The Swedish Economy

March 2014

National Institute of Economic Research

KONJUNKTUR INSTITUTET KI

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The National Institute of Economic Research (NIER) prepares analyses and forecasts of the Swedish and international economy and conducts related research. NIER is a government agency accountable to the Ministry of Finance.

The Swedish Economy is published four times a year and contains analyses and forecasts of the Swedish and international economy. It is a translation of the summary, the chapter on macroeconomic development and economic policy, and, occasionally, selected special analyses of the full report **Konjunkturläget**.

Data sets in the form of outcome and forecast data for the development of the Swedish and international economy are available on our website: www.konj.se/statistics.

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SPECIAL ANALYSES

Summary of the Forecast

The Swedish economy has begun to recover. GDP will grow by 2.6 per cent this year and just over 3 per cent next year. Unemployment will start to fall after a slight delay but will not reach equilibrium levels until 2017. Growth in the euro area has also picked up, but considerable downside risks remain. Inflation is low in large parts of the world, and the leading central banks' policy rates will remain very low until at least mid-2015. The Riksbank will postpone a first increase in the repo rate until the third quarter of 2015, but CPIF inflation will still not hit 2 per cent until 2017. General government net lending will show a deficit of 2 per cent of GDP this year, and tight fiscal policy will be needed in subsequent years to meet the surplus target.

TENTATIVE RECOVERY HAS BEGUN

Sweden had the fastest-growing GDP in the whole of the EU in the final quarter of 2013. The rise of 1.7 per cent over the previous quarter marked a turnaround in the economy (see Diagram 1). Both exports and consumption grew much more quickly than in previous quarters. This very strong growth was driven partly by temporary stock effects and supplies of defence materiel to the military, however, and so growth will be much weaker in the first quarter of 2014.

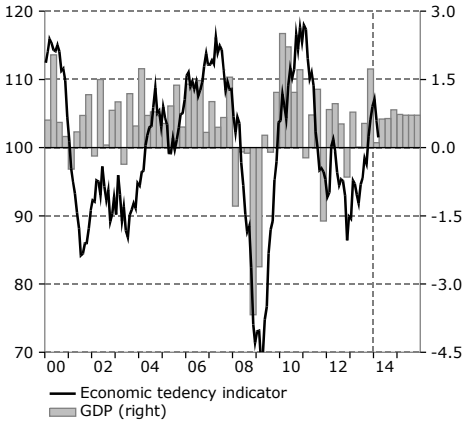
The NIER's Economic Tendency Survey is also signalling weaker growth at the beginning of 2014, but the slowdown is expected to be temporary. Despite falling in February and March, the economic tendency indicator is at a level compatible with GDP growth slightly above the historical average. Although temporary factors are expected to result in weak growth in the first quarter of 2014, the Economic Tendency Survey and other information suggest that the economic recovery that began in the fourth quarter of 2013 will continue.

Exports have started to grow more strongly after performing poorly in the first half of 2013. The outlook for exports is increasingly bright, with GDP growth continuing to accelerate in the US and the euro area. This picture is supported by firms reporting a clear rise in export orders in the Economic Tendency Survey.

Household consumption will grow more quickly this year, due to decreased uncertainty about the labour market, expansionary monetary policy and reductions in household taxation. The fifth earned-income tax credit and the tax cut for the over-65s will increase household disposable income by SEK 15 billion this year, or 0.8 per cent. The Riksbank's lowering of the repo rate in December will further boost consumption.

Diagram 1 Economic tendency indicator and GDP

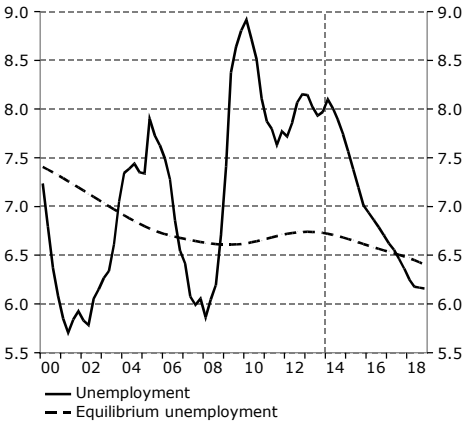
Index mean=100, monthly values and percentage change, seasonally adjusted quarterly values, respectively



Sources: Statistics Sweden and NIER.

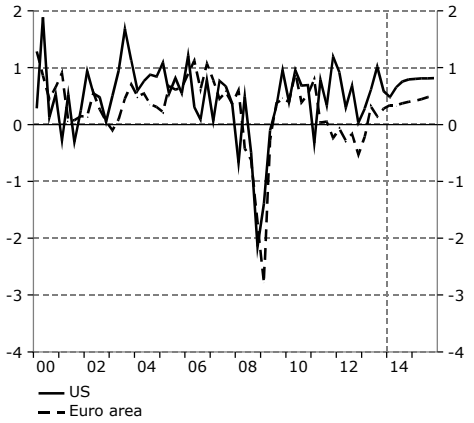
Diagram 2 Unemployment and equilibrium unemployment

Percent of labour force, seasonally adjusted quarterly values



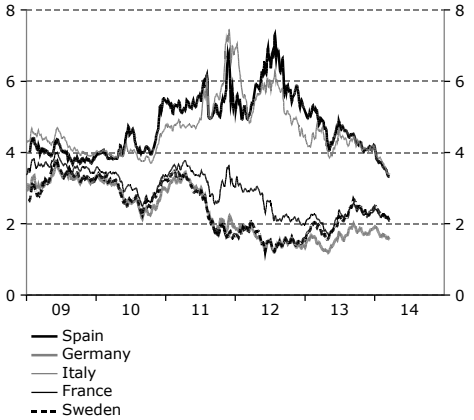
Sources: Statistics Sweden and NIER.

Diagram 3 US and euro area GDP
Percentage change, seasonally adjusted quarterly values



Sources: Bureau of Economic Analysis, Eurostat and NIER.

Diagram 4 Government bond interest rates in selected countries
Per cent, daily values, 5-days moving average



Note. 10-year bonds.
Source: Macrobond.

TEMPORARY DETERIORATION IN THE SWEDISH LABOUR MARKET

Employment growth has been weak in recent months, and unemployment has begun to rise again (see Diagram 2). Indicators such as firms' employment plans and new vacancies suggest, however, that employment growth will pick up. The relationship between the labour market and GDP growth now appears somewhat more normal than it was for much of 2013, when employment grew unusually strongly relative to GDP growth. The normal pattern is for GDP to affect employment and unemployment with a certain time lag. Unemployment held around 8 per cent last year, but will begin to fall back more tangibly as GDP grows more quickly.

With GDP growth averaging 2.8 per cent in 2014–2017, unemployment is forecast to drop to 6.5 per cent in 2017, which is in line with the NIER's assessment of equilibrium unemployment in that year (see Diagram 2). For this level of unemployment to be realised, there is a need for both demand for labour to increase and matching in the labour market to improve. Since a substantial proportion of the unemployed are in weak groups[1] that find it harder to gain employment, active labour market initiatives will be required for a long period.

BRIGHTER OUTLOOK FOR THE US AND EURO AREA

The cold winter has put a damper on economic activity in the US, with GDP growth slowing at the end of last year and expected to hold around 0.5 per cent in the first quarter this year (see Diagram 3). Housing investment has performed particularly poorly, but there are now signs of it picking up later this year. Fiscal policy will be less contractionary this year, and wages will begin to rise more quickly as unemployment creeps down. This will pave the way for more rapid growth in household consumption.

Confidence in the euro area economy is continuing to improve. Substantial tax increases and spending cuts have begun to impact on public finances, and most euro countries are on the right track in terms of government finances. This can be seen, for example, from reduced government bond spreads between the countries with the weakest government finances and Germany (see Diagram 4). Household and business confidence has also improved and is above the historical average, which indicates that GDP is set to grow more quickly.

In the euro area as a whole, GDP grew by 0.3 per cent in the final quarter of 2013, with all of the larger countries reporting positive growth. Fiscal policy will need to remain contractionary, and there are still major imbalances in the euro area. Several countries have problems with competitiveness and need to cut

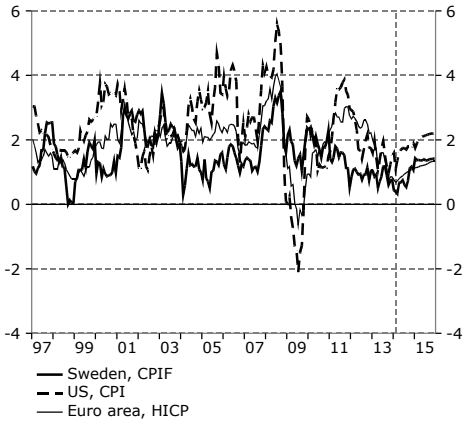
[1] Weak groups are defined by the Employment Service as those with only basic education, those with disabilities, those born outside Europe and older people (55–64 years).

cost levels relative to Germany. Due to the common currency, this adjustment will take time. There is a need for a period of low wage growth and structural rationalisation. This process will put a damper on growth. It is most likely that the recovery will continue, with the result that unemployment slowly begins to head downwards in 2014.

Downside risks continue to dominate, however. The banking system is poorly capitalised, and if the upcoming stress-testing by the European Central Bank (ECB) reveals weaker balance sheets than expected, fresh turmoil could break out in financial markets. The ongoing conflict between Russia and Ukraine could also escalate rapidly, potentially with major consequences for economic developments, but confidence in financial markets has been affected to a surprisingly limited extent to date.

Diagram 5 Sweden, US and euro area consumer prices

Annual percentage change, monthly values



Sources: Statistics Sweden, Bureau of Labor Statistics, Eurostat and NIER.

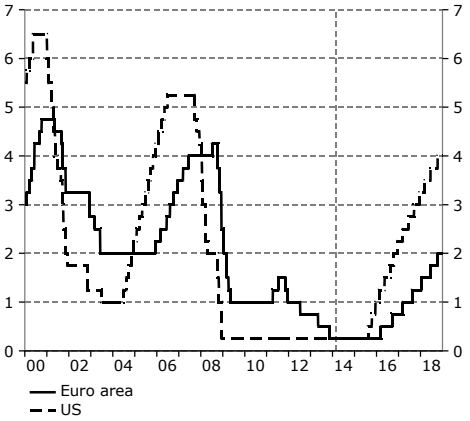
LOW INFLATION IN MANY PARTS OF THE WORLD

Inflation in Sweden is very low. As measured by the CPIF (consumer price index with constant mortgage rates), it was just 0.4 per cent in February, its lowest since 1998 bar a single month in 2004 (see Diagram 5). There are no signs that inflation is about to rise in the near term, and slow growth in unit labour costs and a certain strengthening of the krona mean that inflation will remain low in 2014 before rising slowly in 2015.

Inflation is also low in the euro area and the US. Apart from the sharp fall during the financial crisis in 2009, similarly low levels of inflation have not been seen since the start of the new millennium. In the US, where the economy is clearly in recovery, the Federal Reserve is continuing to taper its purchases of assets, but a first interest rate hike is not expected until mid-2015 (see Diagram 6). The ECB has left its policy rate unchanged at recent meetings, but has also made it clear that further monetary stimulation may be required to boost growth and push up inflation. The ECB will not start to raise its policy rate until 2016.

Diagram 6 Policy rates

Per cent, daily values



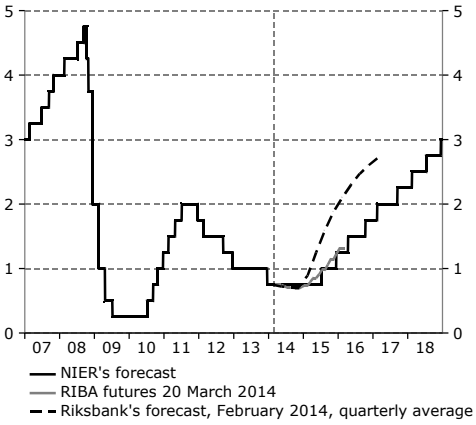
Sources: ECB, Federal Reserve and NIER.

RIKSBANK POSTPONES RATE INCREASES

In the Riksbank's latest forecast, published in February, CPIF inflation reaches 2 per cent at the end of 2015. It is unlikely to rise that quickly, however, and so the Riksbank will not raise the repo rate as early or as quickly as indicated (see Diagram 7). In the NIER's forecast, the first hike comes in the third quarter of 2015, with the repo rate then being raised relatively slowly. The repo rate will then average just 2.0 per cent in 2017 when the output gap closes (see Diagram 8). This is an unusually low level by historical standards, but can be explained by low interest rates outside Sweden and an unusually long period of weak resource utilisation, which has put a damper on inflation and inflation expectations. The repo rate therefore needs to be unusually low to avoid an excessively strong krona and push inflation up towards the target level.

Diagram 7 Repo rate

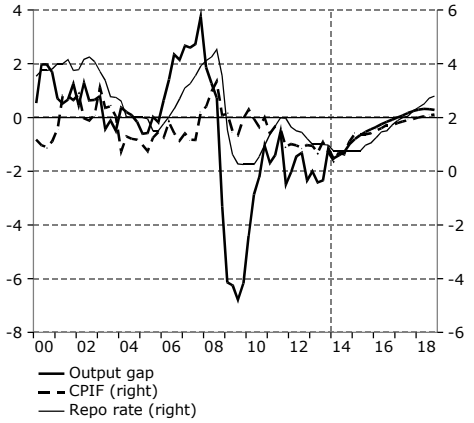
Per cent, daily values



Sources: NASDAQOMX, The Riksbank and NIER.

Diagram 8 Output gap, CPIF and repo rate

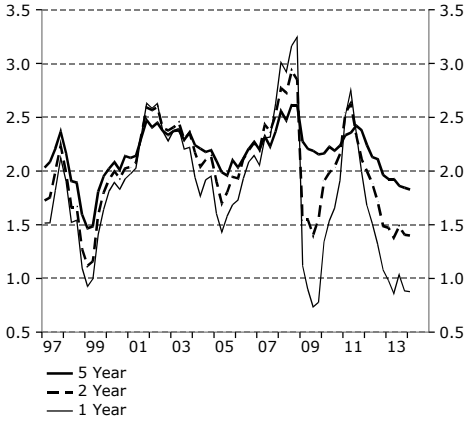
Per cent and annual percentage change, quarterly values, respectively



Sources: Statistics Sweden and NIER.

