains at a low level relative to before the outbreak of coronavirus, particularly in the service sector. Retail sales rose in April and May, but are still at a low level compared with the previous year. This suggests that the recovery on the demand side can generally be expected to take longer, inter alia because behavioural factors play a major role.

Activity in China is recovering Chart 16



Source: Macrobond.

In the euro area and the USA, measures to limit the spread of infection have been in force well into the 2nd quarter. Economic activity is therefore expected to fall even further in this quarter. This is reflected in e.g. business confidence, which fell to a record low in April and continues to point to falling activity despite a marked increase in May, see Chart 17.

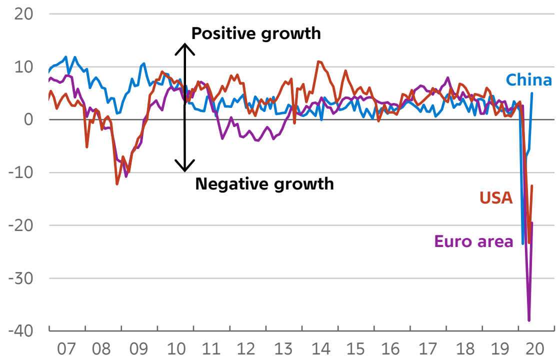
During May, most euro area member states and several US states had the spread of infection so much under control that they could begin to gradually reopen their economies. The reopening is expected to be mirrored in economic activity in the coming period. In the euro area, the first phase of the reopening has, inter alia, comprised small-scale service sectors such as hairdressers and restaurants. At the same time, museums and some educational institutions have started to open up again. Several euro area member states have also started to open their borders. But social distancing requirements continue to apply. This means that activity in large parts of the service sector will remain at a lower level than usual for some time to come.

World trade severely affected by pandemic

Border closures and lockdown of factories worldwide have made it difficult to maintain the normal value chains in industrial production, which are largely globally anchored. In combination with lower demand, the disruption of global value chains has had a major negative knock-on effect on world trade. In 2020, the OECD and the IMF expect a drop in world trade of around 10-12 per cent. The fall comes on top of already weak development in

Business confidence in the service sector indicates negative growth in Q2 in the euro area and the USA

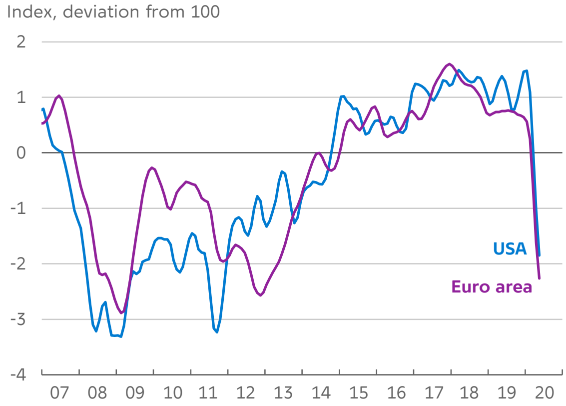
Chart 17



Note: Purchasing Managers' Index for the service sector. For the USA, data from the Institute for Supply Management (ISM) is displayed until October 2009.
Source: Macrobond.

Plunge in consumer confidence

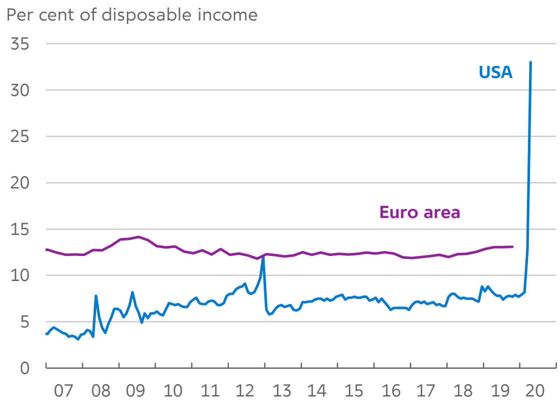
Chart 18



Note: Based on OECD confidence indicator.
Source: Macrobond.

Higher savings may temporarily boost private consumption after the reopening

Chart 19



Source: Macrobond.

2019, when world trade was adversely affected by the US-China trade conflict.

As economies and borders reopen around the world, trade in goods, in particular, is expected to increase. Trade in services such as tourism is expected to recover more gradually, depending on the extent of continued social restrictions, among other factors.

Private consumption affected by uncertainty and restrictions

In the euro area and the USA, consumer confidence fell sharply as the spread of infection and lockdown measures increased, see Chart 18. This has contributed to a fall in private consumption, otherwise the main driver of the recovery from the financial crisis.

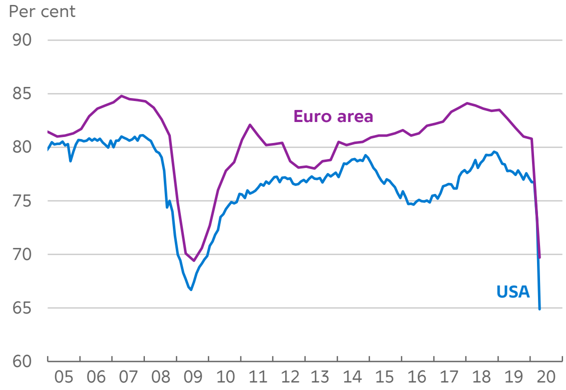
However, a particular direct effect on consumption has stemmed from households' inability to maintain their normal consumption due to restrictions. Consequently, especially consumption of services such as restaurant visits, entertainment and travel has declined, while consumption of groceries has grown a little. Lockdown and behavioural changes have generally created a combination of lower confidence, lower consumption and rising unemployment, which is very much self-reinforcing.

