

# Swedish Fiscal Policy

Fiscal Policy Council Report 2012

The Swedish Fiscal Policy Council is a government agency. Its remit is to conduct an independent evaluation of the Government's fiscal policy. The Council fulfils its tasks primarily through the publication of the report Swedish Fiscal Policy, which is presented to the Government once a year. The report is used by the Riksdag as a basis for its evaluation of the Government's policy. The Council also arranges conferences. In the series *Studier i finanspolitik* (Studies in fiscal policy), it publishes in-depth studies of different aspects of fiscal policy.

Fiscal Policy Council  
Box 3273  
SE-103 65 Stockholm  
Kungsgatan 12-14  
Tel: 08-453 59 90  
Fax: 08-453 59 64  
[info@finanspolitiskaradet.se](mailto:info@finanspolitiskaradet.se)  
[www.finanspolitiskaradet.se](http://www.finanspolitiskaradet.se)

ISSN 2000-3641  
ISBN 978-91-980242-1-0

# Foreword to the English translation

The 2012 report of the Swedish Fiscal Policy Council was published in Swedish on 14 May 2012. Barbara Burton has translated the report into English. Joakim Sonnegård, Head of Agency, led the preparation of the English version with the participation of Niklas Frank, Lars Jonung, Georg Marthin and Charlotte Sandberg.

Lars Calmfors was appointed the first chairman of the Swedish Fiscal Policy Council when it was established by the Riksdag in 2007. During his tenure (2007-2011), four annual reports have been published. Under his skilled leadership, the Council has become an independent and respected institution in Swedish public life. He has left a solid foundation for us to build upon.

Stockholm, 24 August 2012

Lars Jonung

Chairman of the Council

## Foreword

In accordance with the instruction for the Fiscal Policy Council, the Council is to “review and assess the extent to which the fiscal and economic policy objectives proposed by the Government and decided by the Riksdag (the Swedish Parliament) are being achieved and thus contribute to more transparency and clarity about the aims and effectiveness of economic policy”.

The Council is composed of the six members who have signed this foreword. Since the previous report in May 2011, Torben Andersen, Lars Calmfors, Laura Hartman, Lars Tobisson and Erik Åsbrink have left the Council (2011-06-30). John Hassler, Steinar Holden and Eva Lindström have been appointed as new members (2011-08-18). At that time, former Council member Lars Jonung became chairman of the Council.

The current Council, which was constituted in August 2011, has worked under a new instruction issued 28 April 2011 after a cross-party agreement between the Government, the Social Democrats, the Green Party and the Left Party. Its remit has since also included

“analysing the effects of fiscal policy on the distribution of welfare in the short and the long run.”

In autumn 2011 the Council commissioned researchers to analyse a number of income and wealth distribution issues. These background reports (see below) have recently been completed and are available on the Fiscal Policy Council’s website – [www.finanspolitiskaradet.se](http://www.finanspolitiskaradet.se). These reports will be discussed at an open seminar in June this year.

The Council is assisted by a secretariat consisting of Joakim Sonnegård (Head of Agency), Max Elger and Niklas Frank (Senior Economists), Georg Marthin (Economist) and Charlotte Sandberg (Head of Administration). Tomas Nordström has acted as a consultant to the Council in its work. Pär Nyman (Economist) has also participated in the final editing of this year’s report.

This is the Council’s fifth report. In the work on this year’s report, eight recorded meetings were held. At these meetings, a number of people were invited to make presentations. The analytical work was completed on April 24, 2012.

The Council has commissioned six background reports. They will be published in the Council’s publication series, *Studier i finanspolitik* (Studies in fiscal policy):

1. Christian Hagist, Stefan Moog and Bernd Raffelhüschen: A Generational Accounting Analysis of Sweden.
2. Göran Hjelm and Ulla Robling: Utveckling av de offentliga finanserna till 2020 vid fem olika makroekonomiska scenarier (Public finance developments to 2020 with five different macroeconomic scenarios).
3. Georg Marthin: Measuring Mismatch in the Swedish Labour Market.
4. Jesper Roine: Varför ska vi bry oss om fördelningsfrågor? (Why should we care about distribution issues?)
5. Gabriella Sjögren Lindquist and Eskil Wadensjö: Inkomstfördelningen bland pensionärer. (The distribution of income among pensioners).
6. Daniel Waldenström: Granskning av regeringens fördelningspolitiska redogörelser, 1992-2011 (A review of the Government’s income distribution reports, 1992-2011).

In the course of our work, we have received many valuable comments. We would like to thank the following who have presented reports at Council meetings: Andreas Bergh, Åsa Hansson, Agneta Kruse, Inga Persson (August 2011), Roland Andersson and Göran Hjelm (October 2011), Jesper Roine and Ingvar Mattsson (November 2011), Thomas Olofsson and Daniel Waldenström, Ulla Robling, Göran Hjelm (January 2012) and Christian Hagist, Markus Jäntti, Gabriella Sjögren Lindquist and Eskil Wadensjö (February 2012).

We have also benefited from a dialogue with many colleagues at the National Institute of Economic Research. Marianne Larsson and Aila Ahsin have provided valuable administrative support as has Anneli Hedeland, Lars Johansson, Birgit Kaur, Kerstin Malmberg Jarnestedt, Tommy Persson and Kerstin Abrahamsson. We wish to thank Marie Hyllander and Madelén Falkenhäll in the Ministry of Finance for the help they have given the Council. Our thanks also go to Thomas Hagberg at the Swedish National Audit Office and Erik Höglén at the National Institute of Economic Research.

As the first chairman of the Swedish Fiscal Policy Council from 2007-2011, Lars Calmfors has had a crucial role in the development of the Council's activities. This has given us a solid foundation to build upon.

Stockholm, 3 May 2012

Lars Jonung  
(Chairman)

John Hassler  
(Deputy Chairman)

Michael Bergman

Steinar Holden

Eva Lindström

Helena Svaleryd

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## The Fiscal Policy Council's remit

The Fiscal Policy Council, in accordance with its instruction, is to monitor and evaluate the extent to which the fiscal and economic policy objectives proposed by the Government and decided by the Riksdag are being achieved and thus contribute to more transparency and clarity about the aims and effectiveness of economic policy.<sup>1</sup>

In particular, the Council, with the Spring Fiscal Policy Bill and the Budget Bill as its basis, is to assess whether fiscal policy is consistent with:

1. long-term sustainable public finances and
2. budgetary targets, particularly the surplus target and the expenditure ceiling.