Diagram 9 Inflation expectations

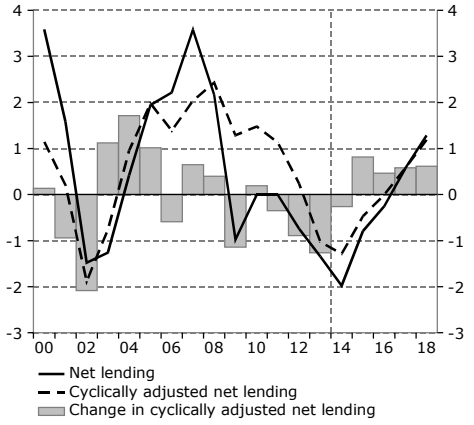
Per cent, quarterly values



Note. Average, all respondent categories.
Source: Prospera.

Diagram 10 Actual and cyclically adjusted general government net lending

Per cent of GDP and per cent of potential GDP, respectively



Sources: Statistics Sweden and NIER.

Since the real economy is performing more or less as expected, and the inflation forecast has been revised down, it would be natural for monetary policy to be made more expansionary. If this adjustment is not made, there is a risk of inflation expectations falling further, and they are already some way below the inflation target of 2 per cent (see Diagram 9). The NIER believes that it would be appropriate to lower the repo rate at the next monetary policy meeting in April. This would accelerate the economic recovery, help inflation return to the target level more quickly, and so increase the credibility of the inflation target.

The Riksbank has stated repeatedly over the past year that it is keeping the repo rate slightly higher than motivated by inflation and resource utilisation alone, in order to reduce the risks associated with an excessive ratio of household debt to disposable income. The repo rate is something of a blunt instrument for managing debt levels, however. According to the Riksbank's analysis, substantial changes in the repo rate would be needed to have any appreciable effect on the debt-to-income ratio.[2] The NIER does not therefore believe there is currently any reason for monetary policy to be influenced by household debt. A cut in the repo rate in April would also make it possible to start raising it again earlier, so reducing the risk of households revising down their long-term expectations for mortgage interest rates to unrealistically low levels.

TIGHT FISCAL POLICY NEEDED TO MEET SURPLUS TARGET

General government net lending was negative at −1.3 per cent of GDP last year (see Diagram 10) and will fall further this year to −2.0 per cent of GDP, due mainly to the tax reductions for households introduced at the start of the year. Net lending has been in decline for several years, due partly to the weak economy and partly to active decisions to cut taxes.

Even allowing for the weak economic climate, net lending will still be negative this year. Cyclically-adjusted net lending is forecast to be −1.3 per cent of potential GDP in 2014, which means that contractionary fiscal policy will be required in future years to meet the surplus target.

The fiscal policy forecast for 2015 includes discretionary decisions on tax increases for households of SEK 10 billion and an equivalent increase in general government consumption. This forecast is associated with considerable uncertainty, but reflects statements by representatives of both the government and the opposition indicating that only fully funded measures will be introduced in 2015. Cyclically-adjusted net lending will increase somewhat nevertheless as a result of the automatic stabilisers.

In the NIER's medium-term forecast, the public sector commitment is assumed to hold at 2015 levels. This means that

[2] See the article "The effects of monetary policy on household debt", *Monetary Policy Report*, February 2014, Sveriges Riksbank.

new decisions on expenditure increases totalling SEK 53 billion on transfers, investments and consumption will be made in 2016–2018. To finance this additional expenditure and still return net lending to 1.2 per cent of GDP in 2018, as would be required to meet the NIER's interpretation of the surplus target, tax increases of SEK 100 billion will be needed in the central government sector. In the forecast, the local government sector is also forced to raise taxes by SEK 8 billion to finance an increased need for welfare services and satisfy the balanced budget requirement.

Over the past decade, general government consumption and investment have grown at roughly the same rate as forecast for 2014–2018, but transfers to households have risen much more slowly. This trend could conceivably continue for a while, so reducing the need for tax increases, but at some point, for example, the ceiling for unemployment insurance will need to be raised so that protection is not excessively eroded.

It is important to remember that these calculations are based on the NIER's assessment of sustainable employment and potential GDP. With more optimistic assumptions for these variables, the need for tax increases is smaller.

TIME TO REVIEW THE SURPLUS TARGET

Whatever the need for tax increases in the coming years, there is reason to review the level of the surplus target for general government net lending, currently 1 per cent over a business cycle. The main reason for introducing the target was to reduce the national debt in a period with relatively favourable demographic developments. Sweden's national debt is now one of the lowest in the EU, and the general government sector has positive net financial wealth equivalent to around 20 per cent of GDP. Demographic developments have since turned, and a growing share of elderly people in the population is putting pressure on general government expenditure. Swedish public finances are nevertheless sustainable (see the special analysis "The Long-term Sustainability of Public Finances").[3] Even with relatively generous projections of general government expenditure and conservative assumptions for the average retirement age, taxes do not need to be raised as far as in the forecast for public finances to be considered sustainable.

It is high time to re-examine the appropriate level of the surplus target in the future. This review should also take account of other factors, such as the need for safety margins for future economic downturns. It is also important for any adjustment of the target to be widely supported so as not to undermine its credibility.

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[3] See also "Is an Unchanged Public Sector Commitment a Sustainable Commitment?", Occasional Study No. 39, Swedish National Institute of Economic Research, 2014.

Table 1 Selected indicators

Percentage change unless otherwise noted

	2011	2012	2013	2014	2015	2016	2017	2018
GDP, market price	2.9	0.9	1.5	2.6	3.2	3.1	2.5	2.3
GDP, calendar-adjusted	2.9	1.3	1.5	2.7	2.9	2.9	2.7	2.4
Current account[1]	6.2	6.5	6.6	6.1	5.8	5.3	4.8	4.5
Hours worked[2]	2.0	0.7	0.4	1.1	1.3	1.4	1.1	0.8
Employment	2.3	0.7	1.0	0.9	1.3	1.1	0.9	0.8
Unemployment[3]	7.8	8.0	8.0	7.9	7.3	6.8	6.5	6.2
Labour market gap[4]	–1.4	–1.5	–1.7	–1.3	–0.8	–0.4	0.0	0.3
Output gap[5]	–1.5	–1.8	–2.0	–1.3	–0.6	–0.2	0.1	0.3
Hourly earnings[6]	2.4	3.0	2.6	2.8	2.9	3.1	3.1	3.3
Labour cost, business sector[2]	3.3	3.5	1.8	3.2	3.1	3.1	3.2	3.4
Productivity, business sector[2]	1.6	1.3	1.7	2.0	2.0	1.8	2.0	1.9
CPI	3.0	0.9	0.0	0.1	1.2	2.3	2.6	2.8
CPIF	1.4	1.0	0.9	0.7	1.4	1.6	1.9	2.1
Repo rate[7,8]	1.75	1.00	0.75	0.75	1.25	1.75	2.25	3.00
Interest rate, 10-year government bond[7]	2.6	1.6	2.1	2.4	2.9	3.5	3.9	4.3
Index for the Swedish krona (KIX)[9]	107.6	106.1	103.0	102.5	100.5	99.2	99.5	99.8
GDP, world-wide	3.9	3.2	3.0	3.7	4.0	4.1	4.1	4.1
General government net lending[1]	0.0	–0.7	–1.3	–2.0	–0.8	–0.3	0.6	1.3
General government consolidated gross debt (Maastricht debt)[1]	38.6	38.2	41.5	42.4	41.2	40.3	38.8	36.8
Cyclically adjusted net lending[10]	1.1	0.2	–1.0	–1.3	–0.5	0.0	0.6	1.2

[1] Per cent of GDP. [2] Calendar-adjusted. [3] Per cent of labour force. [4] Difference between actual and potential hours worked, in per cent of potential hours worked. [5] Difference between actual and potential GDP, in per cent of potential GDP. [6] According to Short-term Earnings Statistics. [7] Per cent. [8] At year-end. [9] Index 1992-11-18=100. [10] Per cent of potential GDP.

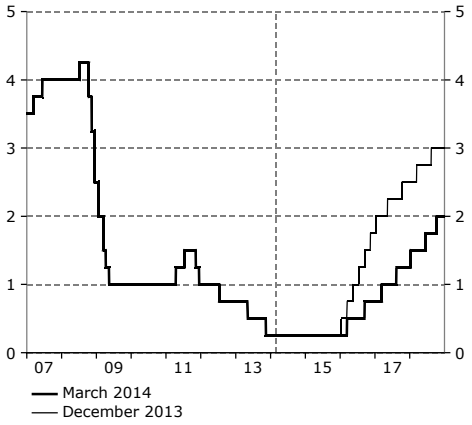
Sources: Statistics Sweden, National Mediation Office, the Riksbank and NIER.

Forecast Revisions 2014–15

This section outlines the principal revisions to the forecast published in The Swedish Economy, December 2013. In general, the revisions of GDP and employment are relatively minor (see Table 2). The forecasts for inflation and the repo rate have been revised down.

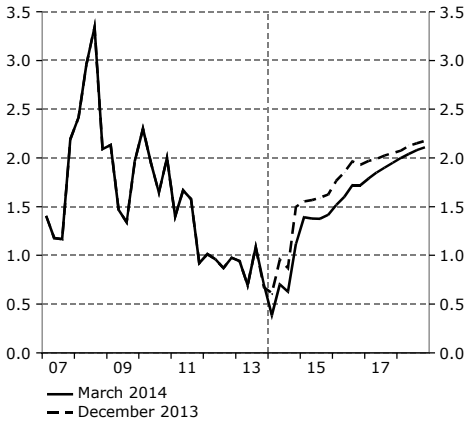
- GDP growth in Sweden was higher than anticipated in the final quarter of 2013, which means that the level of GDP at the beginning of 2014 is somewhat higher than expected, and so the average rate of growth in 2014 will be slightly higher.
- Gross fixed capital formation and general government consumption are expected to grow somewhat more quickly in both 2014 and 2015, while stockbuilding will contribute less to demand growth after the surprisingly strong contribution in the fourth quarter of 2013.
- Employment will be somewhat weaker than expected, which means that productivity growth will be higher, putting a damper on growth in unit labour costs.
- Inflation in the euro area has been lower than expected, and the ECB is expected to start raising the refinancing rate later and much more slowly (see Diagram 11). The revised forecast is more in line with market pricing and expectations in a number of surveys.
- The more expansionary monetary policy in the euro area will lead to a somewhat stronger krona.
- Inflation in Sweden has been lower than expected, and the forecast has been revised down, particularly for 2014 and 2015 but also in the longer term (see Diagram 12). This is because unit labour costs grew more slowly than anticipated in 2013, which has also boosted corporate earnings. The stronger krona will also contribute to lower inflation.
- The Riksbank is not expected to begin raising the repo rate until July 2015 (see Diagram 13). The lower inflation in Sweden and lower central bank policy rates abroad, especially in the euro area, mean that the repo rate will be raised much more slowly in 2016–2018 than in the previous forecast.
- One reason why the forecast for general government net lending has been revised down for 2014 and up for 2015 is a reassessment of the timing of the repayment of SEK 5 billion in insurance premiums from AFA to the local government sector.

Diagram 11 ECB refi rate
per cent, daily values



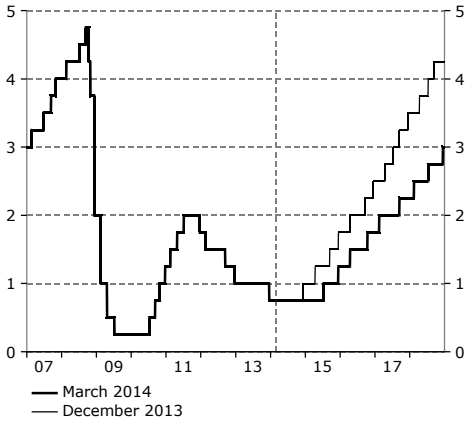
Sources: ECB and NIER.

Diagram 12 CPIF
Annual percentage change, quarterly values



Sources: Statistics Sweden and NIER.

Diagram 13 Repo rate
Per cent, daily values



Sources: The Riksbank and NIER.

Table 2 Current forecast and revisions compared to the December 2013 forecast

Percentage change unless otherwise noted

	2014		2015	
	March 2014	Diff.	March 2014	Diff.
International				
GDP, world-wide	3.7	0.0	4.0	–0.1
GDP, OECD	2.2	0.0	2.6	–0.1
GDP, Euro Area	1.2	0.1	1.7	0.0
GDP, United States	2.7	0.1	3.2	–0.2
GDP, China	7.5	0.0	7.2	0.0
Federal funds target rate[1,2]	0.25	0.00	1.00	0.25
ECB:s refi rate[1,2]	0.25	0.00	0.25	0.00
Oil price[3]	106.7	–0.7	105.1	–1.8
CPI, OECD	1.8	0.0	2.0	0.0
GDP by Expenditure				
GDP, calendar-adjusted	2.7	0.2	2.9	0.0
GDP	2.6	0.2	3.2	0.0
Household consumption	2.8	–0.1	2.4	0.0
General government consumption	1.0	0.3	1.9	0.8
Gross fixed capital formation	6.0	0.7	8.2	0.4
Stockbuilding[4]	0.3	–0.2	–0.1	–0.2
Exports	4.4	1.9	5.6	–0.2
Imports	6.0	1.6	6.2	0.0
Labour Market, Inflation, Interest Rates etc.				
Hours worked[5]	1.1	–0.1	1.3	0.2
Employment	0.9	–0.3	1.3	0.3
Unemployment[6]	7.9	0.2	7.3	0.0
Labour market gap[7]	–1.3	–0.2	–0.8	–0.1
Output gap[8]	–1.3	0.0	–0.6	0.1
Productivity, business sector[5]	2.0	0.5	2.0	–0.2
Hourly earnings[9]	2.8	0.0	2.9	0.1
CPI	0.1	–0.4	1.2	–0.7
CPIF	0.7	–0.3	1.4	–0.2
Repo rate[1,2]	0.75	–0.25	1.25	–0.50
Interest rate, 10-year government bond[1]	2.4	–0.2	2.9	–0.4
Index for the Swedish krona (KIX)[10]	102.5	–1.3	100.5	–1.6
Current account[4]	6.1	0.7	5.8	0.6
General government net lending[11]	–2.0	–0.4	–0.8	0.2

[1] Per cent. [2] At year-end. [3] Dollar per barrel, annual average. [4] Change in per cent of GDP preceding year. [5] Calendar-adjusted. [6] Level, per cent of labour force. [7] Difference between actual and potential hours worked, in per cent of potential hours worked. [8] Difference between actual and potential GDP, in per cent of potential GDP. [9] According to Short-term Earnings Statistics. [10] Index 1992-11-18=100. [11] Per cent of GDP.