In the USA, a consequence of lower consumption has been an increase in the savings ratio to a record-high level of 33 per cent in April, see Chart 19. The main reason is that while consumption has decreased, disposable income has so far fallen only slightly. Accumulated savings can be key to stimulating activity when consumption options are back to normal. However, the extent to which consumer behaviour will be affected by the pandemic in the future is uncertain. The risk of infection and general uncertainty about the future could still affect consumption for a prolonged period after reopening.

Prospects of lower investment

Investment in the euro area and the USA fell only slightly in the 1st quarter despite the drop in activity. This is probably due to the fact that the level of investment in the 1st quarter reflects investment projects planned before the crisis broke out. Going forward, investment is expected to decline significantly, however. In both the USA and the euro area, corporate capacity utilisation has decreased significantly since the lockdown, see Chart 20, indicating lower investment activity in the near term. At the same time, there is still a great deal of uncertainty associated with developments in the pandemic and demand. Although the spread of infection appears to have come under control in many countries, there is a risk that it will flare up and dampen activity again, e.g. through new restrictions. This creates considerable uncertainty about future corporate earnings and can mean that investments are postponed or cancelled altogether.

Drop in capacity utilisation indicates lower investment activity Chart 20

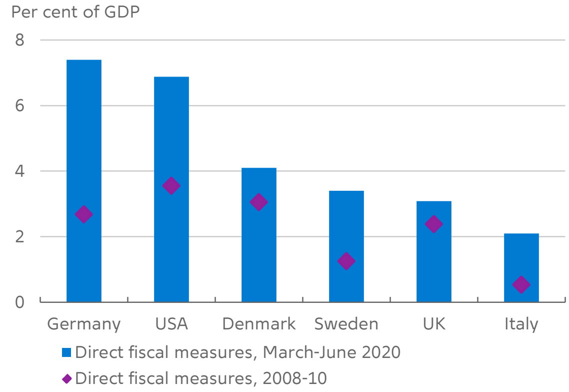


Source: Macrobond.

Economic policy measures have supported the economy during the lockdown

At the beginning of the pandemic, historically unprecedented fiscal and monetary measures were implemented across countries to mitigate liquidity pressures and support non-financial corporations and households. The relief packages provided by governments and central banks have included e.g. comprehensive state guarantees and liquidity measures. In addition, the fiscal relief packages have contained substantial direct fiscal measures of greater magnitude than measures adopted during the financial crisis years, see Chart 21. Fiscal measures have comprised, inter alia, liquidity support for severely affected corporations and wage compensation schemes to avoid a surge in unemployment.

Historically unprecedented fiscal relief packages have been implemented Chart 21



Note: Measures exclude guarantee and liquidity measures. Some of the measures announced imply fiscal easing beyond 2020. The direct fiscal measures in 2008-10 are based on changes in the structural budget balance.
Source: IMF, OECD, national ministries of finance and own calculations.

Given the substantial drawings on public finances, government deficits and debt ratios are set to increase significantly in 2020. The European Commission expects the overall government deficit in the euro area to increase from 0.6 per cent of GDP in 2019 to 8.5 per cent of GDP in 2020. This reflects both the impact of automatic stabilisers and considerable discretionary measures to mitigate the economic consequences of the lockdown. In most euro area member states, gross public debt as a ratio of GDP is expected to increase by around 15-20 percentage points during 2020.

Relief packages are likely to be phased out as economies reopen. However, many countries will probably still need to support activity through fiscal stimuli.

Emerging market economies have generally found it difficult to stimulate economic activity through fiscal policy. One reason is that many of the countries have weak automatic stabilisers, less developed social safety nets and limited fiscal room for manoeuvre due to high public debt.

Lockdown of economies has led to a sharp decline in labour markets

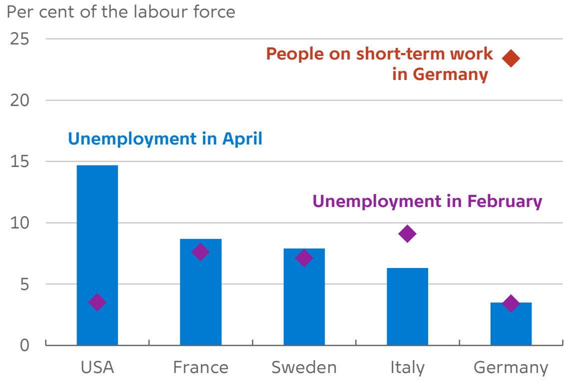
Recent years' labour market growth has been disrupted across countries by a sharp fall in employment and higher unemployment as a result of the lockdown of economies. However, the extent to which lockdown has caused higher unemployment varies considerably. This is due, inter alia, to country-specific wage compensation schemes and labour market structures. For example, German corporations have exercised the option of moving employees to short-time work schemes rather than dismissing them.[8] This means that more than 10 million people or approximately 23 per cent of the workforce at the end of April worked reduced hours instead of being unemployed, see Chart 22.

The use of wage compensation schemes will generally help to dampen the rise in unemployment in the euro area. In April, the unemployment rate thus rose to just 7.3 per cent from 7.1 per cent in March. However, employment expectations as measured by the PMI index indicate that the labour market situation will deteriorate further in the 2nd quarter, see Chart 23.

The US labour market has been particularly severely affected by the outbreak of coronavirus. In April, employment declined by 20.5 million persons, see Chart 24. As a result, the entire employment growth since the financial crisis was lost in just one month. Parts of the service sector, in particular, have been severely affected by the labour market decline.

