



The Swedish Economy

March 2019

The National Institute of Economic Research (NIER) is a Swedish government agency accountable to the Ministry of Finance. We produce forecasts to support decisions on economic policy in Sweden, analyse economic developments and conduct economic research.

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Summary

The Swedish economy is still booming but has peaked and entered a slowdown phase. The previously strong investment climate has meant that investment is now at high levels in parts of the business sector. Together with the recent deterioration in business confidence, considerable shortages of labour with the required skills and a continued decline in housing investment, this means that business investment will fall back slightly this year. Unemployment will bottom out this year at 6.3 per cent before rising slightly next year, but resource utilisation in the labour market will still be higher than normal. Despite the strong labour market, wage growth will be moderate. Inflation will be below 2 per cent both this year and the next. The Riksbank is nevertheless expected to raise the repo rate at the end of 2019, but will not do so again until 2021.

After a weak third quarter, GDP growth picked up in the fourth quarter to 1.2 per cent (see Diagram 1). Exports increased by more than 3 per cent, and stockbuilding made an unusually large contribution to demand growth. The strong rise in exports and stockbuilding is believed to have been partly of a temporary nature, and a negative correction is to be expected in the first quarter this year, leading to flat GDP growth for the quarter.

Most signs are that the economy has peaked and has entered a slowdown phase. Both consumer confidence and business confidence have been falling recently, and consumers are now less positive than normal (see Diagram 2) despite a still strong labour market. Housing investment will also continue to tumble in the first half of the year. All in all, GDP growth is therefore expected to be slightly weaker than normal in the second quarter.

The strong GDP growth in the fourth quarter made its mark on the labour market. Employment increased by 0.7 per cent (see Diagram 3), and unemployment fell slightly. Both recent data and various indicators suggest that employment growth has slowed sharply in the first quarter, which is consistent with the slowdown in demand growth.

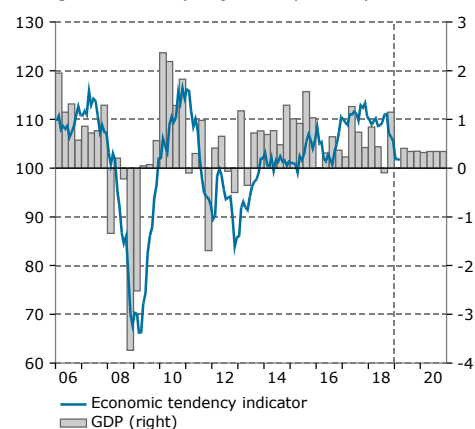
SLOWDOWN IN THE GLOBAL ECONOMY

The decline in Swedish confidence indicators can partly be explained by growth in the global economy having begun to slow, along with considerable uncertainty about the global outlook. This slowdown is clearly reflected in weaker growth in world trade and global industrial production. Manufacturing confidence indicators have fallen and are now only marginally above their historical averages in many parts of the world (see Diagram 4). Consumers have also become less optimistic in recent months, not least in the euro area and the UK.

The customs tariffs on Chinese goods introduced by the US are impacting negatively on the Chinese economy. There is also

Diagram 1 Economic tendency indicator and GDP

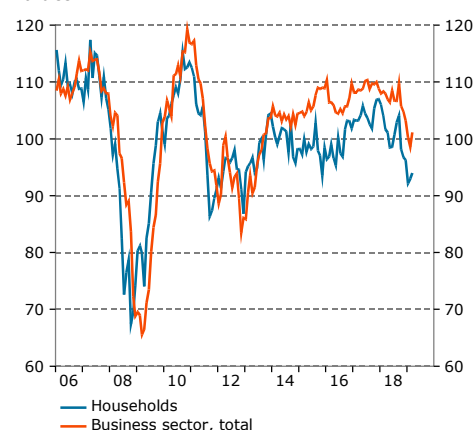
Index mean=100, monthly values and percentage change, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

Diagram 2 Households and the business sector confidence indicator

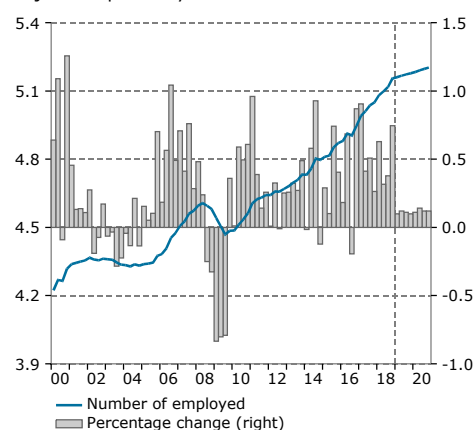
Index mean=100, seasonally adjusted monthly values



Source: NIER.

Diagram 3 Employment

Millions and percentage change, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

a tangible risk of the US expanding its tariffs aimed at China to include automotive imports, which could have substantial negative effects on world trade. Uncertainty about Brexit is continuing to hamper activity in the UK. Brexit is also casting a shadow over developments in the other EU countries. The UK is considered more likely to make an orderly exit from the EU than to leave without a deal, and so our forecast is based on the assumption that a no-deal Brexit is avoided. If the UK were to leave the EU without a deal, this would have appreciable negative consequences for the UK economy in particular, but would also have negative effects elsewhere.

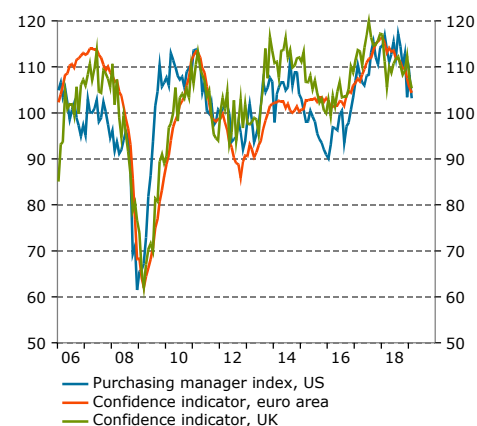
In the euro area, GDP growth was weak in the third and fourth quarters, with output falling slightly in both Germany and Italy. In Germany's case, this was partly the result of weaker growth in demand for its export goods. Expansionary economic policy and a still favourable investment climate mean that GDP growth in the euro area will pick up during the course of this year. Inflation will remain relatively low this year and the next (see Diagram 5), and the ECB will not raise the refi rate until 2020 (see Diagram 6).

In the US, growth last year was strong and the economic development continued to improve. Unemployment is now below 4 per cent, and the strong labour market has caused wage growth to begin to take off. This has not yet had any great effect on inflation, which is currently in line with the Federal Reserve's target. Further ahead, however, stronger wage growth will put more pressure on inflation, and the Federal Reserve will continue on its established path of interest rate increases next year to prevent the economy from overheating.

WEAK KRONA BOOSTS SWEDISH EXPORTERS

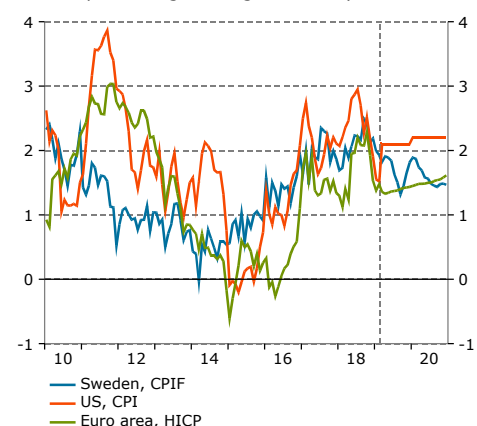
Recent years' strong depreciation of the krona has increased Swedish exporters' international competitiveness, and manufacturing profits are currently strong. According to the NIER's Economic Tendency Survey, manufacturers are still happy with their export order books (see Diagram 7), albeit slight less so recently. Indicators for new export orders have also dropped back lately and are now around normal levels. Together with a continued good growth in exports of services, this suggests that exports will grow at around the same rate this year as the last, despite the expected negative correction in the first quarter. Export growth will thus not be especially strong by historical standards. To some extent, this is because the demand for Swedish export goods is growing relatively slowly, but export growth is also expected to be held back by bottlenecks in production. Capacity utilisation has been very high for some time (see Diagram 8), as have shortages of labour with the required skills.

Diagram 4 Confidence indicators for manufacturing in US, Euro Area and UK
Index mean=100, monthly values



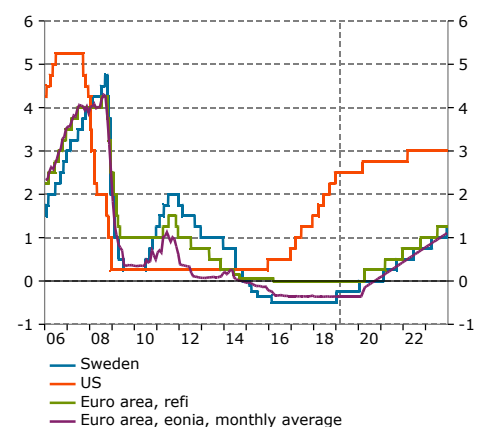
Sources: Institute for Supply Management, European Commission and Macrobond.

Diagram 5 Consumer prices
Annual percentage change, monthly values



Sources: OECD, Macrobond and NIER.

Diagram 6 Policy rates
Per cent, daily- and monthly values



Note. US policy rate refers to upper bound of the target rate for the federal funds rate.

Sources: ECB, Federal Reserve, the Riksbank, Macrobond and NIER.

INVESTMENT CLIMATE COOLING

Although capacity utilisation is still high, investment growth in manufacturing will slow markedly over the course of the year. This is mainly due to investment levels already being high, but to some extent also to difficulties finding staff with the right skills. The situation is similar in services, where investment will virtually stagnate this year.

After a long period of rapid growth, housing investment decreased last year in the wake of the sharp fall in housing prices in late 2017 and early 2018. Prices seem to have stabilised, but the number of apartment starts has continued to fall relative to the same quarter the previous year. Housing investment will therefore decrease this year before stabilising next year. A strong supply of new housing means that there is a not insignificant risk of housing prices beginning to fall again, with further negative effects on housing investment. All in all, business investment is forecast to decrease by 0.6 per cent this year. Investment will therefore fall slightly as a share of GDP (see Diagram 9), which is the normal development once the economy has peaked.

NO FISCAL SPACE IN 2019

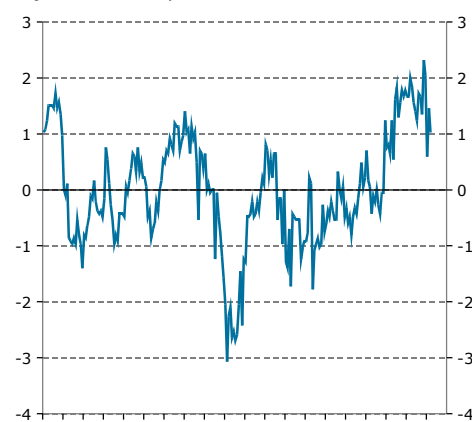
Government net lending will be low this year despite high resource utilisation, and will to some extent be propped up by the strength of the economy. Structural net lending – a cyclically adjusted measure of net lending that serves as an important indicator of compliance with the surplus target – is also expected to be low (see Diagram 10). If this picture persists, net lending may need to be reinforced for the target to be met. Fiscal policy is expected to be neutral in 2019. Given the surplus target, there is no scope for unfunded measures in the spring amending budget. Fiscal space in 2020-2023 is estimated at just under SEK 120 billion, which roughly corresponds to the cost of maintaining personnel density in the provision of publicly funded services. An increase in the standard of these services in line with the historical pattern would cost an additional SEK 20 billion.

CONSUMERS DOWNBEAT DESPITE ECONOMIC BOOM

Employment has risen rapidly in recent years. Although employment growth will slow this year, resource utilisation in the labour market will still be higher than normal (see Table 1). This year's tax cuts mean that households' real disposable income will increase by 2.1 per cent in 2019 despite dampened wage growth (see Diagram 11). In spite of the strong labour market, the consumer confidence indicator has dropped back markedly since September last year and is now below its historical average (see Diagram 2). Consumers are less optimistic than normal about both about the economy as a whole and their personal finances, although they do believe that the risk of becoming unemployed themselves is still falling.

Diagram 7 Manufacturer's view of export order books

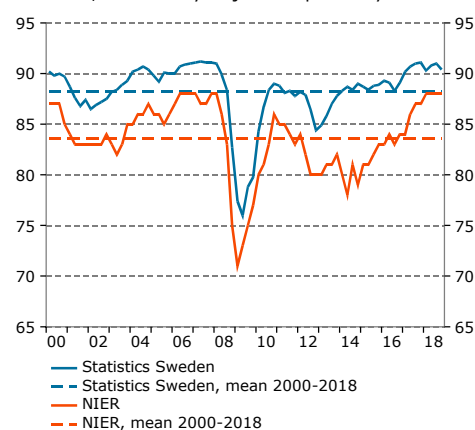
Standardized deviations from mean, seasonally adjusted monthly values



Source: NIER.

Diagram 8 Industrial capacity utilisation

Per cent, seasonally adjusted quarterly values

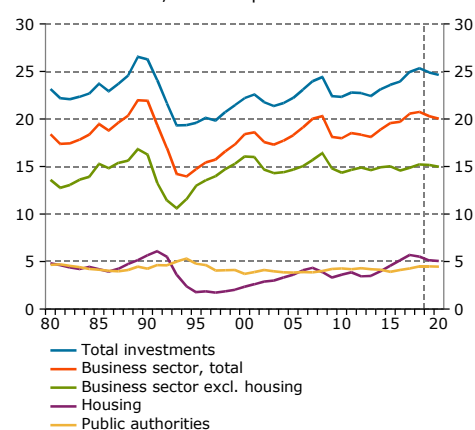


Note. The NIER's capacity utilisation refers to the manufacturing industry.

Sources: Statistics Sweden and NIER.

Diagram 9 Gross fixed capital formation

Per cent of GDP, current prices



Sources: Statistics Sweden and NIER.

Household consumption was very weak in the third quarter last year, with a drastic reduction in sales of new cars as a result of the new bonus-malus system for vehicle taxation from 1 July 2018. Spending on new cars remained sluggish in the fourth quarter, and households are expected to continue to buy fewer cars in the near term than before the tax change.

Table 1 Selected Indicators

Percentage change, unless otherwise indicated

	2018	2019	2020	2021	2022	2023
GDP, Market Prices	2.3	1.5	1.6	1.5	1.6	1.6
GDP per Capita	1.2	0.5	0.7	0.5	0.6	0.8
GDP, Calendar-Adjusted	2.4	1.5	1.4	1.3	1.6	1.9
GDP, World	3.6	3.4	3.4	3.3	3.3	3.3
Current Account Balance ¹	3.4	4.0	3.9	3.9	3.9	3.8
Hours Worked ²	2.4	1.2	0.3	0.2	0.4	0.6
Employment	1.8	1.1	0.5	0.5	0.5	0.7
Unemployment Rate ³	6.3	6.3	6.4	6.5	6.7	6.8
Labour Market Gap ⁴	1.0	1.2	0.7	0.3	0.0	0.0
Output Gap ⁵	1.6	1.2	0.7	0.3	0.0	0.0
Hourly Earnings ⁶	2.6	2.7	2.9	2.9	3.1	3.3
Hourly Labour Costs ^{2,7}	2.6	2.6	2.8	2.9	3.1	3.3
Productivity ²	0.1	0.4	1.1	1.1	1.2	1.2
CPI	2.0	1.8	1.9	2.2	2.4	2.3
CPIF	2.1	1.7	1.6	1.8	2.0	2.0
Repo Rate ^{8,9}	-0.50	-0.25	0.00	0.50	0.75	1.25
10-year Government Bond Yield ⁸	0.7	0.5	0.9	1.4	1.8	2.2
Effective Krona Exchange Rate Index (KIX) ¹⁰	117.6	120.6	119.6	118.2	115.9	113.4
Government Net Lending ¹	0.7	0.2	0.3	0.4	0.2	0.3
Structural Net Lending ¹¹	-0.1	-0.1	0.0	0.3	0.3	0.3
Maastricht Debt ¹	38.9	34.6	34.4	33.7	33.2	32.7

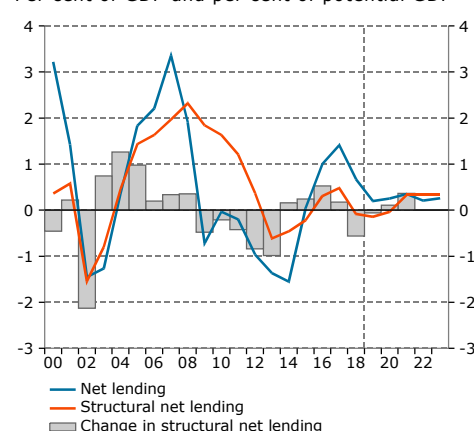
¹ Per cent of GDP. ² Calendar-adjusted. ³ Per cent of labour force. ⁴ Difference between actual and potential hours worked in per cent of potential hours worked. ⁵ Difference between actual and potential GDP in per cent of potential GDP. ⁶ According to the short-term earnings statistics. ⁷ Refers to the hours of employees. ⁸ Per cent. ⁹ At year-end. ¹⁰ Index 18 November 1992=100. ¹¹ Per cent of potential GDP.

