Ministry of Finance

# Update of Sweden's convergence programme

November 2008

# Introduction

In accordance with the Council's regulation (EC) 1466/97, Sweden submitted its convergence programme in December 1998.[1] The programme was evaluated and approved by the Council during the spring of 1999. In accordance with the Council's regulation, an update of the convergence programme is to be submitted annually and this was carried out during the period 1999–2007. The Council's statement on the update of the convergence programme for 2007 was considered by the Riksdag's EU committee on 8 February 2008. This update is based on the Government Budget Bill for 2009, which was presented to the Riksdag on 22 September 2008. The Riksdag's Standing Committee on Finance was informed about the programme on 18 November 2008.

# 1 Economic policy framework and targets

## 1.1 Fiscal policy framework and targets

In order to create better conditions for long-term sustainable public finances and to avoid short-termism in the budget work, the central government budget process was tightened in the mid-1990s. In 1997, a central government expenditure ceiling covering several years was introduced, in order to keep the development of central government expenditure under control. This restriction means that so-called ceiling-restricted expenditure, i.e. central government expenditure (excluding interest expenditure) and expenditure in the old-age pension system, must not exceed the expenditure ceiling determined by the Riksdag. When this central government expenditure ceiling was introduced, the starting point was that the ceiling for an individual budget year should be determined three years in advance.

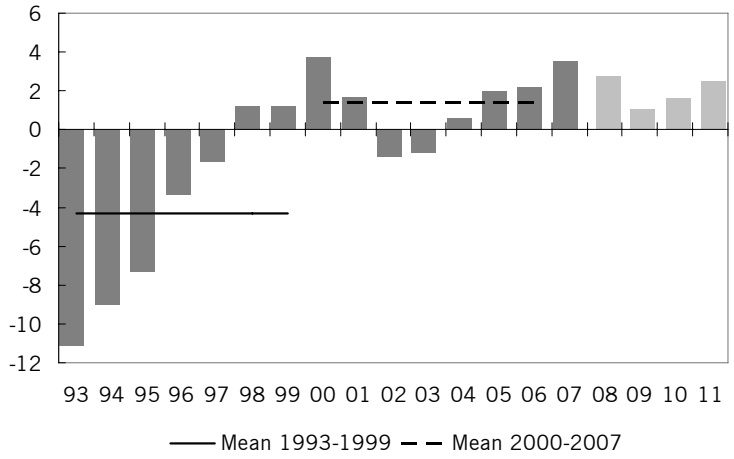
In 2000, a target for general government net lending was introduced, the so-called surplus target. This stipulates that consolidated general government net lending should be 1 per cent of GDP on average over a business cycle.[2] In addition, there is a balanced budget requirement for

[1] Council Regulation (EC) 1466/97 of 7 July 1997 on the strengthening of the surveillance of budgetary positions as well as the surveillance of economic policies.

[2] Up to and including 2006, the suplus target was 2 per cent of GDP over a business cycle. In 1997, Eurostat, the EU's statistical agency, decided that the new Swedish premium pension system in its entirety was to be classified as part of the general government sector. In 2004, Eurostat changed its decision, which meant that the premium pension system was no longer to be included in general government net lending as from 2007. For Sweden, this has resulted in a reduction in general

the local government sector, which stipulates that municipalities and county councils should each year budget for a surplus or a balanced outcome. If a municipality or a county council reports a deficit for an individual year, this deficit is to be reversed within three years.

**Diagram 1 General government net lending**




Source: Statistics Sweden and Ministry of Finance.

Diagram 1 shows general government net lending during the period 1993–2011 (2008–2011 are forecasts). Public finances have strengthened appreciably over the years that the framework has been in force. The deficits in the 1990s have been replaced by an average surplus of 1.4 per cent of GDP during the period 2000–2007.[3] Together with strong economic growth, this has contributed to a reduction in central government debt, measured as a proportion of GDP. General government expenditure and revenues have also declined as a proportion of GDP.

Overall, the more stringent budget policy targets and the improved budget process have contributed to good budget discipline, which has strengthened the control of public finances and improved the conditions for economic stability and growth.

The experiences of the fiscal policy framework are favourable. At the same time, the government considers that certain areas of the framework have functioned less well and a review of how the fiscal policy framework can be strengthened and further developed has therefore begun. A comprehensive report is to be presented before the end of the government's term of office, with parts of the work presented in Government Bills as they become available. Within the scope of the review, the government has presented new indicators to improve its ability to evaluate proposed and announced fiscal policy. Moreover, the government has

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government net lending of approximately 1 per cent of GDP. As a result of this statistical change, the target for general government net lending was adjusted from 2 per cent to 1 per cent.

[3] A more detailed description of the development of public finances is to be found in Chapter 4.

reintroduced the three-year expenditure ceiling and clearly presented the considerations underlying the decisions on expenditure ceilings. An essential condition for confidence in the fiscal policy framework and its sustainability in the long term is that the fiscal policy targets are monitored by an external assessor. In 2007, the government therefore established a Fiscal Policy Council, in order to increase transparency and insight into fiscal policy. An important task in the work of strengthening the framework is the development of methods and models, which can form the basis for analysis and decisions on fiscal policy in the short and long term. The Ministry of Finance is working on a project to further develop the long-term scenarios, which aims to show, among other things, the effects of the demographic trend on the economy and public finances.

*Surplus target*

The surplus target constitutes Sweden's medium-term objective as stated in the Stability and Growth Pact and has been drawn up on the basis of:

- The long-term sustainability of public finances.
- A fair distribution of resources between generations.
- Economic efficiency and stability through a predictable development of taxes and expenditure.

In view of the marked increase in age-related general government expenditure in the future, the government considers that the surplus target of 1 per cent of GDP over a business cycle should be maintained as long as is necessary for the long-term sustainable development of public finances.

When the current demographic situation with relatively large generations of working age changes and the proportion of older people increases sharply, it may be justified to adjust the surplus target. At the same time, both Swedish and international experiences show that a fiscal policy regime without rules and targets is unsatisfactory and damages the national economy. The government therefore wants to emphasise that fiscal policy will continue to be subject to clear targets and rules. The government intends to allow fiscal policy to be guided by a net lending target in the future.

*Central government expenditure ceiling*

The main task of the expenditure ceiling covering several years is to provide the conditions for achieving the surplus target, i.e. to create the conditions for long-term sustainable finances. The expenditure ceiling constitutes an important budget policy commitment, which promotes budget discipline and strengthens the credibility of economic policy by, for example, preventing temporary revenue from being used to finance permanent expenditure. This also limits the risk of pursuing a destabilising (procyclical) fiscal policy on the expenditure side of the central

government budget. The expenditure ceiling also underlines the need for prioritising between different expenditure items and prevents a development in which the tax levy must be gradually raised as a result of inadequate expenditure control. Moreover, it provides a fixed starting point in the central government budget process by focusing from the outset on the whole, i.e. the total ceiling-restricted expenditure. The level of the expenditure ceiling should also promote a desirable long-term development of central government expenditure.

In the 2007 Spring Fiscal Policy Bill, the government stated that transparency and clarity in the budget process should increase, in order to strengthen the credibility of the expenditure ceiling. An important element in this work is clarifying which principles should form the basis for determining the expenditure ceiling. In the 2008 Spring Fiscal Policy Bill, the government stated that the following considerations should form the basis for decisions on the level of the expenditure ceiling:

- The government's assessment of a new expenditure ceiling starts from an overall assessment of the fiscal policy rules and regulations and the forecast for the public finances.
- The expenditure ceiling should be determined at a level that is consistent with the surplus target and a long-term sustainable fiscal policy. The government's view is that central government expenditure should decline weakly as a proportion of GDP.
- The budgeting margin, i.e. the difference between ceiling-restricted expenditure and the expenditure ceiling, should be large enough to manage forecast uncertainty and temporary variations in expenditure development in a three-year perspective under the given rules.

In order to maintain the predictability and stringency of the budget process, and thus provide the conditions for stable expenditure development, the three-year expenditure ceiling has been reintroduced.[4] An assessment of an appropriate central government expenditure ceiling for the third future year will in future be included in Spring Fiscal Policy Bills, as a part of the guidelines for economic policy and budget policy. In the normal case, this assessment should constitute a proposed expenditure ceiling in the next Government Budget Bill.

It is also essential that the basic principles for budgeting and accounting for central government revenues and expenditure are respected. In brief, this means that the central government budget should include all central government activity (the completeness principle) and that all expenditure and revenues for each individual activity should be evident from the central government budget (the gross principle). A transparent and consistent application of the principles of com-

[4] Since 2002, the government has on several occasions refrained from proposing an expenditure ceiling for the third future year.

pleteness and gross budgeting strengthens the credibility of the expenditure ceiling and the fiscal policy framework as a whole.

However, it may be difficult to adhere to these principles without exception. Any deviations should in such cases be well justified and the possibility of comparability over time should then be secured. Technical adjustments of a previously determined expenditure ceiling are justified in connection with a change in institutional demarcation and assignment of responsibilities in the general government sector, which only affects the allocation of expenditure between different sectors. Consequently, adjustments of the central government expenditure ceiling should be made in connection with the transfer of responsibility for a general government commitment, for example, from the central government sector to the local government sector. Technical adjustments may also be caused by changes in budgetary method, i.e. as a result of changes in accounting principles etc. An essential starting point is that the same principles should form the basis for both increases and reductions in the central government expenditure ceiling.

*Local government balanced budget requirement*

In order to strengthen the budget process at local level, a separate statutory balanced budget requirement for the local government sector was introduced in 2000. This stipulates that each individual municipality and county council should budget for a balanced outcome. If a municipality or county council reports a deficit after the event, it must correct the deviation within three years.

## 1.2 Monetary policy target

In Sweden, the Riksbank is responsible for monetary policy. In accordance with the Sveriges Riksbank Act (1988:1385), the Riksbank should independently make decisions on monetary policy. Under this act, the decision-making Executive Board of the Riksbank must not seek or receive instructions when performing its monetary policy tasks.

The objective of monetary policy is to maintain a stable monetary value. The Riksbank has defined this statutory objective in an explicit inflation target, which stipulates that the annual change in the consumer price index (CPI) should be 2 per cent. The Riksbank has also formulated a tolerance interval of ±1 percentage point.

If deviations from the inflation target arise, inflation should normally be returned to the target within two years. Apart from the fact that monetary policy takes effect with a time lag, the two-year horizon provides scope for taking account of developments in the real economy. In exceptional cases, the Riksbank may allow the adjustment to the inflation target to take longer than two years. When the Riksbank considers this necessary, it should be clearly explained in connection with the monetary policy decisions.

Since the beginning of 2007, the Riksbank has published the repo rate trend currently considered most appropriate by the Executive Board. One reason for this is that it helps the Riksbank to explain its view of interest rates and the reasoning behind monetary policy decisions to the public and the financial market.

In September 2003, Sweden held a referendum on the introduction of the euro. The result of this referendum led to no changes in monetary and exchange rate policies. The government is responsible for overall exchange rate policy matters and decides on the exchange rate system, while the Riksbank is responsible for the application of the exchange rate system. The current monetary and exchange rate policy regime is fixed. Sweden's experience of an inflation target and a floating exchange rate is very favourable. Pegging the Swedish krona to ERM2 is not under consideration.

# 2 Economic policy

## 2.1 Fiscal policy

Achieving permanently high employment is of the utmost importance for maintaining a strong economy, stable and favourable public finances and for reducing exclusion. The government has therefore initiated a broad reform programme to increase employment.

In the Budget Bill for 2009, the government continues to implement structural reforms to permanently increase employment and to improve the functioning of the Swedish economy. The government also intends to take additional steps to continue reducing exclusion, which remains high despite the sharp decline over the past few years.

*Government proposals in the Budget Bill for 2009*

In the Budget Bill for 2009, the government presents three reform packages:

- a reform package for jobs and enterprise,
- a reform package to prepare Sweden for the future, and
- a reform package to strengthen welfare.

Within the scope of the reform package for *jobs and enterprise*, the government proposes to reduce the tax on earned income. Firstly, a third stage in the earned income tax credit is proposed, resulting in a tax cut of approximately SEK 10 billion. In total, the earned income tax credit, including the third stage, has resulted in a tax cut on earned income of SEK 60 billion since 2006, which is equivalent to approximately 7 per cent of tax revenues from work or 2 per cent of GDP. The design of the

earned income tax credit makes it more profitable for individuals to participate in the labour market by lowering the thresholds into the labour market and stimulating already employed low- and middle-income earners to increase the supply of labour. The government considers that the three stages of the earned income tax credit will lead in the long term to 100,000 more people in work.

Secondly, the government proposes a reduction in the central government income tax levy by raising the lower threshold in the central government tax scale. This leads to a reduced tax levy of approximately SEK 5 billion. The reform aims to increase the incentives for full-time employees to work more and to increase their productivity by making it more profitable to invest in training. The change in the threshold is estimated to reduce the proportion of people paying central government income tax from 17 to 15 per cent.

In order that Sweden should maintain good international competitiveness in the future, an innovative and dynamic business sector is required. In the Budget Bill, the government proposes a number of changes in corporate taxation, which aim to strengthen the incentives for investment and hiring. Among other things, a reduction in both corporation tax and the so-called expansion fund tax from 28 to 26.3 per cent is proposed, which is equivalent to a tax cut on enterprise of approximately SEK 7 billion.

Further, the government proposes a 1 percentage point reduction in social security contributions, which is equivalent to reduced labour costs for firms of SEK 12 billion. The reduced cost pressure improves the conditions for hiring and employment, particularly in the current economic situation. The already implemented reduction in employer contributions for young people is strengthened further to facilitate young people's entry into the labour market. The measures in corporate taxation are financed by broadening the base for corporate taxation, by stopping tax planning in the form of partnership structure and intra-group interest payments.

The reform package *to prepare Sweden for the future* contains proposals in the education and infrastructure sectors. The government proposes extensive investments in pre-school, primary, secondary and higher education, and vocational training. These investments help to develop Sweden as a knowledge nation and to achieve a well-educated labour force with the ability to adapt and develop. The pre-school and school reforms focus on increased quality in the pre-school, incentive grants for mathematics, natural science and technology, and an upper secondary apprentice programme. Vocational training programmes have long been neglected and the government proposes initiatives within the scope of municipal adult education and through the establishment of a vocational university as from 2009.

In order that Sweden should continue to be considered one of the foremost research nations in the world, considerable investments in the research policy area are proposed. The government proposes additional

resources in the research sector, which result in grants being SEK 5 billion higher in 2012 than in 2008. As a result of the additional resources, the government estimates that general sector financing of research amounts to 1 per cent of GDP. The focus is on direct research grants to universities and colleges. The financing of universities and colleges should be based on quality and allocated to an increased extent on the basis of performance and scientific quality.

A well-functioning infrastructure is a prerequisite for maintaining and strengthening Sweden's competitiveness. The government follows up last year's infrastructure investment with increased measures in the Budget Bill for 2009. A large part of these measures consist of road investment.

The third reform package aims to *strengthen welfare*. The government proposes reducing tax for pensioners by means of an increased basic tax allowance. This tax relief covers the vast majority of pensioners and is particularly large in the case of low incomes. The government also proposes reforms to strengthen psychiatric care and to improve the quality of social services.

*Effects on public finances*

The reforms proposed or announced by the government in the Budget Bill for 2009 result in general government finances weakening by approximately SEK 32 billion in 2009, compared with the forecast for 2009 in the 2008 Spring Fiscal Policy Bill. This is equivalent to approximately 1 per cent of GDP. Table 1 illustrates the expenditure and revenue changes.

**Table 1 Reforms proposed and announced for 2009 in relation to the 2008 Spring Fiscal Policy Bill**

SEK billion. Change in relation to the 2008 Spring Fiscal Policy Bill.

| | 2009 |
|---|---|
| **Expenditure changes**[1] | |
| Increased appropriations | 16.6 |
| Reduced appropriations | -3.6 |
| **Total appropriation changes (increase in appropriations)**[1] | **13.1** |
| **Revenue changes**[2] | |
| Reduced taxes | -26.6 |
| Other revenue reforms | -1.3 |
| **Total revenue changes, (gross)** | **-27.9** |
| **Expenditure and revenue reforms, (gross)** | **-41.0** |
| Indirect effects of reforms[3] | 8.6 |
| **Change in general government net lending** | **-32.4** |

[1] A minus sign indicates that expenditure falls. Appropriation changes as a result of the macroeconomic development, volume changes in transfer payment systems etc. or appropriation changes justifying a technical adjustment of the central government expenditure ceiling are not included.

[2] A minus sign indicates that revenue falls.

[3] Indirect effects are the difference between a reform's effect on general government net lending and the direct effect on the central government budget.

Source: Ministry of Finance.

Table 2 illustrates the total budget effects between 2008 and 2009 of previously decided reforms and the reforms proposed and announced in the Budget Bill for 2009. The table shows that expenditure increases by SEK 6.2 billion as a result of discretionary decisions, while revenue declines by SEK 30.2 billion. Overall, reforms are thus proposed for 2009 totalling SEK 36.4 billion.

**Table 2 Expenditure and revenue reforms decided and proposed for 2009**

SEK billion. Change in relation to 2008.

| | 2009 |
|---|---|
| **Revenue reforms** | **-30.2** |
| Tax on labour | -38.3 |
| Tax on capital | 1.9 |
| Tax on consumption | -0.3 |
| Indirect effects of tax reforms | 7.4 |
| Other revenue reforms | -0.9 |
| **Expenditure incl. loan financing** | **6.2** |
| Government, administration UO 1-3 | 0.9 |
| Judicial system, UO 4 | 0.2 |
| International cooperation and development aid, UO 5 and 7 | 0.5 |
| Defence, preparedness and vulnerability, UO 6 | -0.2 |
| Migration, UO 8 | -0.4 |
| Health care and social care, UO 9 | -0.1 |
| Financial security in event of illness and disability, UO 10 | -0.5 |
| Financial security for families, children and old people, UO 11-12 | 0.0 |
| Labour market, integration and equality, UO 13-14 | -1.6 |
| Study allowance, UO 15 | 0.1 |
| Education, research and culture, UO 16-17 | 2.8 |
| Social planning, UO 18 | -0.5 |
| Environment, energy, UO 20-21 | 0.3 |
| Communications, UO 22[1] | -22.3 |
| Agriculture and forestry, UO 23 | 0.0 |
| General grants to municipalities, UO 25 | 0.6 |
| Other, UO 19, 24 and 27 | 0.3 |
| Total appropriation changes | -19.9 |
| Loan-funded infrastructure investment[1] | 26.0 |
| **Total reforms[2], revenue and expenditure 2009** | **-36.4** |

[1] In 2009, appropriations under expenditure area 22 decline by SEK 25 billion compared with 2008, as a result of the allocation of SEK 25 billion to a supplementary budget, in order to implement extra repayments of infrastructure loans on a one-off basis in 2008. For the same reason, the loan-funded part increases substantially in 2009, compared with 2008.

[2] A minus sign indicates that net lending declines.

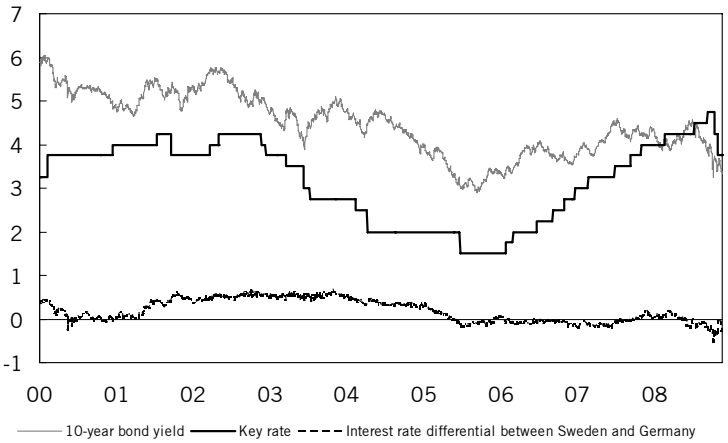
Source: Ministry of Finance.