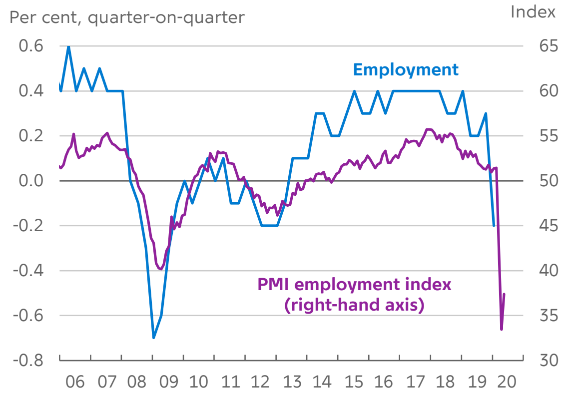
The plunge in employment caused the US unemployment rate to rise by more than 10 percentage points to 14.7 per cent, the highest level since 1948. The Bureau of Labor Statistics has also estimated that due

Wage compensation schemes affect the level of unemployment Chart 22



Note: The red dot shows the number of people on short-time work up until April.
Source: Macrobond, Eurostat, Bundesbank and OECD.

Prospects of declining employment in the euro area Chart 23



Source: Macrobond.

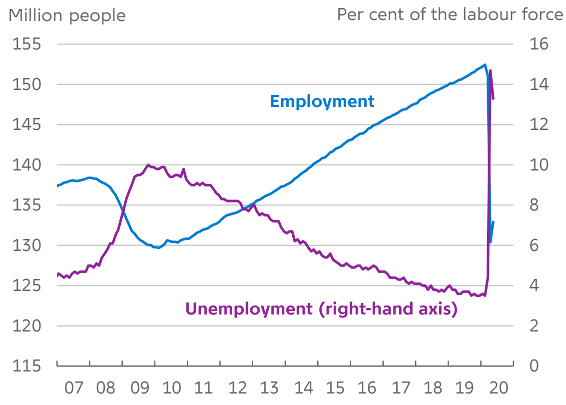
8 The German short-time work scheme entitles employers to a compensatory allowance for employees whose working hours have been reduced due to temporary lack of work. The aim is to avoid redundancies and the scope of the scheme can thus be a warning of the current state of affairs in the labour market.

to reporting errors the unemployment rate in April may have been almost 5 percentage points higher.

However, the decline in the US labour market appeared to reverse in May, when employment grew by 2.5 million persons and the unemployment rate fell to 13.3 per cent. Almost 73 per cent of the unemployed have been temporarily made redundant, i.e. they are initially expected to return to their old jobs when the economy reopens. It is an extraordinarily high share, which can contribute to a rapid recovery of the labour market when the economy normalises.

But the near-term outlook for the US labour market is for continued weakness. This is supported, among other things, by the still very high number of newly registered unemployed in May. Since mid-March, a total of 44.2 million persons registered as new unemployed in the USA.

Sharp drop in US employment in April Chart 24

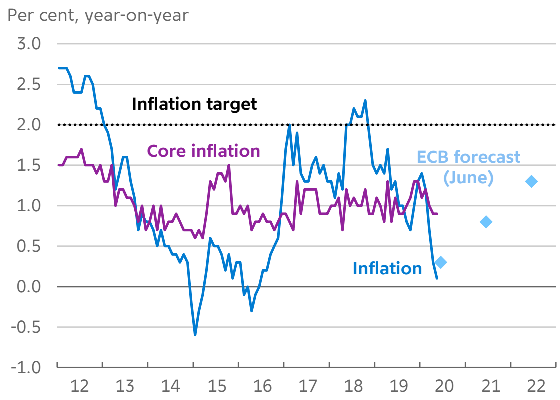


Source: Macrobond.

Lower demand and energy prices after coronavirus outbreak dampen inflation

The outbreak of coronavirus has generally generated downward pressure on inflation due to lower demand and plummeting oil prices. At the same time, however, supply constraints can lead to price increases for some goods and services, e.g. due to disruption of value chains, shortages of foreign labour and lower capacity utilisation resulting from social distancing. In the short term, there is also a risk that the virus outbreak will give rise to measurement errors of actual inflation, as lockdown in several countries complicates data collection and causes considerable shifts in consumption patterns.

Lower energy prices exert downward pressure on inflation in the euro area Chart 25



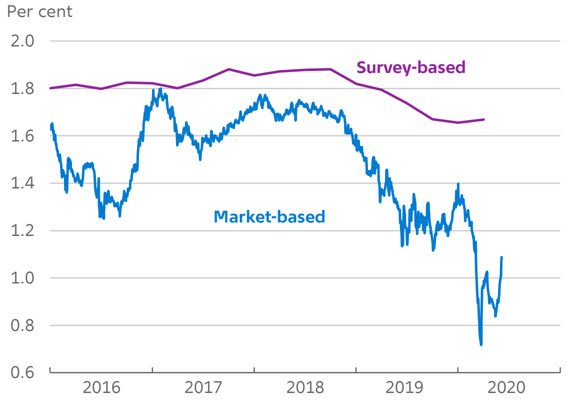
Source: Macrobond and ECB.

Euro area inflation, measured by the rate of increase in the Harmonised Index of Consumer Prices, HICP, fell to 0.1 per cent in May, see Chart 25. Inflation was mainly dampened by lower oil prices, whereas food prices rose. Core inflation, i.e. consumer price inflation excluding energy, food, alcohol and tobacco, stood at 0.9 per cent in May.

According to Eurostat, the measures to contain coronavirus have affected price data collection. In April and May, more than 20 per cent of prices in HICP for the euro area were based on estimates rather than actual data, i.e. imputed. This is a significantly higher percentage than normal, giving rise to heightened uncertainty about current price developments.