Sources: IMF, Statistics Sweden, National Mediation Office, The Riksbank, Macrobond and NIER.

Despite the decline in consumer confidence, household consumption increased by 0.7 per cent in the fourth quarter. Both retail sales and the household consumption indicator were also relatively strong in January. This suggests that household consumption has continued to grow at around the normal historical rate in the first quarter. All in all, household consumption is expected to grow slightly more slowly than real disposable income

Diagram 10 Net lending and structural net lending in the public sector

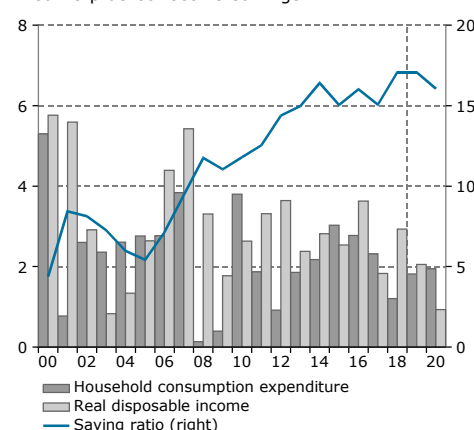
Per cent of GDP and per cent of potential GDP



Sources: Statistics Sweden and NIER.

Diagram 11 Household consumption, real disposable income and saving ratio

Percentage change and per cent of disposable income plus collective savings

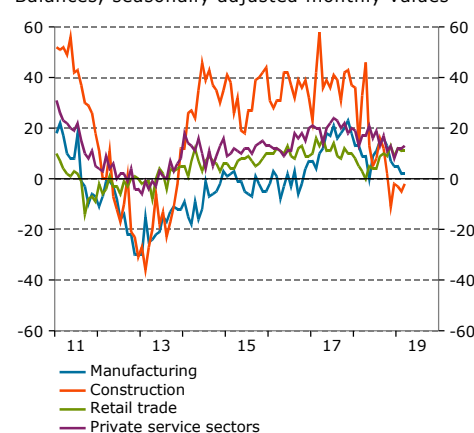


Note. The savings ratio is defined as households' total saving incl. savings in premium and occupational pensions as a share of household disposable income plus savings in premium and occupational pensions.

Sources: Statistics Sweden and NIER.

Diagram 12 Recruitment plans

Balances, seasonally adjusted monthly values



Source: NIER.

this year. Next year, when real disposable income rises more slowly, the saving rate is expected to come down slightly from its current high levels, and consumption will continue to grow at around 2 per cent (see Diagram 11).

LABOUR MARKET TO REMAIN STRONG

Our expectation that employment growth will slow this year is partly based on employment plans in the business sector as a whole being less positive than they were last year, albeit still slightly better than normal. The sharpest decrease has been in construction, where there are now slightly more firms planning job cuts than job growth (see Diagram 12).

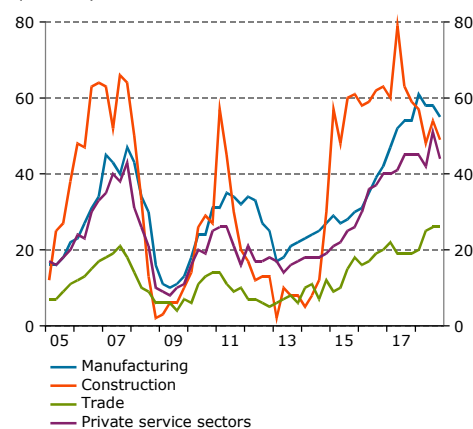
Shortages of labour with the required skills have been widespread across much of the business sector in recent years, which is believed to have put something of a damper on employment growth. Labour shortages are still much higher than normal, although they have abated somewhat recently, especially in construction (see Diagram 13). Now that the economy is moving into a calmer phase, demand for labour will rise more slowly. In the short term, however, the scarcity of labour is expected to continue to hamper job creation somewhat in the business sector, especially in manufacturing. The public sector has accounted for a substantial share of recent years' employment growth, due to high numbers of asylum seekers and other immigrants. These needs are now rapidly receding, and employment growth in the public sector will be weaker in 2019 and 2020 than for the last few years, despite a growing need for personnel in education, health care and social care.

The slower employment growth means that unemployment will stop falling in early 2019 (see Diagram 14). The combination of major shortages of workers with the required skills and a high number of vacancies indicates considerable matching problems in the labour market. This is also reflected in statistics from the Swedish Public Employment Service showing that "vulnerable groups" who find it comparatively hard to obtain work now account for more than 75 per cent of the unemployed. This supports the NIER's view that unemployment is currently below the equilibrium rate. The slower employment growth going forward means that unemployment will edge up again over the course of 2019, and resource utilisation in the labour market will begin to fall back.

DAMPENED WAGE GROWTH IN THE BUSINESS SECTOR

The high resource utilisation in the labour market has not yet had any great impact on wage growth in the business sector. Although wage growth increased slightly in 2018, it is still much lower than during the previous economic booms in the 2000s. The high resource utilisation and continued shortages of workers with the required skills mean that wages in the business sector will now rise slightly more quickly. One reason why wage

Diagram 13 Shortage of labour in different parts of the business sector
Share of yes-answers, seasonally adjusted quarterly values



Source: NIER.

Diagram 14 Unemployment

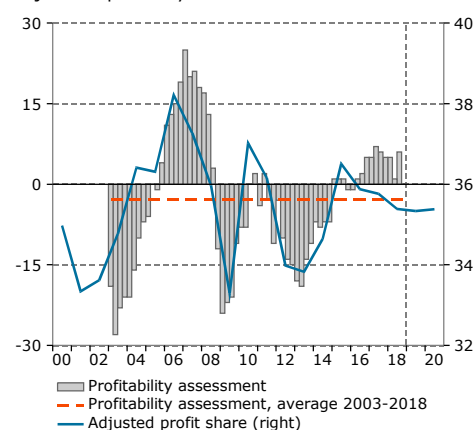
Per cent of labour force and potential labour force, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

Diagram 15 Business sector profitability

Per cent, annual values and balances, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

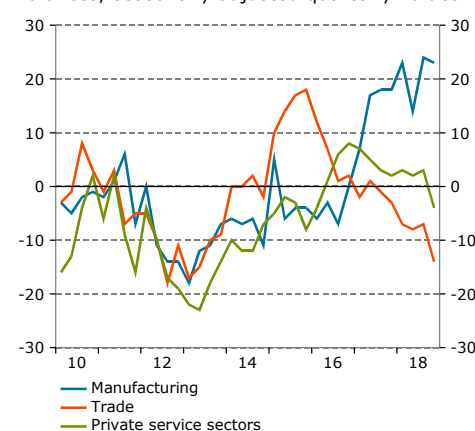
growth in the business sector has been muted is that productivity growth has been surprisingly weak in recent years. Firms have therefore found it difficult to absorb the same rapid increases in labour costs as before. Despite weak productivity growth, the profit share is at normal levels (see Diagram 15). Firms' own assessment of their profitability in the Economic Tendency Survey, on the other hand, is above the average for the past 15 years, which indicates that there is no general need to raise prices. This favourable take on profitability in the business sector as a whole is, however, largely a result of very strong profits at manufacturers, which are benefiting from the weak krona. Service firms' view of their profitability is at normal levels, while retail firms' assessment of profit levels has deteriorated rapidly recently and is now slightly lower than normal, which indicates an increased need to pass on cost increases to customers (see Diagram 16).

Rapidly rising energy prices pushed up CPIF inflation – the increase in the consumer price index with a fixed interest rate – to more than 2 per cent for much of 2018. Excluding energy, inflation was much lower (see Diagram 17). This year, inflation ex energy will accelerate to 1.7 per cent as prices for services and food rise more quickly. The krona's recent depreciation will contribute to inflation by pushing up import prices. CPIF inflation will nevertheless drop back below 2 per cent this year as a result of energy prices rising more slowly. Next year, CPIF inflation ex energy will hold at 1.7 per cent on average, but will be somewhat lower towards the end of the year due to a decreasing effect from the krona's previous depreciation. Energy prices will also fall slightly, partly due to reduced electricity network charges. CPIF inflation will therefore ease to 1.6 per cent in 2020.

The NIER's forecast is that the Riksbank will decide on raising the repo rate to 0.0 per cent in December 2019. This is in keeping with market expectations but slightly later than in the Riksbank's own forecast in February (see Diagram 18). The reduction in electricity network charges in 2020 will probably not have any great impact on monetary policy. However, the weak inflationary outlook even when energy is excluded means that the Riksbank will not raise interest rates further until the beginning of 2021. CPIF inflation will then be on the way up again, and it is expected to hit 2 per cent more consistently in 2022. The Riksbank will therefore then continue on its established path and raise the repo rate gradually in the period 2021-2023.

Diagram 16 Judgement of profitability in the manufacturing industry, trade and private service sectors

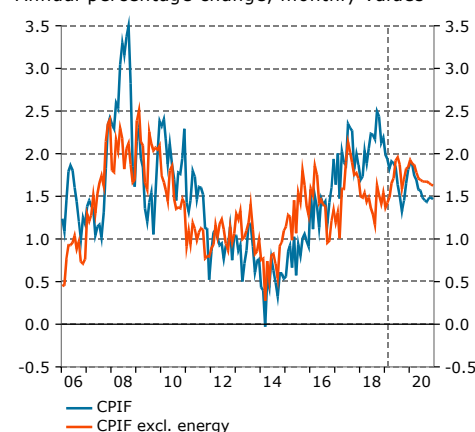
Balances, seasonally adjusted quarterly values



Source: NIER.

Diagram 17 Consumer prices

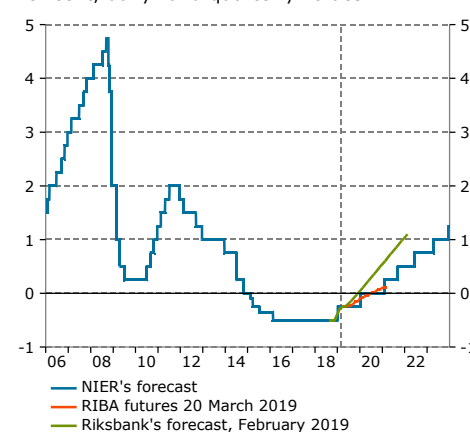
Annual percentage change, monthly values



Sources: Statistics Sweden and NIER.

Diagram 18 Repo rate

Per cent, daily- and quarterly values



Note. The Riksbank's forecast refers to quarterly values.

Sources: Nasdaq OMX, the Riksbank, Macrobond and NIER.

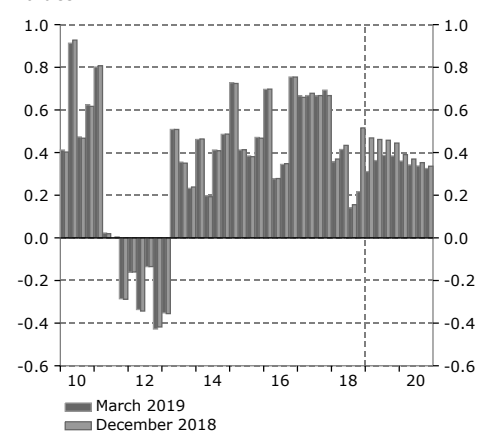
Forecast revisions 2019–2020

New information since our December forecast has led to some revisions (see Table 2). Some of the more significant changes are outlined below.

- Global GDP growth in 2019 has been revised down by 0.3 percentage points. It is primarily growth in the euro area that has been adjusted (see Diagram 19).
- The price of a barrel of Brent crude has been revised up by more than USD 5 both in 2019 and 2020 due to prices rising further than expected recently and to forward prices increasing.
- Swedish GDP growth in 2019 has been adjusted up by 0.2 percentage points, mainly due to a surprisingly strong fourth quarter last year spilling over into 2019.
- Household consumption increased by 0.7 per cent in the fourth quarter, but was predicted to climb even further in our December forecast (see Diagram 20), due in part to a stronger expected recovery in new car sales. The consumer confidence indicator has also continued to fall in recent months. Our forecast for household consumption growth in 2019 has therefore been lowered by 0.5 percentage points.
- Hours worked increased by 1.6 per cent in the fourth quarter, which was surprisingly high. Productivity growth this year has therefore been revised down slightly (see Diagram 21).
- The krona index (KIX) has been much weaker in recent months than anticipated in our December forecast. Although the krona is expected to rally, the index has been revised up by around 3 per cent in both 2019 and 2020.
- Despite the weaker krona, CPIF inflation is now expected to be slightly lower in both 2019 and 2020 than in our December forecast. This can partly be explained by household demand having been weaker than previously anticipated.
- Government net lending as a share of GDP has been revised down by 0.2 and 0.3 percentage points in 2019 and 2020 respectively, primarily due to weaker data for 2018 than anticipated in the December forecast.

Diagram 19 GDP in Euro Area

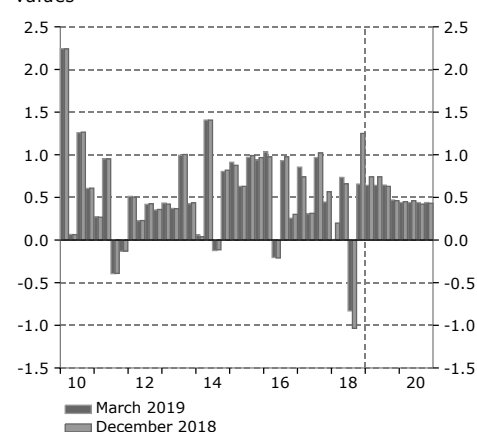
Percentage change, seasonally adjusted quarterly values



Sources: Eurostat, Macrobond and NIER.

Diagram 20 Household consumption

Percentage change, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

Diagram 21 Productivity

Level, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

Table 2 Current Forecast and Revisions Compared to the December 2018 Forecast

Percentage change, unless otherwise indicated

	2019			2020		
	Mar	Dec	Diff	Mar	Dec	Diff
Global Economy						
GDP, World	3.4	3.6	-0.3	3.4	3.5	-0.1
GDP, KIX-weighted	2.0	2.4	-0.4	2.1	2.3	-0.2
GDP, Euro Area	1.2	1.7	-0.5	1.4	1.6	-0.2
GDP, US	2.5	2.7	-0.2	1.9	2.0	-0.1
GDP, China	6.2	6.3	-0.1	6.0	6.0	0.0
Federal Funds Target Rate ^{1,2}	2.5	3.0	-0.5	2.8	3.3	-0.5
ECB Refi Rate ^{1,2}	0.0	0.3	-0.3	0.3	0.8	-0.5
Oil Price ³	66.6	60.7	5.9	66.7	61.4	5.3
CPI, KIX-weighted	2.0	2.1	-0.1	2.1	2.3	-0.2
Domestic Economy						
GDP, Calendar-Adjusted	1.5	1.3	0.2	1.4	1.5	-0.1
GDP	1.5	1.3	0.2	1.6	1.7	-0.1
Household Consumption	1.8	2.3	-0.5	2.0	2.1	0.0
Government Consumption	0.5	0.3	0.2	1.4	1.5	-0.1
Gross Fixed Capital Formation	-0.1	-1.0	1.0	0.5	0.4	0.1
Stockbuilding ⁴	-0.4	-0.2	-0.2	-0.1	-0.1	0.0
Exports	3.6	3.2	0.4	3.0	3.3	-0.3
Imports	1.7	2.0	-0.3	2.5	2.7	-0.2
Labour Market, Inflation, Interest Rates etc.						
Hours Worked ⁵	1.2	0.8	0.4	0.3	0.4	0.0
Employment	1.1	0.9	0.2	0.5	0.4	0.1
Unemployment ⁶	6.3	6.4	-0.1	6.4	6.5	-0.1
Labour Market Gap ⁷	1.2	0.9	0.3	0.7	0.5	0.2
Output Gap ⁸	1.2	0.9	0.3	0.7	0.5	0.2
Productivity ⁵	0.4	0.6	-0.2	1.1	1.1	-0.1
Hourly Earnings ⁹	2.7	2.7	0.0	2.9	2.9	-0.1
CPI	1.8	2.0	-0.2	1.9	2.1	-0.2
CPIF	1.7	1.9	-0.2	1.6	1.7	-0.1
Repo Rate ^{1,2}	-0.25	0.00	-0.25	0.00	0.25	-0.25
10-Year Government Bond Yield ¹	0.5	0.8	-0.3	0.9	1.4	-0.5
Effective Krona Exchange Rate Index (KIX) ¹⁰	120.6	117.5	3.1	119.6	116.2	3.4
Current Account Balance ¹¹	4.0	4.0	-0.1	3.9	3.9	0.0
Government Net Lending ¹¹	0.2	0.4	-0.2	0.3	0.6	-0.3

¹ Per cent. ² At year-end. ³ Brent crude, USD per barrel, annual average. ⁴ Change in per cent of GDP the previous year. ⁵ Calendar-adjusted. ⁶ Per cent of labour force. ⁷ Difference between actual and potential hours worked in per cent of potential hours worked. ⁸ Difference between actual and potential GDP in per cent of potential GDP. ⁹ According to the short-term earnings statistics. ¹⁰ Index, 18 November 1992=100. ¹¹ Per cent of GDP.

