Box 1

Alternative scenarios and uncertainties

The baseline forecast reflects the most likely economic developments during the forecast horizon. The economic outlook is uncertain, however, and could change in response to changes in key assumptions underlying the forecast. While uncertainty about developments in the COVID-19 pandemic and its direct and indirect impact is still a major factor, there are other uncertainties as well. This Box discusses the most prominent of them and presents two different alternative scenarios. One scenario shows how economic developments could change if it takes longer to unwind global supply-chain problems and if imported inflation turns out higher than in the baseline forecast. The other scenario describes how economic developments could play out if Icelandic households are quicker to tap the savings they accumulated during the pandemic than is assumed in the baseline.

Alternative scenario: Global price hikes prove more persistent

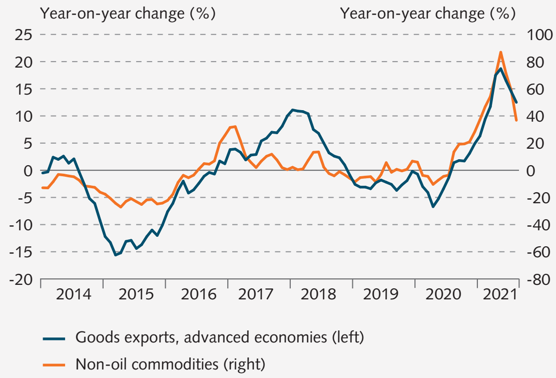
Global inflation has risen markedly in the recent term, owing to surging demand concurrent with bottlenecks in international supply chains, which in turn are due to the pandemic and the various supply shocks that have hit the global economy in the past year. The price of commodities and various intermediate inputs has therefore increased rapidly, and shipping costs have risen at an unprecedented rate (see Chapter I). For example, commodity prices were almost 90% higher in May 2021 than in the same month of 2020, and the price of advanced economies' exported goods was up nearly one-fifth (Chart 1). These price hikes have been far in excess of those projected by the Central Bank and other forecasters. As can be seen in Chart 2, the current baseline forecast assumes that commodity prices will rise this year by just under one-third between annual averages, whereas the Bank's forecasts from 2020 assumed an increase of just 2-2½%. As a result, the outlook is for the price of trading partners' goods and services exports to increase by a full 6% this year instead of the 1% forecast in 2020. The outlook for Iceland's foreign currency import prices has changed similarly.

As Chart 1 indicates, the year-on-year increase in commodity and exported goods prices appears to have peaked, and the baseline forecast assumes that price increases will lose pace as progress is made in addressing supply-chain problems and a portion of household demand shifts from

Chart 1

Export and commodity prices[1]

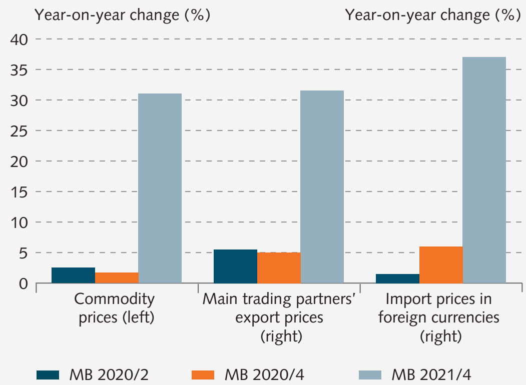
January 2014 – August 2021



1. Export and commodity prices in US dollars. Export prices is the weighted average of export prices in advanced economies.
Source: CPB World Trade Monitor.

Chart 2

Monetary Bulletin forecasts of developments in global prices in 2021[1]



1. Commodity prices excluding oil in US dollars. Export prices are the weighted average of key trading partners' goods and services exports. Iceland's import prices are in foreign currencies (based on the trade-weighted exchange rate index).
Source: Central Bank of Iceland.