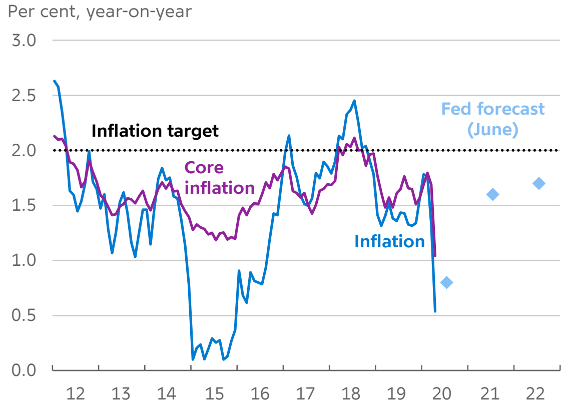
In its June forecast, the European Central Bank, ECB, expects inflation to fall to 0.3 per cent in 2020 and then rise gradually to 1.3 per cent in 2022. However, this is lower than expected before the virus outbreak, reflecting, among other things, that the decline in the labour market will dampen wage growth. The prospect of increased inflation towards 2022 is supported by e.g. the lapse of the contribution of lower energy prices. However, inflation will remain somewhat below the ECB's inflation target of below, but close to 2 per cent. Core inflation is expected to be just under 1 per cent by 2022.

Record low long-term inflation expectations in the euro area Chart 26



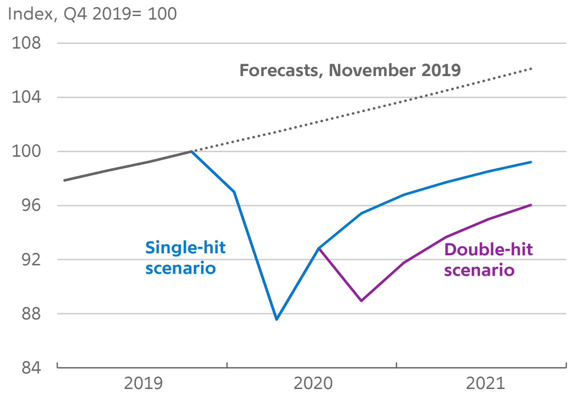
Note: Market-based inflation expectations are based on a 5-year/5-year inflation swap, while survey-based inflation expectations are from the ECB's *Survey of Professional Forecasters*.
Source: Macrobond and Bloomberg.

Prospects of low US inflation Chart 27



Source: Macrobond.

Prospects of deep recession followed by gradual recovery Chart 28



Note: OECD forecasts for global real GDP. The blue and purple lines show the two different scenarios in the OECD forecasts from June 2020.
Source: OECD, *Economic Outlook June 2020.*

The outbreak of coronavirus has led to lower inflation expectations in the euro area. Market-based inflation expectations reached a new historical low of 0.7 per cent at the end of March, see Chart 26. In contrast, survey-based inflation expectations were unchanged at just under 1.7 per cent in the 2nd quarter of 2020. Oil prices and market-based inflation expectations have traditionally been closely related. That is why the sharp fall in oil prices during 2020 may have contributed to a more pronounced decline in market-based inflation expectations compared with survey-based ones.

In the USA, annual consumer price inflation, measured by the rate of increase in the Personal Consumption Expenditures deflator, PCE, fell to 0.5 per cent in April, see Chart 27. It was mainly driven by lower energy prices. Core inflation, i.e. inflation excluding energy and food, has declined a little in recent months, pointing to moderate price pressures. In its June forecast, the US Federal Reserve expects inflation to be 0.8 per cent in 2020, and afterwards increasing to 1.7 per cent towards 2022. The inflation has been dampened by such factors as reduced wage pressures due to high unemployment.

Global growth outlook characterised by extreme uncertainty

The forecasts of international organisations paint a bleak picture of economic development. Growth in 2020 has been continuously revised downwards as the pandemic and lockdown measures have had increasingly far-reaching consequences for activity. Given that the extent and duration of the pandemic are still associated with exceptional uncertainty, forecasts are based on different scenarios for how the pandemic will develop in the near term.

The global economy is expected to be in deep recession in 2020, see Chart 28. The situation is unusual in that the downturn has affected all countries.

This means that global growth is not supported by high activity in other countries and regions, as was the case during the financial crisis, when advanced economies were hit most severely. However, there are prospects of a gradual recovery in 2021, subject to pandemic containment.

Although growth is set to pick up in 2021, it is expected to take several years before global GDP returns to the expected level in the pre-pandemic forecasts. The depth of the recession plays a key role here. In addition, the recovery will be affected by e.g. the fact that a large part of the service sector is expected to operate below full capacity for a long time after reopening, and it will also take time to get back to the pre-crisis employment levels.

The outlook for global economic growth is associated with considerable downside risks. As mentioned earlier, the key risks relate to a new wave of infection and new vulnerabilities in economies due to much higher debt levels, among other factors. Especially as regards emerging market economies, limited access to external debt financing and a weaker growth outlook may squeeze countries with high public debt and require debt restructuring.

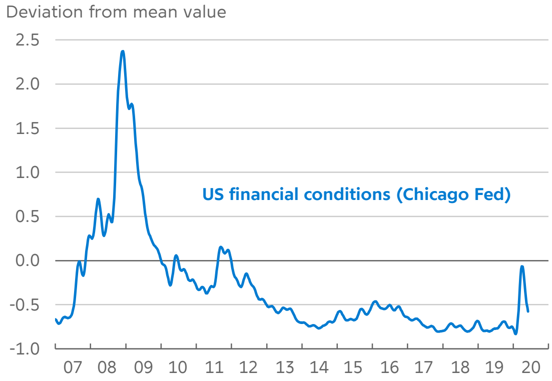
Moreover, experience of a global pandemic can affect globalisation and lead to structural changes in global value chains and consumption patterns. The pandemic has, among other things, uncovered risks linked to corporate use of global supply chains. This may mean that some corporations will be more self-sufficient and/or rely on national or generally safer supply chains. It may also include fundamental changes in trade and international political cooperation. For instance, fears of new spread of infection may change the perception of globalisation and lead to increased protectionism. Rollback of globalisation could have significant negative consequences for global economic growth, depending on how severely the market economy is affected.