The Council, with the Spring Fiscal Policy Bill and the Budget Bill as its basis, is to:

1. assess whether the fiscal policy stance is consistent with cyclical developments in the economy,
2. assess whether fiscal policy is in line with long-term sustainable growth and leads to long-term sustainable high employment,
3. examine the clarity of these bills, particularly with respect to the specified basis of economic policy and the reasons for proposed measures, and
4. analyse the effects of fiscal policy on the distribution of welfare in the short and the long run.

The Council may review and assess the quality of the forecasts presented and the models on which the forecasts are based.

The Council is also to work to stimulate more public debate of economic policy.

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<sup>1</sup> Swedish Code of Statutes SFS 2011:446.



## The fiscal framework

The Government's fiscal framework consists of the fundamental principles fiscal policy is to follow in order to be sustainable in the long run.<sup>2</sup> Some of these principles are governed by law. Others follow practice.

The budgetary framework is a core component of the fiscal framework. The budgetary framework includes a surplus target for general government net lending, an expenditure ceiling for central government expenditure, excluding interest expenditure, and for old age pension system expenditure, and a balanced budget requirement for local governments.

Under the Budget Act, the Government is obliged to present a proposed target for general government net lending. The Riksdag has set the surplus target as follows: government net lending shall be an average of 1 per cent of GDP, over a business cycle.

Under the Budget Act the Government must propose an expenditure ceiling for the third year ahead in the Budget Bill. The Riksdag sets the expenditure ceiling. Under the expenditure ceiling there is customarily to be a budget margin of a specified size. This will primarily act as a buffer if expenditures develop in an unexpected way because of cyclical developments.

The expenditure ceiling is the overarching restriction in the budget process. In the budget process, priorities are set for different expenditures and expenditure increases are considered in the light of a predetermined total fiscal space provided by the expenditure ceiling and the surplus target. The main thrust is that proposals for expenditure increases in an expenditure area have to be covered by proposals for expenditure reductions in the same area.

Since 2000 a balanced budget requirement has been in effect in the local government sector. The balanced budget requirement states that each municipality and county council must plan for a balanced budget, if there are no exceptional reasons.

The Government has drawn up a number of principles to guide stabilisation policy. Fiscal policy's most important contribution to stabilising the economy is to maintain confidence in the long-term

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<sup>2</sup> This summary is based on the Swedish Fiscal Framework (Ramverk för finanspolitiken) (skr. 2010/11:79).

sustainability of the public finances. In the event of normal demand shocks, monetary policy will stabilise both inflation and demand in the economy. The Government then sees no reason to take any active, i.e. discretionary, fiscal policy measures. Given shocks of this kind, fiscal policy will have a countercyclical effect via the automatic stabilisers.

In the event of very large demand and supply shocks, an active fiscal policy is needed. Fiscal measures in this case will help limit the rise in unemployment, reduce the risk of unemployment becoming entrenched and mitigate the consequences for particularly vulnerable groups.

The stabilisation policy measures should also be designed in such a way that they do not prevent net lending from returning to a level compatible with the surplus target when capacity utilisation is once again normal.

It is the Government's view that in financial crises it has to take special measures to contribute to financial stability. The Government presumes that the fiscal consequences of such measures should be limited. Possible losses that arise in the financial sector will first be borne by credit institutions themselves, their shareholders and others who have contributed risk capital.

## Summary

The main task of the Fiscal Policy Council is to monitor and evaluate the extent to which fiscal policy objectives are being achieved. Its remit includes scrutinising fiscal policy to see whether it is compatible with long-term sustainable public finances. The principal conclusions in this year's report are the following:

1. The Swedish economy has thus far coped well with the global crisis that began in 2008. The fiscal policy generally appears to be successful and, on the whole, well balanced considering the shocks that have affected the Swedish economy. A comparison with other countries' economic policy experiences and developments since the crisis began supports this conclusion.
2. In the Council's opinion, the fiscal policy pursued in 2011 and 2012 has complied with the current fiscal framework. We think that there is little risk of expenditures exceeding the expenditure ceiling in the next few years. We take the view that the fiscal policy is compatible with long-term sustainable public finances.
3. The Council recommends that the Government provides a better explanation of how the scope for new policy initiatives arises and how it is divided between taxes and expenditures over the next few years. Decisions on the expenditure ceiling are of major importance not only for the expenditure level, but also for the level of taxes collected in the future. A clearer account of the connections between the expenditure ceiling, the surplus target and the taxes collected would be an important contribution to improved fiscal transparency.
4. The Council notes that the tax cuts announced in spring 2011 were not proposed in the 2012 Budget Bill, presented in September 2011. We think that the position taken by the Government lacked and still lacks a stabilisation policy basis. Rather, the worsened economic situation argued in favour of a more expansive fiscal policy.
5. The Government has referred to the economic crisis and the macroeconomic uncertainty as an argument for larger safety margins in fiscal policy. This argument has caused some confusion about whether the Government thinks that the fiscal

framework is adequate. Regular use of safety margins risks creating an undesirable procyclical element in fiscal policy and causing average government net lending to exceed the surplus target.

6. The global crisis shows the danger of underestimating the macrofinancial risks associated with rapidly expanding credit, large public debt ratios and rising property prices. In the Council's opinion, these risks to the Swedish economy should not be underestimated. We recommend that the Government soon decide how macroprudential regulation and supervision should be strengthened to reduce the risk of future financial crises.
7. It is important for Sweden that confidence in the sustainability of the public finances in the euro area is restored. The Council therefore welcomes Sweden's participation in the EU Fiscal Compact. There is, however, no reason to change the Swedish fiscal framework in the direction of the rules in the Fiscal Compact. The framework we have has a sounder foundation and is better suited to Swedish conditions.
8. The Council has given the National Institute of Economic Research the task of making estimates of the public finances in a scenario in which Sweden would experience a deep economic crisis on the same scale as the 1990s crisis. The calculations show that a drop in domestic demand would have larger repercussions on the public finances than would a drop in export demand. The Council's estimates indicate that Swedish public finances would not be seriously affected by a temporary decline in exports. But a serious escalation of the European crisis could have extensive adverse consequences for Sweden's economy.
9. It is the Council's opinion that the Government should develop better methods of calculating structural net lending. The method currently used gives misleading results. The method should be disaggregated and be based on a measure of the output gap that on average is zero.
10. The surplus target results in the stabilisation of general government net financial wealth as a percentage of GDP. The

level at which it stabilises depends on valuation changes outside the fiscal framework. Net wealth will likely continue to increase from the current level of about 20 per cent of GDP.