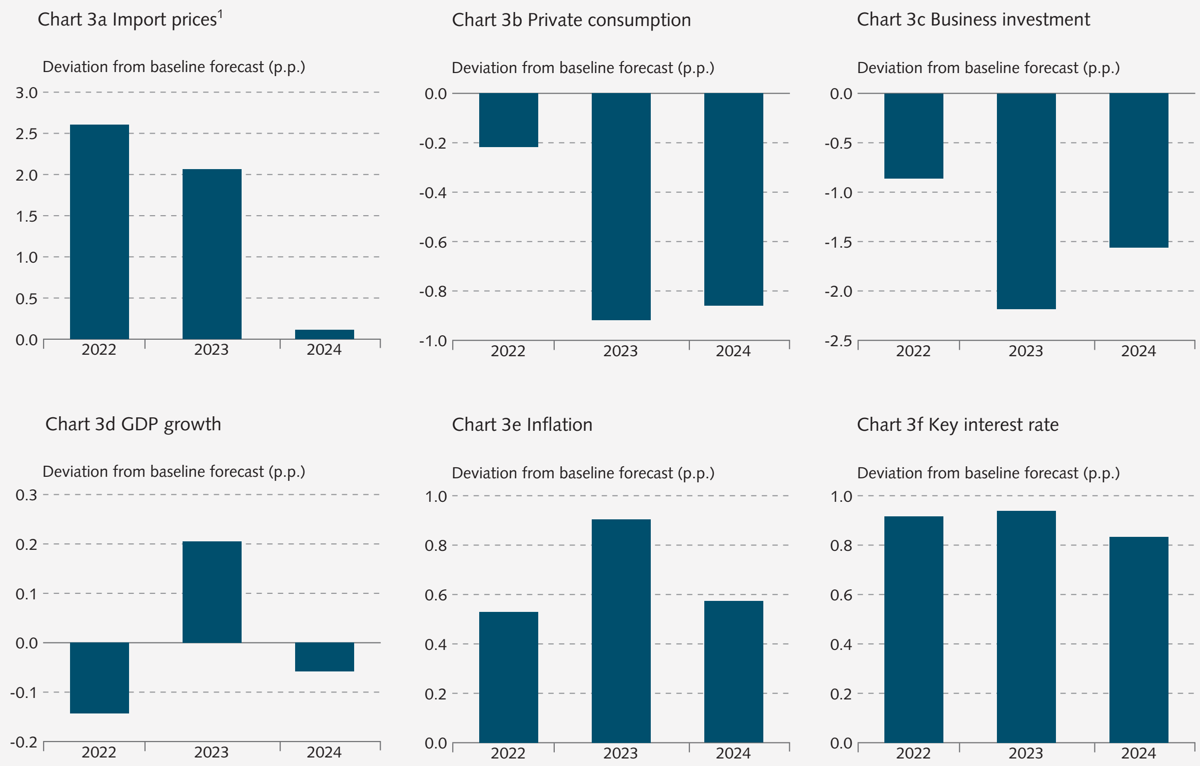
goods to services. This assumption is quite uncertain, however. It could take longer to smooth out the problems in the supply chain, and a further setback in the fight against the pandemic could exacerbate those problems even further. In that instance, global inflationary pressures could prove more persistent than is currently expected. Furthermore, under such conditions, workers could demand even larger pay hikes in anticipation of continued rises in consumer prices, and firms could be forced to push a larger share of the increased cost through to output prices. Medium-term inflation expectations could therefore start to rise, making inflation harder to contain and calling for an aggressive monetary policy response to bring it into line.