The new downside risks appear on top of the risks already associated with the pre-coronavirus growth outlook. They include, inter alia, the still unresolved post-Brexit trade relationship between the EU and the UK. In addition, the US-China trade conflict has not yet ended and could escalate again as a result of the pandemic.

However, some factors suggest that the economic recovery could be faster than expected. First of all,

Stabilisation of financial conditions following the tightening in March

Chart 29



Note: Federal Reserve Bank of Chicago Financial Conditions Index.
Source: Macrobond.

an efficient vaccine could potentially put an end to further spread of infection and thereby create the conditions for a faster economic recovery. Secondly, this time the recovery may happen faster because the downturn is not caused by significant economic imbalances that need to be corrected first.

Coronavirus caused temporary financial turmoil in March

Until mid-February, financial market volatility was limited – European and US stock indices even reached record levels at the beginning of the year. However, as the spread of coronavirus increased and the global growth outlook worsened, sentiment in financial markets changed. Investors took flight in liquid assets perceived as a safe haven during financial turmoil. This resulted, among other things, in plummeting global equity markets and capital outflows from emerging market economies. Financial conditions therefore temporarily tightened in March, but have since stabilised following the announcement of a series of extensive monetary policy measures in the USA, among other countries, see Chart 29.

Extensive monetary policy measures globally

In order to address the economic consequences of the coronavirus, central banks around the world have implemented comprehensive monetary policy measures in a very short time. Many countries' measures are more extensive than the measures implemented during the financial crisis.

Several central banks have cut interest rates to very low levels. In virtually all advanced economies, monetary policy interest rates are now close to zero. Many central banks have also introduced extraordinary measures to protect financial market stability and to support the transmission of monetary policy interest rates to market and retail interest rates. These measures include, inter alia, the provision of liquidity to the markets and purchase of government and corporate bonds, see Table 2.

During the coronacrisis, the Governing Council of the ECB has chosen to maintain the monetary policy deposit rate at -0.5 per cent. Market participants expect it to remain at the current level for the next few years, see Chart 30.

Instead, the ECB has significantly increased its asset purchases. The ECB has both increased the envelope for the existing asset purchase programme, APP, and introduced a new Pandemic Emergency Purchasing Programme, PEPP. In total, the ECB has increased the asset purchase envelope by 1,470 billion euro, or 13 per cent of the euro area GDP. This will primarily include purchases of euro area member states' government bonds, see Box 1.

In March and April, the ECB also announced a number of measures to ensure liquidity for the financial sector. The ECB has, among other things, supported banks' access to liquidity through more and cheaper Longer-Term Refinancing Operations, LTRO. At the same time, agreements have been concluded with a number of central banks on euro swap lines to give financial institutions outside the euro area better access to euro liquidity. In addition, the ECB has eased the collateral requirements for monetary policy counterparties and launched a new type of LTRO, i.e. Pandemic Emergency Longer-Term Refinancing Operations, PELTRO, which will also ensure liquidity for banks. Seven allocations took place from May to December 2020 with maturity dates between July and September 2021. One of the differences between PELTROs and existing LTROs is a lower interest rate on PELTRO loans.

In the USA, the Federal Reserve, Fed, lowered its monetary policy interest rate on two occasions in March. First by 50 basis points and then by 100 basis points to the interval 0.00-0.25 per cent, see Chart 30. These are the largest interest rate cuts from the Fed since the financial crisis in 2008. Market participants had expected an interest rate cut beforehand,

Extensive monetary policy measures in several countries

Table 2

		Federal Reserve	ECB	Sveriges Riksbank	Norges Bank
Interest rate reduction	Change: Level:	Yes 150 bp ↓ 0.00-0.25 per cent	No - -0.50 per cent	No - 0.00 per cent	Yes 150 bp ↓ 0.00 per cent
New asset purchase programmes		Unlimited	1,470 billion euro (13 per cent of GDP)	SEK 300 billion (6 per cent of GDP)	No
- Purchase of public sector bonds		Yes	Yes	Yes	No
- Purchase of real estate-based bonds		Yes	Yes	Yes	No
- Purchase of commercial papers		Yes	Yes	Yes	No
- Purchase of corporate bonds		Yes	Yes	Yes	No
Extraordinary loan and liquidity measures		Yes	Yes	Yes	Yes
Programme for corporate bank loans		Yes	Yes	Yes	No
Change in collateral		No	Yes	Yes	Yes
Dollar loans via swap line with the Fed		-	Yes	Yes	Yes

Source: Federal Reserve, ECB, Sveriges Riksbank and Norges Bank.