## 2.2 Monetary policy

Diagram 2 shows the repo rate trend in Sweden. The repo rate reached a historic low of 1.50 per cent in the second half of 2005. In 2006, the Riksbank began tightening monetary policy, while inflationary pressure in the Swedish economy has risen. Following two repo rate cuts totalling 1 percentage point made by the Riksbank in October 2008, the repo rate is currently 3.75 per cent.

**Diagram 2 Interest rates in Sweden**

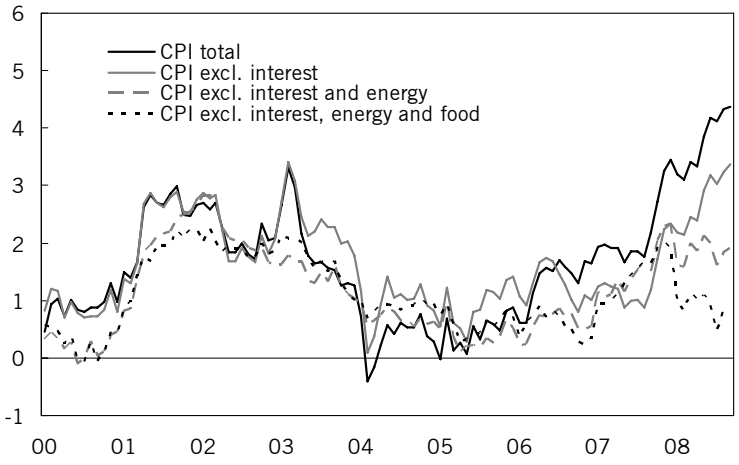
Per cent




Inflation, measured as the percentage change in consumer prices over a 12-month period, has risen for several years (see Diagram 3). Since November 2007, CPI inflation has been above 3 per cent, i.e. above the Riksbank's tolerance interval. High CPI inflation is primarily due to increased interest expenses for owner-occupied dwellings, together with rising food and energy prices. During much of 2008, high actual inflation and expected inflation have created a difficult balancing act for central banks as regards countering weaker economic activity with reduced interest rates.

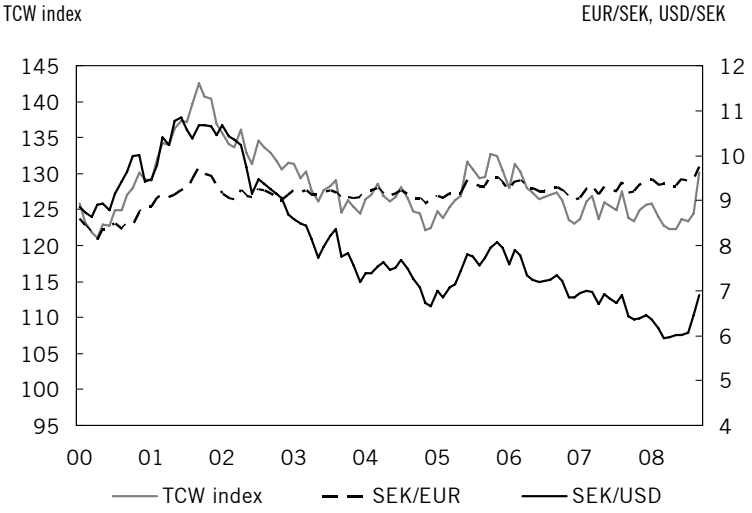
**Diagram 3 Inflation including and excluding interest, energy prices and food prices**

Percentage change




Like international bond yields, the Swedish 10-year bond yield rose between the autumn of 2005 and the spring of 2007. Following yield rises in both 2007 and 2008, bond yields fell back in the summer and autumn of 2008 in pace with the increasing financial turbulence and weaker growth prospects (see Diagram 2).

**Diagram 4 The Swedish krona against the TCW index, the euro and the US dollar**




Sweden has had a floating exchange rate since November 1992. Diagram 4 shows the development of the Swedish krona against the TCW index, the euro and the US dollar during the period 1992–2008. The turbulent situation in the financial markets has led to the krona, like many other small currencies, weakening since the summer of 2008.

# 3 Forecasts and scenarios for the Swedish economy

## 3.1 Introduction

This chapter describes the forecast for economic development presented in the Budget Bill for 2009. This is followed by a description of the developments in global financial markets in the autumn of 2008. The chapter concludes with two alternative scenarios for the Swedish economy.

A considerable economic slowdown in the Swedish economy was predicted in the forecast for economic development in the Budget Bill. GDP was expected to grow more slowly than previously and the labour market was forecast to slow down. The economic situation was difficult to assess and the risks in the forecast were mainly considered to be on the downside. These risks were linked to more prolonged turbulence in global financial markets, even more subdued consumer confidence in the future, and weak productivity growth.

In the Budget Bill for 2009, the government proposes and announces reforms equivalent to SEK 32 billion. These reforms are intended to improve the functioning of the Swedish economy in the longer term, but are also well adapted to the current economic situation. The reform

agenda has three focuses: a package for jobs and enterprise; a package to prepare Sweden for the future, including education, research and infrastructure investments; and a package to strengthen welfare.

During the autumn, the turbulence in global financial markets has deteriorated markedly and is now clearly affecting financial development in Sweden. For example, the interbank market did not function for a short period, paralysing the financial system. In order to get the financial market to function again, central government intervention took place both globally and in Sweden, in order to increase confidence and stability in the financial sector. This intervention was well received, but there is a significant risk of substantial negative effects on the real economy. Recent economic developments mean that the reform package presented in the Budget Bill is very well timed and the risk of procyclical policy is non-existent.

In order to illustrate the consequences of a weaker economic development, two alternative scenarios for the Swedish economy are described in this chapter: scenario 1 *Deeper financial crisis* and scenario 2 *Deeper and prolonged financial crisis.* These scenarios are based on alternative assessments of the intensity and duration of the financial crisis.

## 3.2 Forecast in the Budget Bill for 2009

The global economic slowdown that we have seen recently is continuing and strengthening. The decline in GDP growth is clear in all important regions. The economic slowdown has been going on longest in the United States, while economic activity in the eurozone did not deteriorate until the spring of 2008. Economies outside the OECD area are also expected to grow more slowly in the future. Overall, global growth is forecast to be weak for the next few years.

Following several years of high growth, the Swedish economy is slowing. The continued global financial turbulence is contributing to a deterioration in the conditions for household consumption. Willingness to consume is restrained by the stock market fall and continued high inflation. The increased uncertainty in the housing market is dampening household consumption further. Moreover, employment is expected to stagnate following several years of rises. At the same time, however, a fiscal stimulus, including an increased earned income tax credit, contributes to an increase in household disposable income. In 2008 and 2009, the deterioration in global economic activity is expected to lead to a reduction in the demand for Swedish goods and services and subdued export growth.

The substantial slowdown in productivity in Sweden in 2007 and early 2008 contributes to increased cost pressure, making it more difficult for Swedish firms to compete in global markets. A capacity shortage is no longer a major problem for firms and the financial turbulence has led to tighter credit terms, resulting in firms postponing investment. Following a five-year strong and broad investment upturn, investment growth is

slowing. Overall, GDP growth was estimated at 1.5 per cent in 2008 and 1.3 per cent in 2009 in the Budget Bill for 2009. For 2010 and 2011, GDP growth was forecast at 3.1 and 3.5 per cent respectively (see Table 3).[5]

**Table 3 Demand and output**

Annual percentage change in volume.

| | SEKbn 2007[1] | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| Household consumption expenditure | 1,434 | 3.0 | 1.8 | 2.3 | 3.2 | 3.2 |
| General government consumption expenditure | 797 | 1.1 | 0.4 | 0.9 | 0.0 | 0.0 |
| Gross fixed capital formation | 582 | 8.0 | 3.0 | -0.8 | 4.4 | 7.5 |
| Change in stocks[2] | 24 | 0.7 | -0.5 | -0.1 | 0.2 | 0.1 |
| Exports | 1,609 | 6.0 | 4.6 | 3.8 | 7.3 | 6.5 |
| Imports | 1,375 | 9.6 | 4.3 | 4.1 | 7.4 | 6.7 |
| **GDP** | **3,071** | **2.7** | **1.5** | **1.3** | **3.1** | **3.5** |
| GDP, calendar adjusted | — | 2.9 | 1.2 | 1.4 | 2.8 | 3.4 |

[1] Current prices.
[2] Contribution to GDP growth.Sources: Statistics Sweden and Ministry of Finance.

Developments in the labour market have been positive for a considerable period. However, since the end of 2007, the number of employed people and the number of people in the labour force have begun to grow increasingly slowly. In the Budget Bill for 2009, this slowdown was expected to continue in the future, with employment forecast to rise by 1.2 per cent in 2008 and then remain unchanged in 2009. In 2010, employment was forecast to decline by 0.2 per cent. The labour force, on the other hand, was expected to continue rising in the future, both as a result of an increasing working-age population and an effect of the reforms implemented by the government since it took office, such as the earned income tax credit and the reforms in health care insurance and unemployment insurance. Since the labour force was expected to continue rising, while employment was forecast to decline in 2010, unemployment was forecast to rise from 6.0 per cent in 2008 to 6.6 per cent in 2010.

## 3.3 Increased turbulence in global financial markets in autumn 2008

The turbulence in global financial markets, which became increasingly evident in the spring of 2008, has escalated during the summer and autumn. The origin of the current financial turbulence is the problems in the US housing market. As a result of complex financial instruments and integrated financial markets, these problems have then spread to other countries and regions in a historically unparalleled way.

[5] Further information on the forecast in the Budget Bill for 2009 may be found in Tables C.1 – C.6 in Appendix C.

Part of the problem is that the financial institutions, which were originally responsible for the home loans, have repackaged them and sold them on in the form of complex financial instruments in the US securities market and outside the USA. However, as economic activity declined, a large number of borrowers experienced difficulties in paying the interest and repayments on their home loans, while house prices began to fall.

This development led to increased credit losses in the banking system, which resulted in a number of financial institutions, mainly US but also European, experiencing solvency problems. The US authorities intervened with measures to support a number of institutions. These solvency problems became a greater source of concern when the USA decided not to rescue Lehman Brothers, and the crisis consequently developed into a confidence crisis. Without confidence, large areas of the credit markets were paralysed, which in turn led to a number of financial institutions experiencing liquidity problems. This in turn affects households and firms. The lack of confidence means that the boundaries between liquidity problems and solvency problems become fluid.

The global financial confidence crisis has also left its mark on Sweden. A moderately increased risk of solvency problems has led to increased caution in the banking sector, which has resulted in rising interbank rates. In addition, credit institutions have encountered increased financing costs in the market, to the extent that financing has been at all possible. This development has led to rising interest rates for households and firms and a reduction in lending.

*Coordinated global measures to increase stability*

The measures taken by public authorities should be seen in the light of this development, in both Sweden and the rest of the world. Governments, central banks and responsible authorities have taken or plan to take measures on a broad front, in order to stabilise global financial markets and to mitigate the effects of the crisis on economic activity. These measures have chiefly targeted banks' solvency and liquidity, but have also targeted household and corporate financing as well as measures to support economic activity.

In the USA, Congress has agreed a USD 700 billion bailout plan, while the Federal Deposit Insurance Corporation has been given unlimited loan facilities to cover its commitments and the deposit guarantee has been increased.

In Europe, work has focused on developing common principles that EU member states can comply with. On 7 October the EU's finance ministers agreed on certain basic principles that the member states should comply with. This was followed up by the eurozone in a declaration on 12 October 2008. This was in turn followed up by the EU's heads of state and government, who backed the principles previously agreed by the eurozone on 15-16 October 2008.

*Swedish measures to increase stability*

On 20 October the Swedish government presented a stability plan to secure stability in the financial system by recreating confidence in the banks so that other players, including other banks, have the confidence to lend money once again. This will in turn improve the facilities for firms and households to borrow. The proposed measures are based on the conclusions adopted by the EU's heads of state and government. The stability plan includes a maximum SEK 1,500 billion guarantee programme, in order to support the medium-term financing of the banks and the housing credit institutions. Institutions may on payment of a guarantee fee reach an agreement with central government on the provision of a guarantee for new borrowing. These measures aim to facilitate the banks' financing and reduce their borrowing costs. Moreover, a stability fund is being set up to deal with any future liquidity and solvency problems in Swedish institutions.

In addition to the government's initiatives, the Riksbank and the Swedish National Debt Office have taken a number of measures during the autumn to secure financial stability. The Riksbank has eased the requirement for security, provided US dollar loans and also provided loans with longer maturities (3 and 6 months). In October, the Riksbank cut the key rate by 0.5 percentage points, together with a large number of central banks in a joint action. At the end of October, the repo rate was cut by a further 0.5 percentage points. The Swedish National Debt Office has intervened by selling treasury bills at extra scheduled auctions, in order to meet the increased demand for secure investments. The funds from these issues have been invested in mortgage bonds.

*Downside risks remain*

Despite the measures taken or announced to strengthen the financial systems, both globally and in Sweden, there are ever-increasing and clear signs of a slowdown in the real economy. The effects on Swedish economic development are mainly caused by the crisis having contributed to making it more difficult and more expensive for households and firms to obtain loans, the falling value of shares and properties, and weaker economic activity in the rest of the world. There is considerable uncertainty about both the strength and duration of the economic downturn. Given the current uncertainty, the government considers that the forecast described here should be supplemented by two alternative scenarios with weaker growth: alternative scenario 1 *Deeper financial crisis* and alternative scenario 2 *Deeper and prolonged financial crisis*.

## 3.4 Alternative scenarios

*Alternative scenario 1 – Deeper financial crisis*

In the first alternative scenario, *Deeper financial crisis*, the problems in the financial market are assumed to deepen the current economic

downturn in Sweden to a larger extent than assumed in the forecast in the Budget Bill (the base scenario). This scenario assumes tighter credit terms for households and firms than the base scenario. This expresses itself in the 50 basis-point increase in the spread between the repo rate and the interest rate for households and firms in 2009 and the 5 per cent fall in housing prices and other asset prices, compared with the base scenario. The deeper and more prolonged crisis leads to lower growth in the United States and the rest of the world. Compared with the base scenario, global demand is forecast to be 1 percentage point lower in 2009 and 2010.

The real economy is affected in several ways by the deeper crisis. Firstly, tighter credit terms and higher interest rates subdue firms' willingness to invest. More restrictive lending and the increased market rates, combined with more pessimistic households and lower consumer confidence, contribute to lower private consumption than forecast in the base scenario. Falling housing prices help to further subdue private consumption. Further, the deeper global slowdown leads to weaker development of the demand for Swedish exports.

Overall, this alternative scenario results in GDP growth of 0.1 per cent in 2009 and 2.0 per cent in 2010. This is approximately 1 percentage point lower than in the forecast in the Budget Bill (see Table 4).

In this scenario, the economic downturn leads to resource utilisation falling and reaching its lowest level in 2010, when the GDP gap is approximately -4 per cent. The lower demand contributes to lower employment growth and higher unemployment during the period 2009–2011 (see Table 4). However, firms do not immediately adjust the number of employees to the weaker demand growth, which results in productivity growth developing more weakly in 2008 and 2009.

Lower resource utilisation and lower wage rises subdue the inflationary pressure. Consequently, the Riksbank cuts the repo rate more than in the base scenario. The repo rate reaches its lowest level at the end of 2010, when it is 1 percentage point lower than forecast in the Budget Bill.

In the longer term, the effects of the financial crisis subside. A gradual global recovery and a continued expansionary monetary policy lead to exports, investment and household consumption increasing more rapidly than forecast in the Budget Bill as from 2011. The stronger demand leads to resource utilisation increasing, which in turn leads to employment rising more rapidly than in the base scenario and unemployment starting to return to its equilibrium level. In 2013, the majority of the effects of the economic downturn have ebbed away, and GDP and unemployment are at the same levels as in the forecast in the Budget Bill.

Developments in alternative scenario 1 involve a weakening of public finances, compared with the forecast in the Budget Bill.[6] Net lending is

[6] The development of public finances in the forecast in the Budget Bill for 2009 is described in Chapter 4.

estimated at 0.2 per cent of GDP in 2009 and 0.4 per cent of GDP in 2010, which is 0.9 and 1.3 percentage points lower respectively than in the base scenario. The lower net lending is mainly due to lower revenue from corporation tax and VAT.

*Alternative scenario 2 – Deeper and prolonged financial crisis*

In the second alternative scenario, *Deeper and prolonged financial crisis*, the financial crisis deteriorates further and the negative effects on economic development in the rest of the world and Sweden are considerably more marked.[7] The more prolonged and deeper crisis leads to global growth being 4 percentage points lower in 2009 than forecast in the Budget Bill. The marked deterioration in global growth leads to a sharp fall in the demand for Swedish exports. The even more restrictive lending to firms and the increased market rates affect both investment demand and firms' ability to finance their activities in the short term. Household consumption develops considerably more weakly than in the base scenario, as a result of declining consumer confidence, falling asset prices and continued high market rates. The weaker demand results in Swedish GDP growth of -1.2 per cent in 2009 and 1.4 per cent in 2010.

The sharp economic downturn in alternative scenario 2 leads to even more subdued resource utilisation than in alternative scenario 1. The GDP gap widens to -4.3 per cent of GDP in 2009 and -5.5 per cent of GDP in 2010, despite the Riksbank being expected to cut the repo rate to 2 per cent in 2010. Unemployment is forecast at 9.2 per cent in 2010.

In the longer term, the effects of the financial crisis also subside in this scenario. A gradual global recovery and a continued expansionary monetary policy lead to exports, investment and household consumption increasing more rapidly than in the base scenario as from 2011.

Public finances deteriorate substantially, compared with the base scenario. Net lending is estimated at -0.4 per cent of GDP in 2009 and -0.6 per cent of GDP in 2010. Tax revenue from tax on labour and tax on capital declines. Lower prices result in a reduction in general government consumption.

Diagram 5 illustrates the development of GDP growth, employment, unemployment and net lending in the base scenario and the two alternative scenarios. Table 4 shows further forecast assumptions.

[7] In alternative scenario 2, tighter credit terms are assumed for households and firms in the form of a higher interest rate spread of 100 basis points in 2009 and 25 basis points in 2010. Both housing prices and other asset prices are estimated to fall by 15 per cent, compared with the base scenario.