Note. The difference is between the current forecast and the December 2018 forecast. A positive value denotes an upward revision.

Source: NIER.

In brief

The long-term sustainability of public finances

An ageing population will put pressure on public finances in the coming decades. The NIER's *Fiscal Sustainability Report 2019* shows that Sweden's current strong public finances provide much-needed space to meet demographic challenges, but the margins are small. The buffer built up since the crisis of the 1990s will be used up within a few decades. This demographic outlook demands fiscal prioritisation in the form of lower growth in public expenditure or higher taxes to ensure that public finances are long-term sustainable. A situation where demographic changes are permitted to impact fully on public finances is not compatible in the long term with the current surplus target. If the surplus target were to be replaced with a balanced-budget target in 2027, as part of the scheduled review, fiscal policy would have some scope to adapt to demographic developments, while long-term fiscal sustainability would improve compared to the report's baseline scenario.

There are various ways of looking at the long-term sustainability of public finances. In the NIER's *Fiscal Sustainability Report 2019*, sustainable public finances are defined as where the public sector commitment can be maintained without government debt, expressed as a share of the economy, moving in such a way as to give the government problems meeting its obligations in the longer term. The report attaches particular importance to developments in the government's net financial position – the difference between its financial assets and its liabilities – expressed as a share of the economy, and gross debt.

With a long time horizon, it is reasonable to apply a broad definition of the fiscal policy stance, which is referred to here as an *unchanged public sector commitment*. In practice, this is a matter of interpreting what fiscal policy currently offers the populace. With such an interpretation, we can make projections where future fiscal policy adapts to demographic developments in a way that is considered compatible with the current fiscal policy stance. These projections presuppose active political decisions, for example to maintain spending levels relative to some measure of need.

The NIER interprets the public sector commitment in terms of unchanged personnel density in the provision of publicly funded services, together with an annual increase in standards in line with the historical pattern, unchanged replacement rates in

The purpose of the report

On 20 February, the NIER published its annual report on the long-term sustainability of Sweden's public finances. This special analysis presents the report's overall conclusions. In the short term, until 2023, the scenario for the macro economy and the labour market is based on the National Institute of Economic Research's forecast and medium-term scenario from December 2018.

The aim of the report, as with other sustainability assessments of this kind, is to identify potential future imbalances in public finances at an early stage.

The report's baseline scenario should not be seen as a forecast for public finances, but as an attempt to shed light on the degree to which today's public sector commitment and tax rules are compatible with expected demographic and macroeconomic developments.

Government expenditure and revenue are projected on the basis of Statistics Sweden's latest population forecast, published in April 2018, which runs through to 2100. Demographic developments impact on government expenditure by increasing or decreasing demand for publicly funded welfare services. Spending on these services is affected by the size of the population, but also by its age composition, because the need for different welfare services changes over our lifetime. Demographic changes also affect government revenue, because labour supply and taxable factor income differs between groups.

Unchanged public sector commitment

What can be considered the prevailing public sector commitment is to some extent a matter of interpretation and depends partly on the time horizon for the analysis. For short-term projections, a narrow definition of fiscal policy is sometimes used, based on the latest central government budget for different items of expenditure. In the longer term, however, it would be misleading to interpret the public sector commitment from such a static perspective. Unchanged rules paint an unrealistic picture of future fiscal policy, above all by underestimating expenditure.

The NIER interprets an unchanged public sector commitment in terms of three assumptions: (i) personnel density in publicly funded services is maintained at 2019 levels plus an annual increase in standards in line with the historical pattern, (ii) constant replacement rates in the transfer systems, and (iii) unchanged tax rules. The fiscal policy projections are based on the central government budget decided on for 2019.

The first assumption refers to personnel density relative to the number of users of different welfare services, which means that government consumption and investment will vary over time as a result of demographic changes. When it comes to collective services, such as defence and justice, spending is assumed to follow aggregated population growth. The second assumption means that transfer payments rise in line with wages. The third means, in principle, that taxes rise with GDP, as today's taxes are generally expressed as a percentage of an income or a price.

the transfer systems, and unchanged tax rules (see the box “An unchanged public sector commitment”).

The long time horizon for these projections means that account must be taken of behavioural changes that can be expected to occur in the longer term. Based on observed long-term trends, the population is assumed to work ever longer due to better health, easing the pressure on costs from an ageing population. The sensitivity to these assumptions is discussed in the report.

CRITERIA FOR LONG-TERM SUSTAINABILITY

So what is needed for public finances to be considered long-term sustainable? There is no universally accepted criterion. One indication of long-term sustainability is if the government's net financial position as a share of GDP does not trend downwards over a long time horizon. Some variation over time may be entirely natural, for example due to demographic changes. A long period of gradual deterioration in the net financial position may also, depending on how revenue and expenditure move, lead to the net financial position eventually stabilising at a new, lower level that can still be considered sustainable. The European Commission's S2 indicator considers public finances to be long-term sustainable as long as the net financial position stabilises on an infinite horizon. This is a less stringent criterion for sustainability, as it does not rule out the net position declining over a very long period, even though this would be far from desirable.

It is also important not to focus entirely on the net financial position. Asset values are determined partly by factors beyond the reach of fiscal policy, and many government assets are associated with important welfare functions and cannot readily be sold without neglecting the government's obligations, for example assets in the old-age pension system. Importance is therefore also attached to developments in the government sector's gross debt, and consolidated gross debt (Maastricht debt) in particular, when assessing long-term sustainability.

The report thus makes an overall assessment based on these different aspects of long-term fiscal sustainability. Attention is paid in particular to the evolution of the net financial position, but also to how long it takes for the net position and Maastricht debt to stabilise, and how the new long-term levels compare to current levels.

DEMOGRAPHIC DEVELOPMENTS ARE KEY

In Statistics Sweden's April 2018 population forecast, the Swedish population grows from 10 million people today to 14

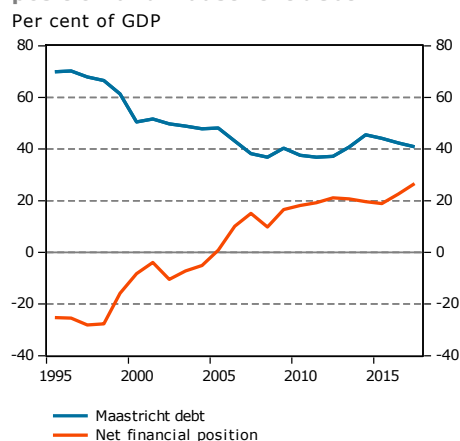
Government net financial position and Maastricht debt

The government's net financial position is the net of its financial assets and gross debt, and corresponds to a firm's equity excluding real assets. If financial assets exceed gross debt, the government will be in a net wealth position. If gross debt exceeds financial assets, the sector will be in a net debt position.

The government's net financial position has improved since the crisis of the 1990s and has been positive for more than a decade (see Diagram 1), which is relatively unusual among comparable countries.

Maastricht debt is the government sector's consolidated gross debt and has decreased by close to 30 per cent since the mid-1990s. It is consolidated in the sense that internal liabilities within the government sector are eliminated, and it therefore corresponds to the amounts owed by central government, local government and the old-age pension system together to lenders outside the government sector.

Diagram 22 Government net financial position and Maastricht debt



Sources: Statistics Sweden and NIER.

million in 2100 (see Diagram 23). Average life expectancy is expected to continue to rise. Today, the life expectancy of a 65-year-old is just over 20 years. This increases to just over 23 years in 2050, and 27 years in 2100. The proportion of the population that is not of working age changes unfavourably with regard to public finances, due mainly to a growing share of elderly people (see Diagram 24). It is especially the share of over-80s that grows in relation to the working-age population.

One key assumption in the report's baseline scenario is that part of the increase in life expectancy consists of healthy, active years. As a result, people are able to work longer and exit the labour market at an ever greater age – in other words, the retirement age rises and the ratio between years of working life and years of retirement remains more or less constant. All else equal, this behavioural change favours public finances. It improves the economic dependency ratio, which shows the number of unemployed and others who are not in work for each person in employment (see Diagram 25). The economic dependency ratio still increases, however, due to the growing share of elderly in the population.

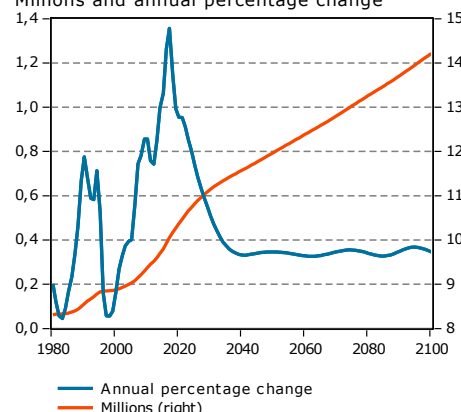
The demographic make-up of the population also affects growth in the longer term. For one thing, the ageing population means that demand for publicly funded welfare services rises, and so an increasing share of production is in the government sector where productivity growth is lower. For another, the number of hours worked rises less quickly than it has historically, due to the working-age population growing relatively slowly. Productivity is assumed to follow the historical pattern. All in all, this means that GDP grows by just over 1.9 per cent per year on average through to 2050, compared with 2.2 per cent in the period 1981-2017.

INCREASED CONSUMPTION OF WELFARE SERVICES

Government consumption is projected to rise in line with the demographic need, with the biggest increase between 2020 and 2035 (see Diagram 26). During this period, government consumption increases by around 1.5 per cent of GDP, which can be explained primarily by greater demand for health and elderly care due to the rising number of elderly people in the population.¹ At the same time, growth in government consumption is curbed by the assumption that health improves as life expectancy increases. This means that the over-65s gradually consume fewer welfare services per person than today in a given age

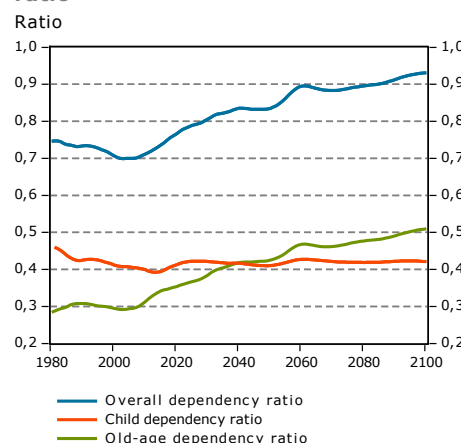
¹ The slightly lower GDP growth in the short term, which is a result of the economy returning to capacity in 2022, means that government consumption grows more quickly than GDP.

Diagram 23 The population of Sweden
Millions and annual percentage change



Source: Statistics Sweden.

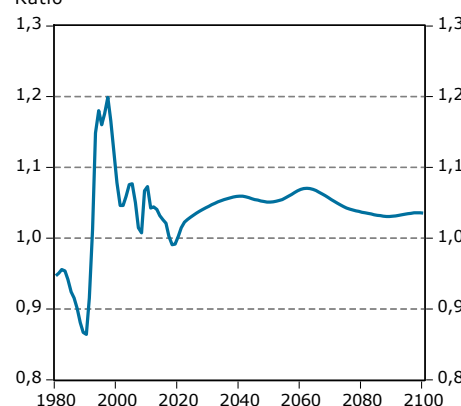
Diagram 24 Demographic dependency ratio
Ratio



Note. The diagram shows the overall dependency ratio (the number of people who are not of working age relative to the number of people who are), which can be divided into a child dependency ratio (the number of people aged 19 and under relative to the working-age population) and an old-age dependency ratio (the number of people aged 65 and over relative to the working-age population).

Source: Statistics Sweden.

Diagram 25 Economic dependency ratio
Ratio



Note. The ratio between the non-working population and the number of employed.

Sources: Statistics Sweden and NIER.

cohort. As consumption of welfare services increases with age, see Diagram 27, this assumption has a positive effect on public finances.² After 2035, consumption is assumed to rise with GDP.

Government investment, which is projected on the basis of demographic developments and economic growth, decreases slightly as a share of GDP in the next few years. This can be explained by elevated levels of investment in recent years to meet major needs for both new buildings and the renovation of existing facilities in the local government sector. Investment falls slightly as a share of GDP as these needs ease, and then rises in line with GDP from 2023.

TRANSFERS FALL RELATIVE TO GDP

Government transfers to households have decreased as a share of GDP since the 1990s, and this trend is projected to continue through to 2030. Pension payments explain much of the decrease, while other social transfers are projected to move more or less in line with GDP (see Diagram 28).

Payments of income pensions fall as a share of GDP through to 2030, despite pensioners accounting for a growing share of the population. This is because increased life expectancy requires pension earnings to fund more years of life, limiting the average annual income pension per pensioner. Around 2030, the financial assets in the buffer fund have grown to the extent that assets exceed liabilities by 10 per cent, pushing the balance ratio above 1.1. Strictly speaking, the old-age pension system is a closed system, and its assets are not intended to fund spending other than future pensions. The projections therefore deal with the surplus by assuming an “accelerator” in the payment of income pensions in line with the proposal in the 2004 report on distributing surpluses in the old-age pension system.³ The surplus is thus distributed as increased payments to existing pensioners and increased pension holdings for future pensioners. This means that pension payments stabilise from 2030 as a share of GDP.⁴

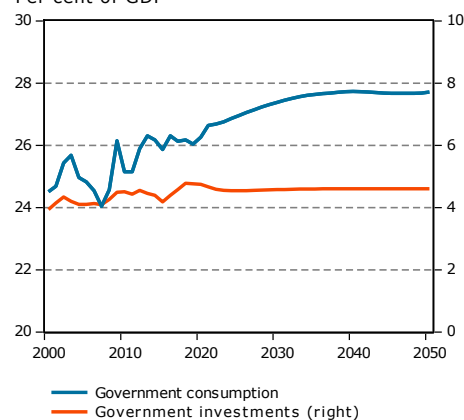
² The assumption that the need for welfare services is pushed back until a later age means that fewer welfare services than today are consumed per person in a given age cohort. Through to 2050, the degree of “rejuvenation” of behaviour is 2 years for the over-65s. As average life expectancy also increases, however, they will still consume more welfare services per person in total during their lifetime.

³ Swedish Government Official Reports (2004) “Utdelning av överskott i inkomstpensionssystemet” [Distribution of surpluses in the income pension system], SOU 2004:105.

⁴ Without this accelerator, net wealth in the old-age pension system would be 10 per cent of GDP higher in 2050 and soar to 80 per cent of GDP in 2100, a trajectory that does not appear plausible.

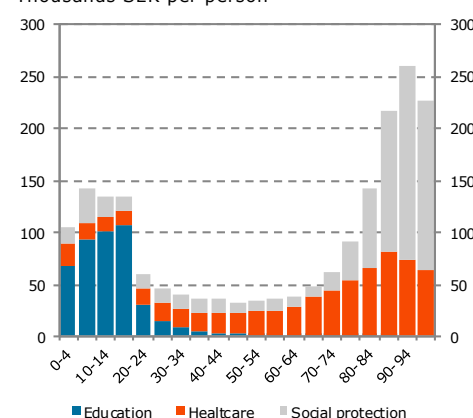
Diagram 26 Government consumption and investment

Per cent of GDP



Sources: Statistics Sweden and NIER.

Diagram 27 Average cost of different welfare services per age group in 2016

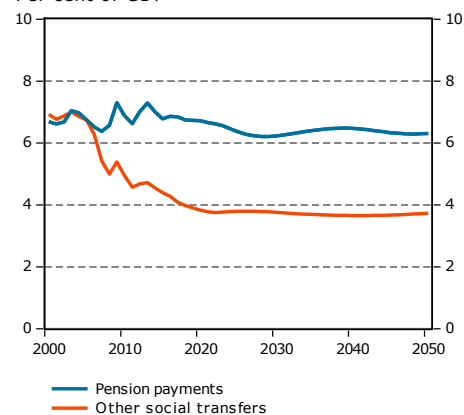


Note. The diagram shows the average cost of individual government consumption per person for five-year age cohorts.