In order to show the potential impact of such a scenario on the domestic economic outlook, this alternative scenario assumes that global oil prices will remain broadly at the current level throughout the forecast horizon instead of declining in tandem with futures prices, as is provided for in the baseline forecast. In addition to this, it is assumed that other commodity prices and trading partners' export prices will increase by a total of nearly 8 percentage points more than in the baseline forecast over the next two years and then develop as in the baseline from 2024 onwards. Consumer price inflation in trading partner countries will also be more persistent: instead of easing as soon as 2022 and falling below 2% in 2023, it is assumed to remain at the current level next year and not fall below 2% until 2024. Protracted supply-chain disruptions will also lower GDP growth among Iceland's main trading partners by about 0.3 percentage points per year over the forecast horizon. Moreover, it is assumed that persistent domestic inflation above 4%, together with imported inflationary pressures, will cause inflation to become less firmly anchored to the Bank's inflation target. As a result, long-term inflation expectations are ½ a percentage point higher than in the baseline forecast over the next five years. It is assumed as well that increased fear of inflation will cause a rise in term premia on domestic long-term interest rates and risk premia on the Icelandic króna.

As Chart 3a shows, this would cause the foreign currency price of imports to rise by a full 2 percentage points more per year in 2022 and 2023. The króna is also weaker than in the baseline, and the domestic currency price of imports therefore rises about 3 percentage points more per year in 2022 and 2023, and just over 1 percentage point more in 2024. Imported goods and services will therefore be more expensive than in the baseline forecast, reducing households' real incomes. Added to this are higher domestic interest rates (see below), which will dampen domestic demand. Consequently, private consumption grows by a total of 2 percentage points less than in the baseline forecast

Chart 3

Alternative scenario: Global supply-chain problems persist longer and imported inflation proves more persistent



1. Deviation of year-on-year increase in import prices in foreign currencies (based on the trade-weighted exchange rate index).
Source: Central Bank of Iceland.

over the next three years, and business investment by nearly 5 percentage points less (Charts 3b and 3c). Export growth is also more sluggish because of a weaker economic recovery abroad, although this is offset to an extent by a lower real exchange rate. The impact on GDP growth is limited, however, as the contraction in domestic demand shows largely in a contraction in imports, according to this scenario (Chart 3d). The extent to which the adjustment of households' and businesses' spending shifts out of the domestic economy is uncertain, however, although the experience gained from the negative shocks of the past two years certainly supports this model conclusion (see Box 3).

As Chart 3e indicates, larger global price hikes and the depreciation of the króna cause inflation to be 0.5 percentage points above the baseline forecast in 2022, and as much as 1 percentage point above the baseline in 2023. From then on, the effects start to subside gradually, partly reflecting higher interest rates (Chart 3f). In 2022, the Central Bank's key interest rate is nearly 1 percentage point above the baseline, and this difference is maintained throughout the forecast horizon so as to ensure that inflation eases back to the target over time. The monetary policy response does not need to be this strong, however, if long-term inflation expectations remain anchored, as inflation will then rise less and taper off faster than is shown in this scenario.

Finally, Chart 4 shows a comparison between the inflation outlook in the alternative scenario and the probability distribution in the baseline forecast. As can be seen, the inflation forecast in the alternative scenario is about 1 percentage point above the baseline from late 2022 through end-2023, and inflation measures over 4% well into 2022 and 3% for the forecast horizon as a whole. The forecast in the alternative scenario lies within the 50% confidence interval of the baseline forecast for the entire forecast horizon.

Alternative scenario: Households tap their savings more rapidly

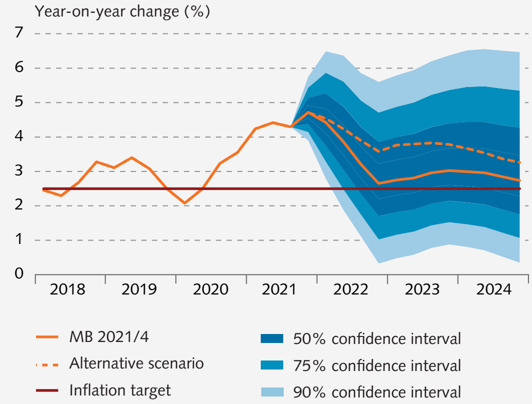
Household saving increased significantly after the pandemic reached Iceland early in 2020 (Chart III-1 in Chapter III). Uncertainty about the economic and employment outlook surged, and broad-based public health measures hindered households' access to various types of services they would otherwise have purchased. In addition, border closures made a large dent in international travel. Consumption spending contracted sharply as a result, and much more than household incomes did, despite a worsening employment situation, which reflects, among other things, Government support measures to preserve jobs and incomes during the pandemic. Because of this, the ratio of savings to disposable income soared in Q2/2020, to more than double the average for the preceding five years.