Anm. The difference is between the current forecast and the December 2013 forecast. A positive value denotes an upward revision.

Source: NIER.

Macroeconomic Development and Economic Policy 2014–2018

Sweden's GDP will grow modestly in the first quarter of 2014 after recovery began at the end of 2013. Not until the beginning of 2017, however, will the economy return to full capacity. The protracted recovery in the OECD area means that domestic demand will be more important than usual for Swedish growth. As cyclically-adjusted net lending in 2014 will be considerably lower than the surplus target would permit in the longer term, fiscal policy will need to be tightened in subsequent years. Given the extensive need for tightening, the NIER believes that general government net lending will not meet the surplus target until 2018, the year after the economy reaches full capacity. Low resource utilisation, low inflation and low interest rates abroad suggest that the Riksbank will leave the repo rate unchanged until the third quarter of 2015.

This chapter begins with an overview of the NIER's forecast for the global and Swedish economies in 2014–2018 before looking in greater depth at the forecast for monetary and fiscal policy. A more detailed presentation of economic developments in 2014–2015 can be found in the subsequent chapters of the report. Public finances and fiscal policy are covered in more detail in the chapter "Public Finances".

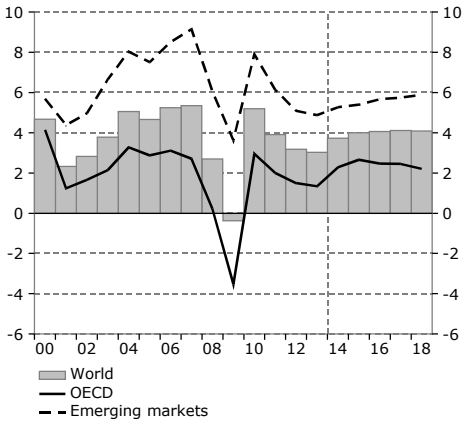
International Developments

CONTINUED RECOVERY IN THE GLOBAL ECONOMY

Leading indicators suggest that the global economy will continue its recovery, but the global picture is mixed. Growth is much higher in the US, the UK and Japan than in southern Europe. GDP growth in emerging markets is weaker than normal (see Diagram 14), but they have fewer idle resources than in the OECD. When the Federal Reserve began to taper its quantitative easing, some emerging markets were also hit by outflows of capital, leading to falling share prices and weaker currencies.

Diagram 14 GDP world-wide, in OECD countries and emerging markets

Percentage change



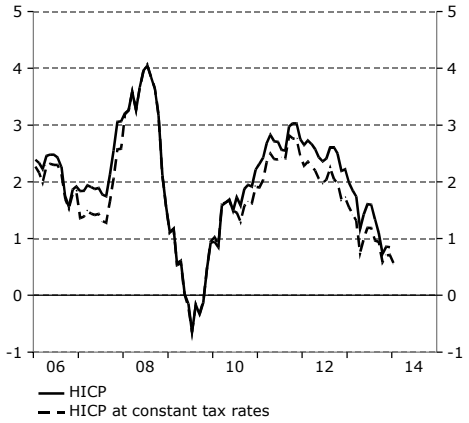
Note. Emerging markets here refer to all non-OECD member countries.

Sources: OECD, IMF and NIER.

SLOW RECOVERY IN THE OECD

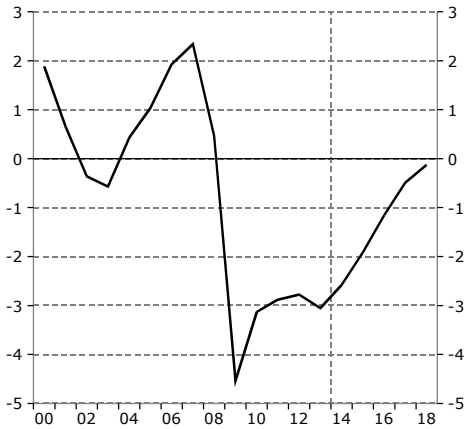
The adjustment of competitiveness between countries in the euro area is continuing. Relative cost levels have improved in several countries with structural current account deficits, but further structural reforms will probably be required in some countries to correct both internal and external imbalances. It is also important that decisions are made on a credible framework for the management of bank crises, and that the stress-testing of the European banking sector by the European Central Bank

Diagram 15 Euro area consumer prices
Annual percentage change, monthly values



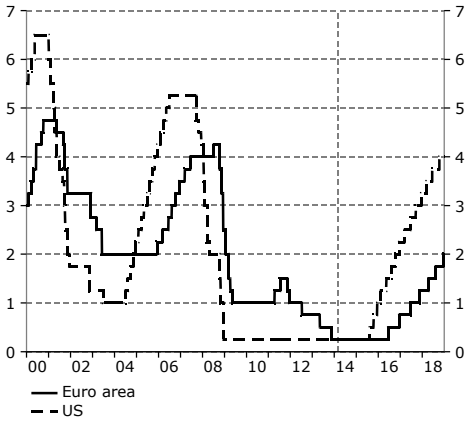
Source: Eurostat.

Diagram 16 Output gap in OECD
Per cent of potential GDP



Sources: IMF, OECD and NIER.

Diagram 17 Policy rates
Per cent, daily values



Sources: ECB, Federal Reserve and NIER.

(ECB) does not uncover any previously unknown problems. Household saving is expected to remain high, and the public sector will continue its fiscal tightening. As debt returns to more stable levels, lending rates are expected to fall for households and firms, and demand for credit will increase as the economy recovers. This will gradually enhance the effect of the region's expansionary monetary policy, which will contribute to the recovery. However, the recovery will only marginally reduce unemployment, which will remain high in the coming years. High unemployment and weak resource utilisation mean very low price pressure in the euro area as a whole (see Diagram 15). Prices in the euro area as a whole will also be held back by low inflation in Germany, because greater competitiveness for euro countries with structural current account deficits depends on prices rising less than in Germany.

In the US, the recovery has slowed recently, due mainly to weather-related disruptions. This slowdown will not persist, however, and the recovery is expected to accelerate again before long. US households are being favoured by rising asset prices, and the debt adjustment process is considered largely complete. Combined with unemployment continuing to fall, this has prompted greater confidence among both consumers and firms, which is stimulating consumption, investment and, thereby, growth. The level of idle resources is still considered to be high, however, which means that monetary policy will remain highly expansionary, contributing, in turn, to resource utilisation gradually increasing and normalising in 2018.

In Japan, expansionary monetary policy has contributed to substantial depreciation of the yen. This has stimulated exports and contributed to increased investment and lower unemployment. The expansionary monetary policy has also pushed up both households' and firms' inflation expectations. Higher inflation expectations, high resource utilisation and the increases in consumption tax in 2014 and 2015 are expected to turn deflation into inflation of around 2 per cent.

GDP in the OECD countries is expected to grow by an average of 2.4 per cent per year in 2014–2018 (see Table 3), but resource utilisation is low and will not normalise until the end of 2018 (see Diagram 16). This low resource utilisation will put a damper on inflation, which means that the expansionary bias of monetary policy is not expected to threaten these countries' inflation targets. This means, in turn, that the recovery may continue to be bolstered by low central bank policy rates in the coming years (see Diagram 17).

EMERGING MARKETS HAVE LOST MOMENTUM

Activity in emerging markets grew more slowly in 2013 than in 2012, due partly to lower trend growth and partly to financial turbulence as a result of the Federal Reserve's tapering of asset purchases, which has led to falling share prices, weaker curren-

cies and tighter monetary policy in countries with large current account deficits. In Brazil, low productivity growth, low investment and poorly functioning infrastructure have led to a drop in trend growth. In China, growth is expected to be much slower in the coming years than the average of just over 10 per cent in 2000–2012. This is due to measures to promote transition to a growth model based on a higher share of private consumption and a lower share of investment. GDP in emerging markets is nevertheless expected to grow by an average of 5.6 per cent per year in 2014–2018 (see Table 3), which is much higher than in the OECD countries.

Table 3 GDP and CPI, world-wide

Percentage change

	2012	2013	2014	2015	2016	2017	2018
GDP, OECD	1.5	1.3	2.2	2.6	2.5	2.4	2.2
GDP, emerging markets[1]	5.1	4.9	5.2	5.3	5.7	5.7	5.9
GDP, world-wide	3.2	3.0	3.7	4.0	4.1	4.1	4.1
CPI, OECD	2.2	1.6	1.8	2.0	2.1	2.2	2.2
CPI, world-wide	4.0	3.8	3.7	3.6	3.4	3.4	3.4

[1] Emerging markets here refer to all non-OECD member countries.

Note. GDP figures are calendar-adjusted and in constant prices. Aggregates are calculated using purchasing-power adjusted GDP weights from the IMF.

Sources: IMF, OECD and NIER.

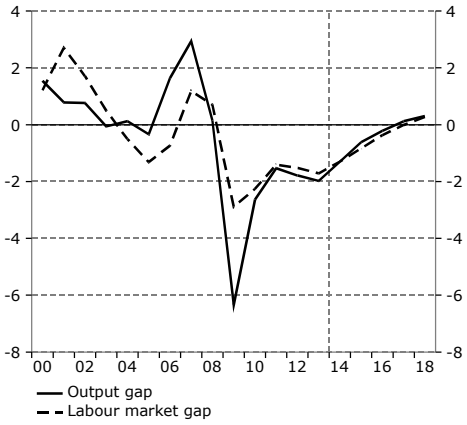
Developments in Sweden

PROLONGED SLUMP

The weak global economic climate in the wake of the financial and debt crises has meant that the Swedish economy remains in the doldrums more than five years after the financial crisis erupted. High export dependence has resulted in the Swedish economy being hit hard by dwindling external demand. The nature of the crises has also fuelled uncertainty about future economic developments, causing households and firms to postpone consumption and investment. Despite expansionary economic policy, resource utilisation in Sweden is much lower than normal. Based on the NIER's calculations, GDP in 2013 was around 2 per cent below potential GDP, or the level of production associated with normal utilisation of labour and capital (see Diagram 18).

Diagram 18 Output gap and labour market gap

Per cent of potential GDP and of potential hours worked, respectively



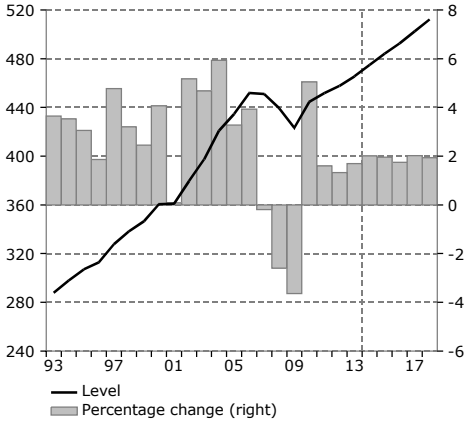
Source: NIER.

WEAK PRODUCTIVITY GROWTH HAS HAMPERED GROWTH IN SWEDEN

The NIER believes that recent years' demographic developments and economic policy – especially the earned-income tax credits – have helped increase the structural supply of labour and thereby potential hours worked. Meanwhile, productivity growth in the business sector has been weak (see Diagram 19),

Diagram 19 Productivity in the business sector

Value added per hour, constant prices, calendar-adjusted values



Source: Statistics Sweden and NIER.

which is believed to be a reflection to some extent of lower growth in potential productivity. This can be explained partly by low resource utilisation leading to lower investment growth for a prolonged period, with negative effects on capital formation. Weak productivity growth in many other countries suggests that the development and introduction of new technology have slowed. All in all, potential GDP is estimated to have grown by an average of 1.9 per cent per year in 2007–2013, which is almost half a percentage point lower than the average rate of growth in GDP in 1980–2006.

The recovery in the Swedish economy in 2014–2018 means that investment in fixed assets will pick up relatively quickly. The capital stock will therefore grow more quickly, promoting a gradual increase in potential productivity growth (see Table 4). Potential hours worked will continue to rise, and altogether this translates into stronger growth in potential GDP in the coming years.

Table 4 Potential GDP, employment and productivity

Percentage change unless otherwise noted

	2013	2014	2015	2016	2017	2018
Potential GDP	1.7	2.0	2.2	2.5	2.4	2.2
Potential hours worked	0.6	0.7	0.9	0.9	0.7	0.5
Potential employment	0.9	0.8	0.7	0.6	0.6	0.5
Of which demographic contribution[1]	0.3	0.5	0.5	0.4	0.4	0.3
Potential productivity	1.1	1.3	1.3	1.5	1.7	1.6
Potential productivity, business sector	1.7	1.7	1.7	1.9	2.1	2.1

[1] Contribution to potential employment due to population growth, percentage points. In addition, the development of potential employment is also affected by the business cycle and by economic policy.

Sources: Statistics Sweden and NIER.

STRONGER EXTERNAL ECONOMY IMPORTANT FOR SWEDISH RECOVERY

The fourth quarter of 2013 saw extensive stockbuilding by firms after two quarters of destocking, and government consumption increased considerably, due partly to temporary factors. Indicators point to significantly lower growth in the first quarter this year, with GDP forecast to rise by just 0.1 per cent. GDP will then grow more quickly, and resource utilisation will rise as the economy continues to improve in 2014–2018. The severe economic downturn in connection with the financial crisis has meant that the current slump has been unusually protracted. By the time resource utilisation in the economy as a whole normalises at the beginning of 2017, the slump will have lasted for a period of eight years.