Sources: Statistics Sweden and NIER.

Diagram 28 Transfers

Per cent of GDP



Sources: Statistics Sweden, Swedish Pensions Agency and NIER.

PRIMARY EXPENDITURE EXCEEDS PRIMARY REVENUE

Primary expenditure, defined as government expenditure excluding interest payments, increases marginally as a share of GDP through to 2040 before falling again slightly (see Diagram 29). It peaks at 48.4 per cent of GDP but drops back slightly through to 2050. Primary expenditure consists of government consumption, government investment and transfers to households, firms and abroad. The main driver of primary expenditure is demographic developments, since welfare services are needed above all by the young and the old.

Primary revenue consists mainly of taxes and duties. Given unchanged tax rules, primary revenue moves largely with the economy, as the likes of social security contributions, income tax and value-added tax are expressed as a percentage of the tax bases. Some variation will be seen over time due to demographic changes, for example where changes in the age composition of the population affect the supply of labour and hence aggregate wages, or where a larger number of elderly results in reduced saving and increased consumption as a share of GDP.

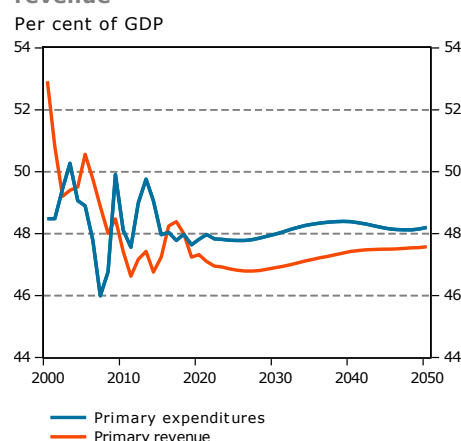
In the baseline scenario, primary revenue falls as a share of GDP until 2022 as the economy slows. Revenue from capital taxes and corporate taxes decreases as a share of GDP as the economy normalises. Revenue then picks up gradually, due mainly to household consumption and taxable income growing as a share of GDP. Household consumption increases relative to GDP as a result of demographic developments bringing a shift in the population away from a high share of middle-aged people, who have a high propensity to save, in favour of elderly people, who instead spend their savings. The decrease in household saving means that household consumption increases, resulting in a higher tax-to-GDP ratio, above all via value-added tax.

Sustainability in the medium term

Given the projected developments in the government's primary expenditure and revenue, primary net lending falls in the short term to around -1 per cent of GDP in the coming five-year period (see Diagram 30).⁵ An unchanged public sector commitment then means persistent deficits. Net lending remains around -1 per cent through to 2040, after which it improves slightly as a result of primary expenditure falling as a share of GDP, and revenue edging up as a share of GDP.

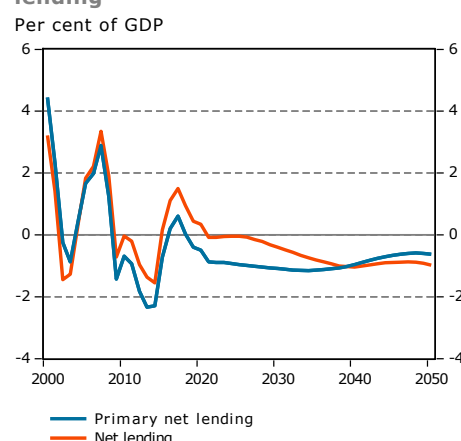
⁵ Replacement rates in the transfer systems are kept constant from 2019 onwards, unlike in the NIER's short run forecasts.

Diagram 29 Primary expenditure and revenue



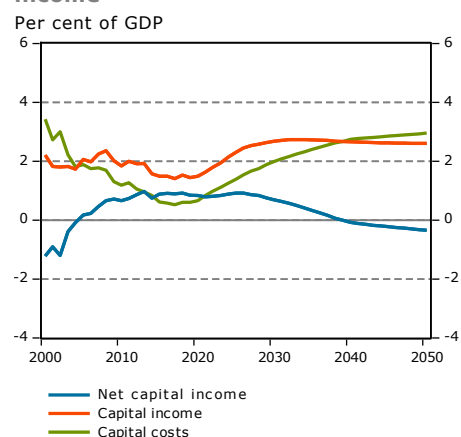
Sources: Statistics Sweden and NIER.

Diagram 30 Net and primary net lending



Sources: Statistics Sweden and NIER.

Diagram 31 Government net capital income



Note. Net capital income is defined as capital income less capital costs.

Sources: Statistics Sweden and NIER.

Net lending is obtained by adding net interest payments to primary net lending. Thanks to positive net interest, it is higher than primary net lending. Net lending nevertheless falls from around 0 per cent of GDP to around -1 per cent in 2040 due to a decline in net capital income (see Diagram 31). Interest expenditures rise more than interest income due to increasing gross debt, but also as a result of interest rates on assets and liabilities normalising at different paces.

Due to the negative net lending, the government's net wealth trends down as a share of GDP through to 2050, and Maastricht debt climbs to more than 50 per cent of GDP (see Diagram 32). Value changes and the interest rate-growth differential have explained the bulk of changes in the net financial position historically, but are less significant in the scenario going forward (see Diagram 33).⁶ The downward trend in the net position relative to GDP indicates that public finances cannot be considered truly sustainable over this horizon. The net position is still positive in 2050, and Maastricht debt is around the level it was at the turn of the millennium, but the rate of change means that the deterioration in public finances in the baseline scenario is problematic.

UNCHANGED PUBLIC SECTOR COMMITMENT NOT COMPATIBLE WITH CURRENT SURPLUS TARGET

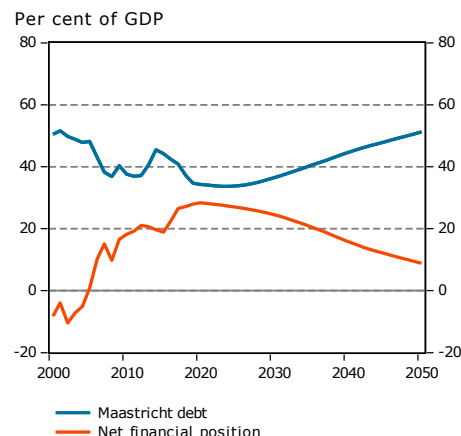
In the baseline scenario, net lending moves in a way that is not compatible with the current surplus target of one-third of a per cent of GDP over a business cycle. For the surplus target to be met every year, revenue needs to be increased and/or spending reduced. The size of the adjustment needed in the longer term is an average of almost 1 per cent of GDP (see Diagram 34). This might mean adjusting transfers to households (government expenditure) or household taxation (government revenue).⁷ Both of these changes could impact on the labour supply and thus how the tax bases and tax revenue move. How these dynamic effects affect the macroeconomy and public finances is discussed in the report.

If the current surplus target were to be met every year, the net financial position and Maastricht debt would stabilise around the current level (see Diagram 35). Public finances could then be

⁶ The interest rate-growth differential captures effects on the net position beyond those from primary net lending. These include the effect from net capital income, but also the growth effect. Since the net position is expressed as a percentage of GDP, economic growth will affect movements in the net position. The interest rate-growth differential determines what primary net lending needs to be for the net position not to deteriorate.

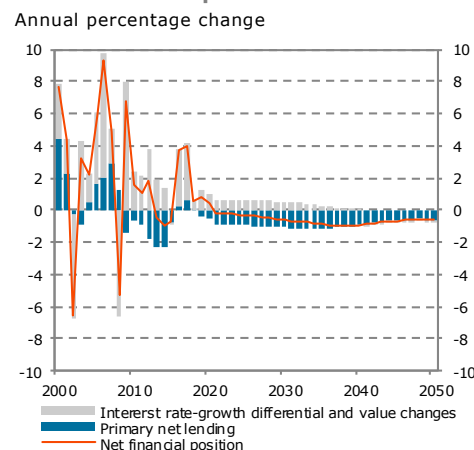
⁷ The surplus target could also be met through higher net lending in the old-age pension system by setting the assumed accelerator for income pensions lower than in the baseline scenario.

Diagram 32 Net financial position and Maastricht debt



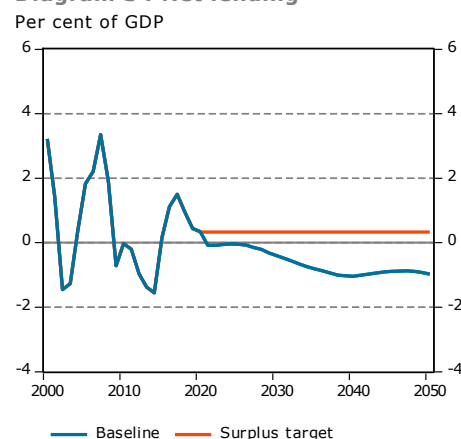
Sources: Statistics Sweden and NIER.

Diagram 33 Breakdown of movements in net financial position



Note. The diagram presents the interest rate-growth differential and the contribution of primary net lending to movements in the net financial position. Changes in the value of assets and liabilities are shown together with the interest rate-growth differential. The scenario assumes that the value of non-interest-bearing assets rises by 2 per cent per year. Sources: Statistics Sweden and NIER.

Diagram 34 Net lending



Sources: Statistics Sweden and NIER.

considered long-term sustainable over this horizon, unlike in the baseline scenario.⁸

SUSTAINABILITY AFTER 2050

After 2050, spending in particular increases as a share of GDP, peaking temporarily around 2060. This is a result of the unusually large cohort born in the 1990s reaching retirement age. Primary net lending hits bottom at this time (see Diagram 36). After 2060, primary expenditure as a share of GDP falls faster than primary revenue, which means that primary net lending improves and approaches zero towards the end of the century. The negative primary net lending causes the net financial position to deteriorate. Net interest payments become more negative, and overall net lending remains negative at just over -1 per cent of GDP despite the improvement in primary net lending.

From 2060, the net financial position is negative – in other words, Sweden has net debt (see Diagram 37). The net position deteriorates continuously before stabilising towards 2090. Strictly speaking, this means that public finances are to be considered long-term sustainable, but this is at the farthest possible horizon in the scenario and around the levels seen after the crisis of the 1990s of just over -10 per cent of GDP. Maastricht debt continues to rise after 2050, and in 2060 it passes the ceiling in the Stability and Growth Pact of 60 per cent of GDP. Net lending is also below the EU medium-term budgetary objective of -1 per cent of GDP during the period.⁹

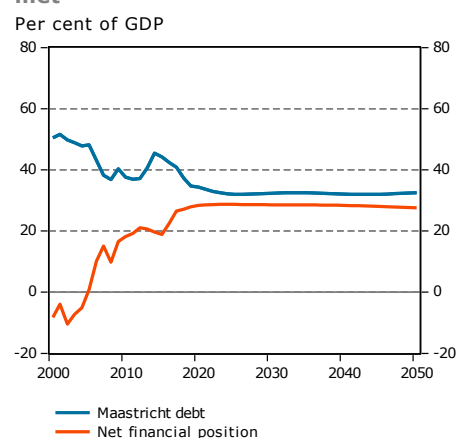
SUSTAINABILITY OVER AN INFINITE HORIZON

One perspective on the long-term sustainability of public finances is provided by the S2 indicator. This shows the degree to which primary net lending needs to be adjusted for the government's net financial position to stabilise at some point in the future. For example, an S2 indicator of 1.0 indicates that primary net lending needs to be permanently tightened by 1.0 per cent of GDP. For public finances to be considered long-term sustainable from this perspective, the S2 indicator needs to be zero or negative, with a negative value indicating a safety margin. Table

⁸ The reason why the net position and Maastricht debt stabilise rather than performing more positively when net lending is in line with the surplus target, is that primary net lending is still slightly negative in the scenario. Net capital income does not deteriorate to the same extent as in the baseline scenario, however, which means that net wealth stabilises despite primary deficits.

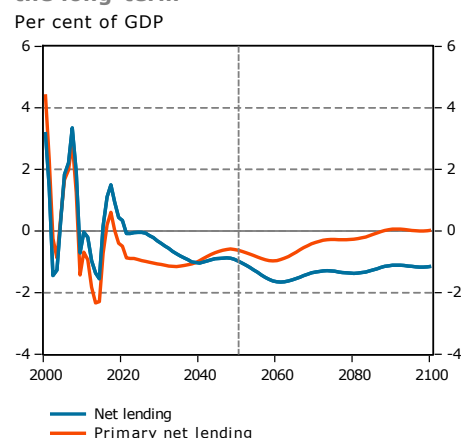
⁹ The budgetary objective is formulated such that structural net lending should not fall below -1 per cent of potential GDP. Structural net lending is a measure of net lending that excludes cyclical effects. Since there are no cyclical variations in the scenario, net lending is the same as structural net lending, and GDP is the same as potential GDP.

Diagram 35 Net financial position and Maastricht debt if the surplus target is met



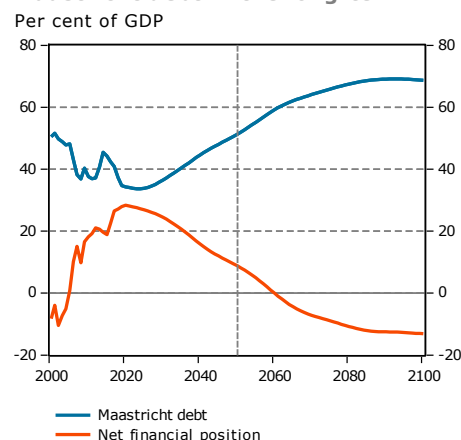
Sources: Statistics Sweden and NIER.

Diagram 36 Government net lending in the long-term



Sources: Statistics Sweden and NIER.

Diagram 37 Net financial position and Maastricht debt in the long-term



Sources: Statistics Sweden and NIER.

3 presents the S2 indicator for the baseline scenario. The score of 0.02 means that public finances are more or less long-term sustainable according to this measure. One weakness of the S2 indicator is that it considers only whether the net position stabilises, and not the level at which it stabilises.

The S2 indicator can be divided into three components (see the box “The S2 indicator’s three components”). The first term shows that Sweden’s strong starting position, with initial net wealth, has a positive effect on long-term fiscal sustainability. The second term shows the effect of primary net lending through to 2100. As primary net lending is negative during the period, the second term is positive. Since the intertemporal budget constraint is to apply over an infinite time horizon, an assumption must be made about what happens after 2100. In our estimate of the S2 indicator, we assume that the situation in 2100 prevails indefinitely. Primary net lending is 0.02 per cent of GDP in 2100 and thus makes only a marginal contribution to sustainability over an infinite horizon.

It is therefore thanks to the government’s initial net wealth that public finances can be considered sustainable based on the S2 indicator. Given the considerable uncertainty about how the economy will perform through to 2100 and beyond, however, it is inappropriate to use the S2 indicator to draw firm conclusions.

Table 3 The S2 indicator

The report's main scenario

(1) Interest on initial net debt	-0.07
(2) Effect of primary deficits through 2100	0.11
(3) Effect of primary deficits after 2100	-0.02
S2 = (1) + (2) + (3)	0.02

Source: NIER.

COMPARISON WITH PREVIOUS PROJECTIONS

Compared to the NIER’s projections published in 2017 and 2018, sustainability has deteriorated marginally (see Diagram 38, Diagram 40 and Diagram 39).¹⁰ Relative to the projections made in 2016, however, sustainability is far stronger. The reason why these projections differ so greatly is the starting position for public finances and a different forecast for inflows of asylum

¹⁰ The 2018 sustainability projections were revised in November 2018. The comparison here is with the revised figures. See <https://www.konj.se/publikationer/special-studier/specialstudier/2018-02-22-hallbarhetsrapport-for-de-offentliga-finanterna-2018.html> (in Swedish only).

seekers. In 2016, initial net lending was negative, which had considerable long-term consequences because an accumulated deficit needed to be financed in the future (see Diagram 38). Government consumption also moved less favourably as a result of the Swedish Migration Agency then anticipating larger numbers of asylum seekers.

Although initial net wealth is now slightly stronger than in 2018, it is expected to fall faster as a share of GDP to 9 per cent in 2050 (see Diagram 40). This can be explained by weaker primary net lending throughout the scenario, due to both weaker revenue and higher expenditure relative to GDP.

The main reason for the slightly lower revenue is lower aggregate wages in the economy as a result of slower growth in hours worked. When it comes to primary expenditure, demographic developments through to 2050 are slightly more favourable than in the 2018 projections. This can be explained chiefly by the number of young people growing more slowly in Statistics Sweden's latest population forecast than in the one used for last year's projections. Primary expenditure is nevertheless higher, which can be explained by the assumption about payments from the pension system having been revised such that these payments are higher, and net wealth in the old-age pension system lower, than in the 2018 projections.