**Diagram 5 Development of GDP growth, employment, unemployment and net lending in the base scenario and alternative scenarios**

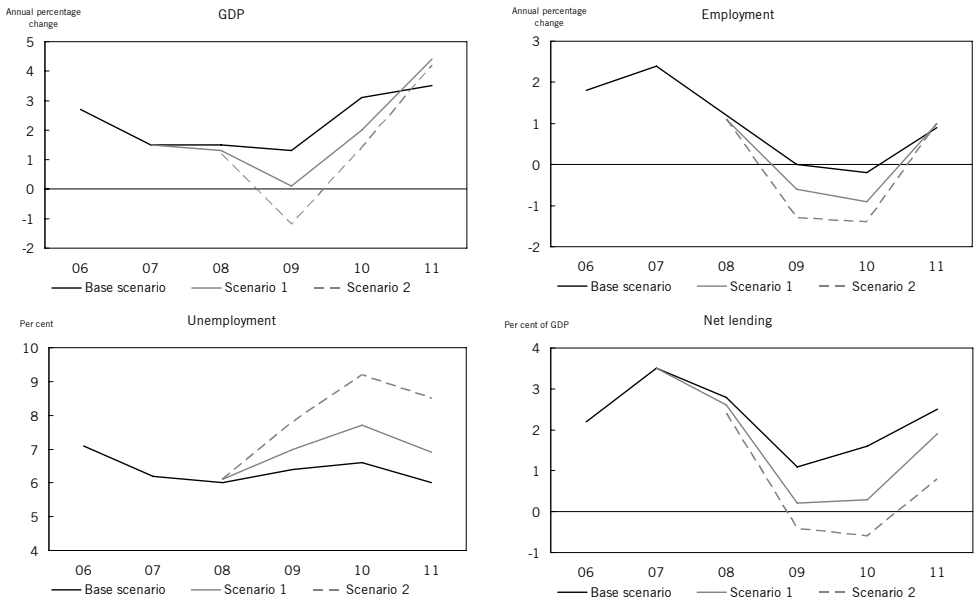



**Table 4 Selected statistics in the base scenario and alternative scenarios**

Percentage change, unless otherwise stated

| | 2008 | | | 2009 | | | 2010 | | | 2011 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Base | Alt.1 | Alt.2 | Base | Alt.1 | Alt.2 | Base | Alt.1 | Alt.2 | Base | Alt.1 | Alt.2 |
| GDP fixed prices | 1.5 | 1.3 | 1.2 | 1.3 | 0.1 | -1.2 | 3.1 | 2.0 | 1.4 | 3.5 | 4.4 | 4.2 |
| GDP gap[1] | -0.7 | -0.9 | -0.9 | -1.7 | -3.1 | -4.3 | -1.4 | -3.9 | -5.5 | -0.5 | -1.8 | -3.8 |
| Number of employed[2] | 1.2 | 1.1 | 1.1 | 0.0 | -0.6 | -1.3 | -0.2 | -0.9 | -1.4 | 0.9 | 1.0 | 1.0 |
| Unemployment, level[3] | 6.0 | 6.1 | 6.1 | 6.4 | 7.0 | 7.8 | 6.6 | 7.7 | 9.2 | 6.0 | 6.9 | 8.5 |
| Closing repo rate | 4.75 | 3.50 | 3.50 | 3.00 | 2.75 | 2.25 | 3.25 | 2.25 | 2.00 | 4.00 | 2.75 | 2.75 |
| Hourly wages | 4.3 | 4.3 | 4.2 | 4.1 | 3.6 | 3.4 | 3.5 | 3.1 | 2.9 | 3.8 | 3.3 | 3.1 |
| CPIX, annual average | 2.8 | 2.7 | 2.7 | 2.1 | 1.8 | 1.3 | 1.3 | 0.9 | 0.7 | 1.7 | 1.3 | 1.3 |
| General government net lending, per cent of GDP | 2.8 | 2.6 | 2.4 | 1.1 | 0.2 | -0.4 | 1.6 | 0.4 | -0.6 | 2.5 | 1.9 | 0.8 |

[1] Difference in per cent between actual and potential output.
[2] Aged 16–64.
[3] Per cent of labour force.
Source: Ministry of Finance.

# 4 Public finances

## 4.1 Accounting principles

This chapter describes the forecast for public finances in the Budget Bill for 2009. The reporting of general government net lending, as in the Budget Bill for 2009, complies with EU regulations for the National Accounts (ESA 95). Revenue and expenditure are consequently reported

in the established formats used by both the Ministry of Finance and the National Institute of Economic Research (NIER). This accounting principle is slightly different from the principle used by the EU for the surveillance of public finances in connection with the *Excessive Deficit Procedure* (EDP) and the Stability and Growth Pact (SGP).[8] Table 5 shows general government finances according to ESA 95 and EDP. A more detailed account of general government finances according to EDP is provided in Table C.7 in Appendix C.

**Table 5 General government finances according to ESA 95 and EDP**

Per cent of GDP

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| **ESA 95 and BB09** | | | | | |
| Revenue | 53.6 | 52.8 | 51.5 | 51.1 | 50.6 |
| Expenditure | 50.0 | 50.1 | 50.5 | 49.5 | 48.1 |
| Net lending | 3.5 | 2.8 | 1.1 | 1.6 | 2.5 |
| **EDP and SGP** | | | | | |
| Revenue | 56.2 | 55.4 | 54.1 | 53.8 | 53.3 |
| Expenditure | 52.6 | 52.5 | 53.1 | 52.2 | 50.8 |
| Net lending | 3.6 | 2.8 | 1.1 | 1.6 | 2.5 |

Note: BB09 = Budget Bill for 2009.
Sources: Statistics Sweden and Ministry of Finance.

## 4.2 The development of public finances

Table 6 shows the development of public finances during the period 2007–2011. Public finances have strengthened over the past four years and net lending was 3.5 per cent of GDP in 2007. This development is mainly explained by strong economic growth and favourable developments in the labour market, combined with expenditure declining as a proportion of GDP.

The economic slowdown and the reforms proposed and announced in the Budget Bill for 2009 contribute to net lending declining in 2008 and 2009. Net lending is estimated at 1.1 per cent of GDP in 2009. Revenue declines as a proportion of GDP, while expenditure increases somewhat. The reforms announced in the Budget Bill for 2009 total approximately 1 per cent of GDP.

[8] Unlike ESA 95, these contexts include the effect of swaps on interest flows in net lending, while revenue and expenditure are defined slightly differently.

**Table 6 General government finances**

Per cent of GDP, unless otherwise stated.

| | SEKbn 2007 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| **Revenue** | 1,645 | 53.6 | 52.8 | 51.5 | 51.1 | 50.6 |
| Taxes and charges | 1,472 | 47.9 | 47.2 | 46.0 | 45.8 | 45.5 |
| of which tax on labour | 871 | 28.4 | 28.5 | 27.5 | 27.2 | 27.1 |
| of which tax on capital | 204 | 6.7 | 5.5 | 5.7 | 5.8 | 5.8 |
| of which tax on consumption | 391 | 12.7 | 13.3 | 13.0 | 12.9 | 12.7 |
| Capital income | 73 | 2.4 | 2.4 | 2.4 | 2.3 | 2.1 |
| Other revenue | 101 | 3.3 | 3.3 | 3.1 | 3.0 | 2.9 |
| **Expenditure** | 1,537 | 50.0 | 50.1 | 50.5 | 49.5 | 48.1 |
| Transfer payments | 592 | 19.3 | 19.1 | 19.4 | 19.3 | 18.7 |
| Consumption | 797 | 25.9 | 26.1 | 26.4 | 25.9 | 25.3 |
| Investment | 91 | 3.0 | 3.0 | 3.0 | 3.0 | 2.8 |
| Interest expenditure | 57 | 1.9 | 1.9 | 1.6 | 1.4 | 1.3 |
| **Net lending** | 108 | 3.5 | 2.8 | 1.1 | 1.6 | 2.5 |
| *Primary net lending* | 93 | 3.0 | 2.3 | 0.3 | 0.8 | 1.7 |
| **Consolidated gross debt** | 1,247 | 40.6 | 35.5 | 32.2 | 28.3 | 23.8 |
| **Net debt** | -642 | -20.9 | -24.2 | -24.4 | -24.9 | -26.2 |

Sources: Statistics Sweden and Ministry of Finance.

In 2010 and 2011, net lending is expected to strengthen as a result of expenditure declining relatively sharply as a proportion of GDP. In case of normal economic development and in the absence of regulatory changes, tax revenue increases roughly in pace with GDP, while expenditure declines in relation to GDP.

## 4.3 Allocation of net lending between sectors

Table 7 describes the allocation of net lending between the sub-sectors of the general government sector: central government, the old-age pension system and the local government sector. A summary of net lending in other sectors (household, corporate and abroad) is to be found in Appendix C.

**Table 7 Net lending and the central government budget balance**

Per cent of GDP

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| **General government sector** | 3.5 | 2.8 | 1.1 | 1.6 | 2.5 |
| Central government | 2.2 | 1.6 | 0.5 | 1.3 | 2.4 |
| Old-age pension system | 1.1 | 0.8 | 0.4 | 0.2 | 0.1 |
| Local government sector | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 |
| Central government budget balance | 3.4 | 4.3 | 1.8 | 2.6 | 3.3 |
| Central government debt | 36.3 | 31.1 | 27.5 | 23.7 | 19.2 |

Sources: Statistics Sweden and Ministry of Finance.

In 2007, general government net lending consisted of a central government surplus of 2.2 per cent of GDP, while the old-age pension system and the local government sector showed surpluses of 1.1 per cent of

GDP and 0.3 per cent of GDP respectively. All sectors are forecast to show surpluses during the period 2008–2011. Central government surpluses make the largest contribution to general government net lending in the coming years. Net lending in the old-age pension system declines gradually as a result of increased pension payments and is estimated to show a deficit around 2015. Net lending in the local government sector declines somewhat but remains positive throughout the forecast period.

## 4.4 Net financial wealth and consolidated gross debt

At the end of 2007, general government financial assets exceeded liabilities by SEK 642 billion or 20.9 per cent of GDP. This positive financial position should be seen in the light of assets of SEK 890 billion in the pension system's buffer funds (National Pension Funds), which is equivalent to 29 per cent of GDP. General government capital income in the form of interest and dividends also exceeds interest expenditure. The consolidated gross debt amounted to 40.6 per cent of GDP, which is considerably below the EMU reference value of 60 per cent of GDP. The surpluses lead to a continued strengthening of the general government sector's net financial position. Moreover, gross debt is reduced as a result of the divestments of state shareholdings implemented during the year and planned for the future. Consolidated gross debt is estimated at 23.8 per cent of GDP at the end of 2011. Of the approximately 17 percentage point reduction between 2007 and 2011, share sales account for approximately 6 percentage points.

## 4.5 Fiscal policy stance

Fiscal policy should be well balanced with regard to the economic situation and not make the Riksbank's task difficult. It should therefore neither stimulate demand in favourable economic situations nor dampen demand in weaker economic situations.

Table 8 shows the change in the structural balance, which can be interpreted as a measure of fiscal policy direction. The proposed reforms in relation to 2008 of SEK 36 billion for 2009 contribute to the structural balance declining by around 1 per cent of GDP in 2009. This helps to maintain demand in a situation of weak resource utilisation. When economic activity weakens in a situation where net lending is expected to permanently exceed the surplus target, it is natural that a more expansionary fiscal policy stance is adopted, which causes net lending to approach the target. The reforms now proposed are therefore consistent with a responsible fiscal policy, taking into account economic conditions.

**Table 8 Indicators for stimulating demand**

Annual change, per cent of GDP

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| **Net lending** | **1.3** | **-0.8** | **-1.7** | **0.6** | **0.9** |
| of which | | | | | |
| Automatic stabilisers | -0.2 | -1.1 | -0.6 | 0.2 | 0.5 |
| One-off effects | 0.0 | 0.3 | -0.3 | 0.0 | 0.0 |
| Extraordinary capital gains | 0.3 | -0.8 | 0.1 | 0.0 | 0.0 |
| **Structural balance** | **1.3** | **0.7** | **-0.9** | **0.3** | **0.5** |
| of which | | | | | |
| Discretionary fiscal policy[1] | -0.9 | 0.0 | -1.1 | 0.1 | 0.1 |
| Capital income, net | 0.2 | -0.1 | 0.4 | 0.1 | 0.0 |
| Local government finances | 0.0 | 0.0 | -0.2 | 0.0 | 0.0 |
| Other | 1.9 | 0.8 | 0.1 | 0.2 | 0.3 |
| GDP gap, change in percentage points | -0.4 | -1.9 | -1.0 | 0.4 | 0.8 |

[1] Refers to expenditure and revenue changes due to decided, now proposed and announced reforms in relation to the previous year, as a proportion of GDP.

Sources: Statistics Sweden and Ministry of Finance.

## 4.6 Monitoring of the surplus target

The surplus target of 1 per cent of GDP is defined as a target for actual general government net lending, which is to be achieved on average over a business cycle. The definition of the target in terms of an average over a business cycle instead of an annual requirement is justified for stabilisation policy reasons. With an annual net lending target of 1 per cent of GDP, fiscal policy would need to be contractionary in a recession with falling net lending, in order to ensure fulfilment of the annual target. This would contribute to strengthening the economic downturn. Moreover, the automatic stabilisers would not be able to act freely. At the same time, the formulation of the target makes it difficult to evaluate on an annual basis that fiscal policy is in line with the target. An annual target could always be checked against the outcome after the event.

Since neither the length of a business cycle nor the exact economic situation at a given time can be determined with any certainty, the surplus target is monitored using several indicators, which all have various strengths and weaknesses:

– Average net lending as from the year the surplus target was introduced, i.e. 2000.
– A seven-year moving average of net lending.
– The structural balance.

The seven-year moving average for a given year includes the given year, the three immediately preceding years and the three immediately following years and is adjusted for major well-defined one-off effects. The seven-year moving average for 2007 thus includes annual net lending for the period 2004–2010 (net lending for 2009 and 2010 are forecasts). The indicator for 2008 includes instead the period 2005–2011 and so on.

The government has chosen to use an average for precisely seven years, since this guarantees that the indicator calculated for the current budget year also includes the three forecast years in the budget as well as the last year for which an expenditure ceiling is determined. In this way, this indicator is also of assistance in drawing up in advance a plan for meeting fiscal policy targets.

Since both average net lending as from 2000 and the seven-year indicator include actual net lending for several years, these indicators take account to some extent of the economic situation. The advantage of both these indicators is that they are relatively simple and transparent. However, their simplicity means that they do not take account of the economic situation in a more exact manner. As regards the seven-year indicator in particular, there is an obvious risk that its calculation includes more boom years than recession years or vice versa. As from the 2008 Spring Fiscal Policy Bill, this indicator is therefore calculated together with a similarly calculated seven-year moving average of the GDP gap. If the latter is close to zero (indicating that the economic situation has on average been normal during the period studied), while the seven-year moving average of net lending is close to 1, the fiscal policy pursued may be regarded as being roughly in line with the surplus target.

The government also calculates the structural balance, which more directly adjusts actual net lending for the economic situation and for some major well-defined one-off effects. The structural balance aims to show how large net lending should be in a normal economic situation. For example, a positive structural balance shows that there is an underlying cyclically independent surplus in the public finances. A structural balance of 1 per cent of GDP indicates fulfilment of the surplus target. One problem with the structural balance is that it must be calculated using a particular statistical method that sometimes has proved to be very uncertain

Table 9 shows net lending in the general government sector and the indicators for checking the surplus target.

**Table 9 Net lending in the general government sector and indicators for checking the surplus target**

Per cent of GDP, unless otherwise stated.

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net lending | 3.7 | 1.7 | -1.4 | -1.2 | 0.6 | 2.0 | 2.2 | 3.5 | 2.8 | 1.1 | 1.6 | 2.5 |
| Net lending, average as from 2000 | 3.7 | 2.7 | 1.3 | 0.7 | 0.7 | 0.9 | 1.1 | 1.4 | 1.5 | 1.5 | 1.5 | 1.6 |
| Seven-year indicator | | | | 0.9 | 0.9 | 1.0 | 1.4 | 1.8 | 2.1 | | | |
| Structural balance | 1.9 | 2.2 | -0.7 | -0.4 | 0.4 | 1.1 | 0.8 | 2.1 | 2.8 | 1.9 | 2.2 | 2.7 |
| GDP gap | 0.8 | -1.0 | -0.9 | -1.0 | -0.2 | 0.5 | 1.6 | 1.2 | -0.7 | -1.7 | -1.4 | -0.5 |
| GDP gap, average as from 2000 | 0.8 | -0.1 | -0.4 | -0.5 | -0.5 | -0.3 | 0.0 | 0.1 | 0.0 | -0.2 | -0.3 | -0.3 |
| GDP gap, seven-year average | | | | 0.0 | 0.0 | 0.1 | -0.1 | -0.1 | -0.1 | | | |

Sources: Statistics Sweden and Ministry of Finance.

*Average net lending since 2000*

Average net lending during the period 2000–2007 was 1.4 per cent of GDP (see Table 9). Taking into account the reforms proposed in the Budget Bill for 2009, net lending is estimated to average 1.5 per cent of GDP between 2000 and 2009. During the same periods, resource utilisation was on average around normal. Net lending may therefore be regarded to exceed the surplus target somewhat during these periods.

After 2009, net lending grows. This is due to some extent to the forecast for 2010 and forwards being based on "unchanged policy", in other words, that no new reforms come into force other than those already announced or previously decided.

*Seven-year indicator*

Table 9 shows the development of net lending and the GDP gap, both measured as a seven-year moving average. For 2004 and 2005, the indicator shows that net lending for the periods 2001–2007 and 2002–2008 averages around 1 per cent of GDP. Since the equivalent seven-year moving averages of the GDP gap are simultaneously close to zero for both these periods, the conclusion is that the fiscal policy pursued during these periods was on average in line with the surplus target. The indicator for 2006, 2007 and 2008 is 0.4, 0.8 and 1.1 percentage points respectively above the surplus target.

*Structural balance*

The structural balance for 2009 and 2010 is estimated at 1.9 and 2.2 per cent of GDP respectively. This indicator also shows that the surplus target is exceeded, but as was the case with the two previous indicators, this is due to some extent to the forecast being based on no new reforms coming into force until 2011, in addition to those already announced or previously decided.

*Overall assessment*

All the indicators used to evaluate the surplus target show that the surplus target is exceeded somewhat during the forecast period. As stated above, this is due to some extent to the forecast being solely based on already announced or previously decided reforms. The government considers that there are several good reasons for not prematurely utilising the future scope for reforms shown by the indicators. The uncertainty around economic developments is currently very considerable in the light of the financial crisis. Experience also shows that net lending can fall markedly in turbulent times and that it is also difficult in such cases to determine what is due to structural (more permanent) factors and what is due to temporary factors. Experience also shows that permanent net lending is generally overestimated at the start of a recession. Taking into account reasonable safety margins and the need for buffers in this situation, the government considers that fiscal policy is in line with the surplus target.

## 4.7 Monitoring of the expenditure ceiling

Table 10 shows the expenditure ceiling during the period 2006–2011. The expenditure ceiling margin, the so-called budgeting margin, was nearly SEK 28 billion in 2007. The budgeting margin during the forecast period is deemed to be sufficiently large, given the margin of uncertainty considered necessary in a three-year perspective. Both the ceiling-restricted expenditure and the levels of the expenditure ceilings decline during the period, measured as percentages of GDP.

**Table 10 Expenditure ceiling 2006–2011**

SEK billion, unless otherwise stated.

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| Expenditure ceiling | 907 | 938 | 957 | 991 | 1,020 | 1,050 |
| *Per cent of GDP* | *31.3* | *30.5* | *30.0* | *30.0* | *29.5* | *28.9* |
| Budgeting margin | 11.8 | 27.9 | 16.9[1] | 37.6 | 34.7 | 48.7 |
| Ceiling-restricted expenditure | 895 | 910 | 940 | 953 | 985 | 1001 |
| *Per cent of GDP* | *30.9* | *29.6* | *29.5* | *28.8* | *28.5* | *27.5* |

Note: The budgeting margin is the difference between a determined or proposed expenditure ceiling and the ceiling-restricted expenditure.
[1] The repayment of infrastructure loans of approximately SEK 25 billion proposed in 2008 increases ceiling-restricted expenditure and reduces the budgeting margin by the same amount. At the same time, expenditure is adjusted downwards by approximately SEK 2 billion per year during the rest of the period, which improves the budgeting margin.
Sources: Statistics Sweden and Ministry of Finance

## 4.8 Monitoring of the local government balanced budget requirement

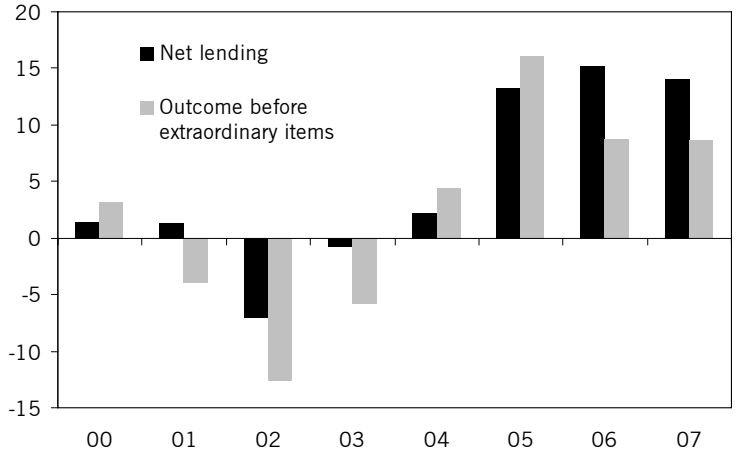
The surplus target for general government finances, which also includes the local government sector, is linked to net lending as defined in the National Accounts.