As has been discussed previously in *Monetary Bulletin*, uncertainty about how much and how quickly households decide to tap their extra savings creates greater uncertainty about the economic outlook in the wake of the pandemic. Various issues relating to developments in saving patterns are explored in Box 1 of *Monetary Bulletin* 2020/4. The baseline forecast published at that time assumed that the saving ratio would have fallen to its pre-pandemic level by H2/2021. But as Chart III-1 shows, this projection has not materialised. *Monetary Bulletin* 2020/4 also included an alternative scenario in which the saving ratio falls more slowly, and closer to the pace provided for in the current baseline forecast (Chart 5). On the other hand, the possibility cannot be excluded that the saving ratio will fall even further now, with the end of the pandemic possibly in sight, reaching its pre-pandemic level during the forecast horizon, as was projected in the baseline forecast in *Monetary Bulletin* 2020/4, even though it does so later than was assumed there.

Chart 4

Inflation forecast based on baseline forecast and alternative scenario

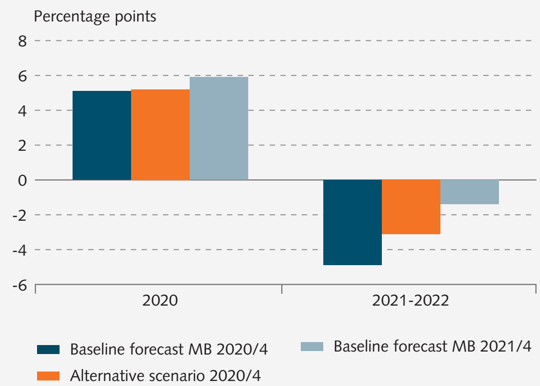
Q1/2018 - Q4/2024



Sources: Statistics Iceland, Central Bank of Iceland.

Chart 5

Change in household saving ratio[1]