11. In the Council's opinion, the Government should clarify its view of the appropriate size of government net wealth. The Council's view is that a further accumulation of net wealth exceeding the current 20 per cent of GDP is difficult to justify with the need for safety margins for future economic downturns.
12. The public financial portfolio contains both large debts and substantial assets. The Government should more clearly define what an appropriate gross debt is and what overall principles should apply in the trade-off between the portfolio's risk and its expected return.
13. In a special appendix to this year's Spring Fiscal Policy Bill, the Government discusses public investments in real capital and developments in general government real capital stock. This is a significant first step towards better analysis of public investment. The Council shares the Government's view that a quantitative target for public investment should not be introduced. But we do not share its opinion that it has been established that the volume and composition of government real capital investments are advantageous from an economic perspective.
14. The Council has given a research institute at the University of Freiburg the task of conducting a generational accounting analysis for Sweden. The results indicate that Sweden's public finances are sustainable in the long run. A strong contributing factor is the design of the pension system. As the Council has pointed out in earlier reports, generational accounts represent a valuable tool for analysing the sustainability of public finances over the very long term. The method is also able to show how taxes and public expenditure affect the intergenerational distribution using a life cycle approach.
15. How well the labour market functions is particularly important for the public finances. The Government has a more positive view of labour market developments than the National Institute of Economic Research. The Council does not take a position on which labour market forecast is most credible. If the

Government's forecast proves to be too optimistic, fiscal policy must take this into account to avoid compromising the surplus target.

16. The Council notes that youth unemployment rose sharply during the recent crisis and is now at a high level. But the description of youth unemployment should be nuanced. Young people generally find a job much more quickly than older workers. They thus on average have shorter unemployment spells than older workers. Young people's chances of finding a job are also more cyclical than older workers'. Young people often combine work and studies. Regarding young people as a homogeneous group may lead to ineffective labour market measures. It is important to target initiatives at those groups that have difficulty finding employment. We would like to point out that the unemployment period for older workers has risen in recent years.
17. The Council describes a method for measuring mismatch in the labour market. The method makes it possible to quantify how much more efficiently the labour market would function with a better matching process, for example, by more geographic mobility.
18. The Government's most costly measure in the 2012 Budget Bill is the reduction of the VAT on restaurant and catering services. It is the Council's opinion that the estimated effects of this measure on unemployment and employment are exaggerated. Moreover the reduced tax rate is an inefficient way of reducing administrative costs. The lower VAT on restaurant and catering services works rather like a subsidy to a specific sector.
19. A common problem with differentiated VAT rates is that they risk increasing the incentives for interest groups to lobby for sectoral support. If more sectors were to benefit from reduced VAT rates, there is a risk of undermining the consumption tax as a tax base. The Government should instead consider introducing a uniform VAT. This would most likely have large positive economic effects.

# 1 Evaluation of fiscal policy

This chapter reviews fiscal policy focusing on the period 2012-2015. First there is a brief account of the economic situation in Europe and in Sweden. We then address the core matter of whether fiscal policy is in line with the fiscal framework. Thereafter we discuss a number of aspects of fiscal policy: the scope for new initiatives, the expenditure ceiling, the safety margins, macroprudential regulations and risks, and the EU Fiscal Compact and its bearing on the Swedish fiscal framework.

## 1.1 The economic situation

### 1.1.1 The crisis in Europe

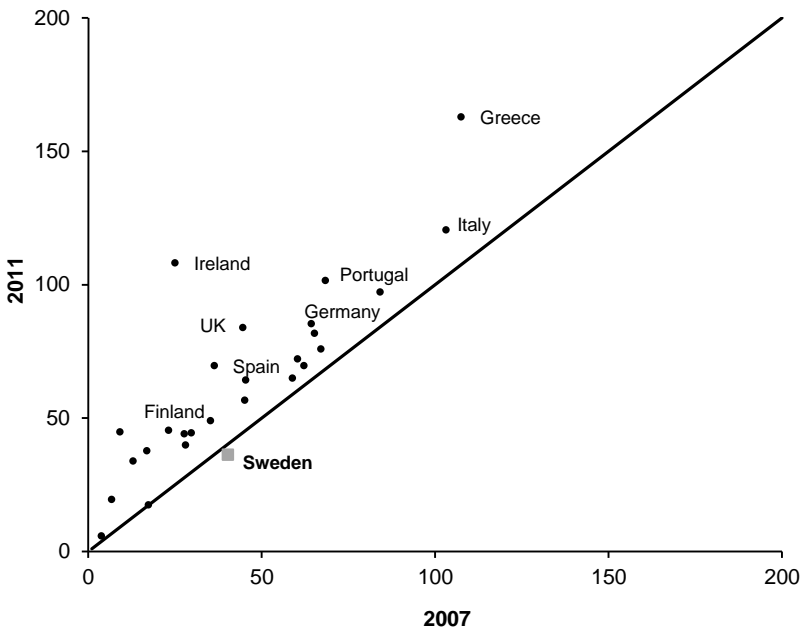
The crisis in Europe, particularly in the euro area, is serious. All indications are that it will dominate international developments for several years to come. Several countries that have long had insufficient net lending have launched consolidation programmes. At the EU level, various agreements aimed at supporting sustainability in member states' public finances have been reached (see Section 1.5 on the EU Fiscal Compact). There is still considerable uncertainty, however, about developments in the euro area, particularly in Greece, Portugal and Spain.

When the crisis in the American housing market deepened in 2008 and 2009, interest rate differences between the euro area countries increased. In early 2010, they increased sharply. Interest rates for a number of euro countries have risen to levels that would have seemed unthinkable only a few years ago. The high interest rates on government bonds represent a serious threat to balanced government finances. Financial market expectations can change rapidly and make the sovereign debt crisis worse.

Figure 1.1 demonstrates the severe problems in government finances in Europe. It demonstrates the consolidated general government gross debt (the Maastricht debt) as a percentage of GDP in 2007 and 2011. The horizontal axis displays the gross debt for 2007. The vertical axis displays the forecast for 2011. Figure 1.1 also has a 45-degree slope. In 2011, the gross debt of those countries on or near this slope has not changed compared with 2007. As seen in Figure 1.1, gross debt has increased in almost all EU countries since 2007. There are some exceptions. Sweden is one of the few countries whose gross debt has not grown.

**Figure 1.1 Gross government debt in the EU in 2007 and 2011**

*Per cent of GDP*



Source: Eurostat (Ameco).