Local government accounting is based, however, on the same theoretical starting points as those that apply to accounting in the business

sector, with minor adjustments in the light of the special nature of local government. The outcome, not net lending, therefore determines whether municipalities and county councils comply with the requirements of the Swedish Local Government Act (1991:900) for good financial management and a balanced budget. As from 2005, municipalities and county councils should determine, among other things, the financial targets that are of importance for good financial management. Consequently, good financial management is an objective, while the balanced budget requirement is a restriction, which states the lowest acceptable level of outcome in the short term. A negative outcome is to be reversed within three years, unless exceptional reasons exist. The annual report should state whether the balanced budget requirement has been complied with.

**Diagram 6 Local government sector outcome before extraordinary items and net lending**

*SEK billion*




Sources: Statistics Sweden and Swedish Association of Local Authorities and Regions

Diagram 6 shows that the outcome and net lending mainly develop in the same direction over time, even though they may vary in monetary terms in individual years. The outcome before extraordinary items for the local government sector was SEK 14.1 billion in 2007, of which the municipalities accounted for SEK 10.1 billion and the county councils for SEK 4.0 billion.

A common objective for municipalities and county councils is good financial management, which means that the outcome should amount to 2 per cent of the total of tax revenues and general central government grants. In 2007, the outcome before extraordinary items was equivalent to 2.5 per cent of tax revenues and central government grants. Favourable economic activity and employment growth over the past few years have contributed to the improvement in outcome. There has also been scope to increase local government costs in fixed prices, which increased by just over 1.5 per cent per year during the period 2005–2007.

The proportion of municipalities and county councils reporting positive outcomes has increased over the past few years. In 2002, approxi-

mately 60 per cent of municipalities and a quarter of county councils reported positive outcomes before extraordinary items. In 2007, the proportion had increased to approximately 90 per cent of both municipalities and county councils. The 2007 outcome varied between SEK -1,295 and SEK 9,361 per inhabitant for municipalities and between SEK -62 and SEK 1,067 per inhabitant for county councils.

## 4.9 The Fiscal Policy Council's first review

An important condition for confidence in the fiscal policy framework and its long-term sustainability is that the fiscal policy targets are monitored in a clear manner by external assessors. In 2007, the government therefore established a Fiscal Policy Council, in order to increase transparency and insight into fiscal policy. The Fiscal Policy Council is charged with annually monitoring, among other things, the fulfilment of the basic fiscal policy targets. The Council will also examine the clarity of the fiscal government bills as well as the quality of the data on which the government bases its assessments. In addition, the Council should assess whether development is in line with good long-term sustainable growth and leads to long-term sustainable high employment. The Council should also promote increased public debate in society on economic policy, thereby improving the general public's opportunities for demanding accountability.

In the spring of 2008, the Fiscal Policy Council submitted its first evaluation of target fulfilment in the government's economic policy. The report primarily deals with the government's application of the fiscal policy framework as well as the long-term effects of growth and employment policies.

The Fiscal Policy Council considers that the government's employment policy reforms, principally the earned income tax credit and the reduction in unemployment benefit, may be assumed to have significant positive employment effects in the long term. On the other hand, the Council advises against further selective tax cuts, such as targeted reduced employer contributions, as these are deemed to have negative net effects on economic efficiency. The Council also considers that the reforms of the financing of the unemployment insurance funds have been designed ineffectively and that the health insurance reforms have small effects. In its assessment of the fiscal policy framework, the Fiscal Policy Council considers that the surplus target should be better justified on the basis of fundamental objectives of distribution between generations and economic efficiency. This requires the Ministry of Finance to develop systematic generational analyses. It should also be examined whether the surplus target should be formulated so that it relates to general government total lending, instead of general government net lending as at present.

The government is working on a review of how the fiscal policy framework can be strengthend and further developed. Improving meth-

ods and modelling techniques for analysing short- and long-term fiscal policy is part of the review. Efforts are under way to further develop the long-term scenarios showing the impact of demographic trends on the economy and public finances. In the 2009 Budget Bill, the long-term estimates have been expanded to include several alternative scenarios showing the sustainability of general government finances.

# 5 Comparison with the updated programme for 2007

Table 11 compares the forecast in the current updated convergence programme with the updated convergence programme for 2007.

**Table 11 Comparison with the updated convergence programme for 2007**

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| **GDP, percentage change in volume** | | | | | |
| Updated convergence programme for 2007 | 3.2 | 3.2 | 2.5 | 2.2 | – |
| Updated convergence programme for 2008 | 2.7 | 1.5 | 1.3 | 3.1 | 3.5 |
| Difference, percentage points | -0.5 | -1.7 | -1.2 | 0.9 | – |
| **General government net lending, per cent of GDP** | | | | | |
| Updated convergence programme for 2007 | 2.9 | 2.8 | 3.1 | 3.6 | – |
| Updated convergence programme for 2008 | 3.5 | 2.8 | 1.1 | 1.6 | 2.5 |
| Difference, percentage points | 0.6 | 0.0 | -2.0 | -2.0 | – |
| of which reforms in the Budget Bill for 2009 | | | -1.0 | -1.0 | |
| **Consolidated gross debt, per cent of GDP** | | | | | |
| Updated convergence programme for 2007 | 39.7 | 34.8 | 29.8 | 24.5 | |
| Updated convergence programme for 2008 | 40.6 | 35.5 | 32.2 | 28.3 | 23.8 |
| Difference, percentage points | 0.9 | 0.7 | 2.4 | 3.8 | – |

Sources: Statistics Sweden and Ministry of Finance.

GDP growth in 2007 was 0.5 percentage points lower than stated in the previous year's updated programme. The GDP growth forecast for 2008 and 2009 has been revised downwards by 1.7 percentage points and 1.2 percentage points respectively.

Net lending in 2007 was 0.6 percentage points stronger than forecast in the last update. The higher net lending is mainly explained by higher tax revenues but also by lower expenditure. The higher tax revenues are partly due to the fact that the tax on household capital gains is now estimated to have amounted to 1.7 per cent of GDP, compared with 1.3 per cent of GDP in the updated convergence programme for 2007. The forecast for general government net lending in 2008 is 2.8 per cent of GDP, which is the same as in the last year's update. Both revenue and expenditure have been revised downwards by just over SEK 10 billion.

Gross debt for all years is considerably lower than in the updated convergence programme for 2007. The lower gross debt, as per cent of GDP, is mainly explained by sales of state-owned companies, but also by GDP in current prices now being higher.

# 6 The government's reform policy and quality in public finances

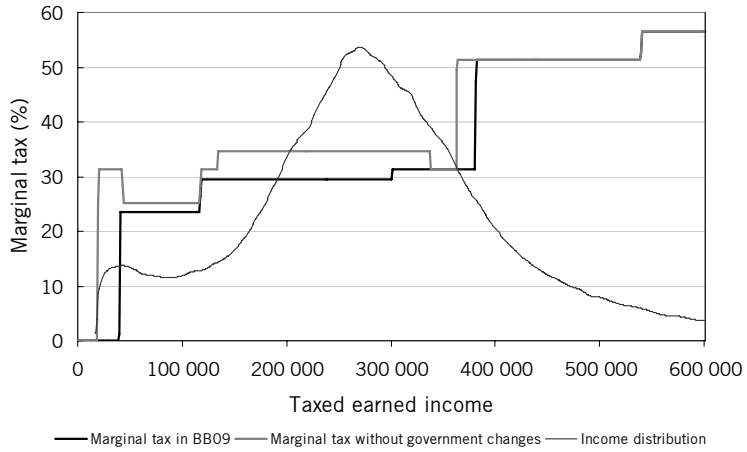
The most central task for the government is getting more people into work and reducing exclusion. Permanently high employment is a prerequisite for the long-term financing of a public welfare system that is fair and of high quality. An important focus of the government's policy has been to take several measures to increase the labour supply, since experience shows that it is the labour supply that in the long term determines the size of employment. These measures include the earned income tax credit and the changes in health insurance and unemployment insurance. These supply reforms have been combined with measures to stimulate demand, such as new start jobs, so-called newly recovered jobs (nyfriskjobb) and reduced employer contributions.[9]

## 6.1 Revenue reforms

In the Budget Bill for 2007, the government proposed a major income tax reform, the earned income tax credit, with the aim of making it more profitable to work. This involved tax relief of SEK 40 billion. The earned income tax credit was increased in a second stage in 2008 and resulted in an additional reduction of SEK 11 billion. In the Budget Bill for 2009, the government proposes a third stage of the reform, including an increase in the threshold for levying central government income tax, which involves total tax relief of SEK 15 billion. With this third stage of the reform, the earned income tax credit means that the tax levy on earned income has been reduced by SEK 60 billion since the government took office. This is equivalent to 2 per cent of GDP and 7 per cent of total taxes on labour. The earned income tax credit is specifically targeted at reducing the thresholds for people entering the labour market and has been designed so that the greater part of the tax relief goes to low- and middle-income earners. The earned income tax credit leads to both reduced average tax and reduced tax margins (see Diagram 7). In order to motivate older people to work longer, an increased earned income tax credit is introduced for people over 65.

[9] Chapter 2 presents the reforms proposed and announced by the Government in the 2009 Budget Bill.

**Diagram 7 Marginal tax and income distribution**




Measures to strengthen the demand for labour are also required, in order that stimulating the labour supply results in increased employment. In order to facilitate the entry of young people into the labour market, the government has implemented reductions in social security contributions targeted at people under 26. The reduction in employer contributions for young people, which means that the employer only pays the old-age pension contribution, is estimated to amount to SEK 20 billion in 2009. Targeted reductions have also been made for older people. The employer only pays the old-age pension contribution for people aged between 65 and 67, while no contribution is paid for those over 67. This reduction results in a 17 per cent reduction in labour costs for young people and a 20 per cent reduction in labour costs for older people.

In order to increase the opportunities for returning to work for those who have not worked for more than a year, the government has introduced new start jobs. These involve a subsidy to the employer equivalent to the whole, half or double the employer contribution depending on the person hired. This subsidy applies, with certain special rules for young people and older people, for a period equivalent to the period that the employee has been absent from working life, but a maximum of five years.

The government has also implemented and announced tax relief, which aims to strengthen the incentives for enterprise and investment in Sweden. Wealth tax was abolished in 2007. Moreover, the government has reformed the taxation of active partners in close companies, the so-called 3:12 rules, with the aim of simplifying the rules and regulations and stimulating entrepreneurship and growth. In the Budget Bill for 2009, the government announces a reduction in the corporation tax rate from 28 to 26.3 per cent as from 2009. In addition, a 1 percentage point reduction in the levy of social security contributions as from 2009 is announced. The government has introduced quarterly reporting of VAT for small firms, in order to reduce the regulatory burden on businesses.

**Table 12 Tax revenue**

Per cent of GDP

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Difference 2000-2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tax on labour | 31.5 | 31.9 | 30.8 | 31.1 | 30.7 | 30.3 | 29.6 | 28.4 | 28.5 | 27.5 | 27.2 | 27.1 | -4.4 |
| Direct taxes | 18.4 | 18.2 | 17.4 | 17.9 | 17.7 | 17.4 | 16.9 | 15.7 | 15.7 | 15.2 | 15.1 | 15.0 | -3.4 |
| Indirect taxes | 13.1 | 13.7 | 13.5 | 13.3 | 13.0 | 12.9 | 12.7 | 12.7 | 12.9 | 12.3 | 12.1 | 12.1 | -1.1 |
| Tax on capital | 7.2 | 5.1 | 4.2 | 4.3 | 5.2 | 6.1 | 6.6 | 6.7 | 5.5 | 5.7 | 5.8 | 5.8 | -1.3 |
| Tax on capital, households | 1.5 | 0.6 | 0.3 | 0.3 | 0.5 | 0.8 | 1.3 | 1.6 | 0.8 | 0.8 | 0.9 | 0.8 | -0.7 |
| Tax on corporate profits | 3.2 | 2.2 | 1.8 | 1.9 | 2.7 | 3.4 | 3.4 | 3.3 | 3.0 | 3.2 | 3.3 | 3.4 | 0.2 |
| Tax on consumption | 12.9 | 12.9 | 13.0 | 13.0 | 12.9 | 13.1 | 12.9 | 13.0 | 13.5 | 13.3 | 13.2 | 13.0 | 0.1 |
| VAT | 8.8 | 8.9 | 9.0 | 9.0 | 9.0 | 9.1 | 9.1 | 9.3 | 9.7 | 9.5 | 9.5 | 9.4 | 0.6 |
| Tax arrears and other taxes | 0.2 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | -0.1 | 0.0 | -0.1 | -0.1 | -0.1 | -0.1 | -0.4 |
| **Total tax revenue** | **51.8** | **49.8** | **47.9** | **48.3** | **48.7** | **49.5** | **49.1** | **48.0** | **47.4** | **46.3** | **46.1** | **45.8** | **-6.0** |

Sources: Statistics Sweden and Ministry of Finance.

Table 12 shows the development of tax revenue between 2000 and 2011. During this period, the tax ratio, i.e. total tax revenue as a percentage of GDP, is estimated to decline by 6 percentage points. This decline is an effect of both a reduced tax levy and higher growth. Tax on labour in particular has declined. Tax cuts totalling SEK 142 billion or just over 4 per cent of GDP have been implemented or announced for the period 2000–2009. The table also shows that tax on capital has declined during the period. However, this decline is explained by very large capital gains in 2000 and temporary tax revenue from firms that same year. Major changes in capital taxation include the abolition of wealth tax and the reduction in tax on housing. Higher growth has resulted in an increase in VAT revenue as a percentage of GDP, mainly due to higher consumption and investment. Revenue from excise duties, including tax on energy and carbon dioxide, declines despite increased taxes. This decline is explained by more efficient residential heating, the switch from electricity and oil to geothermal heat and district heating, as well as a newer vehicle stock with more energy-efficient engines.

## 6.2 Expenditure reforms

The functioning of the labour market largely depends on the design of the health insurance and unemployment insurance systems. The changes implemented by the government in these areas have been necessary for these insurance systems to regain their intended function when introduced. Over the years, these insurances, originally intended as temporary transitional insurances with generous benefits for a limited period, have become a long-term or lifelong maintenance system for many people. The longer people receive maintenance from these systems, the more difficult it is to return to the labour market. This development has

resulted in growing exclusion. During the period 1995 to 2005, more than 20 per cent of people aged 20 to 65, calculated as full-year equivalents, received maintenance from these insurance systems. In order to break this pattern, the government has implemented changes in both health insurance and unemployment insurance.

In unemployment insurance, the availability for work condition has been tightened and the number of days an unemployed person is entitled to benefit has been restricted. The benefit levels in unemployment insurance have been reduced by abolishing the increased insurance ceiling for the first 100 benefit days and by introducing a gradual reduction in the benefit level from 80 to 70 per cent after 200 benefit days. The government has also increased self-financing in unemployment insurance by introducing a link between the membership charges and the unemployment level in the insurance fund. Differential charges are expected to improve wage formation and the functioning of the labour market. In order to increase the insurance nature of unemployment insurance, the government has also restricted the entitlement to unemployment benefit in the case of part-time work. The reform of unemployment insurance has resulted in many people choosing to leave the unemployment insurance fund. The statistics on which people have left the fund are deficient, but indicate that it is primarily people who have been out of the labour market a considerable time, those approaching retirement and those with a relatively low risk of unemployment. In order to minimise the number of people without insurance, the government therefore announces in the Budget Bill for 2009 a temporary shortening of the membership condition in the unemployment insurance fund as well as other initiatives to stimulate the entry conditions.

In addition to the reform of unemployment insurance, the government has implemented other changes in labour market policy. These include more efficient matching of job seekers to job vacancies as well as an increased focus on people who are remote from the labour market.

In order to increase employment and reduce the high ill-health figures (ohälsotal), the government has also implemented extensive reforms in health insurance. One of the central reforms is the introduction of fixed time limits for the receipt of sickness benefit and for a review of the entitlement to rehabilitation. The fixed time limits are expected to lead to shorter sickness cases and reduced total sickness absence, as many players in the sickness certification process are now expected to act earlier in the sickness case. The health insurance package also includes other reforms, such as a more consistent review of the entitlement to both sickness benefit and sickness and activity compensation, expanded occupational health services, a rehabilitation guarantee and measures to stimulate those receiving sickness and activity compensation to return to work.

## 6.3 Effects of economic policy

The main purpose of the majority of the government's reforms is to increase permanent employment. It is very difficult to assess the long-term effects of these reforms. The government's assessments are based on empirical or theoretical research on reforms of a similar type. Implemented reforms are then monitored using outcome statistics to see whether the actual outcome matches the anticipated effect.

The overall assessment of the long-term effects of the reforms so far implemented by the government or announced in the Budget Bill for 2009 is that employment increases by 2.8 per cent or 120,000 people. The number of hours worked is estimated to increase by 4.4 per cent and GDP by 3.4 per cent. Table 13 illustrates the long-term effects of the government's policy.

**Table 13 Long-term effects of the government's policy**

Change in per cent

| | Number of employed[1] | Employment | Hours worked | GDP |
|---|---|---|---|---|
| Earned income tax credit and increased lower threshold for central government tax | 70,000 | 1.6 | 2.4 | 1.9 |
| Unemployment insurance | 10,000 | 0.3 | 0.4 | 0.2 |
| Labour market policy | 20,000 | 0.4 | 0.7 | 0.5 |
| Health insurance | 10,000 | 0.3 | 0.8 | 0.7 |
| Other[2] | 10,000 | 0.2 | 0.2 | 0.1 |
| **Total** | **120,000** | **2.8** | **4.4** | **3.4** |

[1] The number of employed people is calculated on the potential employment level in 2006, which is estimated at 4,364,000 people.
2 Includes the effects of the child care allowance, the tax cut for household services, the reduction in employer contributions for young people and a general reduction in social security contributions.
Sources: Statistics Sweden and Ministry of Finance.

The government estimates that the first two stages of the earned income tax credit have increased the labour supply by 60,000 people. External assessors, such as the Fiscal Policy Council, the National Institute of Economic Research and the Swedish Trade Union Confederation, have made similar estimates.

## 6.4 Quality in public finances

In recent years, the importance of quality in public finances has been increasingly emphasised in Sweden as well as in the rest of the EU. As seen in Chapter 4, general government expenditure accounts for 50.1 per cent of GDP in 2008 (according to ESA 95), a fall of more than 8 percentage points since 2003. Government-funded welfare services will, however, increase in volume as a result of the demographic trend. Demands for higher quality in general government activities, such as health care, schools and care of the elderly, may also be expected in the future. In order to meet this increased demand, general government funds need to be utilised effectively and the joint resources created today need to prepare the economy for future challenges.

The EU is currently in the process of compiling uniform statistics on the allocation of public finances by each member state. Uniform statistics enable cross-country as well as intertemporal comparisons of general government expenditure. In order to evaluate whether a change in the composition of general government expenditure has affected long-term growth, further and more detailed information is required. However, the allocation of general government expenditure between different purposes and the change in allocation over time provide an indication of how different types of expenditure and purposes are prioritised as well as an indication of policy stance.