The ECB has increased its government bond purchases

Box 1

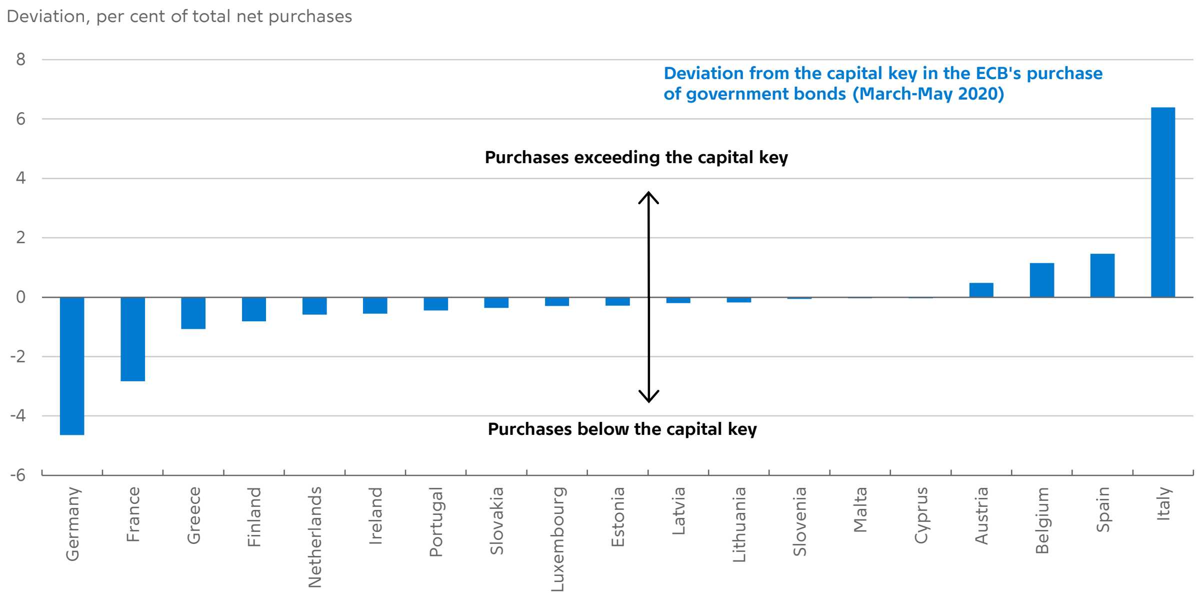
At its monetary policy meeting on 12 March, the ECB announced that APP net purchases of bonds would be increased by 120 billion euro for the rest of the year. Prior to that, the ECB's monthly bond purchases amounted to around 20 billion euro. One purpose of the asset purchases is to reinforce the accommodative impact of the low policy rates on other interest rates.

On 18 March, the ECB announced a new comprehensive asset purchase programme to address the risks posed by the coronacrisis. The Pandemic Emergency Purchase Programme, PEPP, initially allowed purchases of private and public sector bonds for up to 750 billion euro. At the monetary policy meeting on 4 June, the Governing Council of the ECB decided to increase purchases under the PEPP by an additional 600 billion euro, bringing the total envelope for PEPP purchases to 1,350 billion euro, or around 12 per cent of GDP in the euro area. At the same time, the horizon for the PEPP was extended at least until the end of June 2021. Purchases under the PEPP comprise the same assets as the existing Asset Purchase Programme, APP, i.e. inter alia, government and corporate bonds. The ECB has estimated that the additional debt issuance requirement in the euro area will amount to 1,000-1,500 billion euro in 2020 due to the recession and discretionary fiscal measures. This means that the ECB's total net purchases are roughly in line with the expected increase in government debt in the euro area in 2020.

The ECB's purchases of government bonds across euro area member states follow the ECB's capital key as a general rule. However, when the PEPP programme was announced in March, the ECB announced that purchases of government bonds would be carried out with greater flexibility related to, inter alia, the distribution of purchases across countries. In addition, the ECB announced that debt issued by Greece would now also be purchased, which has not been possible under the existing asset purchase programmes. Since March, the ECB has purchased more Italian securities than provided for in the capital key, and conversely purchased fewer German securities, see chart below. It is not unusual for the distribution of ECB government bond purchases to deviate from the capital key in some months. However, the deviations for Italy and Germany have been particularly large since the ECB increased its overall net purchases in March.

The ECB's purchases of euro area member states' sovereign debt have been the subject of much discussion in the past. These purchases have come into renewed focus after the announcement of the PEPP. The focus was reinforced by the ruling of the German Constitutional Court in early May, which questioned the ECB's purchases of governments bonds under the APP. The ruling was made notwithstanding the European Court of Justice's decision in 2018 to the effect that the ECB's purchases of governments bonds under the APP are within the ECB's monetary policy mandate. However, the decision of the German court had no immediate effect on the financial markets.

Increased flexibility in the ECB's purchase of sovereign debt has led to deviations from the capital key



Note: Deviations from the ECB's capital key as a percentage of total net purchases from March to May, excluding purchases of bonds issued by supranational institutions.
Source: ECB and own calculations.

but on both occasions the Fed took the market by surprise by lowering interest rates more than expected. Market participants now expect interest rates to remain unchanged until the end of 2022.

At the same time as the second interest rate cut in mid-March, the Fed also announced purchases of government and mortgage bonds for at least 700 billion dollars or 3.3 per cent of US GDP. It turned into the Fed's commitment to purchase as many assets as it would take, with no indication of maturity dates or thresholds.

In March, the Fed also expanded its monetary policy counterparties' access to borrow and concluded agreements with many central banks, including Danmarks Nationalbank, on dollar swap lines. The swap agreements were intended to address the stronger market pressure for short-term assets in dollars.

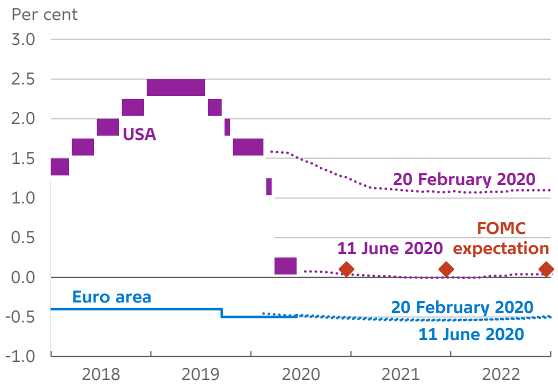
The Swedish central bank, Sveriges Riksbank, maintained its key monetary policy rate at 0.0 per cent in March, but announced a series of measures to support the financial markets, including a new lending facility and increased bond purchases. In Norway, Norges Bank lowered its monetary policy rate on three occasions between March and May to 0.0 per cent.[9] Moreover, as an extraordinary support measure Norges Bank bought Norwegian kroner totalling 3.5 billion in the foreign exchange market in March and April, after the Norwegian krone had weakened.