The recovery in the Swedish economy can to a great extent be explained by the brighter economic outlook abroad. The NIER estimates that demand for Swedish exports will grow by an average of almost 5 per cent per year in 2014–2018 (see Dia-

gram 20). Export growth will be somewhat below the historical average in 2014–2018, however, and the recovery will be more dependent on a higher rate of growth in domestic demand. Reduced uncertainty and an investment backlog in the household and business sectors will contribute to increased domestic demand in the coming years. Economic policy will be important in supporting this process. As new instruments for macroprudential supervision are still relatively untested, the Riksbank is expected to continue to make allowance for household debt levels in the formulation of its monetary policy, which will delay the Swedish recovery slightly. Monetary policy is nevertheless expected to remain expansionary in the coming years (see Diagram 21 and the section "Monetary Policy and Exchange Rates" later in this chapter). This is particularly important given that fiscal policy is expected to be tightened in order to meet the surplus target in 2018.

Diagram 20 Market for Swedish exports

Percentage change

Sources: National sources, IMF and NIER.

Table 5 GDP by expenditure

Percentage change, constant prices, calendar-adjusted values

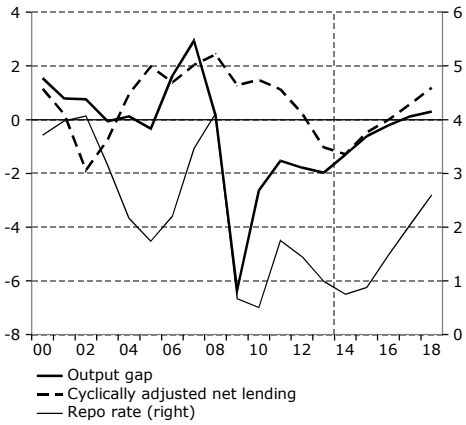
	2013	2014	2015	2016	2017	2018
Household consumption expenditure	2.0	2.8	2.3	3.1	3.0	2.3
General government consumption expenditure	2.0	1.2	1.6	1.5	1.8	1.8
Gross fixed capital formation	–1.3	6.1	7.8	5.9	4.7	3.6
Final domestic demand	*1.3*	*3.0*	*3.2*	*3.3*	*3.1*	*2.5*
Stockbuilding[1]	0.2	0.3	–0.1	0.0	0.0	0.0
Total domestic demand	*1.5*	*3.3*	*3.1*	*3.3*	*3.1*	*2.5*
Exports	–0.9	4.6	5.1	5.0	4.9	4.7
Total demand	*0.7*	*3.7*	*3.8*	*3.9*	*3.7*	*3.2*
Imports	–1.2	6.2	5.7	6.1	5.8	5.1
Net exports	*0.1*	*–0.4*	*0.0*	*–0.2*	*–0.2*	*0.0*
GDP	**1.5**	**2.7**	**2.9**	**2.9**	**2.7**	**2.4**

[1] Change in per cent of GDP preceding year.

Sources: Statistics Sweden and NIER.

Diagram 21 Output gap and economic policy

Per cent of potential GDP and per cent, respectively



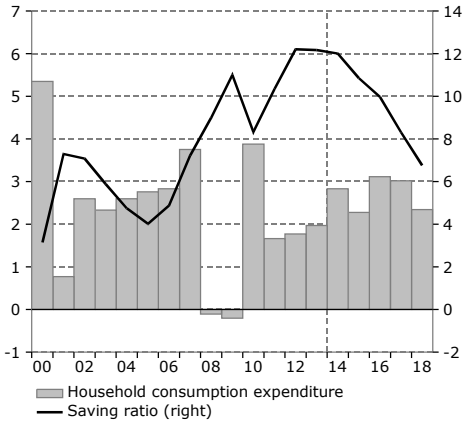
Sources: The Riksbank and NIER.

STRONG CONSUMPTION GROWTH AFTER A LENGTHY PERIOD OF UNCERTAINTY AND HIGH SAVING

There has been great uncertainty about the economy in the wake of the financial and debt crises. Over the past year, however, consumer confidence has increased in many OECD countries, including Sweden. Although the consumer confidence indicator in the Economic Tendency Survey has fallen back at the beginning of 2014, it is still close to the historical average, and its recovery in 2013 reflects growing optimism. The rise in the saving rate to record levels indicates that the uncertainty has caused households to postpone consumption. As uncertainty in the household sector eases further, the high level of saving will facilitate increased consumption (see Diagram 22). Consumption growth will also be supported by low interest rates and further employment growth. All in all, this means that household con-

Diagram 22 Household consumption and saving ratio

Percentage change, calendar-adjusted values and per cent of disposable income, respectively



Sources: Statistics Sweden and NIER.

sumption expenditure will grow by 2.8 per cent in 2014 and by an average of 2.7 per cent per year in 2015–2018. The saving rate will therefore drop back to around 7 per cent of disposable income in 2018.

Growth in general government consumption will accelerate from 1.2 per cent in 2014 to 1.8 per cent in 2018. This mainly reflects a growing need for public services towards the end of the forecast period as the proportions of children and elderly in the population rise more quickly.

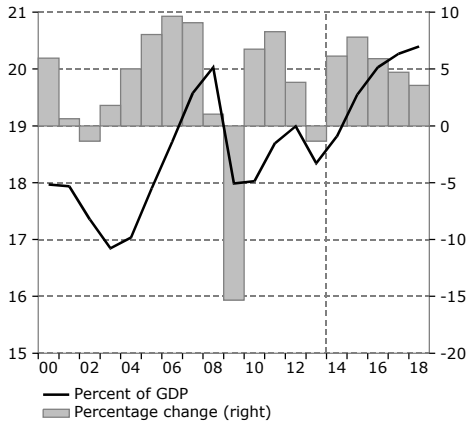
INVESTMENT BACKLOG SPELLS HIGHER INVESTMENT GROWTH

Investment, which normally varies considerably over the course of a business cycle, fell by no less than 15 per cent in the crisis year of 2009. Despite relatively strong growth in subsequent years, investment is still much lower relative to GDP than before the crisis. The investment-to-GDP ratio will increase in 2014, and the NIER expects that it will then rise further and move above 20 per cent for a few years to build up stocks of real capital.

According to both Statistics Sweden and the Economic Tendency Survey, capacity utilisation in industry increased in 2013. The recovery in demand in the coming years means that capacity utilisation will continue to rise, increasing the need for investment. A pent-up need for new housing also spells a rapid increase in housing investment in the coming years. For example, investment in new housing is forecast to grow by almost 20 per cent in 2014. This means that investment as a whole will grow relatively quickly at the beginning of the forecast period and slightly exceed 20 per cent of GDP in 2018 (see Diagram 23). Investment is expected to average around 20 per cent of GDP in the longer term.

Diagram 23 Gross fixed capital formation

Per cent of GDP, current prices and percentage change, calendar-adjusted values, respectively



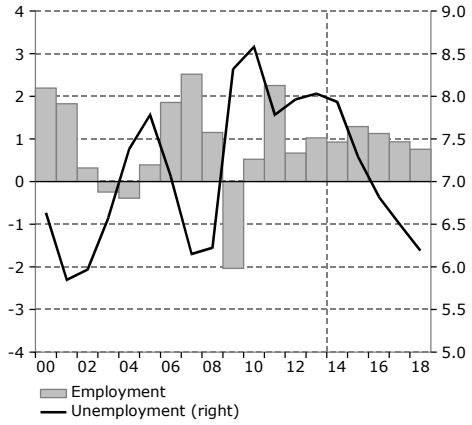
Sources: Statistics Sweden and NIER.

RECOVERY LEADS TO LOWER UNEMPLOYMENT

Although GDP will grow by 2.7 per cent in 2014, unemployment will fall only marginally to 7.9 per cent and will therefore still be slightly more than 1 percentage point above the NIER's estimate of equilibrium unemployment for 2014. This is because the labour force is continuing to grow relatively quickly. Unemployment is then expected to fall gradually, due partly to the number of employed rising somewhat faster when resource utilisation at firms normalises, and partly to growth in the labour force slowing with growth in the working-age population (see Diagram 24). By 2017, unemployment will have fallen to 6.5 per cent and the labour market will be more or less in equilibrium (see Table 6).

Diagram 24 Employment and unemployment

Percentage change and per cent of labour force, respectively



Sources: Statistics Sweden and NIER.

Table 6 Labour market

Percentage change

	2013	2014	2015	2016	2017	2018
Hours worked[1]	0.4	1.1	1.3	1.4	1.1	0.8
Employed	1.0	0.9	1.3	1.1	0.9	0.8
Labour force	1.1	0.8	0.6	0.6	0.6	0.4
Unemployment[2]	8.0	7.9	7.3	6.8	6.5	6.2

[1] Calendar-adjusted. [2] Per cent of labour force.

Sources: Statistics Sweden and NIER.

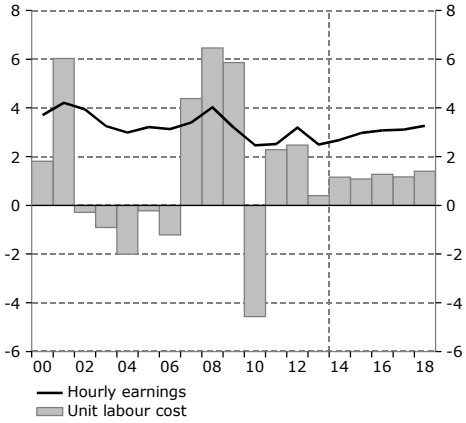
WAGE GROWTH CLOSE TO 3 PER CENT PER YEAR IN 2014–2018

Most of the central pay settlements reached in 2013 run for three years. High unemployment has meant that the wage growth resulting from these agreements is lower than normal. Low resource utilisation can also be expected to rein in wage drift over and above this. All in all, therefore, wages are expected to grow somewhat more slowly during the current three-year period than the average for 1997–2012 of 3.4 per cent. Wage growth will be 2.8 per cent in 2014, but will climb to 3.3 per cent in 2018 due to rising resource utilisation in the labour market in the coming years (see Diagram 25).

After increasing slowly in 2013, unit labour costs in the business sector will rise by 1.2 per cent this year and an average of 1.3 per cent per year in 2015–2018. This level of growth is believed to be compatible with inflation close to 2 per cent in the longer term and means that labour costs' share of value added in the business sector will fall marginally in 2014–2018.

Diagram 25 Hourly earnings and unit labour cost in the business sector

Percentage change, calendar-adjusted values



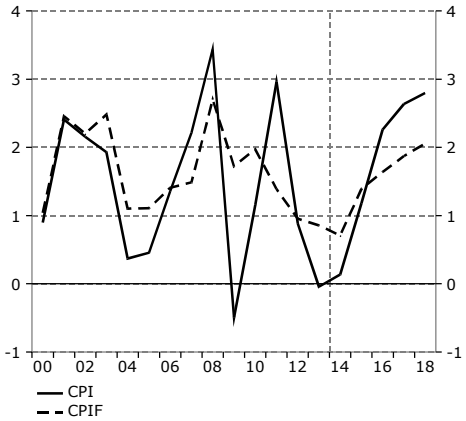
Sources: National Mediation Office, Statistics Sweden and NIER.

LOW INFLATION FOR YEARS TO COME

Weak resource utilisation in Sweden and large parts of the rest of the world has made it hard for firms to raise prices, and inflation has remained low despite relatively strong growth in unit labour costs in 2011 and 2012. Resource utilisation will improve gradually in the coming years, which can be expected to bring somewhat faster price rises. The krona will continue to strengthen, however, which will put a damper on import prices. All in all, inflation as measured by the CPIF (consumer price index with constant mortgage rates) will remain low and will not reach the inflation target until the end of 2017 (see Diagram 26). The Riksbank will begin raising the repo rate in the third quarter of 2015, and mortgage rates will then also start to rise, helping CPI inflation to hit 2 per cent about a year earlier.

Diagram 26 Consumer prices

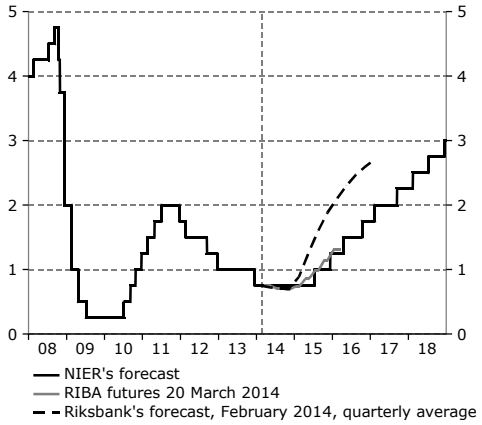
Percentage change



Sources: Statistics Sweden and NIER.

Diagram 27 Repo rate

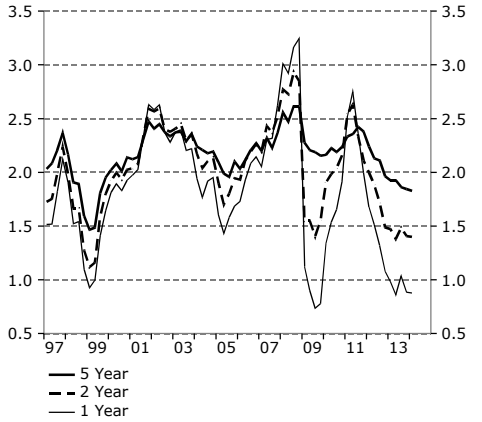
Per cent, daily and quarterly values, respectively



Sources: NASDAQOMX, The Riksbank and NIER.

Diagram 28 Inflation expectations, 1, 2 and 5 year horizons

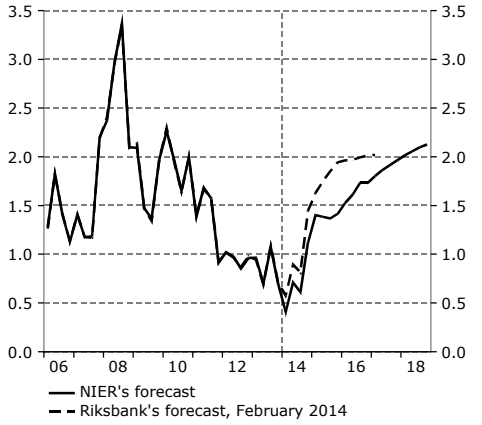
Per cent, quarterly values



Note. Average, all respondent categories.
Source: Prospera.

Diagram 29 Inflation, CPIF

Per cent, quarterly values



Sources: The Riksbank and NIER.