Conclusions

The purpose of the NIER's fiscal sustainability projections is to assess the degree to which today's public sector commitment and taxes are compatible with expected demographic developments. In the baseline scenario, government expenditure adapts to demographic changes without being restrained by the surplus target, even though this target is a cornerstone of the fiscal policy framework. The projections should not therefore be interpreted as a forecast of how public finances will perform. Sweden has a comparatively strong fiscal policy framework, and a history of relatively good fiscal discipline indicates that in practice there is a limited risk of public finances developing unsustainably, at least in the near term.

One conclusion of the report is that expected demographic developments will put pressure on public finances, but that strong initial public finances provide scope to meet this challenge. At the same time, it has to be said that the margins are small. In the baseline scenario, where demographic changes are permitted to have their full impact on public finances, today's surpluses turn within a few years into deficits which persist for a

Diagram 38 Net lending, comparison with previous projections

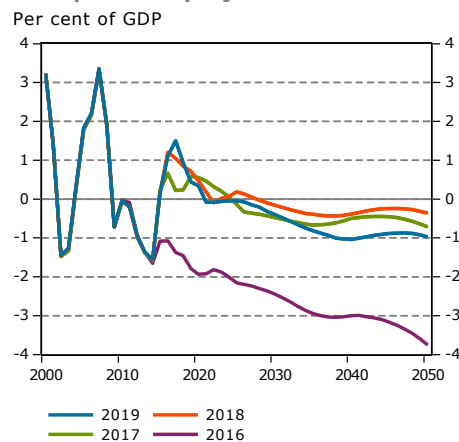


Diagram 39 Gross debt, comparison with previous projections

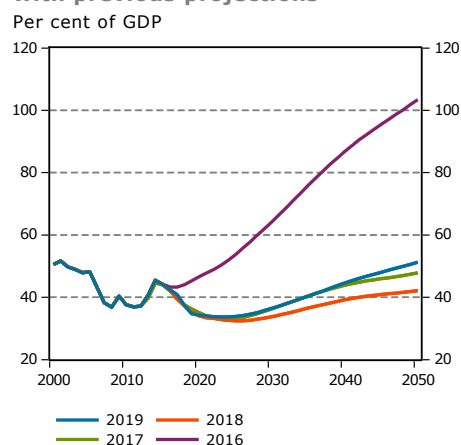
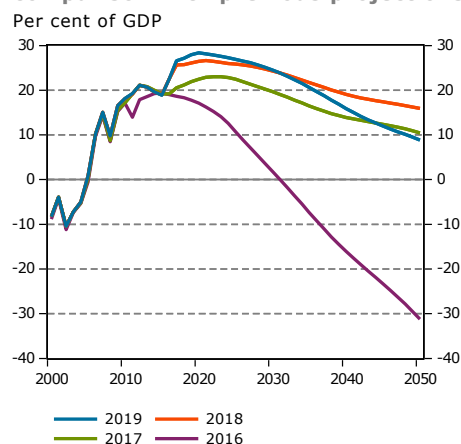


Diagram 40 Net financial position, comparison with previous projections



long time. These deficits cause the net financial position to deteriorate for a long period and turn from net wealth to net debt, while gross debt does not stabilise until the end of the century and does so at a much higher level than today. This comes despite the baseline scenario's assumptions of a longer working life and gradually improved health among the elderly. There are also no crises in the baseline scenario, and historical experience shows that crises can have an enduring impact on public finances.

One further conclusion is that the current public sector commitment and level of taxation are not compatible in the long term with the current surplus target. Given expected demographic developments, there is a risk that the surplus target will prove overly restrictive in the longer term. At the same time, the surplus target serves partly as a way of ensuring safety margins for when the economy underperforms. These margins are needed for a number of reasons. The long-term demographic forecast is sensitive to assumptions, and the reality may turn out differently. The baseline scenario rests on assumptions of a longer working life and improved health easing the pressure on costs from an ageing population, but these mitigating factors may not arise. Economic crises can have long-lasting effects on public finances. The cost of future climate change is unknown and could be considerable for both the private and the public sector.

Although it is reasonable for unfavourable demographic developments to result in a slight deterioration in public finances, prudence dictates that sufficient safety margins should be maintained to absorb weaker economic performance. All in all, this supports retaining a surplus target, or at least a balanced-budget target. One possibility for striking a balance between, on the one hand, permitting demographic developments to have some impact on public finances, and, on the other, ensuring slightly larger safety margins, is illustrated in the report using an alternative scenario where the current surplus target is replaced with a balanced-budget target from 2027 as part of the scheduled review of the target (see Diagram 41, Diagram 42 and Diagram 43).

The long-term projections in the report suggest that a balanced-budget target could be operated for a long period without overly restricting the scope for fiscal policy to adapt to expected demographic changes.

NET LENDING TARGET DEMANDS PRIORITISATION

A target for net lending, be it a balanced-budget target or a surplus target, entails stronger net lending than in the baseline

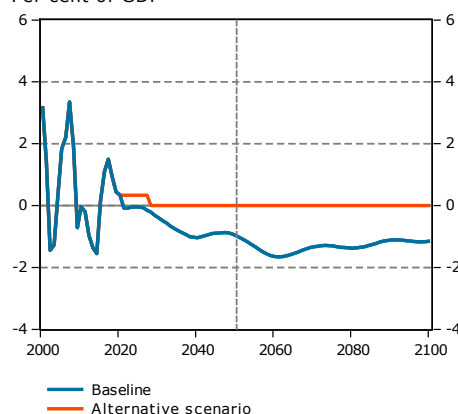
The surplus target

The surplus target for government net lending was introduced in the year 2000 to strengthen public finances after the crisis of the 1990s. The target was initially set at 2 per cent, but was lowered to 1 per cent following a review of the national accounts in 2007 when the premium pension system was transferred out of the government sector. From 2019, a new surplus target applies. This is currently one-third of a percent on average over a business cycle, but is to be reviewed every eight years, partly on the basis of how debt has moved relative to a debt anchor of 35 per cent.

A key role for the current surplus target is to safeguard strong public finances and so ensure sustainability. The long-term levels of the public sector commitment and taxes are ultimately a matter for politicians and voters to decide. The surplus target can then be adjusted to the population's preferences as expressed through the democratic process.

Diagram 41 Net lending

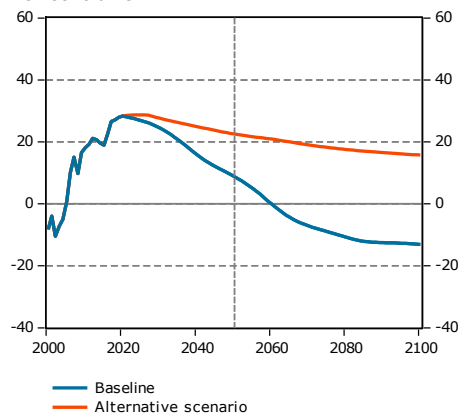
Per cent of GDP



Sources: Statistics Sweden and NIER.

Diagram 42 Net financial position

Per cent of GDP

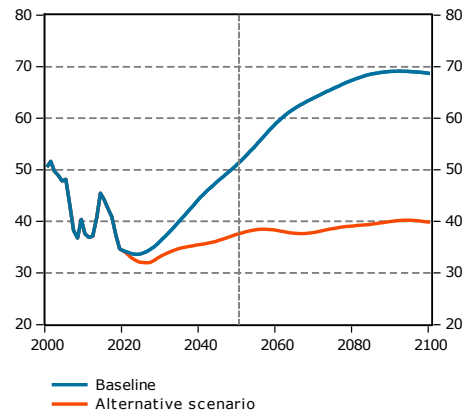


Sources: Statistics Sweden and NIER.

scenario. Net lending can be improved through lower spending or higher taxes. It is important to note that the projections in the baseline scenario assume an increase in the standard of publicly funded welfare services that has a considerable impact on how expenditure moves in the long term. This assumption means that government consumption and investment rise not only with the demographic need, but also with an increase in standards of 0.6 per cent per year in line with the historically observed trend. However, it is reasonable to question whether it is justified not only to maintain personnel density but also to raise the standard of welfare services, given that Sweden faces a significant demographic challenge with fewer people in work providing for more and more elderly. Even an increase in standards that is just a couple of tenths of a percent less than in the baseline scenario brings a clear improvement in public finances, which is illustrated in one of the report's alternative scenarios. One conclusion from these projections is thus that there is scope to raise the standard of welfare services while also strengthening public finances relative to the baseline scenario. If this is to be done without raising taxes, however, standards will need to be raised at a somewhat slower pace.

Diagram 43 Maastricht debt

Per cent of GDP



Sources: Statistics Sweden and NIER.

Technical appendix

In the sustainability projections, the labour market variables are influenced by changes in the composition of the population in terms of gender, age and country of origin, based on Statistics Sweden's population forecast. Different population groups have different characteristics, including participation rates, employment rates and average hours worked by those who are employed. In the model projections, these differences are assumed to persist, and in the long run the scenario is based almost entirely on demographic projections, with the exception of the assumption of a longer working life. Until 2050, the number of hours worked rises more slowly than the average for 1981-2017, with the working-age population growing more slowly than before and those born abroad accounting for an increasing proportion of the working-age population. After 2050, growth in hours worked is even lower than the historical average, due to slower population growth. As a result, GDP growth is assumed to be lower through to 2100 than it has been historically.

Productivity growth has been low in recent years but is assumed to move in line with the historical average from 2023 onwards. Relatively low productivity growth means that GDP grows more slowly through to 2050 than it has in recent decades. After that, it is mainly the relatively slow growth in hours worked that puts a damper on GDP.

Growth in government consumption is driven by demographic developments. An ageing population means that a growing share of hours worked in the economy is used for the production of welfare services. Government consumption therefore increases as a share of GDP until the end of the 2030s.

Coming demographic developments entail a shift in the population composition, away from a high share of middle-aged people, who have a high propensity to save, and toward elderly people, who instead spend their savings. The household saving rate therefore drops back to historical levels, motivating lower net lending to abroad. Net exports as a share of GDP therefore trend down until the mid-2060s before holding around 1 per cent of GDP. The reduction in household saving means that household consumption rises as a share of GDP.

Investment in the economy has been projected such that the capital stock in current prices is constant relative to value added in current prices. The capital stock is assumed to be just over 300 per cent of GDP in current prices, which is consistent with what has been observed historically.

The nominal interest rate is assumed to normalise gradually to 4.5 per cent in 2040 and is then constant. The average return

Methodology

The projections are based throughout on Statistics Sweden's April 2018 population forecast. In the short term, they are also based on the NIER's December 2018 forecast and medium-term scenario. The projections after that have been produced using the NIER's long-term models. From 2023 onwards, the scenario builds on the assumption that the economy continues to operate at capacity. This means that the output gap and the labour market gap are closed, and that all potential variables are the same as actuals. Economic growth from 2023 onwards is determined by demographically driven developments in hours worked and the technological advances that, together with capital formation, give aggregate productivity growth.

A longer working life

By 2023, unemployment is at the equilibrium rate of 6.8 per cent. In the projections, both the employment rate and the participation rate in the 15-74 age group fall somewhat between 2020 and 2040. This is mainly the result of an increase in those born outside Europe as a share of the working-age population. This group has historically had a lower employment rate than other groups, but the labour market status of those born abroad varies partly with how long a person has been in Sweden. Due to the large number of refugees arriving in the past decade, the average duration of residence in Sweden for those born outside Europe has fallen. The participation rate and the employment rate are assumed to rise gradually among recent arrivals and be the same after 15 years as the average for all those born outside Europe.

The average age at which people exit the labour market, or retirement age, is assumed to rise largely in step with average life expectancy, such that the ratio between years of working life and years of retirement is more or less constant. It is also assumed that the age at which they enter the labour market does not change over time. The average retirement age is assumed to increase by around 1.5 years by 2050 and 4 years by 2100.

In the baseline scenario, the participation rate rises slightly after 2040 and hits 75 per cent in 2050. This is due to increasing participation among older people and relatively rapid growth in those born in Sweden, who have historically had a higher participation rate than other groups. The employment rate – the number of employed relative to the population of working age – follows a similar path. For the 15-74 age group as a whole, this means that the participation rate and the employment rate are almost 2 percentage points higher in 2050 than with an unchanged retirement age.

on interest-bearing instruments rises through to 2040 and is then 4.5 per cent, as is the total return on shares, breaking down into dividends of 2.5 per cent and appreciation of 2.0 per cent. Inflation is assumed to be in line with the 2 per cent target from 2024 onwards.

Government consumption is projected on the basis of demographic developments and an increase in standards in line with the historical pattern. Collective consumption moves with the overall population, whereas individual consumption is projected on the basis of changes in different age groups.

Local government investment moves with local government consumption and thus follows demographic developments. Central government investment, which consists mainly of investment in infrastructure and defence, has a weaker connection with demographic developments and is therefore assumed to move with potential GDP.

The replacement rates in the various transfer systems follow average wages, which move with GDP. Pension payments also rise more or less in line with average incomes. However, with unchanged rules and a 4.5 per cent total return from 2040 onwards, net wealth in the pension system would grow sharply. The scenario therefore assumes that surpluses in the pension system beyond a certain level are then distributed in the form of payments to existing pensioners.

Revenue is projected on the basis of 2019 rules, which implies that tax revenue approximately follows GDP in current prices. Since different tax bases are taxed at different rates, however, the tax-to-GDP ratio depends on the composition of GDP. For example, an ageing population will affect how household consumption moves.

Increase in standards

Besides a constant personnel density, it is assumed that costs for wages, capital and inputs account for constant shares of total costs in the production of welfare services, and that prices for capital and the consumption of inputs increase more slowly than wages. This creates scope for standards to trend upwards as a result of more and/or better equipment per hour worked over time. This increase in standards is assumed to be 0.6 per cent per year, in line with the historical pattern.

Table 4 Hours worked, productivity and GDP

Average percentage change

	1981–2017	2018–2050	2051–2100
Population Aged 15–74	0.5	0.5	0.3
Labour force	0.6	0.5	0.3
Employment	0.5	0.5	0.4
Hours worked	0.6	0.4	0.3
Productivity	1.6	1.5	1.6
GDP, constant prices	2.2	1.9	1.9
Household consumption	1.9	2.3	2.3
Government consumption	1.2	1.1	0.9
GDP per capita, constant prices	1.7	1.4	1.6
GDP, current prices	5.8	4.2	4.2

Note. The values for 2018–2050 and 2051–2100 are calculated for the report's main scenario.

Sources: Statistics Sweden and NIER.

Tables

Data for additional variables and longer time series can be found on the NIER's website at www.konj.se/english/data-sets.

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The Global Economy 2019–2020

Table A1 Global Output

Per cent of global GDP at purchasing power parity and percentage change, constant prices, respectively

	Weight 2017	2014	2015	2016	2017	2018	2019	2020
World		3.6	3.5	3.3	3.7	3.6	3.4	3.4
KIX Weighted ¹	74.7	2.3	2.4	2.3	2.9	2.5	2.0	2.1
US	15.3	2.5	2.9	1.6	2.2	2.9	2.5	1.9
Euro Area	11.6	1.4	2.0	1.9	2.5	1.8	1.2	1.4
Germany	3.3	2.2	1.5	2.2	2.5	1.5	1.0	1.4
France	2.2	1.0	1.0	1.1	2.3	1.5	1.2	1.4
Finland	0.2	-0.6	0.5	2.8	2.7	2.3	1.8	1.6
Japan	4.3	0.3	1.3	0.6	1.9	0.8	0.8	0.6
UK	2.3	2.9	2.3	1.8	1.8	1.4	1.4	1.6
Sweden	0.4	2.7	4.2	2.4	2.4	2.4	1.5	1.4
Norway	0.3	2.1	1.8	0.9	2.4	1.7	1.9	2.0
Denmark	0.2	1.6	2.3	2.4	2.3	1.2	2.0	1.6
China	18.2	7.4	7.0	6.7	6.8	6.7	6.2	6.0
India	7.4	7.2	7.7	8.6	7.0	7.4	7.2	7.6
Brazil	2.5	0.5	-3.5	-3.3	1.1	1.1	1.9	2.7
Rest of the World ²	23.6	3.5	3.2	3.1	2.9	3.3	3.2	3.2
GDP per Capita								
US		1.7	2.1	0.8	1.5	2.2	1.9	1.3
Euro Area		1.2	1.7	1.6	2.3	1.6	0.9	1.2
Japan								
Market Growth								
World ³		3.6	4.3	3.7	5.0	3.1	3.2	3.5
		3.6	3.5	3.3	3.7	3.6	3.4	3.4

¹ KIX weighted GDP is the weighted average of GDP growth in the 32 countries included in the KIX effective krona exchange rate index. ² The rest of the world is defined here as countries that are not part of the KIX aggregate, that is, not belonging to Sweden's 32 most important trading partners. ³ World market growth refers to total import demand in the countries to which Sweden exports, each country weighted by its share of Swedish goods exports.