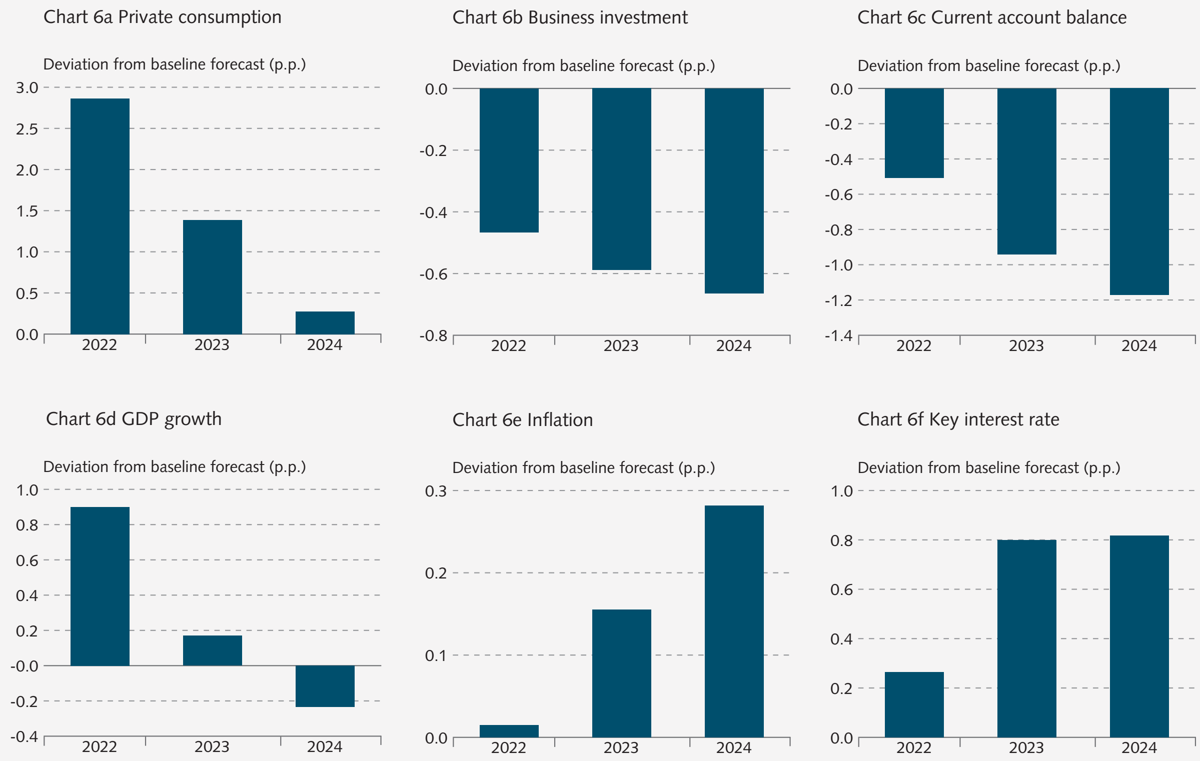


1. Change in saving ratio from 2019-2020 and from 2020-2022. The ratio is calculated based on Central Bank estimates of disposable income.

Source: Central Bank of Iceland.

Chart 6

Alternative scenario: Household tap accumulated savings more quickly



Source: Central Bank of Iceland.

Chart 6 shows how the economic outlook could be affected if the saving ratio falls more rapidly than in the baseline forecast. According to the alternative scenario, the saving ratio is 2 percentage points below the baseline forecast in 2022, and 3 percentage points below it at the end of the forecast horizon. Household demand therefore grows considerably faster than in the baseline: private consumption growth is around 3 percentage points stronger in 2022 and 1½ percentage points stronger in 2023 (Chart 6a). Increased household spending crowds out business investment, however, owing to greater strain on domestic factors of production, which leads to higher domestic interest rates (see below). As a result, business investment grows more slowly than in the baseline forecast by ½ a percentage point per year over the forecast horizon (Chart 6b). On the whole, domestic demand grows more quickly than in the baseline, however, and declining national saving causes the current account balance to deteriorate by 1¼ percentage points of GDP by the end of the forecast horizon (Chart 6c). Although GDP growth is offset by increased demand for imported goods and services, it will be about 1 percentage point stronger in 2022 and ¼ a percentage point stronger in 2023 (Chart 6d). As a result, it will measure just over 6% in 2022 instead of the 5% assumed in the baseline forecast, and the GDP level will be nearly 1% higher by the end of the forecast horizon. Increased domestic economic activity will cause an output gap to open up earlier, and even though the króna will be a full 1% stronger in 2022 than in the baseline forecast, headline inflation will be 0.2-0.3 percentage points higher over the forecast horizon (Chart 6e). In order to ensure that inflation ultimately realigns with the target, the Bank's interest rates will be about 0.8 percentage points higher over the next two years (Chart 6f).

Other uncertainties

The economic outlook depends on success in containing the pandemic

The medium-term economic outlook is subject to a number of other uncertainties. An important one is the level of success in bringing the COVID-19 pandemic to an end. Although a large share of Icelanders have now been vaccinated and most public health restrictions have been lifted, the efficacy of the vaccines – particularly against new variants of the virus – is still uncertain. As a consequence, the possibility of a setback in the fight against the pandemic and the reinstatement of at least some public health restrictions – which could impede GDP growth once again – cannot be ruled out (see, for instance, the alternative scenario to this effect in Box 1 of *Monetary Bulletin* 2021/2).