Table 7 Earnings and prices

Percentage change

	2013	2014	2015	2016	2017	2018
Hourly earnings[1]	2.6	2.8	2.9	3.1	3.1	3.3
Hourly earnings, business sector	2.5	2.7	3.0	3.1	3.1	3.3
Unit labour cost, business sector	0.4	1.2	1.1	1.3	1.2	1.4
CPI	0.0	0.1	1.2	2.3	2.6	2.8
CPIF	0.9	0.7	1.4	1.6	1.9	2.1

[1] According to Short-term Earnings Statistics.

Sources: National Mediation Office, Statistics Sweden and NIER.

Monetary Policy and Exchange Rates

UNCHANGED REPO RATE

The Riksbank decided to leave the repo rate at 0.75 per cent in February, and its forecast for the repo rate was also largely unchanged. Low resource utilisation and low expected inflation have led to record-low interest rates since the most intense phase of the financial crisis. At the same time, the Riksbank has long expressed concern about growth in household debt. The Riksbank's reasoning is that excessive debt brings a risk that households will be forced to sharply increase saving at some point, which could have unfavourable effects on the real economy and jeopardise the achievement of monetary policy goals beyond the bank's forecast horizon.[4] A majority of the Riksbank's executive board has presented this argument in recent years for not lowering the policy rate further.

Based on forward pricing, market players generally expect interest rates to start going up rather later and rather more slowly than indicated by the Riksbank's interest rate path (see Diagram 27). One likely explanation is that market players expect inflation to remain significantly below target even in two years' time (see Diagram 28). The Riksbank's forecast from February indicates that CPIF inflation will be close to 2 per cent by the end of 2015, which is much earlier than in the NIER's forecast (see Diagram 29).

DEBT LEVELS IMPACTING ON MONETARY POLICY

Despite the actions already taken, the NIER believes that household debt will grow slightly more quickly than disposable income in the coming years, moving the debt-to-income ratio even higher. Since the effects on the debt-to-income ratio of previous measures and untested new instruments for macroprudential supervision are uncertain or hard to gauge, it is assumed

[4] See the article "Financial imbalances in the monetary policy assessment" in *Monetary Policy Report*, July 2013, Sveriges Riksbank.

that this growth in the ratio will mean that the Riksbank continues to make allowance for household debt levels in the formulation of monetary policy. In other words, the Riksbank will pursue a slightly less expansionary monetary policy line than would otherwise have been the case. In the short term, this will come at the cost of lower resource utilisation and of inflation undershooting the target for somewhat longer.

While accepting that there may be risks associated with high levels of household debt, the NIER does not currently see any justification for making allowance for these risks in the formulation of monetary policy. Fundamental factors appear to explain much of the increase in household debt, and the weight of evidence suggests that changes in the central bank policy rate do not have any significant impact on debt levels and house prices.[5]

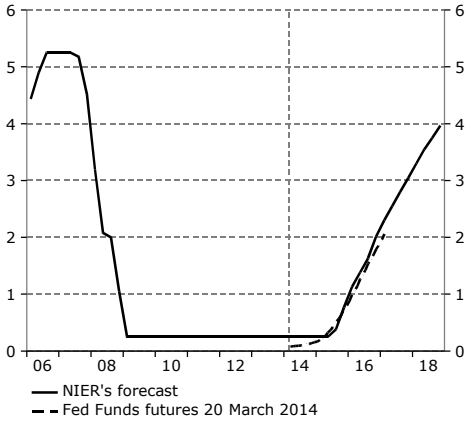
LOW POLICY RATES ABROAD KEY TO MOVEMENTS IN REPO RATE

Interest rates outside Sweden, especially in the euro area, will remain very low throughout the forecast period (see Diagrams 30 and 31). This is due largely to continued debt consolidation in both the government and household sectors limiting the expansionary effect of central bank policy rates on demand. Very low interest rates will therefore be needed for a long period by historical standards, supplemented with unconventional measures to increase resource utilisation and push inflation towards the target levels.

Sweden's expansionary monetary policy has cushioned the drop-off in demand and been an important factor in the economic recovery that commenced at the end of last year. The deep slump still engulfing many of Sweden's export markets means that economic recovery in Sweden will be slow, however, and so monetary policy will need to remain expansionary for a long time. Household debt will also increase slightly relative to disposable income. To rein in household debt and avoid excessively high resource utilisation further ahead, with inflation overshooting the target, the Riksbank will begin to raise the repo rate gradually from the third quarter of 2015. Monetary policy will thus help resource utilisation in the economy as a whole to normalise in 2017. The repo rate will then still be at much lower levels than have historically been associated with normal resource utilisation. With very low interest rates abroad, a higher repo rate in Sweden would cause the krona to appreciate, which would slow recovery and further subdue inflation. A return to more normal resource utilisation outside Sweden, with gently rising interest rates, will see the Riksbank gradually raise the repo rate to 3 per cent at the end of 2018 (see Diagram 32).

Diagram 30 Policy rate and futures' implicit rate, USA

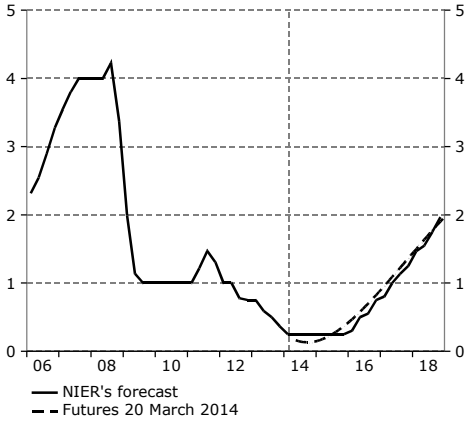
Per cent, quarterly and monthly values, respectively



Sources: Federal Reserve, Chicago Board of Trade and NIER.

Diagram 31 Policy rate and futures' implicit rate, euro area

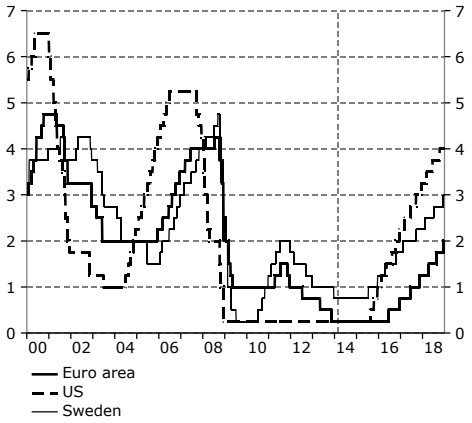
Per cent, quarterly and monthly values, respectively



Sources: ECB and NIER.

Diagram 32 Policy rates

Per cent, daily values



Sources: ECB, Federal Reserve, The Riksbank and NIER.

[5] See the article "The effects of monetary policy on household debt", *Monetary Policy Report*, February 2014, Sveriges Riksbank.

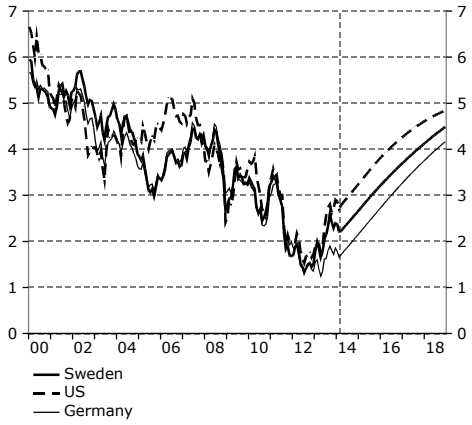
GOVERNMENT BOND YIELDS TO RISE AS THE GLOBAL ECONOMY RECOVERS

In the wake of the financial crisis and the ensuing debt crisis, many countries have pursued highly expansionary monetary policy to counter weak domestic and external demand. This expansionary monetary policy has entailed not only very low policy rates but also unconventional measures, such as extensive bond purchases by central banks, which have sent government bond yields to very low levels. Considerable uncertainty about the economic outlook has also caused many investors to move into low-risk assets, which has further eroded yields.

Now that uncertainty about the recovery in the major economies is easing, demand for riskier assets is picking up, and this may help explain the stock market rally in many countries over the past year. It has also meant that demand for safe government bonds in countries with stable government finances is waning. As unconventional monetary policy measures also start to be phased out, and central bank policy rates begin to be raised in many of the major economies, yields will rise further. By historical standards, however, short-term interest rates will rise slowly in both the euro area and the US, which means that government bond yields will remain low for a long period (see Diagram 33). Swedish 10-year government bond yields will follow the international pattern and climb to 2.9 per cent in 2015 and 4.3 per cent in 2018 (see Table 8).

Diagram 33 Government bond interest rates

Per cent, monthly values



Note: 10-year bonds.
Sources: National sources and NIER.

Table 8 Interest rates

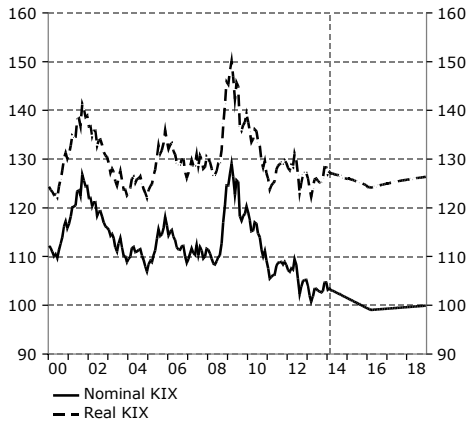
Per cent

	2013	2014	2015	2016	2017	2018
At year-end						
Repo rate	0.75	0.75	1.25	1.75	2.25	3.00
Annual average						
Repo rate	1.0	0.8	0.9	1.5	2.0	2.6
5-year government bond	1.6	1.7	2.4	3.0	3.6	4.0
10-year government bond	2.1	2.4	2.9	3.5	3.9	4.3

Sources: The Riksbank and NIER.

Diagram 34 Effective exchange rate of the Swedish krona – KIX

Index 1992-11-18=100, monthly values



Note. A higher index implies a weaker krona.
Sources: The Riksbank and NIER.

STRONGER KRONA IN THE COMING YEARS

The krona as measured by the effective exchange rate index KIX has strengthened by almost 1 per cent so far this year and is now almost 7 per cent stronger than it was in August 2008 before declining as a result of the financial crisis (see Diagram 34). In real terms, the KIX index has strengthened by approximately 2 per cent over the same period. Smaller trade surpluses are expected to coincide with a strengthening of the real exchange rate against several trading partner currencies. The KIX index also includes several emerging market currencies. In the slightly longer term, these countries are expected to have higher productivity growth than Sweden, which suggests that the krona will weaken against their currencies in real terms. All in all, the krona

is forecast to appreciate in real terms by almost 1 per cent by 2018. Higher external inflation means that it will strengthen slightly further in nominal terms (see Diagram 34 and Table 9).

Table 9 Exchange rates

Index 1992-11-18=100 and SEK per currency unit, respectively

	2013	2014	2015	2016	2017	2018
KIX	103.0	102.5	100.5	99.2	99.5	99.8
Euro	8.65	8.79	8.52	8.35	8.37	8.39
US dollar	6.51	6.49	6.52	6.55	6.57	6.58

Sources: The Riksbank and NIER.

Fiscal Policy

FISCAL TIGHTENING TO COMMENCE NEXT YEAR

Fiscal policy was expansionary in 2013 and contributed to cyclically-adjusted general government net lending falling to −1 per cent of potential GDP after being slightly positive in 2012. Unfunded measures amounted to around SEK 25 billion and included a reduction in the corporate income tax rate from 26.3 to 22 per cent and initiatives on the expenditure side in areas such as education, research, justice and the labour market.

The Budget Bill for 2014 contained proposals for unfunded measures totalling SEK 24 billion. The Riksdag rejected the proposed increase in the threshold for state income tax, leaving measures amounting to SEK 21 billion.[6] A fifth earned-income tax credit is the largest of these and is expected to reduce tax revenue by SEK 12 billion. Combined with much lower dividends from state-owned enterprises this year, these measures mean that cyclically-adjusted net lending will fall slightly further this year to −1.3 per cent of potential GDP (see Diagram 35).

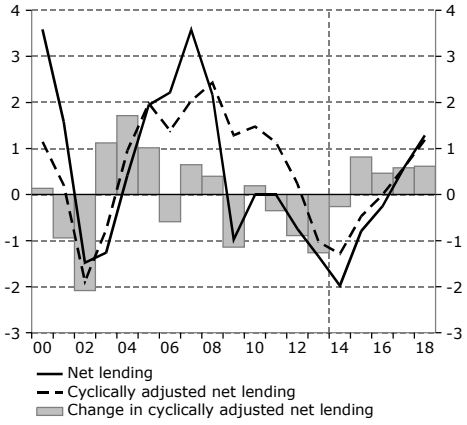
Next year, fiscal policy is expected to include spending increases of SEK 10 billion funded by tax increases of the same magnitude. Whatever the outcome of the parliamentary elections in the autumn, it can be assumed that there will be some spending increases or tax cuts. In the absence of fiscal space, however, the scope of these measures is expected to be limited. Although the net effect on cyclically-adjusted net lending of active fiscal policy measures is expected to be neutral, due to automatic budget strengthening net lending will still increase by 0.8 per cent. The fiscal policy stance is therefore expected to be contractionary next year.

TIGHTENING CONTINUES THROUGH TO 2018

The fiscal policy forecast for 2016 onwards is guided by the principles for the Swedish fiscal policy framework. The corner-

Diagram 35 Actual and cyclically adjusted general government net lending

Per cent of GDP and per cent of potential GDP, respectively



Sources: Statistics Sweden and NIER.

[6] See the special analysis "The Budget Bill for 2014" in *The Swedish Economy*, December 2013, for a more detailed examination of the content of the bill.

Fiscal policy concepts

Cyclically-adjusted net lending is an estimate of general government net lending with normal resource utilisation (economy at capacity) and a normal composition of the main tax bases. It is usually expressed as a percentage of potential GDP.

The fiscal policy stance in any given year is determined by the change in cyclically-adjusted net lending in relation to potential GDP. A decrease in cyclically-adjusted net lending indicates that fiscal policy is *expansionary* in terms of resource utilisation (the output gap) in the economy. The reason may be that cyclically-adjusted tax revenue rises more slowly than potential GDP (due to lower tax rates, for example), that general government expenditure rises more quickly than potential GDP, or a combination of the two. Similarly, an increase in cyclically-adjusted net lending indicates that fiscal policy is *contractionary*. Fiscal policy is *neutral* when cyclically-adjusted net lending is unchanged in relation to potential GDP.