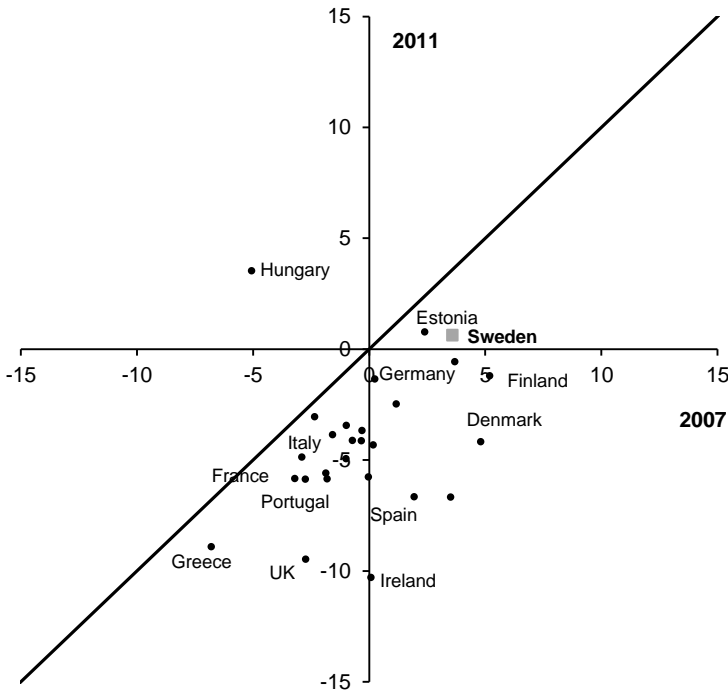
Figure 1.2 shows general government net lending as a percentage of GDP in EU countries for 2007 and the forecast for 2011. All of the euro countries have growing deficits in net lending. Sweden is an exception, showing a surplus in net lending.



Figures 1.1 and 1.2 demonstrate that fiscal consolidation in many EU countries is badly needed. When consolidation does come, we can expect a reduction in the demand for Swedish exports. A rising tax burden and lower public expenditure lead to falling demand, which in turn spills over into a reduction in the demand for imported goods. As Sweden’s export share to the EU is large (56 per cent of total exports in 2011), there is a risk that this development will have adverse effects on Swedish output and employment in the next few years.

**Figure 1.2 Net government lending in the EU in 2007 and 2011**

*Per cent of GDP*



Source: Eurostat (Ameco).

The problems in government finances in Europe are related to differences in price and wage trends in the euro area. The differences in productivity growth have not made up for these differences. This

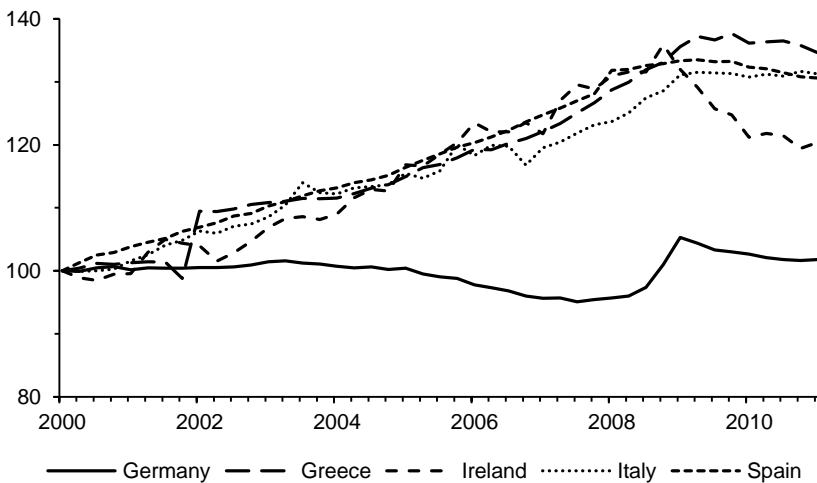
can be seen in Figure 1.3, which shows the growth in unit labour costs in Greece, Italy, Portugal, Spain and Germany.

While production costs have remained stable in Germany in the last 10 years, they have risen in Southern Europe. Higher costs in Southern Europe have reduced export opportunities and driven up imports. The loss of competitiveness has resulted in large current account deficits and rising foreign debt.

Without an improvement in competitiveness, the export sector cannot help the economies in Southern Europe grow and without growth, problems in government finances will become increasingly difficult to manage. This is how the debt crisis is connected with the imbalances in price and wage growth in the euro area.

**Figure 1.3 Unit labour costs in some euro countries**

*Index 2000 = 100*

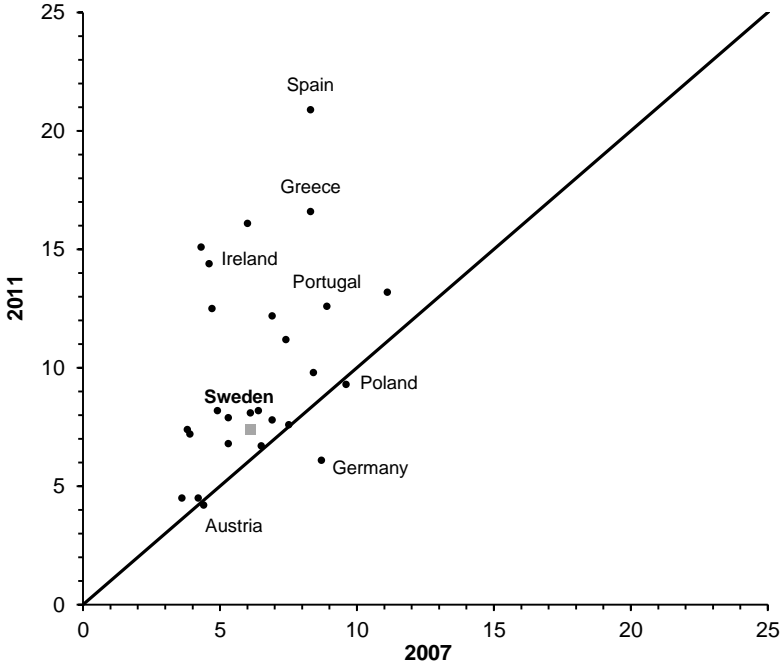


Source: OECD.

Figure 1.4 shows unemployment in the EU in 2007 and 2011. The figure shows that unemployment has risen in almost all EU countries between these years. Unemployment is likely to continue to rise in the next few years.

**Figure 1.4 Unemployment in the EU in 2007 and 2011**

*Per cent*



Source: Eurostat (Ameco).

The overall economic situation in Europe is thus gloomy. Many countries badly need to restore confidence in the sustainability of their public finances. Tightening economic policies is expected to lead to falling demand, lower economic growth and rising unemployment.

The current crisis in Europe represents a difficult political challenge for the euro countries. Without public acceptance of consolidation programmes and structural reforms, problems in government finances will probably grow worse.

The economic downturn in Europe will likely be both deep and long. There is a chance that the United States and other countries outside Europe will be able to support the European economy. Even if the international crisis is limited to Europe, demand from the rest of the world will not be able to make up for the downturn in Europe. The Government’s fiscal policy should be evaluated, keeping these developments in mind.