Note. The figures for GDP are the calendar-adjusted change expressed in constant prices. The aggregates are calculated using time-varying purchasing power parity GDP weights from the IMF.

Sources: IMF, OECD, Eurostat, Macrobond and NIER.

Table A2 Global Inflation

Percentage change in CPI

	2013	2014	2015	2016	2017	2018	2019	2020
US	1.5	1.6	0.1	1.3	2.1	2.4	2.0	2.2
Euro Area	1.3	0.4	0.2	0.2	1.5	1.8	1.4	1.5
Germany	1.6	0.8	0.7	0.3	1.7	1.9	1.6	1.6
France	1.0	0.6	0.1	0.3	1.2	2.1	1.4	1.5
Finland	2.2	1.2	-0.2	0.4	0.8	1.2	1.3	1.5
Japan	0.3	2.8	0.8	-0.1	0.5	1.0	0.9	1.4
UK	2.3	1.5	0.4	1.0	2.6	2.3	2.1	2.1
Sweden	0.4	0.2	0.7	1.1	1.9	2.0	1.7	1.5
Norway	2.0	1.9	2.0	3.9	1.9	3.0	2.4	1.9
Denmark	0.5	0.3	0.2	0.0	1.1	0.7	1.3	1.6
China	2.6	1.9	1.4	2.0	1.6	2.1	2.1	2.2
India	10.9	6.4	5.9	4.9	2.5	4.9	4.5	4.7
Brazil	6.2	6.3	9.0	8.7	3.4	3.7	4.1	4.0

Note. The CPI values for the EU countries and Norway refer to harmonised indices of consumer prices (HICP). The OECD aggregate includes national CPI series only. CPI for the United Kingdom refers to CPIH, including owner occupiers' housing costs. The aggregate for the euro area is weighted using consumption weights from Eurostat and the OECD aggregate using consumption weights from the OECD.

Sources: OECD, Eurostat, Macrobond and NIER.

Table A3 Selected Indicators for the Euro Area

EUR billion, current prices, and percentage change, constant prices, respectively

	Level 2017	2014	2015	2016	2017	2018	2019	2020
Household Consumption Expenditure	6 061	0.9	1.8	1.9	1.8	1.3	1.1	1.2
General Government Consumption Expenditure	2 280	0.7	1.3	1.8	1.2	1.0	1.2	0.9
Gross Fixed Capital Formation	2 306	1.7	4.6	4.0	2.9	3.1	2.9	2.7
Stockbuilding ¹	43	0.3	0.0	0.1	0.0	0.2	-0.1	0.0
Exports	5 302	4.7	6.3	3.0	5.5	3.0	2.7	2.9
Imports		4.8	7.5	4.2	4.1	2.9	3.2	3.1
GDP	11 211	1.4	2.0	1.9	2.5	1.8	1.2	1.4
HICP ²		0.4	0.2	0.2	1.5	1.8	1.4	1.5
Unemployment ³		11.6	10.9	10.0	9.1	8.2	7.7	7.6
Policy Rate ⁴		0.05	0.05	0.00	0.00	0.00	0.00	0.25
10-Year Government Bond Yield ⁵		1.2	0.5	0.1	0.4	0.5	0.2	0.7
USD/EUR ⁶		1.33	1.11	1.11	1.13	1.18	1.14	1.14

¹ Change in per cent of GDP the previous year. ² Percentage change. ³ Per cent of labour force. ⁴ Refi rate level, per cent, at year-end. ⁵ Level, per cent, Germany. ⁶ Level.

Sources: ECB, Eurostat, Macrobond and NIER.

Table A4 Selected Indicators for the US

USD billion, current prices, and percentage change, constant prices, respectively

	Level 2017	2014	2015	2016	2017	2018	2019	2020
Household Consumption Expenditure	13 321	2.9	3.7	2.7	2.5	2.6	2.6	2.1
General Government Consumption Expenditure	2 731	-0.8	1.6	1.5	-0.1	1.3	1.5	1.7
Gross Fixed Capital Formation	3 986	4.9	3.3	1.6	4.0	4.9	3.7	3.6
Stockbuilding ¹	25	-0.1	0.3	-0.6	0.0	0.1	0.2	-0.3
Exports	2 350	4.3	0.6	-0.1	3.0	3.9	2.4	3.0
Imports		5.1	5.5	1.9	4.6	4.6	3.9	3.3
GDP	19 485	2.5	2.9	1.6	2.2	2.9	2.5	1.9
CPI ²		1.6	0.1	1.3	2.1	2.4	2.0	2.2
Unemployment ³		6.2	5.3	4.9	4.4	3.9	3.6	3.8
Policy Rate ⁴		0.25	0.50	0.75	1.50	2.50	2.50	2.75
10-year Government Bond Yield ⁵		2.5	2.1	1.8	2.3	2.9	2.7	2.9
USD/EUR ⁶		1.33	1.11	1.11	1.13	1.18	1.14	1.14

¹ Change in per cent of GDP the previous year. ² Percentage change. ³ Per cent of labour force. ⁴ Federal Funds target rate level, per cent, at year-end. ⁵ Level, per cent. ⁶ Level.

Sources: US Bureau of Economic Analysis, US Bureau of Labor Statistics, Federal Reserve, Macrobond and NIER.

Table A5 Scenario for the Global Economy

Percentage change and per cent, respectively

	2016	2017	2018	2019	2020	2021	2022	2023
GDP, OECD	3.3	3.7	3.6	3.4	3.4	3.3	3.3	3.3
GDP, Euro Area	1.6	2.2	2.9	2.5	1.9	1.5	1.5	1.5
GDP, US	1.9	2.5	1.8	1.2	1.4	1.3	1.3	1.3
GDP, Emerging Markets	3.1	2.9	3.3	3.2	3.2	2.8	2.8	2.8
GDP, Global	1.3	2.1	2.4	2.0	2.2	2.3	2.3	2.3
HICP, Euro Area	0.2	1.5	1.8	1.4	1.5	1.8	1.9	1.9
CPI, US	0.75	1.50	2.50	2.50	2.75	2.75	3.00	3.00
Policy Rate, Euro Area	0.00	0.00	0.00	0.00	0.25	0.75	1.00	1.25
Policy Rate, US	-0.14	-0.04	0.10	0.14	0.49	0.78	1.11	1.41
Policy Rate, KIX6-Weighted	-0.4	-0.3	-0.4	-0.4	0.1	0.4	0.8	1.1
Overnight Rate, Euro Area (Eonia)	3.3	3.7	3.6	3.4	3.4	3.3	3.3	3.3

Note. Policy rates refer to year-end values. KIX6-weighted policy rate refers to an average of Eonia (for the euro area) and policy rates in the US, Norway, UK, Denmark and Japan. Other aggregates are calculated using the IMF's purchasing power parity GDP weights.

Sources: IMF, OECD, Macrobond and NIER.

The Swedish Economy 2019–2020

Table A6 GDP by Expenditure

SEK billion, current prices, and percentage change, constant prices, respectively

	Level 2017	2014	2015	2016	2017	2018	2019	2020
Household Consumption Expenditure ¹	2 041	2.1	3.1	2.9	2.2	1.2	1.8	2.0
Goods	927	2.6	4.1	3.7	1.3	1.2	1.1	1.5
Services Excl. Housing	663	3.1	3.8	3.7	2.2	1.1	2.6	2.6
Housing	395	2.1	1.7	2.4	3.8	3.2	4.1	2.9
General Government Consumption Expenditure	1 196	1.5	2.4	3.6	0.0	0.9	0.5	1.4
Central Government	305	1.7	2.0	2.1	−1.6	0.5	−0.3	1.1
Local Government	892	1.5	2.6	4.1	0.6	1.0	0.7	1.5
Gross Fixed Capital Formation ²	1 143	5.4	6.7	4.2	6.0	3.3	−0.1	0.5
Business Sector Excl. Housing	681	4.2	5.4	1.0	4.4	4.1	2.0	0.9
Industry	176	9.0	−15.7	0.3	5.0	−1.5	4.4	1.3
Other Goods Producers	108	3.1	0.2	−2.8	4.8	3.3	3.3	0.9
Service Producers Excl. Housing	397	1.7	20.6	2.4	4.0	6.8	0.6	0.7
Housing	260	15.6	18.0	10.9	11.6	−0.7	−7.6	−1.1
General Government	196	1.6	0.3	8.1	4.9	5.6	2.2	0.8
Domestic Demand Excl. Stockbuilding	4 380	2.7	3.8	3.4	2.6	1.6	0.9	1.5
Stockbuilding ³	30	0.2	0.4	−0.1	0.1	0.4	−0.4	−0.1
Total Domestic Demand	4 410	2.9	4.2	3.2	2.7	2.0	0.5	1.3
Exports	2 076	5.3	5.7	3.0	3.2	3.5	3.6	3.0
Exports of Goods	1 430	3.1	3.5	2.3	5.0	4.3	3.7	2.7
Processed Goods	1 132	1.6	3.9	2.0	6.3	5.4	4.2	3.0
Raw Materials	298	8.6	2.2	3.4	−0.5	0.4	1.6	1.6
Exports of Services	646	10.4	10.7	4.4	−0.3	1.8	3.5	3.6
Total Demand	6 486	3.6	4.7	3.2	2.9	2.5	1.5	1.9
Imports	1 908	6.3	5.2	4.3	4.8	2.9	1.7	2.5
Imports of Goods	1 322	4.6	5.4	5.9	4.0	4.7	2.5	2.6
Processed Goods	984	4.8	6.1	5.9	5.7	4.8	2.7	3.2
Raw Materials	337	4.2	3.7	5.9	−1.1	4.4	1.9	0.8
Imports of Services	586	10.4	4.9	0.9	6.4	−1.2	−0.4	2.1
Net Exports ³	169	−0.2	0.4	−0.4	−0.5	0.4	1.0	0.4
GDP	4 579	2.6	4.5	2.7	2.1	2.3	1.5	1.6
GDP per Capita ⁴	455	1.6	3.4	1.4	0.7	1.2	0.5	0.7

¹ Including non-profit institutions serving households and the net of household consumption abroad and foreign consumption in Sweden. ² Including non-profit institutions serving households. ³ Change in per cent of GDP the previous year. ⁴ SEK, thousand, current prices, and percentage change, constant prices, respectively.

Note. There is a break in the time series between 2014 and 2015 due to changes in the industry classification of Ericsson AB. At the aggregated level, more activities are therefore classified in the service sector (SNI 45–98) and fewer in the manufacturing industry (SNI 05–33).

Sources: Statistics Sweden and NIER.

Table A7 Household Income, Consumption Expenditure and Saving

SEK billion, current prices, and percentage change, respectively

	Level 2017	2017	2018	2019	2020	2021	2022	2023
Total Earnings, Adjusted for External Transactions	1 811	4.7	4.9	4.0	3.2	3.1	3.6	3.9
Hourly Earnings (according to national accounts) ¹		2.5	2.2	2.6	2.9	2.9	3.1	3.3
Hours Worked ^{1,2}		2.3	2.7	1.3	0.3	0.2	0.4	0.6
Transfers From Government Sector, Net	626	2.4	2.9	2.4	2.0	2.0	2.2	2.7
Property Income, Net	298	-3.6	1.4	0.2	1.3	-3.7	-2.0	2.6
Other Income, Net ³	321	6.1	5.9	4.4	1.6	-3.0	7.4	5.3
Income Before Taxes⁴	3 056	3.5	4.3	3.3	2.6	1.6	3.2	3.7
Direct Taxes ⁵	814	0.1	1.1	0.5	-0.2	-0.3	0.1	0.0
Disposable Income	2 242	3.6	5.3	3.8	2.4	1.3	3.3	3.7
Consumer Prices ⁶		1.7	2.3	1.7	1.4	1.8	2.0	2.0
Real Disposable Income	2 242	1.8	2.9	2.1	0.9	-0.5	1.2	1.7
Per Capita ⁷	223	0.5	1.8	1.1	0.0	-1.5	0.3	0.8
Consumption Expenditure⁸	2 041	2.2	1.2	1.8	2.0	1.7	1.8	2.0
Saving ⁹	362	15.1	17.1	17.1	16.1	14.1	13.4	13.0
Own Saving ⁹	201	9.0	10.5	10.8	9.8	7.7	7.2	6.9
Net Lending ⁹	267	11.1	13.3	13.9	13.0	11.0	10.3	9.9

¹ Calendar-adjusted values. ² Employees only. ³ This also includes computational calculations of transfers to households through altered taxes and/or transfers, see table A23. ⁴ Growth in income before taxes is calculated as a weighted sum of the growth rates for total earnings, transfers, capital income and other income. ⁵ Change in per cent of income before taxes, with reverse sign. ⁶ Implicit price index for household consumption expenditure. ⁷ SEK thousand. ⁸ Constant prices, reference year 2015. ⁹ SEK billion, current prices, and per cent of disposable income, respectively. Own saving excludes occupational and premium pensions.

Sources: Statistics Sweden and NIER.

Table A8 Current Account and Net Lending

SEK billion, current prices, and per cent, respectively

	2013	2014	2015	2016	2017	2018	2019	2020
Net Exports, Goods	122	123	127	96	109	99	130	124
Net Exports, Services	48	47	77	99	60	64	85	96
Earnings, Net	17	18	14	9	7	8	9	9
Investment Income, Net	62	60	26	19	60	66	51	51
Transfers etc., Net	-58	-62	-64	-54	-66	-76	-78	-82
Current Account Balance	192	187	180	167	171	163	197	198
<i>Per cent of GDP</i>	<i>5.1</i>	<i>4.7</i>	<i>4.3</i>	<i>3.8</i>	<i>3.7</i>	<i>3.4</i>	<i>4.0</i>	<i>3.9</i>
Capital Transfers	-9	-5	-8	-3	-3	0	-3	-3
Net Lending	183	181	172	165	168	162	194	195
<i>Per cent of GDP</i>	<i>4.8</i>	<i>4.6</i>	<i>4.1</i>	<i>3.8</i>	<i>3.7</i>	<i>3.4</i>	<i>3.9</i>	<i>3.8</i>

Sources: Statistics Sweden and NIER.

Table A9 GNI

SEK billion, current prices, thousands, ratio and annual percentage change, respectively

	Level 2017	2014	2015	2016	2017	2018	2019	2020
GNI	4 649	4.3	5.4	4.0	5.3	4.7	3.2	3.1
Deflator, Domestic Use		1.7	1.7	1.6	2.5	2.8	2.0	1.8
Real GNI		2.5	3.7	2.4	2.8	1.8	1.1	1.3
Population ¹	10 058	1.0	1.1	1.3	1.4	1.1	1.0	1.0
Real GNI per Capita²	462	1.5	2.6	1.2	1.4	0.7	0.2	0.3

¹Thousands, ²SEK thousand.

Sources: Statistics Sweden and NIER.

Table A10 Production

SEK billion, current prices, and percentage change, constant prices, respectively, calendar-adjusted values

	Level 2017	2014	2015	2016	2017	2018	2019	2020
Goods Producers	1 064	0.9	-2.3	0.6	4.1	2.7	1.2	1.4
Of Which: Industry	643	-0.4	-5.5	1.6	4.2	3.0	2.3	1.9
Construction	257	3.0	5.3	0.7	6.9	4.4	-0.8	0.4
Service Producers	2 105	4.5	8.8	3.5	2.2	3.2	2.3	1.8
Business Sector	3 170	3.2	5.0	2.5	2.8	3.0	1.9	1.7
General Government	826	1.2	0.7	1.5	0.9	0.5	0.5	0.4
GDP at Basic Prices¹	4 050	2.8	4.0	2.3	2.4	2.5	1.6	1.4
Taxes/Subsidies on Products	529	2.2	5.5	3.5	1.9	2.2	0.6	1.3
GDP at Market Prices	4 579	2.7	4.2	2.4	2.4	2.4	1.5	1.4

¹Including production in non-profit institutions serving households.

Note. Production refers here to value added. There is a break in the time series between 2014 and 2015 due to changes in the industry classification of Ericsson AB. At the aggregated level, more activities are therefore classified in the service sector (SNI 45-98) and fewer in the manufacturing industry (SNI 05-33).

Sources: Statistics Sweden and NIER.