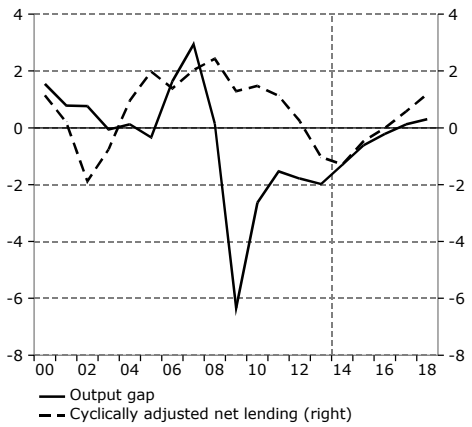
Unfunded measures are fiscal policy decisions to increase expenditure and/or decrease taxes that are not funded by decisions to decrease expenditure and/or increase taxes in other areas by the same amount. Such measures therefore erode general government net lending and normally have a positive effect (multiplier) on GDP.

Unchanged rules are defined as how fiscal policy variables develop with no further fiscal policy decisions being taken by the government or parliament. In practice, however, there are significant demarcation problems.

Automatic budget strengthening refers to the increase in general government net lending that normally occurs even with unchanged rules. This tightening is a result of tax revenue moving largely in line with GDP, while expenditure tends to fall in relation to GDP with unchanged rules.

Diagram 36 Output gap and fiscal policy

Per cent of potential GDP



Source: NIER.

stone in this assessment is the surplus target for net lending, but the expenditure ceiling and the balanced budget requirement for the local government sector are also taken into account. The surplus target means that net lending in the general government sector is to average 1 per cent of GDP over a business cycle. For net lending to reach this level on average, the NIER believes that cyclically-adjusted net lending needs to be 1.2 per cent of GDP when resource utilisation in the economy is normal.[7] The fiscal policy forecast assumes that fiscal policy in the longer term will be steered towards the surplus target, and that any departures from the target will gradually be corrected, taking due account of economic developments and other factors.

The present forecast assumes that the output gap will close in 2017, which means that the economy will then feature normal levels of resource utilisation (see Diagram 36). Since the surplus target requires cyclically-adjusted net lending to increase by no less than 2.5 per cent of potential GDP, from −1.3 per cent this year to the target level of 1.2 per cent, it is likely that a return to the surplus target will take somewhat longer than the period to 2017. Reaching the target of 1.2 per cent in 2017 would require relatively far-reaching discretionary tightening over a three-year period. The forecast therefore assumes tightening at a rate that brings cyclically-adjusted net lending back to 1.2 per cent only in 2018. Fiscal policy will therefore remain contractionary in 2016–2018.

NO SPACE FOR UNFUNDED MEASURES IN THE COMING YEARS

The NIER also estimates general government net lending based on unchanged rules – in other words, in the absence of measures beyond those already decided upon.[8] This differs from the NIER's fiscal policy forecast, but enables comparison with the government's forecast for public finances in the medium term. The calculations are also used for the assessment of fiscal space (previously referred to as the scope for reforms).

Unchanged rules would mean that cyclically-adjusted net lending rises much more slowly than in the NIER's forecast, reaching a level of 0.1 per cent of GDP in 2018 rather than 1.2 per cent (see Table 10). In other words, in the absence of active decisions on fiscal tightening, net lending would be substantially weaker than is compatible with the surplus target.

[7] The conclusion that cyclically-adjusted net lending needs to be 1.2 per cent of GDP with normal resource utilisation for the surplus target to be met, rather than 1 per cent, is based on an assumption that the business cycle is asymmetrical with more lows than highs. See the special analysis "The Surplus Target for General Government Finances" in *The Swedish Economy*, March 2013.

[8] Unchanged rules here means the rules after the implementation of the measures proposed in the Budget Bill for 2014, excluding the increase in the threshold for state income tax. See www.konj.se/alternativfinanspolitik for a model-based macroeconomic forecast assuming unchanged fiscal policy (in Swedish).

Table 10 General government net lending and cyclically adjusted net lending

Per cent of GDP and per cent of potential GDP

	2013	2014	2015	2016	2017	2018
Net lending	−1.3	−2.0	−0.8	−0.3	0.6	1.3
Net lending excl. fiscal policy 2015−2018	−1.3	−2.0	−0.9	−0.4	−0.2	0.2
Cyclically adjusted net lending	−1.0	−1.3	−0.5	0.0	0.6	1.2
Cyclically adjusted net lending excl. fiscal policy 2015−2018	−1.0	−1.3	−0.5	0.0	0.0	0.1

Source: NIER.

The NIER uses developments in cyclically-adjusted net lending with unchanged rules to assess the amount of fiscal space on a five-year horizon. Fiscal space is defined here as the scope for unfunded measures that have an enduring impact on the budget, which is why fiscal space is not assessed for individual years. Fiscal space can be seen as any surplus arising in public finances with unchanged rules over and above that which is required by the surplus target. The reason why such a surplus can arise is that tax revenue largely follows GDP, while expenditure tends to fall in relation to GDP.[9]

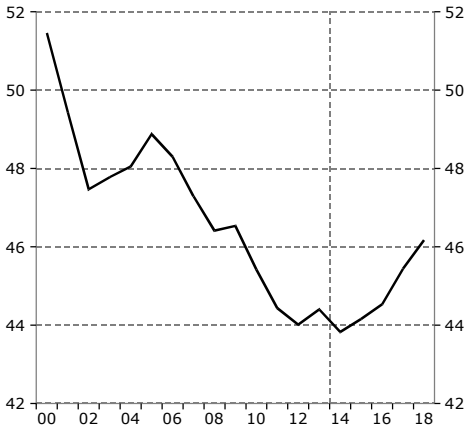
The NIER assumes that 1.2 per cent of GDP is the level of cyclically-adjusted net lending that is compatible with the surplus target with normal resource utilisation in the economy. As resource utilisation is expected to return to normal within a five-year period, net lending of 1.2 per cent in 2018 is the starting point for the calculation of fiscal space. The estimated fiscal space on a five-year horizon therefore emerges as the difference between net lending in 2018 with unchanged rules and the target level of 1.2 per cent. Since cyclically-adjusted net lending will be just 0.1 per cent in 2018 with unchanged rules, fiscal space is negative at −1.1 per cent of GDP, or a negative SEK 47 billion.[10] This negative fiscal space should be interpreted as the amount of fiscal tightening required to meet the surplus target in the form of increases in taxes, decreases in expenditure or a combination of the two.

The fact that fiscal policy needs to be tightened for the surplus target to be met does not rule out the possibility of measures that increase central government expenditure. In the absence of fiscal space, however, these measures must be fully funded by corresponding tax increases or spending cuts in other areas.

[9] See the special analysis "The NIER's Assessment of the Scope for Reforms", *The Swedish Economy*, March 2013, for a more detailed analysis of the automatic stabilising effect of unchanged rules.

[10] This is SEK 9 billion less than indicated in *The Swedish Economy*, December 2013, when fiscal space was forecast to be a negative SEK 56 billion. The change is due mainly to revisions of general government interest income and costs.

Diagram 37 Tax ratio
Per cent of GDP



Source: Statistics Sweden and NIER.

FISCAL POLICY WILL FEATURE TAX INCREASES

The NIER has forecast the content of fiscal policy in 2016–2018 on the basis of the tightening required to gradually reach the surplus target in 2018 and the increase in expenditure needed to maintain the public sector commitment.[11]

For the period 2016–2018, the measures forecast on the expenditure side of the central government budget correspond to an unchanged public sector commitment at 2015 levels. This means decisions on expenditure increases of SEK 43 billion (see Table 11). This expenditure comprises increased central government consumption and increased central government grants to the local government sector in line with demographic developments, plus increased replacement levels in the transfer systems in line with nominal wages. For the full period 2015–2018, expenditure increases of SEK 53 billion are forecast, including SEK 10 billion in 2015.

Table 11 Forecast fiscal policy and automatic budget strengthening, 2015–2018

SEK billion and per cent of potential GDP, respectively

	2015	2016	2017	2018	2015–2018
Income policy measures	10	14	37	39	100
Expenditure policy measures	10	15	10	18	53
Fiscal policy effect on cyclically adjusted net lending	**0**	**0**	**27**	**20**	**47**
Per cent of potental GDP	*0.0*	*0.0*	*0.6*	*0.4*	*1.0*
Automatic budget strengthening[1]	0.8	0.5	0.0	0.2	1.5
Change in cyclically adjusted net lending[1,2]	0.8	0.5	0.6	0.6	2.5
Cyclically adjusted net lending [1]	–0.5	0.0	0.6	1.2	

[1] Per cent of potental GDP. [2] The change in cyclically adjusted net lending consists of the sum of the fiscal policy effect and the automatic budget strengthening.

Note. Due to rounding, components may not add up.

Source: NIER.

On the income side of the central government budget, total tax increases of SEK 100 billion are assumed for 2015–2018. These will not only finance the measures on the expenditure side (SEK 53 billion) but also provide the fiscal tightening required to reach the surplus target in 2018 (SEK 47 billion). Together with tax increases in the local government sector, this translates into a rise in the overall tax-to-GDP ratio from today's 44 per cent to

[11] This forecast, which is associated with considerable uncertainty, does not necessarily reflect what the NIER considers to be the most appropriate fiscal policy.

just over 46 per cent in 2018.[12] This means that the ratio will return to around the level prevailing in 2008–2009 (see Diagram 37). The net effect of the measures forecast for 2015–2018 on cyclically-adjusted net lending is SEK 47 billion and corresponds to the negative fiscal space.

[12] Taxes in the local government sector are forecast to be raised by a total of 0.34 per cent in 2015–2018, or SEK 8 billion, resulting in total tax increases in the period of SEK 108 billion. The NIER estimates that the total financing required for the general government sector to meet the surplus target in 2018 and maintain the public sector commitment at 2014 levels is SEK 112 billion. This figure is the sum of the negative fiscal space (SEK 47 billion) and the total spending increases of SEK 65 billion needed to keep the public sector commitment unchanged at 2014 levels.

SPECIAL ANALYSIS

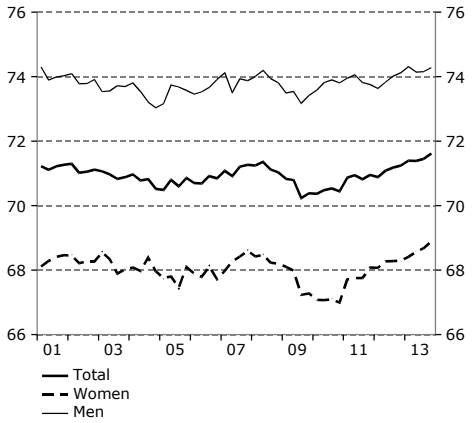
Labour force participation has risen

The labour force in Sweden has grown relatively strongly since 2010 despite the weak economic climate. Employment has also grown strongly in recent years relative to GDP growth, primarily in the service sector. The increase in both the labour force and employment has been unevenly distributed between women and men, however, and there are big differences between those born in Sweden and those born abroad. The participation rate has increased substantially in recent years among those born abroad and is now as high for foreign-born men as for Swedish-born men, but remains low among foreign-born women. This analysis looks at recent years' developments in the labour force and employment from the perspective of gender and country of origin.

The Swedish economy has been in a slump since the end of 2008. In such a climate, fewer people tend to enter the labour force, as the prospects of finding work are worse, and labour force participation – the proportion of the population aged 15–74 in the labour force – was indeed low in 2010 (see Diagram 38). From 2010 to 2013, however, the number of people in the labour force increased by 167,000 (see Table 12), while the population aged 15–74 increased by 135,000. This meant that the labour force participation rate rose to a higher level in 2013 than during the economic boom in 2007 (see Diagram 38), among both women and men. The growth of the labour force is due in part to favourable demographic developments, and in part to previous reforms to increase the supply of labour.[13] According to the NIER's analysis, only a small part of the increase can be attributed to the economic situation being slightly better in 2013 than in 2010. The rise in labour force participation since 2010 has been greater among women than among men, which can be explained to some extent by a higher proportion of women having exited the labour force in connection with the financial crisis (see Diagrams 38 and 39). The participation rate was still 5.6 percentage points higher for men than for women in 2013, however.

Diagram 38 Labour force participation rate

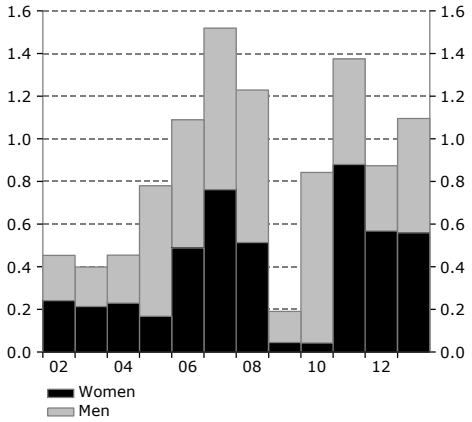
Per cent of population age 15–74, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

Diagram 39 Contributions to labour force growth

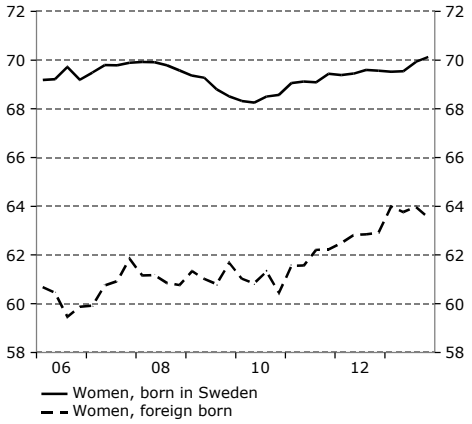
Percentage points



Sources: Statistics Sweden and NIER.