### 1.1.2 Developments in Sweden

The fourth quarter of 2011 was very weak. In the winter the labour market recovery came to a standstill. The main explanation for the deterioration was a drop in exports.

Table 1.1 shows key indicators for the Swedish economy from the 2012 Budget Bill (published in September 2011) and from the 2012 Spring Fiscal Policy Bill. The table also shows the National Institute of Economic Research (NIER) and the Riksbank (the Swedish central bank) forecasts for corresponding years.

The forecasts agree that the outlook for the Swedish economy has worsened since the autumn 2011 Budget Bill. When the Budget Bill was presented, forecasters predicted a deterioration in the labour market in 2012 – but an improvement in 2013. This pattern still holds but the turnaround is expected to come later. The employment forecasts for 2013 have thus been revised downwards. The inflation forecast has also been lowered. It is expected to be below two per cent in 2012 and 2013.

In the 2012 Budget Bill, the Government expected a balanced budget in 2012 and a small surplus in 2013. Like other forecasters, the Government has revised this forecast downwards in the 2012 Spring Fiscal Policy Bill. The budget is now expected to show a deficit in 2012.

**Table 1.1 Key macroeconomic indicators for the Swedish economy**

	Budget Bill 2012 (Sept 2011)			Spring Fiscal Policy Bill (April 2012)		
	2011	2012	2013	2011	2012	2013
GDP	4.1	1.3	3.5	3.9	0.4	3.3
Productivity in the business sector	3.3	1.1	2.9	2.4	1.3	3.2
Employed	2.2	0.0	0.4	2.1	-0.1	0.3
Unemployment	7.5	7.8	7.7	7.5	7.8	7.7
CPI	3.0	1.2	1.8	3.0	1.2	1.3
Net lending	0.1	0.0	0.7	0.1	-0.3	0.3
	NIER (Aug 2011)			NIER (March 2012)		
	2011	2012	2013	2011	2012	2013
GDP	4.3	1.9	3.4	3.9	0.4	2.5
Productivity in the business sector	3.5	1.5	2.8	2.4	0.6	2.3
Employed	2.1	0.6	1.0	2.2	-0.1	0.5
Unemployment	7.5	7.5	7.3	7.5	7.7	7.7
CPI	3.0	1.9	2.1	3.0	1.5	1.4
Net lending	-0.1	0.3	0.4	0.2	-0.4	0.2
	The Riksbank (Sept 2011)			The Riksbank (April 2012)		
	2011	2012	2013	2011	2012	2013
GDP	4.5	1.7	2.4	3.9	0.4	1.9
Productivity in the business sector	2.8	1.2	1.7	1.7	0.6	1.8
Employed	2.1	0.6	0.5	2.1	-0.1	0.5
Unemployment	7.5	7.2	6.9	7.5	7.7	7.7
CPI	3.0	2.1	2.6	3.0	1.2	1.9
Net lending	0.5	0.8	1.0	0.1	-0.1	0.2

Note: Unemployment and net lending show the level in per cent, other variables the percentage change (growth rate) on an annual basis. Net lending refers to general government net lending.

All the forecasts show GDP growing more slowly than potential GDP in 2012. Hence the output gap will widen. It will then narrow in the two subsequent years (see Table 1.2).

**Table 1.2 Capacity utilisation under different forecasts**

	2010	2011	2012	2013	2014
<b>The Government</b>					
Real growth		3.9	0.4	3.3	3.7
Real GDP	100	104	104	108	112
Potential GDP		105	107	110	113
<b>NIER</b>					
Real growth		3.9	0.4	2.5	2.9
Real GDP	100	104	104	107	110
Potential GDP		106	108	109	111
<b>The Riksbank</b>					
Real growth		4.5	0.7	2.1	3.2
Real GDP	100	105	105	107	111
Potential GDP		105	107	109	111

Note: Real GDP indicates the level (index 2010 = 100). Potential GDP is indicated in the same index units.

Sources: The 2012 Spring Fiscal Policy Bill, the Swedish Economy March 2012, Monetary Policy Report February 2012 and own calculations.

After the acute crisis years of 2008-2009, the labour market improved. From the latter half of 2009 to the end of 2011, employment rose rapidly while unemployment fell (see Figure 1.5). In recent months, this trend has stalled. The labour market has not recovered to the levels that prevailed before the 2008 financial crisis.

**Figure 1.5 Unemployment and employment, ages 15-74**

Per cent



Source: Statistics Sweden.

A comparison of unemployment trends in the current crisis and in the 1990s crisis, i.e. 1991-1993, shows that the causes of the crisis are of great importance when explaining their effects on public finances.

The forces driving the 1990s crisis can be traced to domestic imbalances. One of the main factors driving the crisis was a too rapid expansion in the demand and supply of credit together with a fixed krona exchange rate. It resulted in a property bubble which burst after a prolonged rise in residential and commercial real estate prices in the latter half of the 1980s.

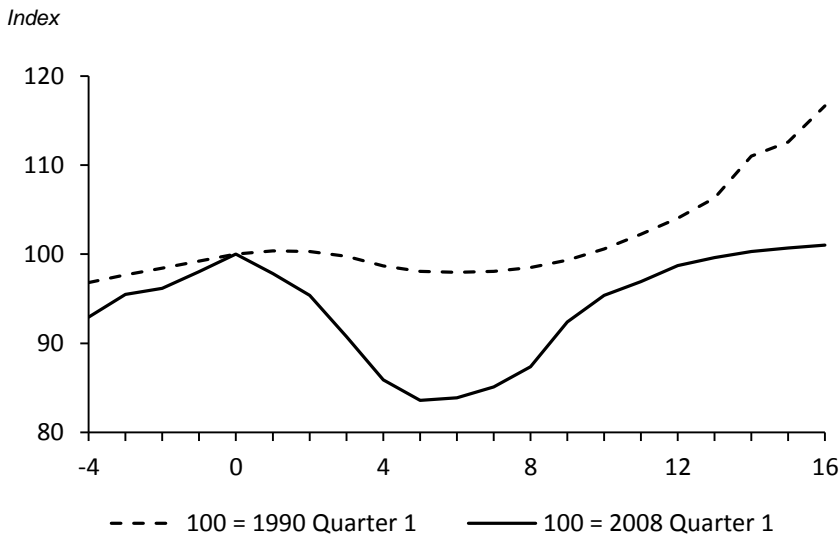
In the early 1990s, exports stayed at a relatively constant level until the changeover to a floating exchange rate. The sharp deterioration in the krona after the Riksbank was forced to adopt a floating exchange rate in November 1992 contributed to a strong export led expansion. The rise in exports was of key importance for Sweden’s recovery. There would probably have been a considerable delay in the positive effects of the structural reforms adopted without the move to a floating exchange rate.