**Table 14 General government expenditure by purpose, per cent of GDP**

Per cent of GDP

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Change 1995-2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General public administration | 12.0 | 11.7 | 12.0 | 11.0 | 10.2 | 10.2 | 8.7 | 9.1 | 8.2 | 7.9 | 7.7 | -4.3 |
| interest | 6.6 | 6.5 | 6.2 | 5.4 | 4.7 | 4.0 | 3.0 | 3.2 | 2.4 | 1.9 | 2.0 | -4.6 |
| other | 5.4 | 5.2 | 5.8 | 5.7 | 5.5 | 6.2 | 5.7 | 5.9 | 5.9 | 5.9 | 5.7 | 0.3 |
| Defence | 2.5 | 2.5 | 2.4 | 2.4 | 2.4 | 2.4 | 2.2 | 2.1 | 2.1 | 1.9 | 1.7 | -0.7 |
| Social responsibility and judicial system | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.3 | -0.1 |
| Economic issues and economic policy | 6.0 | 4.9 | 4.5 | 4.6 | 4.9 | 4.1 | 4.4 | 4.8 | 4.9 | 4.8 | 5.1 | -0.9 |
| Environmental protection | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.2 |
| Provision of housing and social planning | 2.8 | 2.6 | 2.0 | 1.7 | 1.3 | 0.9 | 1.0 | 0.9 | 0.9 | 0.8 | 0.9 | -1.9 |
| Health care | 6.3 | 6.6 | 6.3 | 6.3 | 6.4 | 6.3 | 6.7 | 7.0 | 7.2 | 7.0 | 7.0 | 0.7 |
| Leisure, culture and religion | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 1.1 | -0.8 |
| Education | 7.1 | 7.0 | 7.1 | 7.4 | 7.5 | 6.8 | 7.2 | 7.4 | 7.3 | 7.2 | 7.3 | 0.2 |
| Social security | 26.9 | 25.9 | 24.7 | 23.4 | 23.7 | 23.5 | 23.5 | 23.7 | 24.7 | 24.3 | 23.8 | -3.1 |
| **Total expenditure** | **67.1** | **64.8** | **62.5** | **60.3** | **59.8** | **56.8** | **56.5** | **57.9** | **58.2** | **56.8** | **56.4** | **-10.7** |
| excluding interest | 60.5 | 58.4 | 56.3 | 54.9 | 55.1 | 52.8 | 53.5 | 54.7 | 55.8 | 54.9 | 54.4 | -6.1 |

Sources: Statistics Sweden and Ministry of Finance.

Only three expenditure categories increased as a percentage of GDP during the period 1995-2005: environmental protection, health care and education. The main reason that most expenditure categories fell as a percentage of GDP is that GDP growth was high during that period. Consequently, expenditure that follows the general price trend has gradually fallen as a percentage of GDP.

Further, it may be stated that expenditure on social security in Sweden accounts for just under one-quarter of GDP and just over 40 per cent of total general government expenditure. However, social security expenditure fell somewhat as a percentage of total expenditure in 2005, compared with 2004. Given the changes the government has made in the insurance systems, this expenditure will probably continue to fall as a percentage of GDP. Expenditure on health care accounts for a significant percentage of total expenditure and is the expenditure category that increased the most during the period. Expenditure on education also increased as a percentage of total expenditure during the period 1995-

2005. Interest expenditure fell dramatically, which is mainly the result of the sharp fall in general government consolidated gross debt as a percentage of GDP since 1995. Expenditure on provision of housing and social planning also fell during the period.

**Table 15 General government expenditure by purpose, per cent of total expenditure**

Per cent of total expenditure

| | 1995 | 1997 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Change 1995-2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General public administration | 17.9 | 18.1 | 19.2 | 18.3 | 17.1 | 18.0 | 15.5 | 15.7 | 14.1 | 13.8 | 13.6 | -4.2 |
| interest | 9.8 | 10.0 | 9.9 | 8.9 | 7.8 | 7.1 | 5.4 | 5.6 | 4.0 | 3.4 | 3.5 | -6.2 |
| other | 8.1 | 8.1 | 9.3 | 9.4 | 9.3 | 10.9 | 10.1 | 10.1 | 10.1 | 10.5 | 10.1 | 2.0 |
| Defence | 3.7 | 3.9 | 3.9 | 4.0 | 4.1 | 4.2 | 3.9 | 3.7 | 3.6 | 3.4 | 3.1 | -0.6 |
| Social responsibility and judicial system | 2.1 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.4 | 2.5 | 2.5 | 2.4 | 2.4 | 0.3 |
| Economic issues and economic policy | 9.0 | 7.5 | 7.2 | 7.6 | 8.1 | 7.2 | 7.8 | 8.3 | 8.5 | 8.5 | 9.1 | 0.1 |
| Environmental protection | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.7 | 0.5 |
| Provision of housing and social planning | 4.2 | 4.1 | 3.3 | 2.9 | 2.2 | 1.6 | 1.7 | 1.5 | 1.5 | 1.5 | 1.7 | -2.6 |
| Health care | 9.4 | 10.1 | 10.2 | 10.4 | 10.6 | 11.0 | 11.9 | 12.1 | 12.4 | 12.3 | 12.4 | 3.0 |
| Leisure, culture and religion | 2.8 | 2.9 | 2.9 | 3.0 | 3.0 | 1.9 | 2.0 | 1.9 | 1.9 | 1.8 | 1.9 | -0.9 |
| Education | 10.6 | 10.8 | 11.4 | 12.4 | 12.5 | 12.0 | 12.7 | 12.8 | 12.6 | 12.7 | 13.0 | 2.4 |
| Social security | 40.1 | 40.0 | 39.5 | 38.9 | 39.7 | 41.3 | 41.6 | 41.0 | 42.4 | 42.9 | 42.2 | 2.0 |
| **Total expenditure** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | |
| excluding interest | 90.2 | 90.0 | 90.1 | 91.1 | 92.2 | 92.9 | 94.6 | 94.4 | 96.0 | 96.6 | 96.5 | 6.2 |

Sources: Statistics Sweden and Ministry of Finance.

# 7 The sustainability of public finances

During the period mainly reported in the Budget Bill for 2009, i.e. 2008–2011, general government net lending is estimated at between 1.1 and 2.8 per cent of GDP.

The fact that public finances look strong in the immediate foreseeable future need not, however, necessarily mean that this applies in the longer term. General government expenditure largely consists of transfer payments and services that vary substantially with the age of the recipients. Expenditure on education, for example, mainly relates to young people, while old-age pensions, care of the elderly and health care have a clear link to older people. Variations in the age structure of the population can therefore result in a change in the expenditure level, without a change in policy stance. The size of general government revenue can also change over time, without a change in tax rates. An unfavourable demographic trend and other relevant factors can consequently weaken public finances in the long term, despite the fact that they currently look strong. This

chapter therefore presents an analysis of the long-term sustainability of public finances.

If current policy can in the long term be expected to lead to an uncontrolled increase in general government indebtedness, public finances are not sustainable in the long term. Such a policy stance will sooner or later need to be revised. Two key issues in this context are how "current policy" is defined and what is meant by "uncontrolled" debt growth.

This chapter discusses these and other issues with a bearing on the long-term development of public finances. The analysis focuses on the impact of the demographic trend on general government expenditure and revenue. The sustainability of public finances is analysed with the aid of long-term projections of economic development.

## 7.1 The demographic trend

Sweden's population is currently 9.2 million people. According to the population forecast presented by Statistics Sweden in the spring of 2008, the population will have grown to 10.4 million people by 2050. Of the total increase of 1.2 million, approximately two-thirds will be people aged 65 and over (Appendix A presents the calculation assumptions for the long-term estimates in more detail).

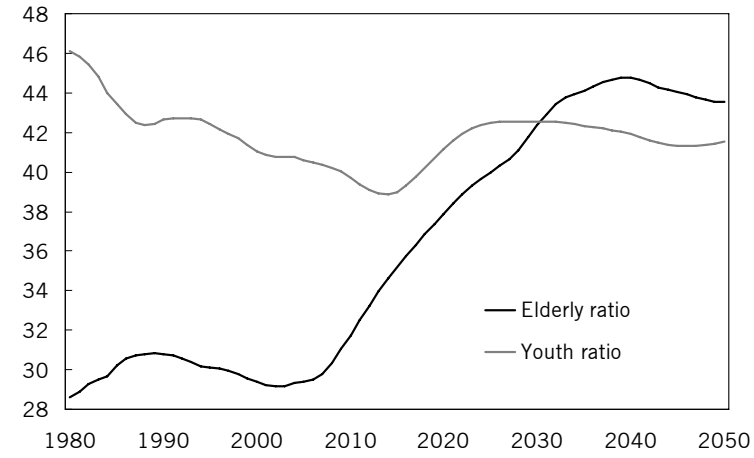
The demographic trend may be summarised in dependency ratios, i.e. the ratio between the number of people of non-working age and the number of people of working age. Diagram 8 shows the development of these dependency ratios. The dependency ratio for older people, measured as the number of people aged 65 and over in relation to the number of people aged 20 to 64, is forecast to increase from approximately 30 per cent in 2008 to approximately 44 per cent in 2035.[10] This is a sharp but nevertheless moderate increase in an international perspective. Between 2004 and 2050, the elderly ratio in the EU is forecast to increase from 25 to 50 per cent.[11] The dependency ratio for young people, measured as the number of people under the age of 20 in relation to the number of people aged 20 to 64, is more stable and fluctuates around 40 per cent throughout the period.

[10] As life expectancy increases, there is of course a possibility that the retirement age also rises. In order to maintain the elderly ratio at 30 per cent, older people must be defined as aged 70 and over and the working age as 20 to 69 by 2035. However, no change in the average retirement age is assumed in the scenarios presented here.

[11] The elderly ratio is defined in this case as the number of people aged 65 and over in relation to the number of people aged 15 to 64. Using this definition, the elderly ratio in Sweden increases from 26 to 39 per cent between 2004 and 2050.

**Diagram 8 Demographic dependency ratios**

Per cent

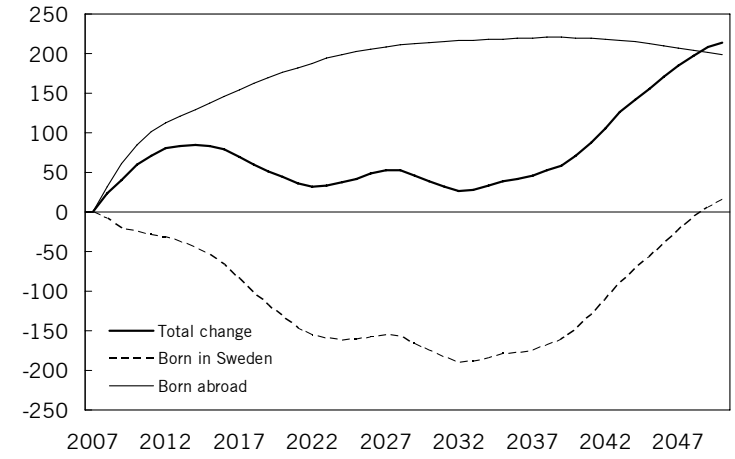



Source: Statistics Sweden.

Immigration accounts for the major part of population growth and is also of vital importance for growth in the population of working age. Without immigration, the number of people in the 20–64 age group would fall (see Diagram 9). The vast majority of immigrants are people born outside the EU. The employment ratio of this group is currently considerably below the average for the Swedish population. The increase forecast in the 20–64 age group therefore only results in a weak increase in the number of employed, unless the integration of immigrants in the labour market improves.

**Diagram 9 Population aged 20 to 64**

Change compared with 2007, thousands




Source: Statistics Sweden.

## 7.2 Long-term development of public finances

The purpose of the sustainability analysis is to assess whether current policy, if maintained in the future, is compatible with long-term sustainable public finances. An assumption of *unchanged policy* forward in time

is therefore fundamental in the projections. However, what this means is not self-evident. On the one hand, it is difficult to determine unambiguously what is included in *current policy*, on the other, *unchanged* can be interpreted in various ways. An assessment of long-term economic development must also be made in the projection. This assessment will naturally be fairly rough and development will largely be a product of the assumptions made.

The basis for the scenarios presented here is the forecast for economic development and public finances for the period 2008–2011 presented in Chapters 3 and 4. This forecast takes account of the policy, which was proposed in the Budget Bill for 2009 and which as a rule comes into force during the budget year 2009. The following two years in the forecast are based, however, on a policy in which no reforms are implemented. After that, the long-term projections take over. Consequently, current policy refers to the situation prevailing in 2011, according to the forecast, rather than to the situation in 2008.

In the forecast in the Budget Bill, public finances show a surplus of 2.5 per cent of GDP in 2011. This net lending exceeds the 1 per cent surplus target. The estimates assume that the surplus target must be met and that maintaining this target is an essential part of an unchanged policy. The concept of unchanged policy is interpreted as that the level of ambition of the general government commitment remains firm, financing is carried out according to unchanged principles, and the surplus target directs policy.

The period in which the surplus target is to apply has never been established. However, the demographically determined increase in general government expenditure, which has been stated as one of the reasons for the target, begins around 2015 (see Diagram 9). The estimates therefore assume that the target applies up to and including that year. In these circumstances, a technical adjustment is made so that net lending declines to 1 per cent of GDP, in accordance with the surplus target. This technical adjustment is made gradually between 2012 and 2015.[12]

The adjustment of net lending is of a computational nature and is implemented through a transfer from central government to households. This transfer improves household incomes and increases consumption expenditure, but is not assumed to affect the functioning of the economy.

In order to illustrate the importance of structural reforms for the long-term development of public finances, this base scenario is contrasted with an alternative scenario – a so-called employment scenario. In this scenario, the adjustment to the 1 per cent target is made through tax cuts, which permanently increase the labour supply and employment.

[12] After 2015, the technical adjustment remains as an unchanged percentage of GDP.

In both scenarios, tax rates are held constant after 2015 and expenditure and revenue are then determined mainly by demographic factors.[13] This results in the estimated general government net lending normally diverging from 1 per cent of GDP after 2015. In the estimates, the public finances will show deficits for long periods. These deficits are a direct consequence of the assumptions made in the estimates and should be interpreted as a consequence analysis and not as a forecast. Development after 2015 is therefore a mechanical projection, which describes what would happen in the absence of future fiscal policy rules and regulations, given a number of assumptions. The aim is to isolate as far as possible the demographic impact on public finances.

## 7.3 Economic development after 2011

The long-term projection of economic development is based on the forecast for the development of the Swedish economy up to 2011 described in Chapter 3. Employment growth after 2011 is mainly based on the forecast population growth. In the estimate, men and women born in Sweden and abroad in various age groups are assumed to work to the same extent as today. Average working hours, the proportion of people employed, the number of unemployed etc. are thus held constant in groups defined by gender, age and country of birth.

Up to and including 2014, some adjustment is also assumed, as a result of the measures to stimulate supply implemented by the government.

Productivity in the business sector is assumed to increase by an average of 2.4 per cent per year until 2020. This assumption is consistent with the average development from 1970 to the present day. After 2020, productivity growth in the business sector is assumed to fall gradually to an average of 2.2 per cent per year. Productivity growth in the general government sector is assumed to be zero.[14] Combined with employment shifts between the private and general government sectors, this leads to a productivity increase in the whole economy, which varies between 2.0 and 1.7 per cent per year during the period 2012–2050.

GDP growth is a result of the increase in productivity and the development of the number of hours worked (see Diagram 10). GDP is estimated to grow on average by just over 2.0 per cent per year during the

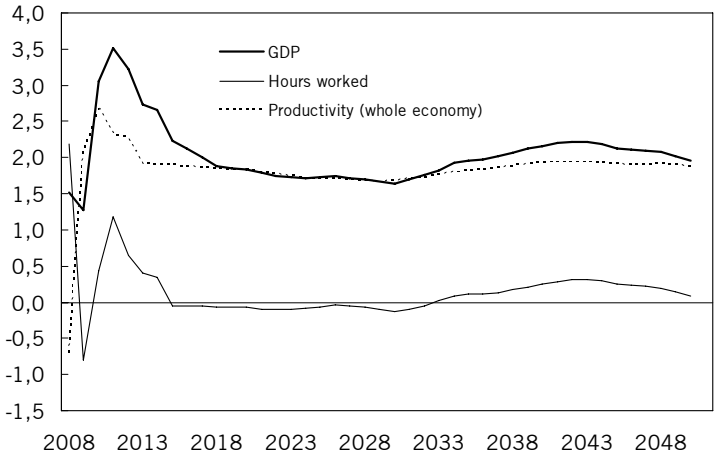
[13] The tax rate is held constant from 2011 in the base scenario, while it is locked from 2015 in the employment scenario.

[14] Previously, productivity growth in the general government sector was by definition zero in the National Accounts. These principles have now been revised so that the productivity level in some areas of the general government sector may vary over time. However, the results reported to date provide little guidance and the assumption of constant productivity is therefore retained in the long-term projections presented here.

period 2008–2050. GDP per capita is estimated to grow on average by just under 1.8 per cent per year.

**Diagram 10 GDP, hours worked and productivity**

Percentage change




Source: Ministry of Finance.

Corporate profit levels are assumed to remain unchanged, which means that wage growth in the private sector is determined by productivity growth. Wages in the general government sector are assumed to follow wages in the business sector. Since productivity growth in the general government sector is assumed to be zero, this results in productivity in the total economy growing more slowly than wages.[15] The most important calculation assumptions are summarised in Table 16.

[15] This would have been the case even with positive productivity growth in the general government sector as long as this growth is lower than in the private sector.

**Table 16 Macroeconomic assumptions**

| | 2000 | 2008 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|
| **Percentage change**[1] | | | | | | | | |
| Population, aged 16-64[2] | 0.5 | 0.5 | 0.2 | -0.3 | 0.0 | 0.1 | 0.1 | 0.2 |
| Employed, aged 16-64 | 2.2 | 1.2 | -0.1 | 0.3 | 0.0 | -0.1 | 0.1 | 0.2 |
| Number of hours worked | 1.1 | 2.2 | -0.2 | 0.5 | -0.1 | -0.1 | 0.1 | 0.2 |
| Productivity in the business sector[3] | 4.3 | -1.2 | 3.2 | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 |
| GDP, fixed prices | 4.4 | 1.5 | 2.2 | 2.9 | 1.9 | 1.7 | 2.0 | 2.1 |
| GDP per capita | 4.1 | 0.9 | 1.6 | 2.4 | 1.5 | 1.4 | 1.8 | 1.9 |
| GDP productivity | 3.3 | -0.7 | 2.4 | 2.4 | 2.0 | 1.8 | 1.9 | 1.9 |
| GDP deflator | 1.5 | 2.3 | 1.9 | 2.2 | 2.3 | 2.4 | 2.2 | 2.1 |
| CPI, annual average | 0.9 | 3.8 | 1.8 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 |
| Hourly wages[4] | 5.4 | 4.7 | 4.0 | 4.3 | 4.4 | 4.3 | 4.2 | 4.0 |
| **Per cent** | | | | | | | | |
| Real interest rate[5] | 4.3 | 0.4 | 3.1 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Labour force participation, aged 16-64[6] | 79.0 | 79.5 | 79.3 | 80.9 | 80.8 | 79.8 | 79.8 | 80.2 |
| Employment ratio, aged 16-64 | 74.8 | 76.0 | 75.4 | 77.4 | 77.4 | 76.3 | 76.3 | 76.7 |
| Open unemployment, aged 16-64[6] | 5.3 | 4.4 | 5.0 | 4.2 | 4.2 | 4.4 | 4.4 | 4.3 |
| ILO unemployment, aged 16-64 | 6.8 | 6.0 | 6.6 | 5.7 | 5.7 | 5.9 | 6.0 | 5.8 |

[1] For 2000 and 2008, the percentage change from the previous year is stated. For the period 2010–2050, the average percentage change from the previous year is stated in the table.
[2] Population as at 31 December.
[3] Business sector including non-profit organisations in the household sector.
[4] Hourly wages paid to employees.
[5] Five-year government bond.
[6] Old definition, i.e. full-time students who have looked for work are not included.
Sources: Statistics Sweden and Ministry of Finance.

## 7.4 General government revenue

The long-term development of tax revenues is largely dependent on employment growth. Most taxes are a direct or indirect taxation of work. The majority of households' income taxes and social security contributions are determined by the wage bill. These taxes account for more than half of general government revenue. The development of the labour market is also of major importance for household consumption expenditure, which generates revenue in the form of VAT and excise duties. Even if the tax rates remain unchanged in relation to the respective tax base, the total tax ratio, i.e. taxes and charges in relation to GDP, will change somewhat over the next few decades. The reason is that the tax bases do not necessarily grow at the same rate as GDP.