Diagram 40 Labour force participation rate

Per cent of population age 15–74, seasonally adjusted quarterly values

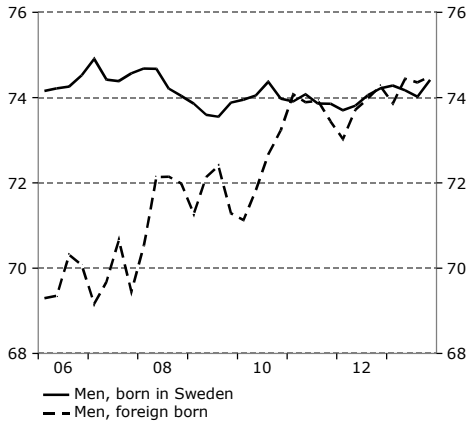


Sources: Statistics Sweden and NIER.

[13] See the special analysis "Long-term effects of economic policy reforms on the labour market" in *The Swedish Economy*, December 2011.

Diagram 41 Labour force participation rate

Per cent of population age 15–74, seasonally adjusted quarterly values



Sourcces: Statistics Sweden and NIER.

Diagram 42 Employment rate

Employed in per cent of population age 15–74, seasonally adjusted quarterly values

Sources: Statistics Sweden and NIER.

Diagram 43 Unemployment

Per cent of labour force, seasonally adjusted quarterly values

Sources: Statistics Sweden and NIER.

BIG INCREASE IN PARTICIPATION AMONG THOSE BORN ABROAD

Part of the rise in labour force participation among women can be explained by a big increase among foreign-born women (see Diagram 40). The participation rate for foreign-born women is still significantly lower than for Swedish-born women, however. The participation rate among foreign-born men increased substantially in 2010, and since 2011 it has been roughly the same as for Swedish-born men (see Diagram 41).

The participation rates for foreign-born women and men have risen 2.9 and 2.1 percentage points respectively since 2010. This is probably due partly to the reform of integration policy to help new immigrants enter the labour market more quickly.[14] However, the rise in participation among foreign-born men began before the reform was introduced (see Diagram 41).

Table 12 Change in population, labour force and number of employed from 2010 to 2013 in the 15–74 age group

Thousands of people

	Population	Labour force	Employed
Total	135	167	181
Women	**66**	**100**	**107**
Born in Sweden	25	56	66
Foreign born	41	44	41
Men	**69**	**67**	**74**
Born in Sweden	–9	–3	19
Foreign born	78	70	55

Source: Statistics Sweden.

EMPLOYMENT GROWTH SINCE 2010 STRONGER AMONG WOMEN THAN AMONG MEN

The labour force comprises both the employed and the unemployed. An increase in the labour force can therefore push up both the number of employed and the number of unemployed. Total employment has grown by 181,000 people since 2010 (see Table 12). This means that the employment rate – the proportion of the population aged 15–74 in employment – has also increased (see Diagram 42). The NIER considers the change in the employment rate to have a larger cyclical component than

[14] Act 2010:197 on integration initiatives for new immigrants entered into force on 1 December 2010. The reform means that refugees and other persons in need of protection who are of working age are to be registered with the employment service and take part in integration schemes. If these people respond that they are seeking work in the Labour Force Survey, they will be classified as members of the labour force.

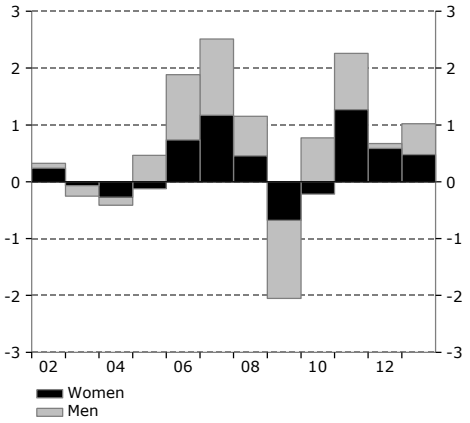
the change in the participation rate. The rise in the employment rate since 2010 can be viewed in the light of the sharp fall in connection with the financial crisis in 2008 and 2009. Relative unemployment, which is measured in relation to the labour force, has decreased over the same period from 8.6 to 8.0 per cent (see Diagram 43).

As with the participation rate, the employment rate has risen further among women than among men since 2010 (see Table 12 and Diagram 44). The employment rate for women at the end of 2013 was almost as high as before the financial crisis, whereas the employment rate for men was still at a lower level (see Diagram 42). This is mainly because women and men tend to work in different sectors and industries, and employment growth has varied relatively widely between industries in recent years.

Of the total number of employed in the economy, just under 50 per cent are women (see Diagram 45).[15] In 2013, women accounted for around 25 per cent of workers in industry, but more than 70 per cent of workers in the public service sector.[16] In the private service sector, just over 40 per cent of workers are women, whereas a very small proportion of women are employed in the other goods-producing industries. The financial crisis and ensuing economic slump have affected the entire economy, but Swedish goods production, in particular industrial production, has been hit particularly hard. As a result, employment in different parts of the economy has been impacted to different degrees. The largest contribution to the rise in employment since 2010 has come from the private and public service sectors (see Diagram 46). Employment in industry has made a negative contribution, and the other goods-producing industries have made only a marginal positive contribution.[17] Because women are less likely than men to work in goods-producing industries and more likely to work in public services, recent

Diagram 44 Contributions to employment growth

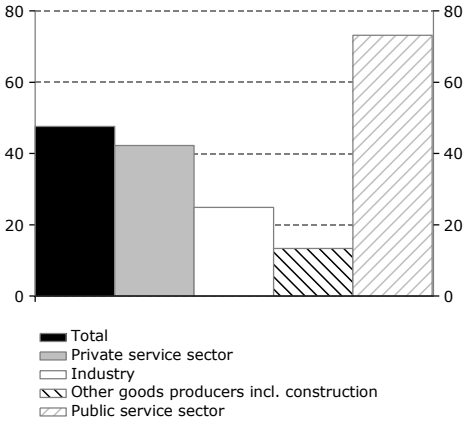
Percentage points



Sources: Statistics Sweden and NIER.

Diagram 45 Employed women, share of total number of employed 2013

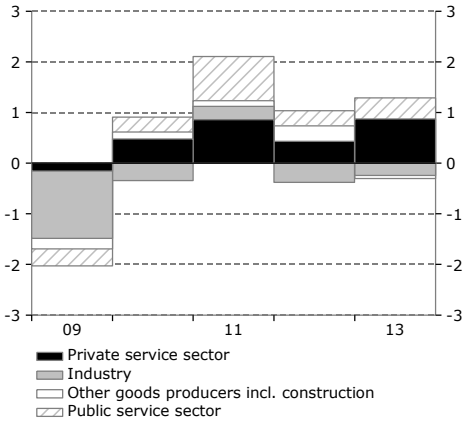
Per cent



Sources: Statistics Sweden and NIER.

Diagram 46 Contributions to employment growth

Percentage points



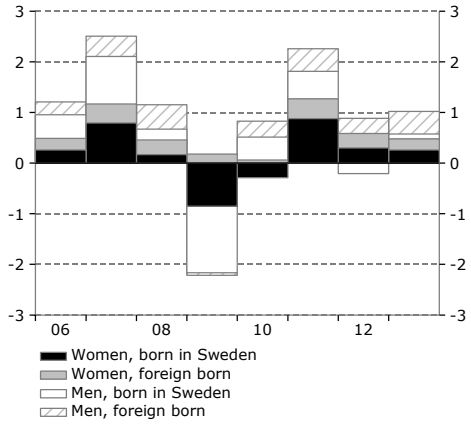
Sources: Statistics Sweden and NIER.

[15] A higher proportion of women than men work part-time, which means that women's share of the total number of hours worked in the economy is somewhat lower.

[16] The Labour Force Survey (LFS) is a sample survey which paints a representative picture of the population's labour market position. The sample for the LFS has not been optimised for industry-level analysis, which means that the results at industry level are more uncertain than those for the overall economy. The LFS does not divide the number of employed between the private and public sectors. Here, the public service sector denotes workers in public administration (NACE codes O and U), education (P) and human health and social work (Q), while the private service sector denotes workers in other service industries.

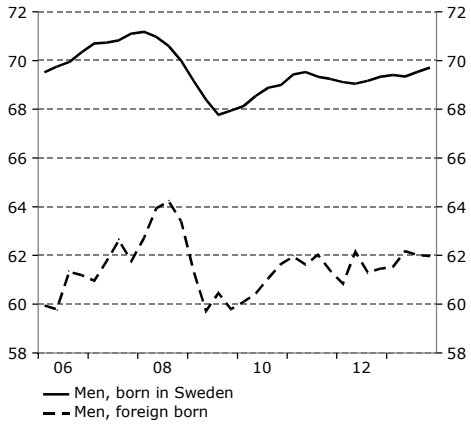
[17] The increased use of temporary staffing services complicates industry-level analysis. According to employers' organisation Teknikföretagen's report "Teknikföretags inhyrning av personal 2013" [Engineering companies' use of temporary staff in 2013], engineering companies hired in 17,000 people from staffing agencies in 2013, which is an increase on 2010. The LFS records employment in the industry in which the respondent is employed, which means that temporary staff in the industrial sector will be recorded as employed in the service sector.

Diagram 47 Contributions to employment growth
Percentage points



Sources: Statistics Sweden and NIER.

Diagram 48 Male employment rate
Per cent of population age 15–74, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

Diagram 49 Female employment rate
Per cent of population age 15–74, seasonally adjusted quarterly values

Sources: Statistics Sweden and NIER.

years' economic developments are probably one reason why employment has increased more among women than among men.

LOW EMPLOYMENT RATE AMONG THOSE BORN ABROAD

It is primarily Swedish-born women and foreign-born men and women who contributed to the rise in employment between 2010 and 2013 (see Table 12 and Diagram 47). The increase in employment among those born abroad accounts for just over half of the overall rise in employment during the period. The employment rate increased for both Swedish-born and foreign-born men in 2010 and early 2011 but has since held relatively steady (see Diagram 48). The employment rate is much lower for foreign-born men than for Swedish-born men, however. This contrasts with the labour force participation rate, which is relatively similar for the two groups, and means that a higher proportion of foreign-born men in the labour force are unemployed. The unemployment rate was 16.7 per cent among foreign-born men in 2013 and just 6.4 per cent for Swedish-born men.

The employment rate for foreign-born women has risen by around 3 percentage points since 2010 but remains low (see Diagram 49). Just under 54 per cent of foreign-born women aged 15–74 were employed in 2013, which is around 12 percentage points lower than for Swedish-born women.

One explanation for the low employment rate among foreign-born women is the low level of labour force participation (see Diagram 40). Although labour force participation among foreign-born women has increased in recent years, it is still significantly lower than for Swedish-born women and both groups of men, which means that a substantial proportion of foreign-born women are a long way outside the labour market.

SPECIAL ANALYSIS

The long-term sustainability of Swedish public finances

The NIER is of the opinion that there are not currently any serious imbalances threatening the long-term sustainability of Sweden's public finances. However, demographic developments will mean an increased need for welfare services in the future. To maintain an unchanged personnel density in the production of welfare services in the long term, taxes will need to be raised by 1.5 to 2 per cent of GDP unless there is a gradual increase in the retirement age. The following is a summary of the special report *Is an Unchanged Public Sector Commitment a Sustainable Commitment?* published together with this edition of *The Swedish Economy*.

Average life expectancy in Sweden has increased by ten years since the 1950s and is set to grow by at least another four years over the next half a century, based on Statistics Sweden's population forecast. Not only are we living longer, but the proportion of elderly people is growing relative to the proportion of younger people even without the increase in life expectancy. From the early 1980s to the early 2000s, the ratio of elderly people to those of working age was largely constant, with around 30 people aged 65 and over for every 100 of working age (20–64 years). In recent years, however, the ratio has begun to rise, and it is forecast to reach 50 per 100 by 2060.

This population ageing raises questions about the future level and financing of welfare services. Will we be able to maintain standards of health care, education and elderly care, and replacement rates in the social transfer systems? Will the pension system be able to provide for an ever larger number of pensioners who are living ever longer? Will future tax revenue be enough to finance a public sector commitment at today's levels? These questions are all related to the long-term sustainability of public finances, which is the subject of the NIER's special report *Is an Unchanged Public Sector Commitment a Sustainable Commitment?*[18]

[18] Occasional Study No. 39, Swedish National Institute of Economic Research, 2014.

SUSTAINABLE PUBLIC FINANCES: INCOME AND EXPENDITURE BALANCE IN THE LONG TERM

The starting point for the sustainability analysis is that flows of expenditure in the general government sector must be matched by equal flows of income over time. If expenditure exceeds income, debt will inevitably increase. If this imbalance is large and persistent, debt levels will eventually become unmanageable, and public finances will not be long-term sustainable.

The study presents projections of public finances through to 2060 based on a number of simplified assumptions about how the economy will perform in the long term. The assessment of the long-term sustainability of public finances is based on the *current* scope of the welfare commitment and the tax system that is to finance it. The question analysed is whether future developments in general government expenditure with an unchanged public sector commitment can be financed with the income generated with the current design of the tax system.[19]

INCREASED NEED FOR WELFARE SERVICES AS WE GROW OLDER

Demographic developments play a pivotal role in the long-term performance of public finances. Changes in the working-age population are an important determinant of the size of the labour force and thereby the nation's overall production, in other words GDP. Since tax revenue is largely dependent on developments in GDP, demographics are important for the size of this revenue.

Demographic developments also play a key role on the expenditure side. A substantial proportion of general government consumption, such as health, education and care services, is age-related. In 2005, individual general government consumption expenditure for a person in their 90s averaged almost SEK 200,000 per annum. The equivalent figure for a person of working age was just over SEK 20,000. The relative sizes of the working-age and non-working-age populations are therefore very important for general government consumption expenditure. Expenditure on social transfers is also determined largely by the age structure of the population. Pensions accounted for around 58 per cent of total transfers to households in 2012, and

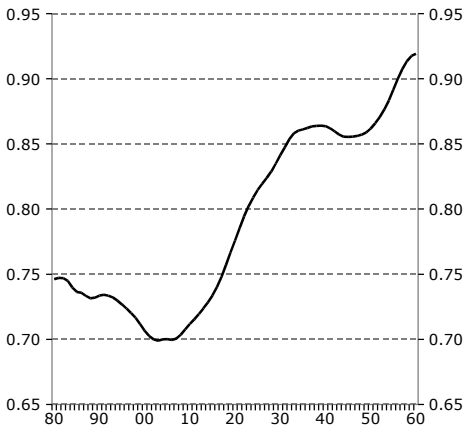
[19] The long-term sustainability of Swedish public finances is assessed regularly not only by the NIER but also by the Swedish government and the European Commission, cf. the 2013 Spring Fiscal Policy Bill (bill 2012/13:100) and the European Commission's "Fiscal Sustainability Report 2012", *European Economy* 8/2012. The Swedish Fiscal Policy Council, in turn, conducts regular reviews of the government's sustainability calculations, cf. the Council's report for 2013, *Swedish Fiscal Policy*.

child/family-related benefits such as parental and child allowance for another 12 per cent.