The economic outlook could change if fiscal policy deviates from the current fiscal plan

Another key uncertainty lies in fiscal policy in the wake of the recent Parliamentary elections, as well as the fact that many local governments' operating environment has grown more challenging in the recent past. Because the fiscal budget proposal for 2022 has not yet been published, the current baseline forecast is based largely on the expenditure framework proposed in the fiscal plan from March 2021 (see Chapter III). Although continued collaboration among the previous Government coalition parties enhances the likelihood that the 2022 budget will be broadly in line with the fiscal plan, it is possible that fiscal policy will be more accommodative than is assumed in the baseline forecast. If so, both domestic demand growth and inflationary pressures will be stronger than in the baseline forecast, all else being equal. In that instance, monetary policy may need to be tighter than currently assumed, as described in the alternative scenario in Chapter I of *Monetary Bulletin* 2019/4.

Increased global economic uncertainty could push risk premia higher than in the baseline forecast

Among other uncertainties is the global economic outlook, particularly to include the risk that the disruption of global supply chains will have an even more deleterious impact on world trade, causing global economic activity to soften once again. Global economic uncertainty could also increase still further, leading to abrupt changes in financial conditions worldwide, a repricing of risk, and a rise in risk premia on domestic financial assets.

The pandemic has radically changed spending patterns, complicating the assessment of the economic outlook

Business practices and household spending patterns have changed substantially in the wake of the pandemic, and it is highly uncertain whether, or how quickly, these changes will reverse. Some of them, such as increased e-commerce and remote working, are likely to prove permanent, but others – the impact on the housing market, for example – are less predictable. Furthermore, the GDP growth outlook will depend on the extent to which households' and businesses' increased proclivity to spend is directed at domestic production rather than imported goods and services.

The inflation outlook is highly uncertain

All of the points listed above make assessing the inflation outlook more difficult than it would be otherwise, as is explained in the two alternative scenarios presented at the beginning of this Box. Uncertainty about the global inflation outlook is a major complicating factor. Added to this is the recent surge in energy prices, which stems in part from the effects of the ongoing switch to green energy, and it is uncertain how long these effects will persist.

There is also significant uncertainty about the outcome of the wage negotiations slated for next year, but if they result in continued pay rises well in excess of productivity, inflation over the forecast horizon could be underestimated. Underlying inflationary pressures could also prove stronger if the rise in house prices does not abate as is assumed in the baseline forecast.

The economic repercussions of the pandemic have had a profound effect on potential output, making it more difficult to estimate the slack in output and project how quickly it will narrow. As a result, it is harder than usual to estimate underlying inflationary pressures, particularly in view of rapid changes in relative prices.

As before, the exchange rate of the króna will also be a major determinant of inflation in the coming term. According to the baseline forecast, the effective exchange rate will hold relatively stable over the forecast horizon; however, further appreciation would cause inflation to subside faster, other things being equal – both by reducing imported inflation and by directing a larger share of domestic spending out of the local economy, thereby easing pressure on domestic factors of production. On the other hand, if the króna depreciates again, inflation will decline more slowly than is currently forecast, all else being equal, or it could even rise further.

As is discussed in the alternative scenario earlier in this Box, developments in inflation expectations will play a key role in how strong and persistent an impact global price hikes will have on the domestic price level. The same is true of the effects of wage rises or a depreciation of the króna. Inflation has now been above 4% for yearly a year, and the risk that inflation expectations will become unmoored is growing. If that happens, inflation could prove more stubborn than is currently forecast.

Consequently, the inflation outlook is unusually uncertain at present, and although inflation has been more persistent recently than was forecast in August, the risk profile is still considered to be tilted to the upside and the risk to the inflation outlook has been revised upwards.