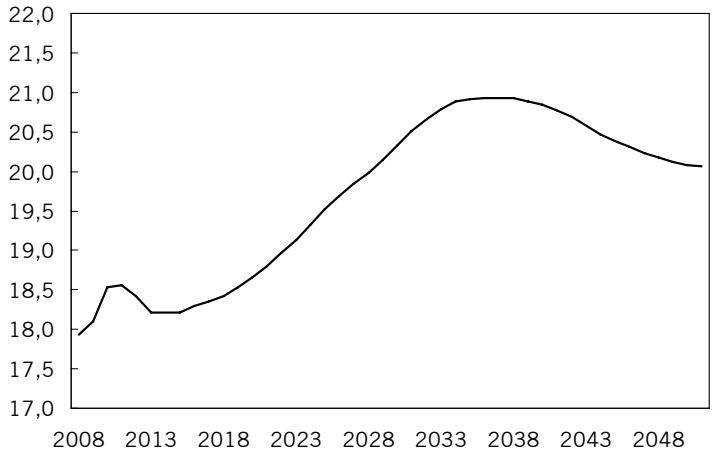
## 7.5 General government expenditure

The development of the population structure has major effects on general government expenditure. The ever-increasing number of older people affects expenditure on pensions, health care and care of the

elderly. Expenditure on health care and care of the elderly is estimated to increase from 9.9 per cent of GDP in 2008 to just under 12.5 per cent in 2050. Overall, expenditure on pensions, health care and care of the elderly is estimated to increase as a percentage of GDP by just over 2.8 percentage points until the mid-2030s and then decline somewhat (see Diagram 11).

**Diagram 11 Expenditure on old-age pensions, health care and care of the elderly**

Per cent of GDP




Source: Ministry of Finance.

Between 2008 and 2020, primary general government expenditure, i.e. expenditure excluding interest, is estimated to increase as a percentage of GDP, as seen from Table 17. The total demographic pressure on expenditure leads to demand for tax-funded welfare services rising on average by 0.5 per cent per year in fixed prices. Transfer payments linked to people under 20 fall as a percentage of GDP in the next few years, while pension expenditure increases. The technical adjustment also results in an increase in household transfer payments. Overall, household transfer payments increase as a percentage of GDP until 2020.

**Table 17 Primary expenditure as a percentage of GDP**

Change in percentage points

| | 2008–2020 | 2020–2050 |
|---|---|---|
| **Primary expenditure** | **1.5** | **0.2** |
| Transfer payments to households[1] | 2.7 | -0.6 |
| Transfer payments to firms and abroad | 0.0 | 0.0 |
| General government consumption | -1.1 | 0.8 |
| Investment | -0.2 | 0.1 |
| Technical adjustment | 3.3 | 0.0 |

[1] Incl. technical adjustment

Sources: Statistics Sweden and Ministry of Finance.

The assumption of unchanged quality and volume in general government activities leads to general government expenditure falling as a percentage of GDP as the economy grows. However, this downward trend is offset

by population growth until the early 2030s. Towards the end of the period, when the pressure on expenditure is no longer maintained by demographics, this downward trend has an impact and general government consumption then declines as a percentage of GDP. Overall, general government consumption and transfer payments (excluding the technical adjustment) constitute a relatively constant percentage of GDP and decline somewhat towards the end of the estimate period.

**Table 18 Public finances**

Per cent of GDP

| | 2000 | 2008 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|
| **Primary revenue** | **54.4** | **50.5** | **48.9** | **49.1** | **49.4** | **49.7** | **49.5** | **49.0** |
| Taxes and charges | 51.3 | 47.2 | 45.8 | 46.4 | 46.9 | 47.3 | 47.4 | 47.1 |
| Other revenue | 3.1 | 3.3 | 3.0 | 2.7 | 2.6 | 2.3 | 2.1 | 1.9 |
| **Primary expenditure** | **49.5** | **48.2** | **48.1** | **49.1** | **49.6** | **51.5** | **51.1** | **49.8** |
| Transfer payments | 21.0 | 19.1 | 19.3 | 21.9 | 22.0 | 22.3 | 22.1 | 21.4 |
| Consumption | 26.0 | 26.1 | 25.9 | 24.5 | 24.9 | 26.4 | 26.2 | 25.6 |
| Investment | 2.5 | 3.0 | 3.0 | 2.7 | 2.8 | 2.8 | 2.8 | 2.8 |
| Technical adjustment | 0.0 | 0.0 | 0.0 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| **Primary net lending** | **4.8** | **2.3** | **0.8** | **-0.0** | **-0.2** | **-1.8** | **-1.6** | **-0.9** |
| Net capital income | -1.1 | 0.4 | 0.9 | 1.0 | 1.1 | 0.9 | 0.1 | -0.3 |
| **Net lending** | **3.7** | **2.8** | **1.6** | **1.0** | **0.9** | **-1.0** | **-1.5** | **-1.2** |
| | | | | | | | | |
| **Financial position** | | | | | | | | |
| Consolidated gross debt | 53.6 | 35.5 | 28.3 | 16.3 | 11.0 | 12.8 | 22.2 | 29.1 |
| Adjusted gross debt[1] | 33.6 | 9.6 | 3.9 | -4.7 | -7.6 | -1.1 | 13.8 | 21.8 |
| Net debt | 5.5 | -24.2 | -24.9 | -29.5 | -31.3 | -23.3 | -6.5 | 3.3 |

[1] Consolidated gross debt minus pension system assets in addition to government securities.

Sources: Statistics Sweden and Ministry of Finance.

## 7.6 Sustainable public finances

The definition of sustainable public finances is that current policy must not lead to uncontrolled debt growth. The assumptions made in the base scenario reflect a possible definition of an unchanged policy stance. Diagram 12 illustrates the development of central government debt, measured as a percentage of GDP, which results from these assumptions. The diagram shows the development for both the base and the employment scenarios. In both scenarios, as previously described, public finances are assumed to show a surplus of 1.0 per cent of GDP in 2015.

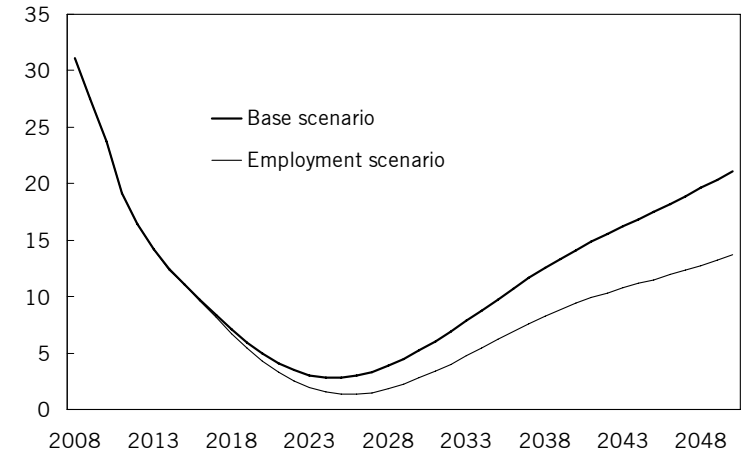
In the base scenario, the balance deteriorates through a transfer from central government to households. This transfer will affect households' disposable income, their consumption and consequently tax revenue from consumption taxes. In the employment scenario, the budget balance is reduced instead through tax cuts, which are designed to stimulate the labour supply. In the long term, employment is assumed to be just over 2 per cent higher than in the base scenario.

The estimate for the base scenario results in a lower debt ratio in 2050 than in 2008. The estimate for the employment scenario shows that

central government debt in 2050, measured as a percentage of GDP, is approximately 7 percentage points lower than in the base scenario (see Diagram 12).

**Diagram 12 Central government debt**

Per cent of GDP




Source: Ministry of Finance.

The debt ratio increases towards the end of the period and the question is whether this increase risks leading to excess debt in the longer term. One way of assessing this is based on the general government sector's so-called *intertemporal budget restriction*. This restriction can be used to derive various indicators for long-term sustainability.[16]

Such indicators are based on general government net debt rather than central government debt. In the strict sense of the word, public finances are sustainable in the long term, if the present value of all future revenues and expenditure, excluding interest, is the same as the net debt at the beginning the period. The European Commission has developed an indicator, which is based on such a definition of sustainability.[17] The $S_2$ indicator states the permanent budget strengthening required to achieve sustainability. $S_2$ is expressed as a percentage of GDP and is -0.1 in the base scenario and -0.3 in the employment scenario. According to the $S_2$ indicator's criteria, the negative values mean that public finances are sustainable and that they can even withstand a small permanent budget weakening (increased expenditure or reduced taxes) in addition to the technical adjustment in the period 2012–2015. In the base scenario, this scope is equivalent to 0.1 per cent of GDP. In the employment scenario, there is scope for a permanent budget weakening of 0.3 per cent of GDP without sustainability being jeopardised.

[16] For a discussion of the concept of sustainability and the indicators for assessing it, see Blanchard, Chouraqui, Hageman & Sartor (1990) *The sustainability of Fiscal Policy: New Answers to an Old Question*. OECD Economic Studies No. 15.

[17] Long-term Sustainability of Public Finances in the European Union, European Economy no. 4/2006.

Public finances can therefore be regarded as sustainable in the long term in both the base scenario and the employment scenario. However, it should be borne in mind that sustainability is achieved with a small margin and that long-term projections suffer from considerable uncertainty. The theoretical scope for budget weakening, in addition to the technical adjustment in the period 2012–2015, shown by the $S_2$ indicator is therefore not an assessment of real scope for reform today. The indicator can rather be used to assess the probability of encountering sustainability problems in the future. A positive indicator value should be interpreted as a warning signal that the current policy stance may need to be altered.

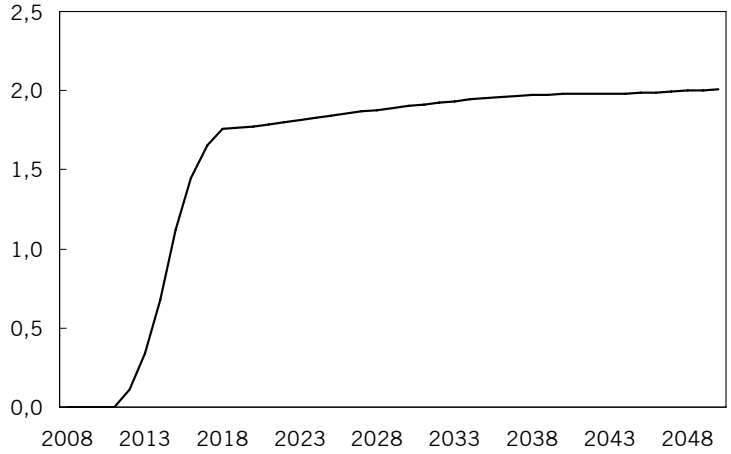
The base scenario illustrates the importance of the surplus target for the possibility of maintaining the standard in tax-funded welfare systems. As the estimates show, such possibilities exist but the margins are very small.

The employment scenario clearly illustrates the vital importance of permanently increased employment for public finances and future welfare. During the period 2012–2018, employment and GDP increase considerably more rapidly than in the base scenario. The employment ratio increases permanently by 1.6 percentage points. After the adjustment, GDP is permanently nearly 2 per cent higher than in the base scenario (see Diagram 13).[18]

[18] The employment effect resulting from tax cuts does not have a full impact on the output level in the estimates. This is due to the fact that the productivity of the additional employees is assumed to be somewhat lower than that of the labour force on average. Despite this assumption, the effect on GDP is larger than on employment, since the additional employees are employed in the private sector. Employment in the general government sector is determined in the base scenario solely by the demographic trend.

**Diagram 13 GDP effect of the employment scenario**

Per cent




Note: The diagram illustrates the increase in GDP that arises in the employment scenario compared with the base scenario.
Source: Ministry of Finance.

The assessment that public finances are sustainable in the long term is dependent on the assumptions made in the estimates. It is of vital importance that general government expenditure does not increase more than is demographically determined during the period after 2011. This means that anticipated future growth is not used at all to increase the quality or volume of general government services.

## 7.7 In-depth sustainability analysis

In order to determine the robustness of sustainability, some important factors that may affect the assessment are discussed in this section. A number of sensitivity estimates have been developed, in order to illustrate the uncertainty in the sustainability estimates.

*Real erosion of general government consumption*

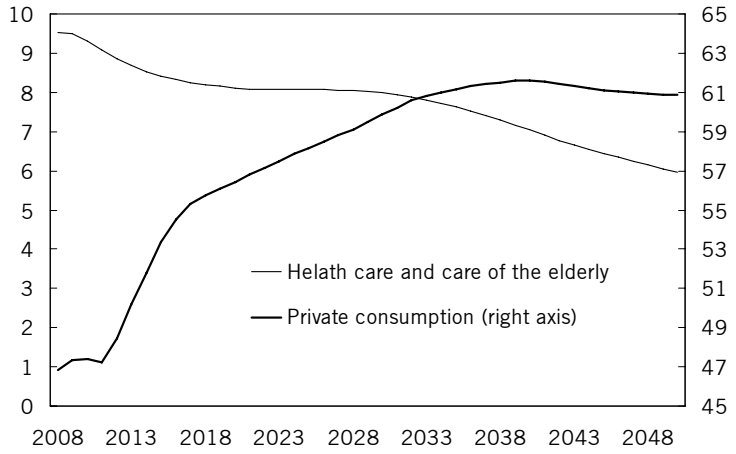
As the economy grows, the scope for various types of consumption increases. In the base scenario, private consumption of goods and services grows by the equivalent of 15 percentage points of GDP in fixed prices during the thirty-year period from 2008 to 2038 (see Diagram 14).

As previously mentioned, the estimate assumes that general government consumption does not grow more than is demographically justified. This results in general government consumption in volume terms (fixed prices) declining relative to other consumption. Diagram 14 illustrates the effect on the consumption of health care and care of the elderly, which in the estimates declines from 9.3 to 7.3 per cent of GDP between 2008 and 2038. Overall, general government consumption

declines from 25.7 to 16.7 per cent of GDP in volume terms between 2008 and 2038.[19]

**Diagram 14 General government consumption of health care and care of the elderly and private consumption**

Per cent of GDP in fixed prices




Source: Ministry of Finance.

The population will be able to allow itself more private consumption of goods and services, while general government services remain unchanged. This development is probably not what households want. Historically, consumption of health care and care of the elderly has tended rather to grow as a percentage of GDP as revenue increases. In the base scenario, the development is the opposite and this constitutes in all probability the largest threat to the long-term sustainability of public finances.

In an alternative scenario (*the care scenario*), general government consumption is therefore assumed to grow more rapidly than was assumed in the base scenario. This assumption is based on the historical development of general government consumption. Between 1980 and 2007, general government consumption (in volume terms) grew on average by 1.2 per cent per year. However, the demographically justified growth was only 0.5 per cent per year, resulting in excess cost growth of 0.7 percentage points per year.

In long-term projections of health care costs in the USA made by the Congressional Budget Office (CBO), this excess cost growth is much more important for cost growth than the ageing population.[20] The CBO

[19] The current costs of general government consumption do not decline, however, as shown in Diagram 14. This is due to the fact that wages in staff-intensive general government output are assumed to rise in pace with wages in the private sector. In the private sector, wage rises are matched by equivalent productivity increases, but in the general government sector, productivity is not assumed to increase.

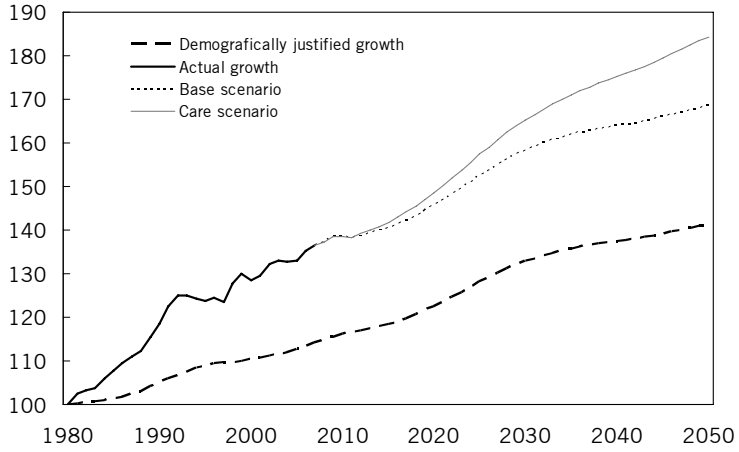
[20] Congressional Budget Office (2007) *The Long-Term Outlook for Health Care Spending*, Congress of The United States, November 2007.

assumes in its estimates that this more rapid cost growth will continue to some extent in the future. One objection to this assumption is that the historical period used to determine excess cost growth was not characterised by unchanged policy. Instead, reforms that raised the level of ambition were implemented.[21] Neither can the historical development in Sweden be considered to be based on unchanged policy. However, it is difficult in this context to distinguish between the effect of an increased level of political ambition and income effects, which mean that households demand more general government services. Probably at least part of the historical excess cost growth is explained by household demand and expectations.

In the care scenario, general government consumption in volume terms is assumed to grow in pace with the demographically justified increase plus an additional amount, which is equivalent to one-third of the historical excess cost growth.[22] Diagram 15 illustrates the actual growth rate and the demographically justified growth rate for general government consumption between 1980 and 2007, as well as the subsequent development according to the base and care scenarios.

**Diagram 15 General government consumption 1980-2050**

Volume growth, index 1980=100




Sources: Statistics Sweden and Ministry of Finance.

Diagram 15 clearly shows the difference between actual and demographically justified volume growth in general government consumption. While purely demographically justified growth would have resulted in a 14 per cent increase in general government consumption between 1980

[21] Follette & Sheiner (2008) *A Microeconomic Perspective on the Sustainability of Health Spending Growth in the United States*. Paper presented at the Banca D'Italia 10th Workshop on Public Finances, Perugia, April 2008.

[22] This additional amount, combined with the increase caused by demographics, results in a growth rate, which is well in line with the historical rate. In this scenario, consumption has increased in county councils, municipalities and central government.

and 2007, the actual increase was 36 per cent, i.e. excess cost growth equivalent to 22 percentage points.

In the base scenario, general government consumption is assumed to increase in accordance with demographics after 2007, while volume growth is somewhat more rapid in the care scenario. Consequently, general government consumption is 68 per cent higher in 2050 than in 1980 (in fixed prices) in the base scenario, while the equivalent increase is 84 per cent in the care scenario.[23] In current prices, general government consumption accounts for 25.5 per cent of GDP in 2050 in the base scenario, compared with 30.9 per cent in the care scenario.

This development is not sustainable in the long term and the $S_2$ indicator (which was negative in the base scenario) is a full 4.6 per cent. A permanent budget strengthening equivalent to 4.6 per cent of GDP must therefore be implemented today for this scenario to be sustainable.

In another scenario (*the care and employment scenario*), the assumption in the care scenario is combined with the assumption in the employment scenario, i.e. increased general government consumption growth of just over 0.2 percentage points per year and a balance adjustment until 2015 through tax cuts for the labour force. However, the resultant permanently higher employment is not sufficient to compensate for the pressure on expenditure generated by the excess cost growth and the development is also unsustainable in this scenario, with a $S_2$ value of 4.3. These scenarios illustrate that the scope for expenditure increases in excess of that demographically justified is very limited even if employment grows more positively than in the base scenario.

*Importance of the development of health*

A common objection to the view that an ageing population leads to increased expenditure on health care and care of the elderly is that older people are becoming healthier and that health care and care costs increase towards the end of life rather than with increasing age.[24] One hypothesis is that the number of anticipated years until death are relevant for care costs rather than the number of years from birth.[25] A purely demographic cost projection can consequently exaggerate the future cost pressure. In a study using Swedish data, health care costs are estimated to increase by 11 per cent between 2000 and 2030, if the cost

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[23] If demographics had determined the development throughout the period between 1980 and 2050, the increase would have been 41 per cent.

[24] Gerdtham & Jönsson (1990) *Sjukvårdskostnader i framtiden – vad betyder åldersfaktorn? [Health care costs in the future – what does the age factor mean?]* Rapport till expertgruppen för studier i offentlig ekonomi, ESO. Ds 1990:39 [Report to the expert group for studies in public economics].

[25] See for example Shoven (2007) *New Age Thinking: Alternative Ways of Measuring Age, Their Relationship to Labor Force Participation, Government Policies and GDP*. NBER Working Paper No. 13476, October 2007.

profiles are adjusted with respect to the anticipated number of remaining years of life, compared with an 18 per cent increase in the case of a purely demographic projection.[26]

However, the hypothesis that health improvements lead to reduced care needs at a given age, if life expectancy increases, is controversial. Medical advances mean that more people may reach a high age despite poor health, which may lead to the average care need at a given age, if anything, increasing.