The demographic dependency ratio – the ratio between the number of people who are not of working age and the number of people who are – fell slightly from the early 1980s through to the early 2000s, reaching a low of around 0.7 in 2003, which meant that there were 70 people of non-working age per 100 people of working age. According to Statistics Sweden's population forecast, we now face a long period of growth in the demographic dependency ratio to 0.85 in 20 years and 0.92 in 45 years (see Diagram 50). In addition, the number of people aged 90 and above is expected to rise from today's level of around 100,000 to almost 300,000 in 2060 (see Diagram 51). The rise in the demographic dependency ratio is due almost exclusively to a growing share of elderly people aged 65 and over, as the proportion of children and young people aged 19 and under is almost constant in Statistics Sweden's population forecast.

Diagram 50 Demographic dependency ratio

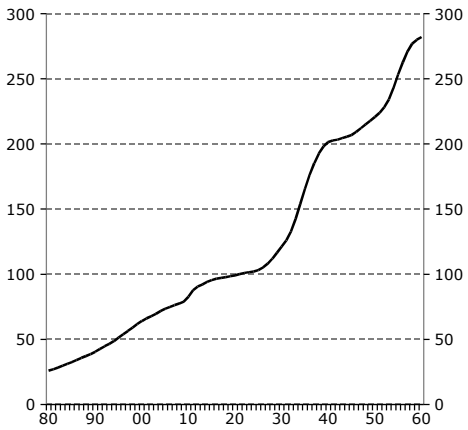
Population not of working age as share of population of working age



Source: Statistics Sweden.

Diagram 51 Population aged 90 or older

Thousands



Source: Statistics Sweden.

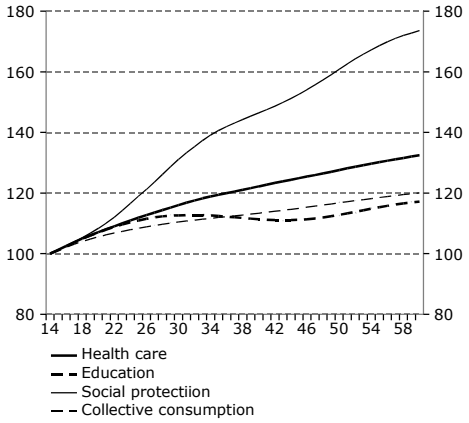
THREE SCENARIOS FOR GOVERNMENT CONSUMPTION

An unchanged public sector commitment can be understood in different ways. The study therefore analyses three scenarios where the level of welfare services moves in different ways due to different definitions of an unchanged commitment.[20] In scenario A, an unchanged commitment means that the *volume* of public services per user is kept constant at current levels, so that the standard of public services is the same in the future as it is today. In scenario B, *personnel density* in the production of welfare services is instead kept constant, so that, for example, the number of teacher hours per ten-year-old and the number of hours of home help per 80-year-old are the same in the future as they are today. This is the definition of an unchanged public sector commitment that the NIER normally uses in its forecasts for public finances on a five-year horizon. Productivity growth in the production of goods and services for general government consumption will then benefit the population in the form of a gradual increase in the standard of welfare services. In scenario C, the public sector commitment is placed in relation to the size of the overall economy, such that expenditure on welfare services per user is constant as a share of GDP per capita.

The analysis differentiates between *individual* (user-specific) and *collective* general government consumption. Individual consumption consists of public services that can be linked to a spe-

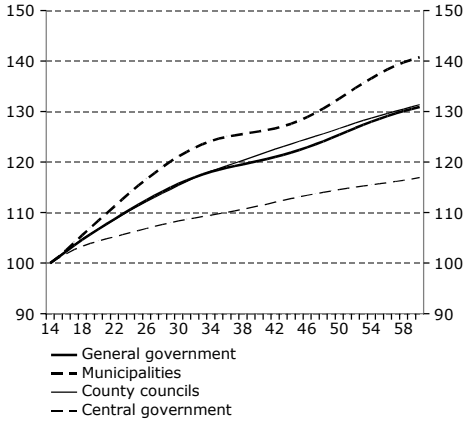
[20] The general government sector's income and other expenditure (investment, social transfers, etc.) move in largely the same way in all three scenarios.

Diagram 52 Resource needs for government consumption
Volume, index 2014=100



Note. The diagram shows the development according to demographically motivated needs.
Sources: Statistics Sweden and NIER.

Diagram 53 Resource needs in government sub-sectors
Volume, index 2014=100



Note. The diagram shows the development according to demographically motivated needs.
Sources: Statistics Sweden and NIER.

cific individual, such as health care and education. Collective consumption is that which cannot be linked to the individual, such as defence or law and order. Individual consumption accounts for around two-thirds of general government consumption, and collective consumption for the remainder. Individual consumption, in turn, is divided into health care, education and social protection (consisting increasingly of elderly care).[21]

The projection of general government consumption purely on the basis of demographic needs, corresponding to scenario A, results in average volume growth of 0.6 per cent per annum in 2014–2060. This can be compared with the period 1993–2012, when consumption increased by an average of 0.8 per cent per annum. The need for social protection (above all, elderly care) will grow relatively quickly, with a growth rate of 2–2.5 per cent per annum in the 2020s. The need for resources in education will grow more slowly, reflecting the limited growth in the number of children and young people (see Diagram 52). As municipalities account for the bulk of the commitment to elderly care, they also see the greatest increase in the need for resources. During the projection period, the demographic need for resources grows by a total of 40 per cent in the municipal sector, compared with around 30 per cent for the general government sector (see Diagram 53).

TAX INCREASES NEEDED TO MAINTAIN PERSONNEL DENSITY IN WELFARE SERVICES

With an unchanged standard of welfare services (scenario A), general government consumption gradually falls from today's level of 27 per cent of GDP to around 23 per cent in 2060 (see Diagram 54). Combined with unchanged tax rates, this would lead to substantial surpluses in public finances in the long term. This scenario would mean that the standard of welfare services and collective utilities remains unchanged, while the standard of goods and services in the rest of the economy increases gradually over time.

In scenario B, which assumes an unchanged personnel density in the production of welfare services, general government consumption increases instead as a share of GDP to just over 30 per cent in 2060. In the absence of tax increases, this results in a gradual deterioration in public finances, with negative net lend-

[21] These areas correspond to categories 7, 9 and 10 in the international standard Classification of the Functions of Government (COFOG). *Social protection* denotes public services in the form of children's homes, after-school child care, daytime child care, employability schemes, elderly care and mobility services. Social transfers are not included, as these are not a form of consumption.

ing of around 2 per cent of GDP in the 2030s and 2040s, and 4 per cent in 2060 (see Diagram 55). The S2 indicator, a measure of the sustainability of public finances, shows that tax revenue will need to be increased permanently by 1.5 to 2 per cent of GDP for an unchanged personnel density in the production of welfare services to be compatible with long-term sustainable public finances.

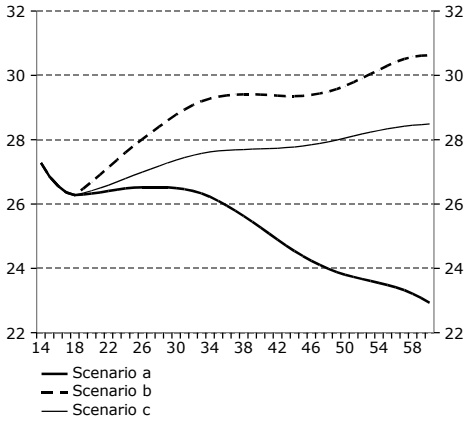
In scenario C, personnel density in the production of welfare services rises in periods when employment grows faster than the population as a whole, but falls in periods with unfavourable demographic developments – in other words, when employment grows more slowly than the population. The standard of welfare services therefore varies over time in this scenario. The public sector commitment is unchanged in the sense that expenditure on welfare services per user is constant relative to GDP per capita.[22] This scenario means that public finances will be largely in balance once the economy is at capacity. Net lending reaches around 1 per cent of GDP in 2040 and rises slightly further by 2060. As both income and expenditure in the general government sector are closely linked to GDP in this scenario, public finances evolve in a stable manner.

ELDERLY CARE FUELS LOCAL GOVERNMENT FINANCING REQUIREMENT

The analysis assumes that local government tax rates are constant at current levels. In two of the three scenarios, however, local government expenditure increases relative to GDP, most notably in scenario B with an unchanged personnel density (see Diagrams 56 and 57). To finance this increased expenditure and still meet the balanced budget requirement, it is assumed that the local government sector receives increased central government grants as these requirements arise. An alternative assumption for the funding of local government would instead be for central government grants to grow in line with the local government sector's tax base, and for municipalities and county councils to adjust their tax rates to the financing requirements that emerge. This assumption does not affect the total financing requirement or tax pressure in the general government sector, but means that

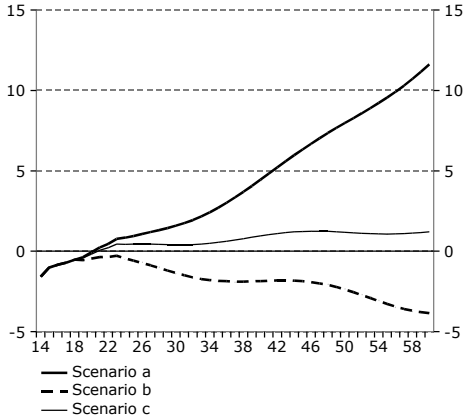
[22] As stated above, individual general government consumption expenditure for a person in their 90s averaged almost SEK 200,000 in 2005, equivalent to around 70 per cent of GDP per capita (then SEK 307,000). The assumption in scenario C means that expenditure on welfare services will continue to average 70 per cent of GDP per capita for a person in their 90s, regardless of how GDP per capita moves. For a given level of productivity, GDP per capita will increase when the number of employed rises relative to the overall population, and decrease when it falls.

Diagram 54 Government consumption
Per cent of GDP



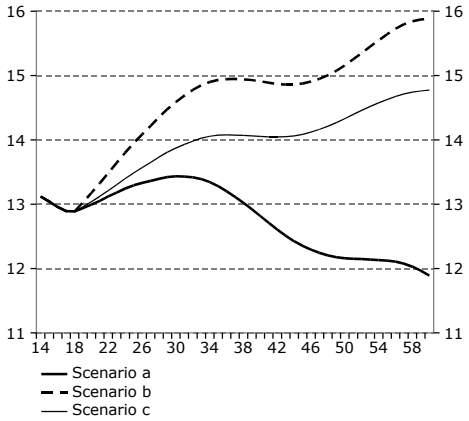
Source: NIER.

Diagram 55 General government net lending
Per cent of GDP



Source: NIER.

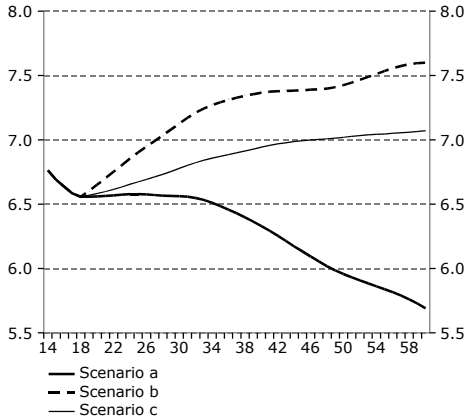
Diagram 56 Local government consumption, municipalities
Per cent of GDP



Source: NIER.

Diagram 57 Local government consumption, county councils

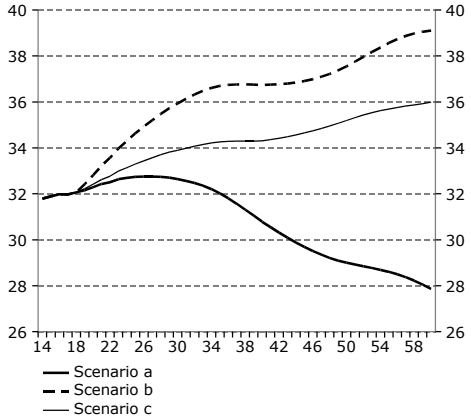
Per cent of GDP



Source: NIER.

Diagram 58 Local government average tax rate

Per cent



Source: NIER.

the local government sector has greater responsibility for financing than under the main assumption.

In scenario B with an unchanged personnel density in the production of welfare services, this approach to central government grants would result in an appreciable need for local government tax increases. From today's average level of just over SEK 32, local government taxation would need to be raised to SEK 36 in 2030 and SEK 39 in 2060 to keep the local government sector's budget in balance (see Diagram 58).

UNCHANGED PERSONNEL DENSITY NOT UNREALISTIC

All in all, the study shows that there are no immediate threats to the long-term sustainability of Sweden's public finances given an unchanged public sector commitment and unchanged tax rates. Some tax increases will, however, be needed to maintain an unchanged personnel density in the production of welfare services. These tax increases are slightly smaller than those needed to meet the surplus target for general government net lending in the next few years while also maintaining an unchanged public sector commitment in the near term (see the section "Fiscal policy" in the chapter "Macroeconomic Developments and Economic Policy 2014–2018").

The study is based on an assumption that the relative cost of welfare services for different groups is constant over time. It also assumes that both the employment rate in different parts of the population and the retirement age are unchanged at current levels (adjusted for purely cyclical effects). A gradual increase in the health of the elderly, for example, might mean that today's need for resources for elderly care and health overestimates future needs. At the same time, increased life expectancy could lead to retirement ages being pushed back gradually, resulting in a more favourable economic dependency ratio than indicated by the projections based on current behaviour. Such effects could reduce the need for tax increases. If, on the other hand, the long-term trajectory of employment is weaker than assumed in the study, the need for tax increases to safeguard future welfare may be underestimated.

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