The crisis in 2008-2009 followed a completely different pattern as it was driven by a sharp downturn in the global demand for Swedish exports. Domestic economic activity was affected less than in the 1990s crisis. The sharp fall in exports in the latter part of 2008 and in

2009 was followed by an equally sharp upturn in 2010 and 2011 (see Figure 1.6).

The drop in exports in 2008-2009 caused staff reductions in the export sector. Expectations that the downturn in the demand for exports was temporary likely made a significant contribution to employee retention. Agreements on temporarily shortening working hours facilitated this process. Overall, both the labour market and the public finances were affected less than in the 1990s crisis.

**Figure 1.6 Exports in the two crises**



Note: Index is set at 100 in quarter 1 in 1990 and in quarter 1 in 2008. The same quarter is denoted as period 0. The horizontal axis shows the number of quarters before and after this point. This construction makes it possible to compare the two crises.  
Source: OECD.

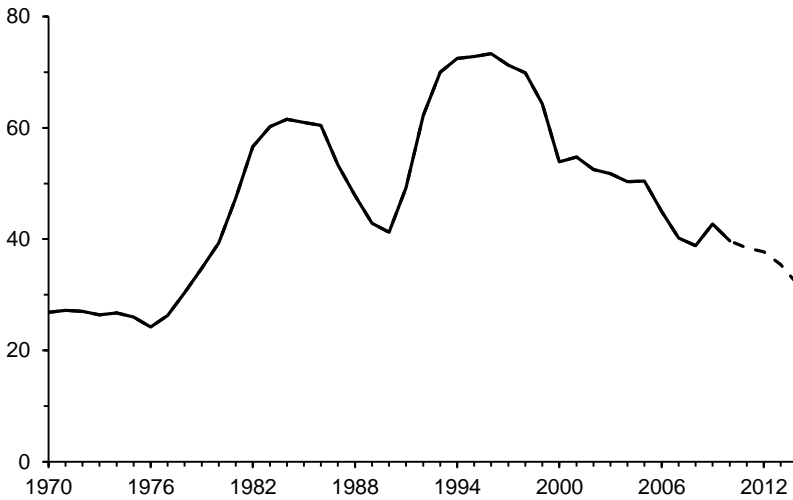
## 1.2 Fiscal policy and the fiscal policy framework

General government gross debt as a percentage of GDP has fallen rapidly since the mid-1990s (see Figure 1.7). The debt ratio is now close to the levels prior to the oil crises in the 1970s. The most recent crisis has not changed this development.



**Figure 1.7 General government gross debt**

*Per cent of GDP*



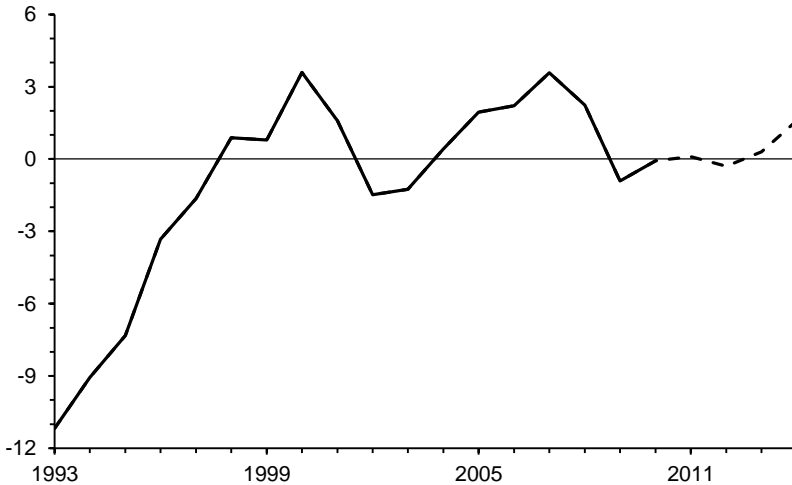
Note: Forecast for 2011-2014 from the 2012 Spring Fiscal Policy Bill.  
Sources: Ameco and the 2012 Spring Fiscal Policy Bill.

The sharp reduction in the gross debt in the last 20 years is of course a reflection of the substantial strengthening of general government net lending (see Figure 1.8).

How does the fiscal policy pursued relate to the fiscal framework? We discuss this question below under three headings: long-term sustainability, the expenditure ceiling and the surplus target (see the brief description of the fiscal framework at the beginning of this report).

## Figure 1.8 General government net lending

Per cent of GDP



Note: Forecast for 2011-2014 from the 2012 Spring Fiscal Policy Bill.

Sources: Ameco and the 2012 Spring Fiscal Policy Bill.

### 1.2.1 Long-term sustainability

Fiscal policy is sustainable in the long run if the current value of public revenue (now and in the future) is equal to the sum of the public debt and the current value of public expenditure (now and in the future). The sustainability of the public finances can be calculated with the help of the S2 indicator. It shows how large a permanent strengthening of the public finances is required in order for them to be sustainable in the long run. A value of 1.0 means that public finances must be permanently strengthened by 1.0 per cent of GDP in order for them to be sustainable in the long run. A value of -1.0 means that the public finances can be permanently weakened by 1.0 per cent of GDP without compromising long-term sustainability.<sup>1</sup> This type of estimate is obviously associated with a very high degree of uncertainty as it is based on a number of assumptions on future policy and conditions.

The EU Commission's estimate of the S2 indicator for Sweden is 0.1.<sup>2</sup> The Government has made a number of different estimates of

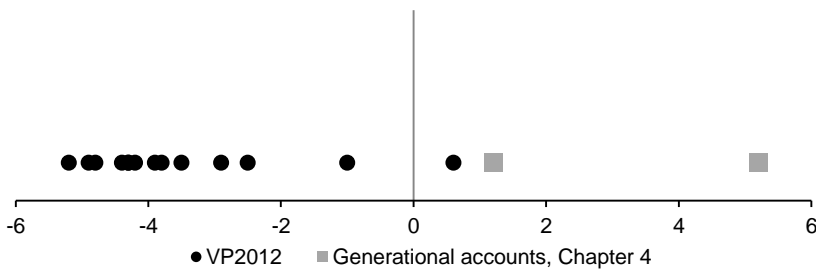
<sup>1</sup> See also the 2010 or 2011 Fiscal Policy Council report.

<sup>2</sup> European Commission (2011).

the S2 indicator in the 2012 Spring Fiscal Policy Bill. These are all within the range of -5.2 to 0.6. In several of them, the S2 indicator is less than zero, which can be interpreted to mean that public finances can be permanently weakened without jeopardising their long-term sustainability (see Figure 1.9).