Recently the trend towards gradually improving health among older people has been questioned. Long-term projections of health care consumption in Sweden are made in a recently published research anthology.[27] The authors allow the number of care days to be determined by the demographic trend and by an assumption of gradually deteriorating health. This deterioration in health is based on the observation that age-specific health among today's working population is worse than it previously was at equivalent ages. This may result in the health of future older people being worse than that of today's older people. If the cost per care day increases in pace with the historical pattern, this results in a dramatic increase in care costs.

In the scenarios presented in the convergence programme, neither deteriorating nor improving health is assumed. Instead, the need for and the consumption of health care is held constant within groups defined by age and gender. In the two care scenarios, a more rapid increase in consumption is allowed. However, this is justified not by the development of health but by the historical trend.

*Improved integration*

Higher labour force participation would facilitate the future demographic challenge. This could be achieved through increased employment among immigrants. In 2007, the employment ratio was 64 per cent among foreign-born people, compared with 78 per cent among Swedish-born people. In the increased integration estimate (*the integration scenario*), it is assumed that the differences, which existed in 2007 between Swedish-born and non-Swedish-born people in labour force participation and employment ratio, gradually decline by one-third over a ten-year period from 2012. The difference is reduced solely by a change in labour market behaviour among foreign-born people. The number of hours worked is 1.6 per cent higher and GDP 2.0 per cent higher in this esti-

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[26] Batljan & Lagergren (2004) *Inpatient/outpatient health care costs and remaining years of life-effect of decreasing mortality on future acute health care demand*. Social Science & Medicine; Dec2004, Vol. 59 Issue 12, p2459-2466.

[27] Klevmarken & Lindgren red. (2008) *Simulating an Ageing Population – A microsimulation approach applied to Sweden*. Contributions To Economic Analysis 285. Emerald Publishing.

mate than in the base scenario in 2050.[28] The $S_2$ indicator is 0.3 percentage points lower in this estimate than in the base scenario, i.e. there is scope for further budget weakening equivalent to 0.3 percentage points in excess of the scope in the base estimate.

*Importance of productivity growth*

Productivity growth may also be of major importance for the long-term sustainability of public finances. In a sensitivity estimate (*the productivity scenario*), productivity growth is assumed to be three tenths higher than in the base scenario during the period 2011–2020. During the next ten-year period, the difference between the two scenarios gradually declines towards two tenths and then remains unchanged. The higher productivity growth in the sensitivity estimate leads to higher GDP. The estimates show that with a higher productivity assumption there is scope for a budget weakening, which is 0.2 percentage points larger as a percentage of GDP than in the base scenario.

*Overall sustainability assessment*

According to the scenarios principally analysed in this chapter, the base scenario and the employment scenario, public finances may be regarded as sustainable in the long term. However, sustainability in the base scenario is achieved with a very small margin, while sustainability in the employment scenario is somewhat larger but still not reassuring. The results of the two care scenarios show that a somewhat more rapid increase in general government consumption expenditure, which cannot in any way be regarded as unreasonable, disturbs sustainability. However, a number of factors can improve sustainability. If productivity in the business sector develops more positively than in the base scenario or the labour market situation for foreign-born people improves, sustainability is strengthened.

Net lending for all the scenarios is illustrated in Diagram 16, while the $S_2$ indicator is illustrated in Table 19.

[28] The effect on GDP is larger than on the number of hours worked, since increased employment is in the private sector, which has higher productivity than the general government sector. Employment in the general government sector is determined by the demographic trend and the assumption of an " unchanged standard" in the general government sector.

**Diagram 16 Net lending**

Per cent of GDP


Source: Ministry of Finance.

**Table 19 $S_2$ indicators in the various scenarios**

| | $S_2$ | Difference compared with base scenario |
|---|---|---|
| Base scenario | -0.1 | 0.0 |
| Employment scenario | -0.3 | -0.2 |
| Productivity scenario | -0.3 | -0.2 |
| Care scenario | 4.6 | 4.7 |
| Care and employment scenario | 4.3 | 4.4 |
| Integration scenario | -0.4 | -0.3 |

Source: Ministry of Finance.

In addition to the improved integration of foreign-born people, there is significant labour supply potential among young people and older people, as well as to some extent among women.[29] If more people in these groups participate in working life, the problems arising in the care scenarios can be mitigated. However, an increase in the number of hours worked is not likely alone to result in sustainability in the care scenario.

All the scenarios assume that no productivity growth occurs in the general government sector. However, there are probably some opportunities for streamlining general government activities.

The overall assessment is that there are no immediate sustainability problems. However, the ageing population, combined with household expectations that general government services should be developed and improved, constitutes a future challenge to the long-term sustainability of public finances.

[29] See Eriksson, Hallberg & Hemström (2008) *Fler i arbete: Grunden för framtidens välfärd [More people in work: The basis for future welfare]*. Ministry of Finance, Ds 2008:36

# Appendix A – Calculation assumptions

The calculation methods used in the estimate of public finances during the period 2012–2050 are discussed in more detail below.

## Demographic assumptions

The estimate is based on Statistics Sweden's population forecast of May 2008 shown in Table A.1.

**Table A.1 Demographic assumptions**

| | 2000 | 2005 | 2010 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|
| Birth rate | 1.55 | 1.77 | 1.91 | 1.88 | 1.86 | 1.87 | 1.87 |
| Average life expectancy, women | 82.0 | 82.8 | 83.3 | 84.4 | 85.2 | 85.8 | 86.3 |
| Average life expectancy, men | 77.4 | 78.4 | 79.4 | 80.9 | 82.1 | 83.1 | 83.8 |
| Net migration, thousands | 24,600 | 27,100 | 32,500 | 17,500 | 17,400 | 16,100 | 14,900 |

Source: Statistics Sweden.

**Table A.2 Taxes and charges**

Per cent of GDP

| | 2000 | 2005 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|
| **Taxes and charges** | 51.3 | 49.3 | 45.8 | 46.4 | 46.9 | 47.3 | 47.4 | 47.1 |
| **Household direct taxes and charges** | | | | | | | | |
| Proportion of GDP | 21.1 | 18.9 | 16.3 | 16.0 | 16.1 | 16.2 | 16.3 | 16.2 |
| Implicit tax rate for direct taxes | 29.3 | 26.2 | 22.3 | 22.4 | 22.4 | 22.4 | 22.4 | 22.4 |
| Tax base for direct taxes as percentage of GDP | 62.4 | 62.0 | 61.2 | 60.0 | 60.1 | 60.7 | 60.7 | 60.2 |
| Implicit tax rate for charges | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |
| Tax base for charges as percentage of GDP | 47.3 | 46.2 | 45.2 | 44.2 | 44.3 | 44.8 | 45.1 | 45.4 |
| **Corporate direct taxes** | | | | | | | | |
| Proportion of GDP | 3.8 | 3.6 | 3.7 | 3.7 | 3.7 | 3.6 | 3.5 | 3.6 |
| Implicit tax rate | 13.3 | 12.8 | 12.9 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| Tax base as percentage of GDP | 28.4 | 28.3 | 28.5 | 28.5 | 28.1 | 27.4 | 27.2 | 27.3 |
| **Indirect taxes**[1] | | | | | | | | |
| Proportion of GDP | 13.3 | 13.8 | 13.7 | 14.7 | 15.2 | 15.5 | 15.5 | 15.2 |
| Implicit tax rate | 27.0 | 28.5 | 28.9 | 27.8 | 27.6 | 27.5 | 27.3 | 27.2 |
| Tax rate as percentage of GDP | 49.4 | 48.6 | 47.5 | 53.0 | 55.1 | 56.4 | 56.7 | 55.8 |
| **Employer contributions and self-employed social security contributions**[2] | | | | | | | | |
| Proportion of GDP | 13.1 | 12.9 | 12.1 | 11.9 | 11.9 | 12.0 | 12.1 | 12.2 |
| Implicit tax rate | 32.0 | 32.2 | 29.5 | 29.5 | 29.5 | 29.4 | 29.4 | 29.4 |
| Tax base as percentage of GDP | 41.0 | 40.1 | 41.0 | 40.4 | 40.4 | 40.9 | 41.2 | 41.4 |

[1] Excluding wage-dependent indirect taxes.
[2] Including wage-dependent indirect taxes.
Sources: Statistics Sweden and Ministry of Finance.

### General government revenue

A standard method for projections of general government revenue is to state taxes and charges as a constant percentage of GDP. In practice, this method means that tax regulations are assumed to change unless the tax bases grow in pace with GDP. The estimates described here are based on an assumption of constant tax rates relative to the tax bases in the respective sector. Consequently, the aggregate tax ratio will vary if the tax bases develop in a different way than GDP. This method reflects unchanged tax regulations. Stable tax rates over time are advantageous both on grounds of effectiveness and redistribution policy. Table A.2 shows in detail general government taxes and charges as a percentage of GDP and as a percentage of the respective tax base (implicit tax rate) as well as the tax base as a percentage of GDP.

Overall, the tax ratio (taxes and charges as a percentage of GDP) declines by 2.2 percentage points during the period 2005–2050.

### General government consumption expenditure

The estimate of general government consumption expenditure is based on age- and gender-distributed unit costs[30] for childcare, primary and secondary education (compulsory school and upper secondary school), adult education (municipal adult education and higher education), health care (outpatient and inpatient care), care of the elderly (home help service and sheltered accommodation), and labour market measures. All these expenditure areas are projected in volume terms by the population change in the relevant age group for women and men. Other consumption expenditure, which mainly consists of general administration, the judicial system and defence, is assumed to follow the change in the total population. The price trend in general government consumption is a weighting of the wage trend and the price trend, with weights reflecting the composition of consumption in the respective operating area. It is assumed in the estimates that productivity growth in all general government activities is zero, which results in the price of general government consumption growing approximately 1.8 percentage points more rapidly than the consumer price index per year (see Appendix B in the Swedish convergence programme for 2004.

[30] These unit costs are based on 1999 consumption patterns.

**Table A.3 General government consumption**

Per cent of GDP

| | 2000 | 2005 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|
| **Total consumption** | 27.8 | 26.4 | 25.9 | 24.5 | 24.9 | 26.4 | 26.2 | 25.6 |
| Childcare | 1.7 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.5 | 1.6 |
| Primary and secondary education | 3.9 | 3.7 | 3.4 | 3.1 | 3.2 | 3.3 | 3.2 | 3.0 |
| Adult education | 2.1 | 1.9 | 1.9 | 1.7 | 1.6 | 1.6 | 1.6 | 1.5 |
| Health care | 6.1 | 6.0 | 5.9 | 5.8 | 6.0 | 6.4 | 6.4 | 6.3 |
| Care of the elderly | 3.8 | 4.0 | 4.1 | 4.0 | 4.3 | 5.6 | 6.0 | 6.2 |
| Other activities | 10.2 | 9.3 | 8.9 | 8.2 | 8.1 | 7.9 | 7.5 | 7.1 |

Sources: Statistics Sweden and Ministry of Finance.

## Transfer payments

The estimates assume a certain standard guarantee in the general government transfer payment systems. For a large part of transfer payments, there are rules and regulations that automatically raise expenditure in pace with real growth in the economy. This applies to pensions, which are adjusted upward in line with the earnings index, and also partly to transfer payments, which compensate for loss of earnings, e.g. health and parental insurance. Transfer payments, which lack an automatic standard guarantee, e.g. child benefit and study allowance, are assumed to increase in line with wages. Such a standard guarantee offsets the erosion of household transfer payments that would take place, if the estimate were only based on a price projection for a period of nearly 50 years.

**Table A.4 General government transfer payments**

Per cent of GDP

| | 2000 | 2005 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|
| **Total transfer payments** | 21.0 | 21.4 | 19.3 | 21.9 | 22.0 | 22.3 | 22.1 | 21.4 |
| Transfer payments to households | 18.0 | 17.9 | 15.9 | 18.7 | 18.8 | 19.1 | 18.9 | 18.2 |
| Old-age | 8.3 | 8.5 | 8.5 | 8.4 | 8.4 | 8.5 | 8.4 | 7.6 |
| Ill health | 3.8 | 4.2 | 3.2 | 2.9 | 3.0 | 3.1 | 3.0 | 3.1 |
| Children/studies | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 |
| Labour market | 1.9 | 1.6 | 0.9 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 |
| Other | 1.7 | 1.4 | 1.3 | 4.6 | 4.6 | 4.7 | 4.7 | 4.7 |
| Transfer payments to firms | 1.9 | 2.0 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.6 |
| Transfer payments abroad | 1.1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Note: "Old age" comprises old-age pension, survivor's pension, central government and municipal pensions as well as supplementary housing benefit to pensioners.
"Ill health" comprises health insurance, occupational injury insurance, disability pension and carer's allowance.
"Children/studies" comprises child benefit, parental insurance, maintenance support and study allowance.
"Labour market" comprises unemployment benefit, labour market training grants and wage guarantee.
Sources: Statistics Sweden and Ministry of Finance.

## Old-age pension system

Table A.5 shows the old-age pension system's revenue and expenditure and its financial position. Net lending deteriorates as pension expenditure increases, as a result of the increasing number of pensioners. The growing expenditure means that the old-age pension system's assets are used up at the end of the estimate period. If the estimates are extended further into the future, the pension system will, however, again accumulate assets.

**Table A.5 Old-age pension system**

Per cent of GDP

| | 2000 | 2005 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|
| **Revenue** | 8.0 | 7.3 | 7.1 | 6.9 | 6.8 | 6.7 | 6.5 | 6.5 |
| Charges | 6.5 | 6.5 | 6.2 | 6.1 | 6.1 | 6.2 | 6.2 | 6.3 |
| Interest, dividends etc. | 1.4 | 0.8 | 0.8 | 0.8 | 0.8 | 0.5 | 0.3 | 0.3 |
| **Expenditure** | 8.3 | 6.3 | 6.8 | 6.8 | 6.8 | 6.9 | 6.8 | 6.2 |
| Pensions | 6.2 | 6.2 | 6.7 | 6.7 | 6.7 | 6.8 | 6.7 | 6.1 |
| Other | 2.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| **Net lending** | -0.4 | 1.0 | 0.2 | 0.1 | 0.0 | -0.2 | -0.2 | 0.3 |
| **Net financial assets** | 32.4 | 27.7 | 27.2 | 23.1 | 20.2 | 14.8 | 8.8 | 7.6 |

Sources: Statistics Sweden and Ministry of Finance.

Table A.6 presents a number of key variables from the Swedish convergence programme in the form recommended by the European Commission.

## Table A.6 Long-term sustainability of public finances

Per cent of GDP, unless otherwise stated

| | 2000 | 2005 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|
| **Total expenditure** | **53.0** | **52.5** | **49.5** | **50.0** | **50.3** | **52.2** | **52.1** | **51.2** |
| Age-related[1] | 29.0 | 29.0 | 27.8 | 26.7 | 27.3 | 29.2 | 29.1 | 28.3 |
| Pensions[2] | 10.0 | 10.7 | 10.3 | 10.0 | 10.0 | 10.2 | 9.9 | 9.2 |
| Guarantee pensions | 0.5 | 0.8 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Old-age pensions | 6.2 | 6.2 | 6.7 | 6.7 | 6.7 | 6.8 | 6.7 | 6.1 |
| Other pensions (disability and survivor) | 2.8 | 3.1 | 2.4 | 2.2 | 2.2 | 2.2 | 2.1 | 2.0 |
| Public pension fund reserves | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Health care | 6.1 | 6.0 | 5.9 | 5.8 | 6.0 | 6.4 | 6.4 | 6.3 |
| Care of the elderly | 3.8 | 4.0 | 4.1 | 4.0 | 4.3 | 5.6 | 6.0 | 6.2 |
| Childcare | 1.7 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.5 | 1.6 |
| Education | 6.0 | 5.6 | 5.3 | 4.8 | 4.8 | 4.9 | 4.7 | 4.5 |
| Unemployment benefit | 1.4 | 1.1 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Other age-related expenditure | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interest expenditure | 3.5 | 1.9 | 1.4 | 0.9 | 0.6 | 0.6 | 1.0 | 1.3 |
| **Total revenue** | **56.8** | **54.4** | **51.1** | **51.0** | **51.2** | **51.2** | **50.7** | **50.0** |
| Capital income | 2.4 | 2.1 | 2.3 | 1.9 | 1.8 | 1.5 | 1.2 | 1.0 |
| of which pension system | 1.4 | 0.8 | 0.8 | 0.8 | 0.8 | 0.5 | 0.3 | 0.3 |
| **Assets in pension funds** | **32.5** | **28.1** | **27.6** | **23.4** | **20.5** | **15.0** | **9.0** | **7.7** |
| of which assets other than government securities | 20.0 | 24.5 | 24.5 | 21.0 | 18.6 | 13.8 | 8.4 | 7.2 |
| Assumptions | | | | | | | | |
| Labour productivity growth, GDP level | 3.7 | 2.7 | 2.7 | 1.9 | 1.8 | 1.7 | 1.9 | 1.9 |
| GDP growth | 4.4 | 3.3 | 3.1 | 2.2 | 1.8 | 1.6 | 2.2 | 2.0 |
| Unemployment | 5.3 | 6.0 | 5.0 | 4.2 | 4.2 | 4.4 | 4.4 | 4.3 |
| Population aged 65 and over as percentage of total population | 17.2 | 17.3 | 18.5 | 20.2 | 21.1 | 22.9 | 24.0 | 23.5 |

[1] Age-related expenditure includes childcare. This expenditure is not included in the age-dependent expenditure, which an EU working group used in its calculations, presented in Appendix B.

[2] Pensions includes both old-age pension and disability pension.

Sources: Statistics Sweden and Ministry of Finance.

# Appendix B – Comparison with long-term projections by the EU

A working group (Ageing Working Group) under the Economic Policy Committee (EPC), together with the European Commission, has made projections for the development of age-related expenditure up to 2050. These estimates were last reported in 2006[31]. The estimates in the convergence programme, however, are based on the data presented to the Riksdag in the Budget Bill for 2009. This section compares the demographic and macroeconomic key figures as well as the age-related expenditure from these two sources.

**Table B.1 Macroeconomic assumptions in the EPC estimates and in the Swedish convergence programme**

Percentage change, unless otherwise stated[1]

| | 2008 | 2010 | 2015 | 2020 | 2030 | 2040 | 2050 | Average |
|---|---|---|---|---|---|---|---|---|
| Population aged 15-64 | | | | | | | | |
| EPC | 0.4 | 0.1 | -0.3 | 0.0 | 0.1 | 0.0 | 0.2 | 0.0 |
| Convergence programme | 0.4 | 0.0 | -0.3 | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 |
| Employed | | | | | | | | |
| EPC, aged 15-64 | 0.5 | 0.4 | 0.2 | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 |
| Convergence programme, aged 16-64 | 1.2 | -0.1 | 0.3 | 0.0 | -0.1 | 0.1 | 0.2 | 0.1 |
| ILO unemployment, per cent of labour force | | | | | | | | |
| EPC, aged 15-64 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| Convergence programme, aged 16-64 | 6.0 | 6.6 | 5.7 | 5.7 | 5.9 | 6.0 | 5.8 | 5.9 |
| Labour productivity | | | | | | | | |
| EPC | 2.3 | 2.6 | 2.7 | 2.5 | 2.0 | 1.7 | 1.7 | 2.0 |
| Convergence programme | -0.7 | 2.4 | 2.4 | 2.0 | 1.8 | 1.9 | 1.9 | 1.9 |
| GDP | | | | | | | | |
| EPC | 2.9 | 2.9 | 2.9 | 2.6 | 2.1 | 1.8 | 1.9 | 2.2 |
| Convergence programme | 1.5 | 2.2 | 2.9 | 1.9 | 1.7 | 2.0 | 2.1 | 2.0 |
| GDP per capita | | | | | | | | |
| EPC | 2.5 | 2.5 | 2.5 | 2.2 | 1.7 | 1.6 | 1.8 | 1.9 |
| Convergence programme | 0.9 | 1.6 | 2.4 | 1.5 | 1.4 | 1.8 | 1.9 | 1.8 |

[1] For 2008, the percentage change from the previous year is stated. For the period 2010-2050, the average percentage change from the previous year is stated in the table.
Sources: European Commission and Ministry of Finance.