In emerging market economies, several central banks gained a little room for interest rate reduction, enabling them to stimulate their economies in the wake of monetary policy easing in the USA and subsiding inflationary pressures. However, financial market uncertainty and risk aversion led to large capital outflows, which contributed to a weakening of many of the countries' exchange rates, e.g. the Brazilian real.

Substantial equity market volatility

The equity markets started the year with considerable increases and reached new record highs in mid-February. In the second half of February, however, investor sentiment changed markedly as it

Markets expect low interest rates for a protracted period of time Chart 30



Note: Federal funds target rate for the USA, the ECB's deposit facility rate for the euro area. The dotted lines denote market expectations based on futures and forward prices.
Source: Federal Reserve, Macrobond, Bloomberg and Scanrate RIO.

became apparent that the coronavirus was spreading globally and affecting the global economy. Investors sold the riskiest assets, such as equities, which led to the greatest market plunges since the financial crisis. The benchmark indices in the USA and the euro area fell 34 per cent and 38 per cent respectively between 20 February and past mid-March, cf. Chart 31.

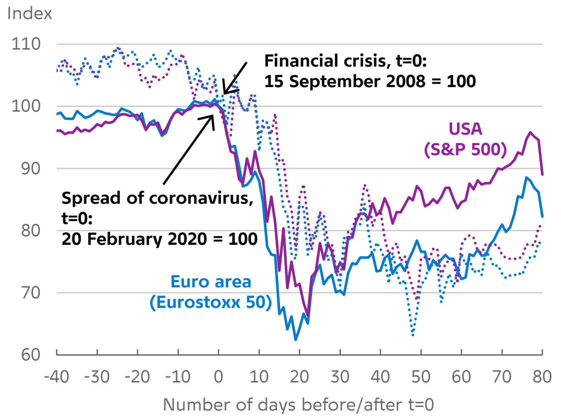
During April and early May, US and European equities have recovered some of the losses. This can be attributed to, inter alia, the many and comprehensive economic support measures, as well as the prospects of reopening. The US index has recovered more, partly due to differences in sector composition between the two indices. For example, the European index has a larger weight of industrial corporations that are severely affected, while the US index has relatively more technology and software corporations.

Volatile government yields and wider spreads

The financial market turmoil led to increased de-

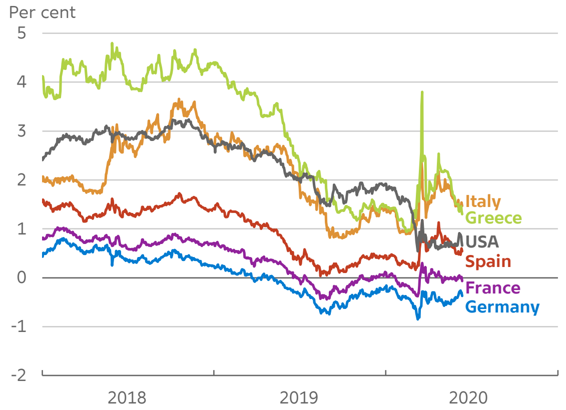
9 Norges Bank has not implemented quantitative easing on the grounds that it will most likely not have the desired effects, as the Norwegian bond market is modest in size and many of the Norwegian bonds are owned by foreign investors.

Equity markets pick up after dramatic declines in February and March Chart 31



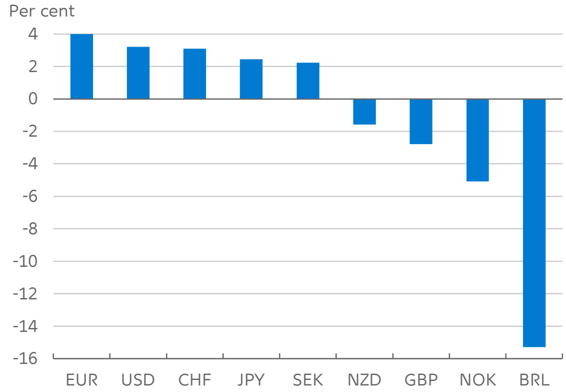
Note: The solid curves illustrate changes in stock indices before and after the spread of coronavirus based on changes since 20 February 2020. The broken curves illustrate changes in stock indices before and after the outbreak of the financial crisis based on changes since 15 September 2008.
Source: Macrobond and own calculations.

Large fluctuations in government bond yields Chart 32



Note: 10-year government bond yields.
Source: Macrobond.

Appreciation of reserve currencies Chart 33



Note: Change in nominal effective exchange rates from 2 January until 10 June 2020. EUR: euro; USD: US dollar; CHF: Swiss franc; SEK: Swedish krona; NZD: New Zealand dollar; GBP: British pound; NOK: Norwegian krone: BRL: Brazilian real.
Source: Macrobond.

mand for lower-risk assets such as German government bonds. At the beginning of March, the 10-year German government bond yield reached its lowest level ever, at -0.85 per cent, see Chart 32.

In the latter part of March, government bond yields rose again. European government bond yield spreads have widened as a result of the market turmoil. One reason is that the extensive fiscal measures gave rise to renewed concerns about debt sustainability. Greek, Italian and Spanish yields, in particular, have risen. The spreads narrowed slightly with the ECB's announcement of the PEPP but are still wider than before the pandemic really hit Europe.