Table A11 Hours Worked

Million hours and percentage change, respectively, calendar-adjusted values

	Level 2017	2014	2015	2016	2017	2018	2019	2020
Goods Producers	1 926	0.3	-2.1	0.5	2.0	2.5	0.8	0.1
Of Which: Industry	984	-1.1	-4.2	-0.8	1.4	1.9	0.9	0.1
Construction	620	2.5	1.7	5.0	3.6	5.1	1.5	0.1
Services Producers	3 771	2.5	2.4	2.2	2.0	2.6	1.7	0.3
Business Sector	5 697	1.7	0.8	1.6	2.0	2.6	1.4	0.3
General Government	2 195	2.1	0.7	3.1	2.4	2.1	0.9	0.5
Total Economy¹	8 061	1.8	0.9	2.0	2.1	2.4	1.2	0.3

¹Including non-profit institutions serving households.

Note. There is a break in the time series between 2014 and 2015 due to changes in the industry classification of Ericsson AB. At the aggregated level, more activities are therefore classified in the service sector (SNI 45-98) and fewer in the manufacturing industry (SNI 05-33).

Sources: Statistics Sweden and NIER.

Table A12 Productivity

SEK per hour, basic prices, and percentage change, constant prices, respectively, calendar-adjusted values

	Level							
	2017	2014	2015	2016	2017	2018	2019	2020
Goods Producers	553	0.6	-0.2	0.1	2.1	0.2	0.4	1.3
Of Which: Industry	653	0.7	-1.3	2.4	2.8	1.0	1.4	1.8
Construction	415	0.5	3.5	-4.1	3.2	-0.7	-2.3	0.3
Service Producers	558	2.0	6.2	1.2	0.2	0.6	0.6	1.5
Business Sector	556	1.5	4.1	0.9	0.8	0.5	0.5	1.4
General Government	376	-0.9	0.0	-1.6	-1.5	-1.6	-0.4	-0.1
Total Economy¹	502	1.0	3.1	0.3	0.3	0.1	0.4	1.1

¹ Including production in non-profit institutions serving households.

Note. There is a break in the time series between 2014 and 2015 due to changes in the industry classification of Ericsson AB. At the aggregated level, more activities are therefore classified in the service sector (SNI 45-98) and fewer in the manufacturing industry (SNI 05-33).

Sources: Statistics Sweden and NIER.

Table A13 The Labour Market

Thousands of people and percentage change, respectively, unless otherwise indicated

	Level							
	2017	2014	2015	2016	2017	2018	2019	2020
Hours Worked ¹	8 061	1.8	0.9	2.0	2.1	2.4	1.2	0.3
Average Hours Worked for Employed ²	30.9	0.3	-0.5	0.4	-0.2	0.6	0.1	-0.1
Number of Employed	5 022	1.4	1.4	1.5	2.3	1.8	1.1	0.5
Employment Rate ³		66.2	66.7	67.1	67.8	68.5	68.9	68.8
Labour Force	5 380	1.3	0.8	1.0	2.0	1.4	1.1	0.6
Labour Force Participation Rate ⁴		71.9	72.0	72.1	72.7	73.1	73.5	73.5
Unemployment ⁵	358	7.9	7.4	6.9	6.7	6.3	6.3	6.4
Population Aged 15-74	7 403	0.7	0.7	0.9	1.1	0.8	0.6	0.5

¹ Million hours, calendar-adjusted values. ² Hours per week, calendar-adjusted values. ³ Number of employed in per cent of the population aged 15-74. ⁴ Number of people in the labour force in per cent of the population aged 15-74. ⁵ Per cent of labour force.

Sources: Statistics Sweden and NIER.

Table A14 Hourly Earnings According to the Short-Term Earnings Statistics

Per cent and percentage change, respectively

	Weight							
	2017	2014	2015	2016	2017	2018	2019	2020
Business Sector	68	2.9	2.3	2.3	2.0	2.5	2.6	2.8
Industry	15	2.5	2.4	2.0	2.1	2.9	2.7	3.0
Construction	7	3.1	1.6	2.7	1.8	3.2	3.0	3.0
Services	46	2.9	2.3	2.3	2.0	2.2	2.6	2.8
Local Government	26	2.8	2.7	2.7	3.1	2.7	2.8	2.9
Central Government	6	2.3	2.6	2.4	2.3	2.8	2.9	2.9
Total	100	2.8	2.4	2.4	2.3	2.6	2.7	2.9
Real Hourly Earnings (CPI) ¹		3.0	2.5	1.4	0.5	0.6	0.9	1.0
Real Hourly Earnings (CPIF) ²		2.3	1.6	1.0	0.4	0.4	1.0	1.3

¹ Deflated by the CPI. ² Deflated by the CPI with constant mortgage rates (CPIF).

Sources: National Mediation Office, Statistics Sweden and NIER.

Table A15 Hourly Earnings and Labour Costs in the Business Sector According to the National Accounts

SEK per hour, per cent and percentage change, respectively, calendar-adjusted values

	Level 2017	2014	2015	2016	2017	2018	2019	2020
Hourly Earnings	241	1.9	3.1	2.1	2.5	2.2	2.6	2.8
Employers' Social Contributions ¹ (per cent of earnings)		41.4	42.0	43.2	43.1	43.8	43.9	43.9
Hourly Labour Costs ²	345	2.0	3.6	2.9	2.4	2.7	2.7	2.8
Productivity ³		1.4	3.7	0.1	0.6	0.1	0.4	1.4
Unit Labour Costs		0.6	-0.1	2.8	1.8	2.6	2.3	1.4

¹ Employers' social contributions and payroll taxes. ² Earnings and employers' social contributions. ³ Value added divided by hours worked by employees.

Sources: Statistics Sweden and NIER.

Table A16 Supply and Use Price Deflators

Per cent and percentage change, respectively

	Weight 2017	2014	2015	2016	2017	2018	2019	2020
GDP	70.6	1.8	2.1	1.6	2.3	2.2	2.1	1.4
General Government ^{1,2}	13.6	2.6	3.2	3.3	4.3	4.3	2.9	2.7
Business Sector ²	48.9	1.7	1.9	1.1	1.7	1.6	1.9	1.1
Product Taxes, Net	8.2	0.9	1.0	2.3	2.2	2.5	1.3	1.5
Imports	29.4	1.8	1.3	-1.7	3.9	6.2	2.1	0.0
Processed Goods	15.2	2.4	4.0	-1.4	2.3	4.0	2.3	-0.7
Raw Materials	5.2	-1.5	-10.2	-4.6	12.5	14.8	-0.1	-0.6
Services	9.0	3.2	4.4	-0.3	2.1	5.0	3.2	1.7
Supply/Use³	100.0	1.8	1.8	0.7	2.7	3.4	2.1	1.0
General Government Consumption Expenditure	18.4	2.4	2.9	2.5	3.7	3.8	2.7	2.6
Household Consumption Expenditure	31.5	1.1	0.9	1.0	1.7	2.3	1.7	1.4
Gross Fixed Capital Formation	17.6	2.2	2.0	1.7	2.7	2.9	1.8	1.5
Exports	32.0	2.0	2.1	-1.2	3.3	4.6	2.1	-0.5
Processed Goods	17.5	2.8	4.4	-1.3	1.8	3.5	2.2	-1.0
Raw Materials	4.6	-0.4	-8.1	-2.5	13.8	14.1	1.7	-2.8
Services	10.0	1.8	3.2	-0.3	1.6	2.2	2.0	1.5

¹ Including non-profit institutions serving households. ² Value added price deflator calculated at basic prices. ³ Including stock-building.

Sources: Statistics Sweden and NIER.

Table A17 Business Sector Prices, Costs and Profits

SEK billion, percentage change and per cent, respectively

	Level 2017	2014	2015	2016	2017	2018	2019	2020
Value Added, Constant Prices ¹		3.1	5.2	2.7	2.6	3.0	1.9	1.9
Value-Added Deflator		1.7	1.9	1.1	1.7	1.6	1.9	1.1
Value Added, Current Prices ²	3 168	5.0	7.0	3.7	4.4	4.8	3.9	3.0
Hours Worked, Employees		1.5	1.9	3.1	1.6	2.6	1.4	0.9
Hourly Labour Costs ³	345	2.3	2.9	2.2	3.1	3.0	2.8	2.1
Total Labour Costs ⁴	1 835	3.8	4.8	5.4	4.7	5.7	4.2	3.1
Gross Profit	1 333	6.6	10.0	1.5	4.1	3.4	3.4	3.0
Profit Share		42.0	43.2	42.2	42.1	41.6	41.4	41.3
Adjusted Profit Share ⁵		34.6	36.5	35.9	35.8	35.4	35.3	35.4

¹ Calculated at basic prices. ² Calculated at factor prices. ³ SEK. ⁴ Including wage-related other taxes on production for employees. ⁵ Excluding one- and two-family houses and secondary homes, and adjusted for the number of hours worked by the self-employed.

Sources: Statistics Sweden and NIER.

Table A18 Consumer Prices

Per cent and percentage change, respectively

	Weight 2017	2014	2015	2016	2017	2018	2019	2020
CPI	100	-0.2	0.0	1.0	1.8	2.0	1.8	1.9
Mortgage Interest Costs, Mortgage Interest Rate		-11.5	-20.8	-13.1	-3.0	-4.9	2.5	7.8
CPIF	100	0.5	0.9	1.4	2.0	2.1	1.7	1.6
Goods	44	-0.1	1.2	0.4	0.4	0.6	1.1	1.0
Services	30	0.5	1.1	2.0	2.8	1.9	2.1	2.3
Housing Excl. Mortgage Interest Costs and Energy	15	1.7	1.5	1.9	1.4	1.8	2.0	1.9
Energy	7	-2.5	-4.9	1.3	5.8	10.5	2.6	-0.1
Mortgage Interest Costs, Capital Stock	3	5.0	5.4	5.8	9.4	7.1	5.6	4.9
CPIF Excl. Energy	93	0.7	1.4	1.4	1.7	1.4	1.7	1.7
HICP		0.2	0.7	1.1	1.9	2.0	1.7	1.5
Crude Oil (Brent) ¹		99.6	53.5	45.1	54.8	71.5	66.6	66.7

¹ Dollars per barrel, annual average.

Note. The CPI's mortgage interest cost component is the product of the mortgage interest rate and the capital stock.

Sources: Intercontinental Exchange, Statistics Sweden, Macrobond and NIER.

Scenario for the Swedish Economy 2019–2023

Table A19 Resource Utilisation

Percentage change, calendar-adjusted values, unless otherwise indicated

	2016	2017	2018	2019	2020	2021	2022	2023
Labour Market								
Equilibrium Unemployment ¹	6.7	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Actual Unemployment ²	6.9	6.7	6.3	6.3	6.4	6.5	6.7	6.8
Potential Hours Worked	1.1	1.5	1.6	1.2	0.8	0.7	0.7	0.6
Of Which: Potential Employment	1.1	1.4	1.4	1.0	0.8	0.7	0.7	0.7
Actual Hours Worked	2.0	2.1	2.4	1.2	0.3	0.2	0.4	0.6
Labour Market Gap ³	-0.4	0.2	1.0	1.2	0.7	0.3	0.0	0.0
Productivity								
Potential Productivity	0.5	0.5	0.5	0.8	1.1	1.1	1.1	1.2
Of Which: Potential Productivity, Business Sector	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6
Actual Productivity	0.5	0.2	0.0	0.3	1.0	1.1	1.2	1.2
Productivity Gap ⁴	1.3	1.0	0.6	0.0	0.0	0.0	0.0	0.0
GDP								
Potential GDP	1.7	2.0	2.0	2.0	1.9	1.7	1.8	1.9
Actual GDP	2.4	2.4	2.4	1.5	1.4	1.3	1.6	1.9
Output Gap ⁵	0.9	1.2	1.6	1.2	0.7	0.3	0.0	0.0

¹ Level, per cent of potential labour force. ² Level, per cent of labour force. ³ Difference between actual and potential hours worked in per cent of potential hours worked. ⁴ Difference between actual and potential productivity in per cent of potential productivity. ⁵ Difference between actual and potential GDP in per cent of potential GDP.

Sources: Statistics Sweden and NIER.

Table A20 Scenario for the Swedish Economy

Percentage change unless otherwise indicated

	2016	2017	2018	2019	2020	2021	2022	2023
Population	1.3	1.4	1.1	1.0	1.0	1.0	0.9	0.9
Population Aged 15–74	0.9	1.1	0.8	0.6	0.5	0.5	0.5	0.5
GDP ¹	2.4	2.4	2.4	1.5	1.4	1.3	1.6	1.9
GDP per Capita ¹	1.2	1.0	1.3	0.5	0.4	0.4	0.7	1.0
Hours Worked ¹	2.0	2.1	2.4	1.2	0.3	0.2	0.4	0.6
Productivity	0.3	0.3	0.1	0.4	1.1	1.1	1.2	1.2
Labour Force	1.0	2.0	1.4	1.1	0.6	0.6	0.7	0.7
Employment	1.5	2.3	1.8	1.1	0.5	0.5	0.5	0.7
Employment Rate ²	67.1	67.8	68.5	68.9	68.8	68.8	68.8	68.9
Unemployment ³	6.9	6.7	6.3	6.3	6.4	6.5	6.7	6.8
Hourly Earnings ⁴	2.4	2.3	2.6	2.7	2.9	2.9	3.1	3.3
Hourly Labor Cost ¹	2.9	2.5	2.6	2.6	2.8	2.9	3.1	3.3
Unit Labour Cost	3.2	2.3	2.8	2.3	1.8	1.8	2.0	2.1
CPI	1.0	1.8	2.0	1.8	1.9	2.2	2.4	2.3
CPIF	1.4	2.0	2.1	1.7	1.6	1.8	2.0	2.0
Government Net Lending ⁵	1.0	1.4	0.7	0.2	0.3	0.4	0.2	0.3
Structural Net Lending ⁶	0.3	0.5	–0.1	–0.1	0.0	0.3	0.3	0.3

¹ Calendar-adjusted values. ² Per cent of population aged 15–74 ³ Per cent of labour force. ⁴ According to the short-term earnings statistics. ⁵ Per cent of GDP. ⁶ Per cent of potential GDP.

Sources: National Mediation Office, Sveriges Riksbank, Statistics Sweden and NIER.

Table A21 GDP and Demand

Percentage change, constant prices, calendar-adjusted values

	2016	2017	2018	2019	2020	2021	2022	2023
Household Consumption Expenditure	2.8	2.3	1.2	1.8	1.9	1.7	1.8	2.1
General Government Consumption Expenditure	3.2	0.3	1.1	0.5	1.0	1.3	1.4	1.4
Gross Fixed Capital Formation	3.8	6.4	3.4	0.0	0.1	0.8	1.4	2.0
<i>Domestic Demand Excl. Stockbuilding</i>	3.2	2.8	1.7	1.0	1.2	1.3	1.6	1.9
Stockbuilding ¹	–0.1	0.1	0.4	–0.4	–0.1	0.0	0.0	0.0
<i>Total Domestic Demand</i>	3.0	2.9	2.1	0.6	1.1	1.3	1.6	1.9
Exports	2.5	3.7	3.7	3.6	2.6	2.6	2.9	3.0
<i>Total Demand</i>	2.9	3.2	2.6	1.6	1.6	1.7	2.0	2.2
Imports	3.9	5.2	3.1	1.7	2.1	2.7	3.0	3.1
<i>Net Exports¹</i>	–0.4	–0.4	0.4	1.0	0.3	0.1	0.1	0.1
GDP	2.4	2.4	2.4	1.5	1.4	1.3	1.6	1.9

¹ Change in per cent of GDP the previous year.

Sources: Statistics Sweden and NIER.

Table A22 Interest and Exchange Rates

Per cent, index 18 November 1992=100 and SEK per currency unit, respectively

	2016	2017	2018	2019	2020	2021	2022	2023
At Year-End								
Repo Rate	-0.50	-0.50	-0.50	-0.25	0.00	0.50	0.75	1.25
Annual Average								
Repo Rate	-0.5	-0.5	-0.5	-0.3	0.0	0.3	0.6	0.9
5-Year Government Bond Yield	-0.2	-0.1	0.1	0.0	0.4	0.9	1.3	1.8
10-Year Government Bond Yield	0.5	0.7	0.7	0.5	0.9	1.4	1.8	2.2
Effective Krona Exchange Rate Index (KIX)	111.7	112.9	117.6	120.6	119.6	118.2	115.9	113.4
EUR Exchange Rate	9.5	9.6	10.3	10.4	10.4	10.2	10.1	9.9
USD Exchange Rate	8.6	8.5	8.7	9.2	9.1	9.0	8.8	8.5

Sources: Sveriges Riksbank, Macrobond and NIER.