The population forecast used by the EPC was prepared by Eurostat during the spring of 2005, while the convergence programme's estimates are based on Statistics Sweden's population forecast of May 2008.

[31] The impact of ageing on public expenditure: projections for the EU25 Member States on pensions, health care, long-term care, education and unemployment transfers (2004–2050). Report prepared by the Economic Policy Committee and the European Commission (DG ECFIN). Special Report no 1/2006.

Population growth among people of working age is relatively similar in both forecasts. However, the elderly ratio[32] is assumed to increase to 40.9 per cent in 2050 in the EPC's estimates, compared with 39.5 per cent in the convergence programme.

The EPC's estimates assume that unemployment has adjusted to a structural level of 4.3 per cent in 2008 and is then constant. The convergence programme assumes that unemployment in fact falls in the long run, partly as a consequence of government policy, but that unemployment is a minimum 5.7 per cent. Employment growth differs somewhat during the next decade, not least due to employment policy measures, but does not differ appreciably in the two projections after 2015. However, labour productivity develops more strongly up to 2030 in the EPC's scenario than in the Swedish convergence programme. As a result, GDP also grows more strongly in the EPC's scenario. Over the whole period 2008-2050, GDP increases by 0.2 percentage points more in the EPC's projections.

The European Commission and the EPC have identified five expenditure items, which are affected by changes in the population structure. These age-related expenditure items are pensions, health care, long-term care, education and unemployment transfers. Several factors affect the estimates of age-related expenditure over the long term, apart from the demographic trend and the economic assumptions. These include the end point for the medium-term estimates, which serves as the starting point for the long-term scenario. The choice of calculation methods also affects the development of expenditure. An increase in the average life expectancy in the population forecast may, for example, be due to the addition of more healthy years to life expectancy. Such an assumption means that the costs of health care and care of the elderly do not increase at the same rate as the increase in the number of older people.

**Table B.2 Change in age-related general government expenditure in EPC's estimates and in the Swedish convergence programme.**

Proportion of GDP.

| | Change 2008-2050 | | | Change 2008-2011 | | | Change 2011-2050 | | |
|---|---|---|---|---|---|---|---|---|---|
| | CP08 | EPC | CP - EPC | CP08 | EPC | CP – EPC | CP08 | EPC | CP – EPC |
| Pensions | -0.9 | 0.1 | -1.0 | -0.1 | 0.2 | -0.3 | -0.8 | -0.1 | -0.7 |
| Health care | 0.4 | 1.0 | -0.5 | 0.0 | 0.1 | -0.1 | 0.4 | 0.8 | -0.4 |
| Long-term care | 2.1 | 1.8 | 0.3 | 0.0 | -0.1 | 0.1 | 2.1 | 1.9 | 0.2 |
| Education | -0.9 | -0.5 | -0.4 | -0.3 | -0.3 | -0.1 | -0.6 | -0.2 | -0.4 |
| Unemployment transfers | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | -0.0 | 0.0 | 0.0 |
| **Total** | **0.7** | **2.4** | **-1.6** | **-0.3** | **-0.1** | **-0.3** | **1.1** | **2.4** | **-1.4** |

Note: CP is the abbreviation for convergence programme.
Sources: European Commission and Ministry of Finance.

[32] The number of people aged 65 and over as a proportion of the number of people aged 15 to 64.

Table B.2 shows the increase in age-related expenditure as a percentage of GDP in the EPC's estimates and in the Swedish convergence programme. In this publication, the total increase in age-related expenditure, as a percentage of GDP, during the period 2009-2050 is estimated at 0.7 percentage points. The equivalent increase is higher in the EPC's estimates, 2.4 percentage points.

The change over time can be divided into the medium term (2008–2011) and the long term (2011–2050). In both the EPC's estimates and the convergence programme, expenditure is expected to decline until 2011, when the demographic pressure increases. Above all, demographically determined lower education costs contribute to the reduced expenditure in the medium term.

As the number of older people increases, age-related expenditure also increases in both the convergence programme and the EPC's estimates. The increase during the period 2011-2050 amounts to 1.1 percentage points of GDP in the convergence programme and 2.4 percentage points of GDP in the EPC's estimates. The difference is mainly due to the elderly ratio being just over 1.4 percentage points lower in the convergence programme. Pensions decline as a percentage of GDP between 2011 and 2050 in both projections. The reason is that the retirement age is assumed to remain unchanged despite the increase in life expectancy, which results in a reduction in pension payments from the income pension system.[33] Expenditure on long-term care of the elderly increases more in the convergence programme than in the EPC's estimates, since it is assumed to be purely demographically determined in the Swedish convergence programme, while assumed health improvements and thus reduced care needs in connection with an increased life expectancy are taken into account in the EPC's estimates.

[33] Note that payments from the premium pension system since 2007 are classified as household saving and are thus not included.

# Appendix C – Tables

### Table C.1 Forecast assumptions

Annual average, unless otherwise stated

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| GDP world[1] | 4.9 | 3.9 | 3.6 | 4.5 | 4.5 |
| GDP eurozone[1] | 2.7 | 1.4 | 1.1 | 2.0 | 2.3 |
| Hourly wages in Sweden[1, 2] | 3.3 | 4.7 | 4.4 | 3.7 | 4.0 |
| TCW index[3] | 125.7 | 125 | 124 | 124 | 124 |
| SEK/EUR[3] | 9.43 | 9.40 | 9.25 | 9.10 | 9.10 |
| EUR/USD[3] | 1.46 | 1.50 | 1.40 | 1.35 | 1.25 |
| Swedish 10-year government bond yield, annual average | 4.17 | 4.24 | 4.35 | 4.48 | 4.55 |
| Swedish 6-month interest rate, annual average | 3.59 | 4.12 | 3.51 | 3.43 | 4.03 |
| Oil price, (Brent, USD/barrel), year-end | 91.4 | 115 | 95 | 100 | 100 |

[1] Annual percentage change.
[2] Definition in accordance with the National Accounts.
[3] Exchange rate at year-end.
Source: Ministry of Finance.

### Table C.2 Demand and output

| | SEKbn | Percentage change in volume | | | | |
|---|---|---|---|---|---|---|
| | 2007[1] | 2007 | 2008 | 2009 | 2010 | 2011 |
| Household consumption expenditure | 1,434 | 3.0 | 1.8 | 2.3 | 3.2 | 3.2 |
| General government consumption expenditure | 797 | 1.1 | 0.4 | 0.9 | 0.0 | 0.0 |
| Central government | 213 | -0.6 | -0.9 | 0.3 | -1.5 | -1.3 |
| Local government | 584 | 1.7 | 0.9 | 1.2 | 0.5 | 0.4 |
| Gross fixed capital formation | 582 | 8.0 | 3.0 | -0.8 | 4.4 | 7.5 |
| Change in stocks[2] | 24 | 0.7 | -0.5 | -0.1 | 0.2 | 0.1 |
| Exports | 1,609 | 6.0 | 4.6 | 3.8 | 7.3 | 6.5 |
| Imports | 1,375 | 9.6 | 4.3 | 4.1 | 7.4 | 6.7 |
| **GDP** | 3,071 | 2.7 | 1.5 | 1.3 | 3.1 | 3.5 |
| **GDP, calendar adjusted** | – | 2.9 | 1.2 | 1.4 | 2.8 | 3.4 |

[1] In current prices.
[2] Contribution to GDP growth.
Sources: Statistics Sweden and Ministry of Finance.

## Table C.3 Contributions to GDP growth

Percentage points

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Final domestic demand | 3.2 | 1.5 | 1.2 | 2.3 | 2.9 |
| Household consumption expenditure | 1.4 | 0.8 | 1.1 | 1.5 | 1.5 |
| General government consumption expenditure | 0.3 | 0.1 | 0.2 | 0.0 | 0.0 |
| Gross fixed capital formation | 1.4 | 0.6 | -0.1 | 0.8 | 1.4 |
| Change in stocks | 0.7 | -0.5 | -0.1 | 0.2 | 0.1 |
| Net exports | -1.1 | 0.5 | 0.2 | 0.6 | 0.5 |
| Exports | 3.1 | 2.4 | 2.1 | 4.1 | 3.7 |
| Imports | 4.2 | 1.9 | 1.9 | 3.5 | 3.3 |
| **GDP** | **2.7** | **1.5** | **1.3** | **3.1** | **3.5** |

Sources: Statistics Sweden and Ministry of Finance.

## Table C.4 Exports and imports of goods

| | SEKbn | Percentage change in volume | | | | |
|---|---|---|---|---|---|---|
| | **2007**[1] | **2007** | **2008** | **2009** | **2010** | **2011** |
| Exports | | | | | | |
| Exports of goods | 1,156 | 3.0 | 3.8 | 3.2 | 7.3 | 6.5 |
| Processed goods[1] | 950 | 3.9 | 3.1 | 3.4 | 7.3 | 6.5 |
| Exports of services | 453 | 14.1 | 6.6 | 5.3 | 7.3 | 6.5 |
| **Total exports** | **1,609** | **6.0** | **4.6** | **3.8** | **7.3** | **6.5** |
| Export prices | – | 1.9 | 2.3 | -0.4 | 0.9 | 1.8 |
| Imports | | | | | | |
| Imports of goods | 1,016 | 9.8 | 3.7 | 3.9 | 7.4 | 6.7 |
| Processed goods[2] | 747 | 12.3 | 4.0 | 4.3 | 7.4 | 6.7 |
| Imports of services | 359 | 9.1 | 6.0 | 4.4 | 7.4 | 6.7 |
| **Total imports** | **1,375** | **9.6** | **4.3** | **4.1** | **7.4** | **6.7** |
| Import prices | – | 0.1 | 3.8 | -0.4 | 1.3 | 2.5 |

[1] In current prices.
[2] Classification according to SNI.
Sources: Statistics Sweden and Ministry of Finance.

## Table C.5 Selected statistics in the forecast in the Budget Bill for 2009

Percentage change, unless otherwise stated

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| CPI, Dec-Dec | 3.5 | 3.6 | 1.1 | 2.2 | 2.8 |
| HICP, Dec-Dec[1] | 2.5 | 3.6 | 1.5 | — | — |
| CPIX, Dec-Dec | 2.0 | 2.8 | 1.5 | 1.5 | 1.7 |
| Import deflator | 0.1 | 3.8 | -0.4 | 1.3 | 2.5 |
| Export deflator | 1.9 | 2.3 | -0.4 | 0.9 | 1.8 |
| GDP deflator | | | | | |
| Increase in hourly wages[2] | 3.3 | 4.7 | 4.4 | 3.7 | 4.0 |
| Number of employed | 2.4 | 1.2 | 0.0 | -0.2 | 0.9 |
| Unemployment, aged 16–64[3] | 6.2 | 6.0 | 6.4 | 6.6 | 6.0 |
| Labour market policy programmes[3] | 1.9 | 1.7 | 1.9 | 1.9 | 1.9 |
| Regular employment ratio, aged 16-64 | 75.0 | 75.7 | 75.5 | 75.1 | 75.8 |
| Regular employment ratio, aged 20-64 | 79.4 | 80.2 | 80.0 | 79.6 | 80.1 |
| Labour productivity[4] | -0.5 | -0.5 | 1.9 | 2.9 | 2.5 |
| Current account balance[5] | 8.5 | 8.3 | 8.4 | 8.4 | 8.3 |
| Wage bill (incl. collective charges) | 7.5 | 3.5 | 3.4 | 3.6 | 4.9 |
| Wage bill (incl. collective charges) per employee[6] | 5.1 | 2.2 | 3.4 | 3.8 | 4.0 |
| Real disposable income | 4.3 | 4.3 | 2.8 | 2.3 | 2.1 |
| Saving ratio[7] | 2.3 | 4.7 | 5.1 | 4.3 | 3.2 |

[1] For 2009 and 2010, HICP is assumed to develop like UND1X.
[2] Definition in accordance with the National Accounts.
[3] Per cent of labour force.
[4] Calendar adjusted.
[5] Per cent of GDP.
[6] The wage bill (incl. collective charges) amounted to SEK 370,400 per employed person in 2007.
[7] Per cent of disposable income. Own saving, i.e. excluding saving in pension fund reserves or the premium pension system.
Sources: Riksbank, Statistics Sweden, National Mediation Office and Ministry of Finance.

## Table C.6 Resource situation

Per cent of potential GDP

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| GDP gap | 1.2 | -0.7 | -1.7 | -1.4 | -0.5 |
| Of which | | | | | |
| Employment gap | 0.6 | 0.8 | 0.0 | -0.5 | -0.2 |
| Productivity gap | 0.1 | -2.2 | -2.2 | -1.1 | -0.4 |
| Average hours worked gap | 0.7 | 0.7 | 0.1 | 0.0 | 0.0 |

Sources: Statistics Sweden and Ministry of Finance.

## Table C.7 General government finances

Per cent of GDP

| | SEKbn 2007 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| **Revenue excl. tax to EU** | **1,724** | **56.2** | **55.4** | **54.1** | **53.8** | **53.3** |
| *Taxes and charges incl. tax to EU* | *1,479* | *48.2* | *47.4* | *46.3* | *46.1* | *45.8* |
| Taxes excl. tax to EU | 1,098 | 35.8 | 36.0 | 35.4 | 35.4 | 35.1 |
| Direct taxes | 583 | 19.0 | 17.6 | 17.3 | 17.3 | 17.4 |
| Product and production taxes | 516 | 16.8 | 18.4 | 18.2 | 18.0 | 17.7 |
| Taxes on capital | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Social security contributions | 395 | 12.9 | 11.8 | 11.1 | 11.0 | 11.0 |
| Capital income, consolidated | 73 | 2.4 | 2.4 | 2.4 | 2.3 | 2.1 |
| Other revenue | 158 | 5.2 | 5.2 | 5.2 | 5.1 | 5.1 |
| **Expenditure** | **1,615** | **52.6** | **52.5** | **53.1** | **52.2** | **50.8** |
| Wages incl. collective charges and consumption | 751 | 24.5 | 24.2 | 24.6 | 24.1 | 23.7 |
| Wages and collective charges | 457 | 14.9 | 14.6 | 15.0 | 14.8 | 14.6 |
| Consumption | 293 | 9.6 | 9.5 | 9.6 | 9.3 | 9.1 |
| Total social security transfer payments | 560 | 18.3 | 18.0 | 18.3 | 18.2 | 17.8 |
| in kind | 91 | 3.0 | 3.0 | 3.1 | 3.0 | 3.0 |
| transfer payments | 470 | 15.3 | 15.0 | 15.3 | 15.1 | 14.8 |
| EDP interest, consolidated | 56 | 1.8 | 1.8 | 1.6 | 1.4 | 1.3 |
| Subsidies | 45 | 1.5 | 1.4 | 1.4 | 1.3 | 1.2 |
| Investment | 96 | 3.1 | 3.2 | 3.2 | 3.1 | 3.0 |
| Other expenditure | 107 | 3.5 | 3.9 | 3.9 | 4.0 | 3.8 |
| **Net lending** | **109** | **3.6** | **2.8** | **1.1** | **1.6** | **2.5** |
| Primary net lending | 166 | 5.4 | 4.7 | 2.6 | 3.0 | 3.8 |
| Temporary tax revenue | 24 | 0.8 | 0.3 | 0.1 | 0.1 | 0.1 |
| Structural balance | 65 | 2.1 | 2.9 | 1.9 | 2.2 | 2.7 |
| Primary structural balance | 121 | 3.9 | 4.8 | 3.5 | 3.6 | 4.0 |
| Net lending | | | | | | |
| Central government | 67 | 2.2 | 1.7 | 0.5 | 1.3 | 2.4 |
| Old-age pension system | 34 | 1.1 | 0.8 | 0.4 | 0.2 | 0.1 |
| Local government | 9 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 |

Sources: Statistics Sweden and Ministry of Finance.

## Table C.8 Consolidated gross debt

Per cent of GDP

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| **Consolidated gross debt** | 40.6 | 35.5 | 32.2 | 28.3 | 23.8 |
| Change in gross debt | -5.3 | -5.1 | -3.3 | -3.8 | -4.6 |
| *Contribution to change* | | | | | |
| Primary net lending | -5.4 | -4.7 | -2.6 | -3.0 | -3.8 |
| Interest, consolidated | 1.8 | 1.8 | 1.6 | 1.4 | 1.3 |
| Stock flows | 0.8 | -0.8 | -1.0 | -0.8 | -0.6 |
| Sale of shares, extra dividends | -1.1 | -2.6 | -1.5 | -1.4 | -1.4 |
| Allocation of interest and taxes | 0.3 | 0.0 | 0.2 | 0.1 | 0.3 |
| Other | 1.6 | 1.9 | 0.3 | 0.5 | 0.4 |
| Nominal GDP growth | -2.6 | -1.5 | -1.2 | -1.4 | -1.4 |
| Implicit interest | 4.2 | 4.7 | 4.6 | 4.6 | 4.7 |

Sources: Statistics Sweden and Ministry of Finance.

## Table C.9 Net lending by sector

Per cent of GDP

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| General government sector | 3.6 | 2.8 | 1.1 | 1.6 | 2.5 |
| Household sector | 2.7 | 3.8 | 4.2 | 3.8 | 3.3 |
| Corporate sector | 2.2 | 1.6 | 2.9 | 2.8 | 2.3 |
| Abroad | 8.5 | 8.2 | 8.2 | 8.3 | 8.1 |

Source: Ministry of Finance.

## Table C.10 Household finances

| | SEKbn | Percentage change, current prices | | | | |
|---|---|---|---|---|---|---|
| | 2007[1] | 2007 | 2008 | 2009 | 2010 | 2011 |
| Real disposable income[2] | 1,468 | 4.3 | 4.3 | 2.8 | 2.3 | 2.1 |
| Price index[3] | – | 1.3 | 2.7 | 2.1 | 1.6 | 2.0 |
| Nominal disposable income | 1,468 | 5.7 | 7.1 | 5.0 | 4.0 | 4.1 |
| of which | | | | | | |
| Wage bill[4] | 1,236 | 6.9 | 6.4 | 3.9 | 3.6 | 5.0 |
| Other factor income | 249 | 5.0 | 6.1 | 1.5 | 4.3 | 4.9 |
| Interest and dividends, net[5] | 6 | -0.4 | -0.4 | -0.4 | 0.4 | -0.2 |
| General government transfer payments | 493 | -1.2 | 2.0 | 5.6 | 3.5 | 2.7 |
| Private transfer payments | 51 | 5.4 | 1.4 | 6.4 | 4.1 | 2.4 |
| Taxes and charges | -566 | 0.8 | -0.9 | 0.3 | 3.9 | 4.6 |

**Household saving**

| | SEKbn | | | | | |
|---|---|---|---|---|---|---|
| | 2007[1] | 2007 | 2008 | 2009 | 2010 | 2011 |
| Own saving | 34 | 2.3 | 4.7 | 5.1 | 4.3 | 3.2 |
| Net saving in pension fund reserves (incl. premium pension system) | 95 | 6.5 | 6.1 | 6.2 | 6.2 | 6.4 |
| Total saving ratio[6] | 129 | 8.3 | 10.2 | 10.7 | 9.9 | 9.0 |
| Net lending | 83 | 5.7 | 7.8 | 8.4 | 7.7 | 6.8 |

[1] In current prices.
[2] Household real disposable income is calculated by deflating nominal income by the implicit price index for household consumption expenditure.
[3] Implicit price index for household consumption expenditure.
[4] The wage bill is equivalent to the number of hours worked multiplied by hourly wages.
[5] For interest and dividends, the net contribution is stated in percentage change in volume.
[6] Total saving ratio = net saving including saving in pension fund reserves (incl. premium pension system)/ (disposable income + net saving in pension fund reserves (incl. premium pension system)).
Sources: Statistics Sweden and Ministry of Finance.