Lowest oil price for 20 years

The outbreak of coronavirus has caused the price of oil to fall from just under 70 dollars per barrel at the beginning of the year to just under 20 dollars per barrel on 21 April. The decline was driven by both plummeting demand due to low economic activity and a continued large supply of oil. Since then, the price has risen to just under 40 dollars per barrel in June, partly supported by reduced global oil production. In the USA, the price of US oil briefly turned negative in April due to diving demand and limited storage capacity.

Appreciation of reserve currencies

At the end of February and in early March, the considerable risk aversion in financial markets led to high demand for reserve currencies such as the dollar, euro and yen. This has contributed to appreciation of the dollar, among other, since the turn of the year, see Chart 33. Conversely, the exchange rates have weakened for many commodity exporting countries with flexible exchange rates.

Appendix: Assumptions in and revisions of the projection for the danish economy

The projection has been prepared using the macroeconomic model MONA and is based on the available economic statistics, including Statistics Denmark's quarterly national accounts for the 1st quarter of 2020. The projection is based on statistics published until and including 10 June 2020. The projection also involves a number of assumptions concerning the international economy, financial conditions and fiscal policy.

The international economy
Export market growth is assumed to be -8.6 per cent in 2020, 6.0 per cent in 2021 and 6.0 in 2022. It reflects the latest forecasts from the OECD, the IMF and the European Commission.

Wage growth abroad is assumed to be moderate in the coming years, and price increases abroad are also assumed to be modest.

Interest rates, exchange rates and oil prices
Developments in short-term and long-term interest rates in the projection are based on the expectations of future developments that can be derived from term structures in the financial markets. The 3-month money market interest rate, measured by the CITA

Overview of the projection assumptions

Table 1

	2019	2020	2021	2022
International economy:				
Export market growth, per cent year-on-year	1.8	-8.6	6.0	6.0
Foreign price[1], per cent year-on-year	0.7	1.8	1.8	1.5
Foreign hourly wages, per cent year-on-year	2.4	2.0	2.1	2.5
Financial conditions, etc.:				
3-month money market interest rate, per cent p.a.	-0.6	-0.4	-0.5	-0.5
Average bond yield, per cent p.a.	0.5	0.4	0.4	0.5
Effective krone rate, 1980 = 100	103.0	103.5	103.9	103.9
Dollar exchange rate, DKK per USD	6.7	6.7	6.6	6.6
Oil price, Brent, USD per barrel	64.4	39.6	42.9	45.5
Fiscal policy:				
Public consumption, per cent year-on-year	0.5	1.8	0.1	1.0
Public investment, per cent year-on-year	4.0	0.5	0.9	0.9
Public sector employment, 1,000 persons	829	833	834	838

1. Weighted import price for all countries to which Denmark exports. The projection assumes the same growth rates for the weighted export prices in the countries from which Denmark imports.

swap rate, is expected to be negative throughout the projection period and remain largely unchanged at the current level of -0.5 per cent.

The average bond yield is an average of yields to maturity for outstanding government and mortgage bonds. It is expected to decline to 0.4 per cent in 2020 and subsequently pick up slightly over the projection period to just under 0.5 per cent by the end of 2022.

In the projection, the effective krone rate and the dollar rate are assumed to remain constant at their current levels.

In early June 2020, the price of oil was around 35 dollars per barrel. The oil price is assumed to develop in line with futures prices, rising gradually to about 45 dollars per barrel by the end of 2022.

Fiscal assumptions
The projection is based on preliminary national accounts data on public sector consumption and investment as well as the planned fiscal policy in the *Economic Survey from May 2020* and *the Updated 2025 development from October 2019*. In addition, the green housing agreement, compensation agreement for home owners and continued security of housing taxation, as well as the most important sub-agreements from the agreement on the phasing out of relief packages, stimuli initiatives and export initiatives, have been incorporated.

Real public consumption is expected to rise by 1.8 per cent this year, 0.1 per cent in 2021 and 1.0 per cent in 2022. Public investment is expected to increase by 0.5 per cent in 2020, 0.9 per cent in 2021 and 0.9 per cent in 2022, see Table 1.

Revisions in relation to the previous projection
Forecasts for GDP growth are adjusted downwards by 5.6 percentage points this year relative to the projection from September 2019, but adjusted upwards by 2.7 percentage points in 2021. Export market growth detracts from the forecasts for 2020 and 2021, but has an upward impact on the forecast for 2022, see Table 2. Much of the slowdown in growth is due to other factors such as the lockdown of various industries in 2020.

The forecast for consumer price inflation (HICP) is weaker throughout the projection period compared with the latest projection from September 2019, reflecting, inter alia, a sharp drop in oil prices in 2020.

Changes in the projection Table 2

	GDP			Consumer prices (HICP)		
Per cent, year-on-year	2020	2021	2022	2020	2021	2022
Projection, September 2019	1.5	1.5	1.6	1.0	1.5	1.6
Contribution to revised forecast from:						
Export market growth	-2.9	-0.5	0.9	0.0	-0.4	-0.7
Interest rates	0.0	0.0	0.0	0.0	0.0	0.0
Exchange rates	0.0	-0.2	0.0	0.0	-0.1	-0.1
Oil prices	0.0	0.1	0.0	-0.6	-0.1	0.0
Other factors	-2.7	3.4	-0.9	-0.1	-0.1	0.4
This projection	-4.1	4.2	1.6	0.2	0.9	1.2

Note: The transition from the previous to this projection may not add up due to rounding.

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News offers a quick and accessible insight into an Analysis, an Economic Memo, a Working Paper or a Report from Danmarks Nationalbank. News is published continuously.

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The analysis consists of a Danish and an English version. In case of doubt regarding the correctness of the translation the Danish version is considered to be binding.

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