**Figure 1.9 Different estimates of long-term fiscal sustainability**

*The S2 indicator*



Note: Each of the points represents an estimate of the S2 indicator. The estimates are within the range of -5.2 to +5.2. VP2012 is the 2012 Spring Fiscal Policy Bill. The figures for the generational accounts are taken from the background report to Chapter 4 of this report.

The calculations from Chapter 4 show that the new pension system strengthens the long-term sustainability of public finances considerably because it is less generous and more robust in the face of demographic and other shocks.<sup>3</sup> Sustainability therefore depends critically on a politically stable pension system. The estimates of the S2 indicator also indicate that possible deviations from long-term sustainability are within the range of what the current policy is capable of handling. Our conclusion is that the economic policy should be considered sustainable in the long run.

<sup>3</sup> More detailed calculations can be found in Hagist and others (2012).

**Table 1.3 Key fiscal indicators***Percentage of GDP unless otherwise stated*

	2011	2012	2013	2014	2015	2016
Net lending (BP 2012)	0.1	0.0	0.7	2.1	3.3	
Net lending (VP2012)	0.1	-0.3	0.3	1.6	3.0	3.7
Structural net lending (BP2012)	1.5	2.0	2.4	3.0	3.7	
Structural net lending (VP2012)	0.7	1.2	1.6	2.1	3.2	3.7
Backward-looking ten-year average	0.7					
Our forward-looking ten-year indicator		1.2				
Expenditure ceiling (SEK billion)	1,063	1,084	1,093	1,103	1,123	1,153
Expenditures subject to ceiling (SEK billion)	989	1,029	1,043	1,052	1,064	1,086
Budget margin (SEK billion)	74	55	50	51	59	67

Note: BP2012 is the 2012 Budget Bill, VP2012 the 2012 Spring Fiscal Policy Bill.

### 1.2.2 The expenditure ceiling

In the next few years, the Government reckons on budget margins of between SEK 50 and 67 billion. They represent the difference between the expenditure ceiling and the expenditures subject to the ceiling (see Table 1.3). These are large sums equalling approximately a twentieth of the expenditures subject to the ceiling. We therefore consider the risk of the expenditures exceeding the expenditure ceiling to be limited.

### 1.2.3 The surplus target

We have previously argued that the surplus target should be evaluated with two ten-year indicators – a backward-looking indicator and a (partially) forward-looking one. These indicators should be used to evaluate whether the target has been met, taking into account the economic situation in the two ten-year periods.<sup>4</sup>

In the last 10 years, the budget surplus has been 0.7 per cent of GDP. This is less than the surplus target. But the target is seen as an

<sup>4</sup> See, for example, the report of the Fiscal Policy Council (2011), p. 82. Our forward-looking ten-year indicator takes into account the six preceding years and the forecast for the current year and the coming three years.

average over a business cycle. In the last decade, the economy has on average performed below its potential.

The National Institute of Economic Research in a study has found that since 2000, the surplus has not been less than the target in two measurable business cycles. From peak to peak – 2000 to 2007 – the surplus averaged 1.3 per cent of GDP. From trough to trough – 2005 to 2009 – the surplus averaged 1.8 per cent of GDP. The National Institute of Economic Research considers this to be high in the context of the surplus target.<sup>5</sup>

In our opinion, the policy thus far has been compatible with the surplus target. Our forward-looking ten-year indicator shows, with the forecast from the 2012 Spring Fiscal Policy Bill, an average surplus of 1.2 per cent of GDP. The output gap in 2006-2015 is expected to be -1.1 per cent according to the Government's estimate in the 2012 Spring Fiscal Policy Bill. In our opinion, the fiscal policy decided and proposed thus far is compatible with the surplus target.

### 1.3 Transparency complements the fiscal framework

The continuing economic crisis in Europe has clearly shown the need for a long-term sustainable fiscal policy. Sweden's situation in the early 1990s is reminiscent of the current situation in several of today's most exposed EU countries. Sweden's experience contributed to a new fiscal framework aimed at creating the conditions for a fiscal policy in line with the long-term objectives of stability, growth and intergenerational equity.

It is difficult to determine precisely what effect the Swedish fiscal framework has had. The Swedish Government's pursuance of a tight fiscal policy since the 1990s crisis is primarily due to a broad insight on the part of both politicians and voters on the adverse consequences of large imbalances in government finances. The Council thinks that it is likely that the new fiscal framework has made some contribution to stronger fiscal discipline.<sup>6</sup>

Even though it is our opinion that the framework has functioned well, there is room for improvement, particularly with respect to

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<sup>5</sup> National Institute of Economic Research (2012), p. 117.

<sup>6</sup> There is also some international empirical evidence that a well-constructed fiscal framework has its own causal effect. See Alt and Lassen (2006) and Fabrizio and Mody (2006).

transparency. Transparency in economic policy contributes to a constructive economic policy debate.

Transparency requires the data and methods of calculations used by the Government for its estimates to be well described and accessible to both the public and to the reviewing agencies. We here raise some issues concerning transparency in the application of the fiscal framework.

### 1.3.1 How does the scope for new initiatives arise?

In its 2011 report, the Council discussed in detail how the scope for new initiatives comes about.<sup>7</sup> In broad terms, government revenue follows GDP while expenditure as a percentage of GDP normally declines in the absence of new decisions. The latter includes local government grants, some transfers to households and agencies' administrative appropriations. By this asymmetric correlation to GDP, a scope arises that can be used both on the revenue and the expenditure sides. This scope grows over time.

From a political perspective, this process could be considered attractive as measures, which in practice only involve the restoration of the quality or coverage of a public activity in whole or in part, can be presented as new initiatives. The prevailing system can also be seen as a tool to facilitate changes in priorities both between different expenditures and between revenue and expenditure. Given the automatic real erosion of public expenditure, a scope for political initiatives emerges without active, probably politically difficult, cutbacks having to be made.

The Government reports the expenditure ceiling's level and growth in several ways. The growth is stated both in fixed prices and as a percentage of GDP. This historical growth of the expenditure ceiling, not least the need for safety margins, is accounted for in such a way that normal cyclical swings can be reflected in expenditures without jeopardising the expenditure ceiling. Further, the Government considers the expenditure ceiling to be consistent with and provide support to the surplus target. The Government does not, however, explain how the scope for new initiatives emerges.

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<sup>7</sup> Fiscal Policy Council (2011), p. 71 ff. The concept of a scope for new initiatives is also defined here.

In its 2011 report, the Council described a breakdown of the scope for new initiatives so as to be able to deduce its origin and requested a clearer explanation by the Government. The Government dismissed the Council's point with the argument that such a report would pre-empt the Riksdag's (the Swedish Parliament) decision.<sup>8</sup> We have difficulty seeing that a clearer explanation of how expenditures vary in following GDP would result in pre-empting the Riksdag's decision.<sup>9</sup> Our recommendation of a clearer explanation stands.