Public Finances 2019–2023

Table A23 General Government Finances

SEK billion and percentage of GDP, respectively, current prices

	2016	2017	2018	2019	2020	2021	2022	2023
Revenue	2 181	2 281	2 372	2 418	2 494	2 573	2 665	2 774
<i>Per cent of GDP</i>	49.7	49.8	49.5	48.7	48.8	48.6	48.6	48.7
Taxes and Duties	1 933	2 025	2 093	2 134	2 203	2 270	2 347	2 437
<i>Per cent of GDP</i>	44.1	44.2	43.7	43.0	43.1	42.8	42.8	42.8
<i>Tax-to-GDP Ratio¹</i>	44.2	44.4	43.8	43.2	43.2	43.0	42.9	42.9
Property Income	65	64	75	76	77	83	92	103
Other Revenue	183	192	203	208	214	220	226	234
Expenditure	2 137	2 216	2 339	2 408	2 490	2 592	2 684	2 789
<i>Per cent of GDP</i>	48.7	48.4	48.8	48.5	48.7	48.9	48.9	49.0
Consumption Expenditure	1 154	1 196	1 252	1 292	1 344	1 413	1 472	1 535
Transfers	767	787	827	848	869	889	912	938
Households	624	639	658	673	687	700	716	735
Corporations	82	82	90	91	94	97	101	105
Abroad	61	66	79	84	88	91	95	98
Capital Formation	186	205	227	234	241	246	251	258
Property Expenditure	30	29	33	35	37	43	50	58
Technical Transfer to Households²	0	0	0	0	-9	-37	-29	-30
Net Lending³	44	65	32	10	13	19	11	15
<i>Per cent of GDP</i>	1.0	1.4	0.7	0.2	0.3	0.4	0.2	0.3
Primary Net Lending⁴	9	29	-10	-31	-27	-21	-31	-31
<i>Per cent of GDP</i>	0.2	0.6	-0.2	-0.6	-0.5	-0.4	-0.6	-0.5
Structural Net Lending	13	22	-4	-7	-2	17	18	19
<i>Per cent of potential GDP</i>	0.3	0.5	-0.1	-0.1	0.0	0.3	0.3	0.3
Maastricht Debt	1 858	1 870	1 864	1 718	1 758	1 785	1 820	1 861
<i>Per cent of GDP</i>	42.4	40.8	38.9	34.6	34.4	33.7	33.2	32.7
GDP, Current Prices	4 385	4 579	4 791	4 961	5 115	5 300	5 488	5 693
Potential GDP, Current Prices	4 348	4 523	4 714	4 905	5 081	5 286	5 487	5 693
Net Financial Wealth	990	1 188	1 182	1 361	1 391	1 461	1 524	1 593
<i>Per cent of GDP</i>	22.6	26.0	24.7	27.4	27.2	27.6	27.8	28.0

¹ The tax-to-GDP ratio is calculated by dividing total taxes, including EU taxes, by GDP. ² Technical transfer to households in the form of changes to taxes and/or transfer payments. ³ Net lending is calculated as income minus expenses plus transfers to households. ⁴ Primary net lending is calculated as net lending minus net capital. Net capital is capital income minus capital expenditures.

Sources: Statistics Sweden and NIER.

Table A24 Central government finances

SEK billion and percentage of GDP, respectively, current prices

	2016	2017	2018	2019	2020	2021	2022	2023
Revenue	1 157	1 206	1 247	1 254	1 291	1 334	1 382	1 438
Taxes and Duties	1 013	1 063	1 093	1 097	1 132	1 166	1 204	1 249
Property Income	24	22	28	28	26	30	34	40
Other Revenue	120	122	126	129	133	138	143	149
Expenditure	1 092	1 131	1 186	1 207	1 233	1 267	1 301	1 342
Transfers	678	710	746	755	763	774	787	805
Old-Age Pension System ¹	26	25	24	23	24	24	24	25
Local Government Sector	247	272	279	280	279	280	282	286
Households	300	302	311	316	319	323	328	336
Corporations	48	50	57	56	58	60	63	65
Abroad	57	62	75	80	84	87	90	94
Consumption Expenditure	296	301	313	319	331	347	359	374
Capital Formation	93	97	101	107	111	115	119	124
Property Expenditure	25	23	26	27	28	31	35	39
<i>Of which interest expenditure</i>	<i>20</i>	<i>18</i>	<i>20</i>	<i>21</i>	<i>22</i>	<i>25</i>	<i>28</i>	<i>32</i>
Technical Transfer to Households²	0	0	0	0	16	25	55	76
Net Lending	65	75	61	46	42	41	26	20
<i>Per cent of GDP</i>	<i>1.5</i>	<i>1.6</i>	<i>1.3</i>	<i>0.9</i>	<i>0.8</i>	<i>0.8</i>	<i>0.5</i>	<i>0.4</i>
Central Government Debt	1 292	1 265	1 196	1 011	1 012	996	996	1 004
<i>Per cent of GDP</i>	<i>29.5</i>	<i>27.6</i>	<i>25.0</i>	<i>20.4</i>	<i>19.8</i>	<i>18.8</i>	<i>18.1</i>	<i>17.6</i>
Net Financial Wealth	-297	-186	-124	2	12	77	127	171
<i>Per cent of GDP</i>	<i>-6.8</i>	<i>-4.1</i>	<i>-2.6</i>	<i>0.0</i>	<i>0.2</i>	<i>1.5</i>	<i>2.3</i>	<i>3.0</i>

¹ Central government's old-age pension contributions. ² Technical transfer to households in the form of changes to taxes and/or transfer payments. In this table, central government grants to the local government sector are estimated on the basis of unchanged rules. If these grants turn out to be higher than with unchanged rules, the technical transfer from the central government sector to households will decrease correspondingly, at the same time as the technical transfer from local government to the households will increase correspondingly via smaller increases in local government taxes (or larger transfer payments). The total technical transfer from the general government sector to households reported in Table A23 will be unchanged.

Sources: Statistics Sweden, National Debt Office and NIER.

Table A25 Old-Age Pension System Finances

SEK billion and percentage of GDP, respectively, current prices

	2016	2017	2018	2019	2020	2021	2022	2023
Revenue	292	302	318	329	340	349	362	377
Social Insurance Contributions	234	245	256	268	277	285	295	307
Central Government's Old-Age Pension Contributions	26	25	24	23	24	24	24	25
Property Income	31	31	35	35	37	38	40	42
Other Revenue	2	2	2	2	2	2	2	3
Expenditure	288	302	311	321	331	340	349	359
Income Pensions	282	296	304	314	323	332	341	351
Property Expenditure	0	0	1	1	1	1	1	1
Other Expenses	6	6	6	7	7	7	8	8
Net Lending	4	0	6	7	9	9	13	17
<i>Per cent of GDP</i>	<i>0.1</i>	<i>0.0</i>	<i>0.1</i>	<i>0.1</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.3</i>
Net Financial Wealth	1 347	1 435	1 407	1 497	1 548	1 578	1 611	1 650
<i>Per cent of GDP</i>	<i>30.7</i>	<i>31.3</i>	<i>29.4</i>	<i>30.2</i>	<i>30.3</i>	<i>29.8</i>	<i>29.4</i>	<i>29.0</i>

Sources: Statistics Sweden and NIER.

Table A26 Local government finances

SEK billion and percentage of GDP, respectively, current prices

	2016	2017	2018	2019	2020	2021	2022	2023
Revenue	1 015	1 079	1 118	1 149	1 175	1 204	1 238	1 280
Taxes	670	700	726	751	776	800	828	860
Municipal Property Tax	16	17	18	18	19	19	20	21
Central Government Grants incl. VAT Compensation	241	267	274	280	278	279	281	285
Property Income	10	12	12	13	14	16	18	21
Other Revenue	78	83	89	87	89	90	91	93
<i>Average municipal tax rate¹</i>	<i>32.10</i>	<i>32.12</i>	<i>32.12</i>	<i>32.19</i>	<i>32.19</i>	<i>32.19</i>	<i>32.19</i>	<i>32.19</i>
Expenditure	1 040	1 089	1 153	1 193	1 238	1 298	1 350	1 408
Transfers	88	84	85	89	91	93	96	99
Households	43	43	45	45	46	47	49	50
Other	45	41	41	43	44	46	47	49
Consumption Expenditure	854	892	935	969	1 009	1 063	1 108	1 156
Capital Formation	94	108	126	127	130	131	131	134
Property Expenditure	5	5	6	7	8	11	15	19
Technical Transfer to Households²	0	0	0	0	-25	-62	-84	-106
Net Lending	-25	-10	-35	-44	-39	-32	-27	-23
<i>Per cent of GDP</i>	<i>-0.6</i>	<i>-0.2</i>	<i>-0.7</i>	<i>-0.9</i>	<i>-0.8</i>	<i>-0.6</i>	<i>-0.5</i>	<i>-0.4</i>
Net Financial Wealth	-60	-61	-101	-138	-169	-194	-214	-229
<i>Per cent of GDP</i>	<i>-1.4</i>	<i>-1.3</i>	<i>-2.1</i>	<i>-2.8</i>	<i>-3.3</i>	<i>-3.7</i>	<i>-3.9</i>	<i>-4.0</i>

¹ Per cent. ² Technical transfer to households in the form of changes to taxes and/or transfer payments. In this table, central government grants to the local government sector are estimated on the basis of unchanged rules. If these grants turn out to be higher than with unchanged rules, the technical transfer from the local government sector to households will increase accordingly via smaller increases in local government taxes (or larger transfer payments). Since the technical transfer from the central government sector to households will decrease correspondingly, the total technical transfer from the general government sector to households reported in Table A23 will be unchanged.

Sources: Statistics Sweden and NIER.

Table A27 General Government Revenue with Unchanged Tax Rules

Per cent of GDP

	2016	2017	2018	2019	2020	2021	2022	2023
Direct Household Taxes	15.9	16.0	15.4	15.2	15.2	15.0	15.0	15.0
Direct Business Taxes	2.9	3.0	3.1	2.8	2.8	2.9	2.9	2.9
Employers' Social Contributions ¹	12.1	12.2	12.2	12.2	12.2	12.2	12.2	12.2
VAT	9.2	9.3	9.3	9.2	9.2	9.2	9.2	9.2
Excise	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1
Other Taxes	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.7
Tax-to-GDP Ratio²	44.2	44.4	43.8	43.2	43.2	43.0	42.9	42.9
EU Taxes ³	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Other Revenue ⁴	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1
General Government Primary Revenue	48.2	48.4	47.9	47.2	47.2	47.0	46.9	46.9
Property Income	1.5	1.4	1.6	1.5	1.5	1.6	1.7	1.8
Total Revenue	49.7	49.8	49.5	48.7	48.8	48.6	48.6	48.7

¹ Employers' social contributions, contributions from the self-employed and special payroll tax. ² The tax-to-GDP ratio is defined as total taxes, including EU taxes, divided by GDP. ³ Taxes paid to the EU are included in the tax-to-GDP ratio but not in general government revenue. ⁴ Including transfers from abroad and from unemployment insurance funds.

Sources: Statistics Sweden and NIER.

Table A28 General Government Expenditure with Unchanged Commitment to Public Welfare Services and Unchanged Regulations for Transfers

Per cent of GDP

	2016	2017	2018	2019	2020	2021	2022	2023
General Government Consumption Expenditure	26.3	26.1	26.1	26.0	26.3	26.7	26.8	27.0
Transfers	17.5	17.2	17.3	17.1	17.0	16.8	16.6	16.5
Households	14.2	13.9	13.7	13.6	13.4	13.2	13.0	12.9
Corporations	1.9	1.8	1.9	1.8	1.8	1.8	1.8	1.8
Abroad	1.4	1.4	1.7	1.7	1.7	1.7	1.7	1.7
Gross Fixed Capital Formation	4.3	4.5	4.7	4.7	4.7	4.6	4.6	4.5
General Government Primary Expenditure	48.0	47.8	48.2	47.8	48.0	48.1	48.0	48.0
Property Expenditure	0.7	0.6	0.7	0.7	0.7	0.8	0.9	1.0
Total Expenditure	48.7	48.4	48.8	48.5	48.7	48.9	48.9	49.0

Sources: Statistics Sweden and NIER.

Table A29 Transfers from General Government to Households with Unchanged Regulations for Transfers

Per cent of GDP

	2016	2017	2018	2019	2020	2021	2022	2023
Pensions ¹	7.8	7.7	7.6	7.6	7.5	7.4	7.4	7.3
Of Which Income Pension	6.4	6.4	6.3	6.3	6.3	6.2	6.2	6.1
Labour Market ²	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5
Illness and Disability ³	1.9	1.7	1.6	1.6	1.5	1.4	1.4	1.3
Family and Children ⁴	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.6
Education ⁵	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Social Assistance ⁶	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other ⁷	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Technical Transfer to Households	14.2	13.9	13.7	13.6	13.4	13.2	13.0	12.9

¹ Income pension, supplementary pension, guaranteed pension, survivor's pension, general government occupational pensions and housing supplement for pensioners. ² Unemployment benefits, labour market training benefits, introduction benefit and salary guarantee. ³ Sickness and rehabilitation benefit, activity and sickness compensation, work injury compensation and disability allowance. ⁴ Parental benefit, child allowance, care allowance and housing allowance. ⁵ Student grants and other study allowance. ⁶ Welfare benefits. ⁷ Assistance compensation, financial support for asylum seekers, income support for the elderly and other transfers to households.

Sources: Statistics Sweden and NIER.

Table A30 Income Index, Balance Index, Income Pensions and Balance Ratio

Percentage change, unless otherwise indicated

	2016	2017	2018	2019	2020	2021	2022	2023
Income Index	2.0	3.7	1.5	3.1	2.7	2.7	2.9	3.1
Balance Index	5.9	4.4	2.6	3.1	2.7	2.7	2.9	3.1
Balance Ratio ^{1, 2}	1.038	1.007	1.013	1.035	1.047	1.042	1.026	
Nominal Income Pension³	4.2	2.8	1.0	1.4	1.1	1.1	1.3	1.5

¹ Level. ² Starting with 2017 entries refer to the dampened balance ratio according to the Swedish Pensions Agency, expressing the pension system's assets in relation to its liabilities two years before the current year. ³ Percentage change of balance index minus 1.6 percentage points.

Sources: Swedish Pensions Agency and NIER.

Table A31 Central Government Budget Balance and Debt

SEK billion and percentage of GDP, respectively

	2016	2017	2018	2019	2020
Budget Balance	85.3	61.8	80.0	126.3	-16.7
Adjustments to Net Lending	21.6	7.7	9.8	-57.6	13.9
Sales of Shares etc.	-0.2	0.0	-1.7	0.0	0.0
Extra Dividends	-2.1	-0.1	-0.2	-0.7	0.0
On-Lending	27.8	11.6	11.9	-59.3	11.1
Other Adjustments	-3.9	-3.9	-0.2	2.5	2.8
Accruals	-45.4	9.6	-31.1	-21.9	45.8
Of Which: Tax Accruals	-31.4	12.2	-27.1	-23.7	36.5
Interest Accruals	-13.1	-3.5	1.0	4.0	9.0
Other	3.3	-3.8	2.1	-0.5	-0.5
Central Government Net Lending	64.8	75.3	60.9	46.2	42.4
Central Government Borrowing Requirement ¹	-85.3	-61.8	-80.0	-126.3	16.7
Stock-Flow Adjustments. Central Government Debt	25.0	35.0	11.3	-59.7	-15.5
Central Government Debt. Change	-60.3	-26.8	-68.7	-186.0	1.2
Central Government Debt	1 292	1 265	1 196	1 011	1 012
<i>Per cent of GDP</i>	<i>29.5</i>	<i>27.6</i>	<i>25.0</i>	<i>20.4</i>	<i>19.8</i>

¹ The central government borrowing requirement is equal to the budget balance with the sign reversed.

Sources: Statistics Sweden, Swedish National Debt Office, Swedish National Financial Management Authority and NIER.

Table A32 Central Government Expenditure Ceiling at Nominally Unchanged Central Government Grants and Unchanged Regulations for Transfers

SEK billion unless otherwise indicated

	2016	2017	2018	2019	2020	2020
Central Government Expenditure Ceiling	1 215	1 274	1 337	1 351	1 388	1 430
<i>Per cent of Potential GDP</i>	<i>27.9</i>	<i>28.2</i>	<i>28.4</i>	<i>27.5</i>	<i>27.3</i>	<i>27.1</i>
Capped Expenditure	1 185	1 229	1 295	1 322	1 352	1 387
<i>Per cent of Potential GDP</i>	<i>27.2</i>	<i>27.2</i>	<i>27.5</i>	<i>26.9</i>	<i>26.6</i>	<i>26.2</i>
Budgeting Margin	31	45	42	29	36	43
<i>Per cent of Capped Expenditure</i>	<i>2.6</i>	<i>3.6</i>	<i>3.2</i>	<i>2.2</i>	<i>2.7</i>	<i>3.1</i>

Sources: Swedish National Financial Management Authority, Ministry of Finance and NIER.