### 1.3.2 Is the expenditure ceiling binding?

In the 2012 Budget Bill, the Government's discussion of the expenditure ceiling up to 2015 follows the somewhat simplified reasoning below.

Some of the scope under the ceiling has to be set aside to manage any uncertainties and normal cyclical swings. The further along in the budget cycle, the greater the need for a safety margin under the expenditure ceiling becomes. It is estimated at about 3 per cent of the expenditures subject to the ceiling for the third and fourth year in the budget cycle. Any scope above that can be used for permanent expenditure initiatives. Reforms of this kind should be gradually introduced up to the last year in the cycle. The scope in year four, after deducting the safety margins, thus consists of the accumulated room for manoeuvre, which is the maximum that the expenditure initiatives can total at that time. The Government estimates this at about SEK 41 billion. This means that there is room for measures that increase expenditure by more than SEK 10 billion a year up to 2015.<sup>10</sup>

The Government's conceptual framework is designed to cover the entire four-year period for which an expenditure ceiling has been approved or proposed. The budget margins in the near future are, however, very large and are hardly a constraint on spending. Even though the Government does not plan to use these margins, it is entirely conceivable that such large budget margins may be an enticement for expenditures that will prove to be unsustainable in the

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<sup>8</sup> The 2012 Budget Bill, p. 665.

<sup>9</sup> The Government in its long-term estimates makes assumptions about how expenditures follow GDP, even though this also requires Riksdag approval in the future.

<sup>10</sup> The 2012 Budget Bill, p. 200.

long run. They can also compromise the surplus target. The large margins may therefore be a potential problem for budget discipline.

The margins are substantially larger than what is needed for managing uncertainty (see Table 1.3). But as the Government sets an expenditure ceiling four years in advance as a benchmark for the expenditure policy, it is in our opinion still quite possible that the ceiling in this perspective acts as a control on expenditure.

### 1.3.3 Accounting for the allocation of the scope for new initiatives to revenue and expenditure

The decision on the expenditure ceiling in practice is not only about how much future expenditures will be, but also about tax levels. The lower the expenditure ceiling is set, the more scope there will be for future tax cuts. How then is the scope for new initiatives allocated between the scope for expenditure increases and tax cuts?

In our 2011 report, we estimated how much scope emerges automatically because expenditures do not follow GDP. That estimate indicated an annual improvement in the public finances of about 0.4-0.5 per cent of GDP.<sup>11</sup> If this calculation is right, the result would be an annual scope for new initiatives of about 0.3 per cent of GDP (over SEK 10 billion), which the Government states is less than the automatic tightening. Expenditures thus fall as a percentage of GDP, which, given the surplus target, provides scope for a falling tax ratio.

The balance to be struck between changes in taxes and expenditures and the long-term size of the public sector depends on is political judgement. Regardless of what judgement the Government arrives at, it is the Council's opinion that it would be desirable to have a clearer account of the relationship between the expenditure ceiling, the surplus target and the taxes collected. Decisions on the expenditure ceiling three or four years into the future involve weighing how an available surplus should be used or how needed budget reinforcements should be implemented. The Government should provide a transparent discussion of the scope for changes on the tax side for the period covered by the expenditure

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<sup>11</sup> Fiscal Policy Council (2011), p. 78.



ceiling similar to its discussion of the scope for permanent expenditure reforms over the same time horizon.

### 1.3.4 Safety margins

In the 2012 Budget Bill, the Government stresses that weaker than expected economic growth and increased uncertainty about the future should be met by higher general government net lending. The second paragraph of the Budget Statement notes that the “weaker economic outlook and the great uncertainty surrounding it require safety margins in the public finances to ensure that Sweden has the necessary room for manoeuvre to meet a sharper or a more prolonged contraction”.

The introduction to the Budget Bill also stresses that the turbulence in the international financial markets, “leads to considerable uncertainty about the global economic recovery in the coming period. Against this background, a crucial element of fiscal policy is safeguarding sustainable public finances in the long run and maintaining adequate safety margins so that measures can be taken in the event of a more adverse development”.<sup>12</sup> The same reasoning recurs in the 2012 Spring Fiscal Policy Bill: “there is still considerable risk of new waves of economic and financial unrest. Sweden therefore needs adequate safety margins in its public finances in order to have sufficient resources to manage a possible intensified crisis”.<sup>13</sup>

The need for a safety margin is expected to be higher in times of heightened uncertainty and with the threat of a severe economic downturn. The Government found less need for safety margins in spring 2011 because of the more balanced risk picture then.

The safety margins are justified by the uncertainty about future economic developments. More specifically, the Budget Bill notes that historical experience shows that the direct costs of rescuing the financial system of a country in crisis can be very large – more than 50 per cent of GDP.<sup>14</sup> It also notes that the real central government debt increased an average of as much as 86 per cent in the three years

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<sup>12</sup> The 2012 Budget Bill, p. 32.

<sup>13</sup> The 2012 Spring Fiscal Policy Bill, p. 29.

<sup>14</sup> The 2012 Budget Bill, p. 191.

after the crisis.<sup>15</sup> But, notes the Government, “These figures show that it is impossible to avoid large deficits in the public sector in the event of a crisis in the financial system simply by maintaining safety margins in public finances. Such margins may, however, help strengthen confidence that the policies pursued will not make the problem worse”.

*Safety margins are normally unnecessary*

The Fiscal Policy Council thinks that the fiscal framework is constructed in such a way that there is normally no need for any safety margins other than those that form part of the framework. If the Government uses safety margins in addition to the surplus target, they should justify this with a careful description of the course of events that could give rise to the developments that the Government wants to insure against.

If the Government normally plans for a safety margin in net lending, the surplus target will in practice be exceeded. This leads to a lack of clarity about the fiscal framework, which in the worst case may weaken its credibility.

The desire for a safety margin ahead of future crises is one of the main arguments for the surplus target in the fiscal framework.<sup>16</sup> The need for safety margins should for this reason already be satisfied by the current surplus target. If the Government thinks that the surplus target is not adequate to manage uncertainty, then it should be raised.

*Greater safety margins lack a stabilisation policy basis*

Systematic use of an ill-defined extra safety margin risks introducing a procyclical element into fiscal policy. The uncertainty would probably appear greatest during economic downturns when there is widespread pessimism about the future. Likewise, growing optimism in economic upturns helps reduce uncertainty. If this reasoning is correct, the size of the Government’s extra safety margin will vary over the business cycle.

The Government’s handling of the scope for new initiatives for 2012 can act as an illustration of this procyclical element. In the 2011 Budget Bill the Government estimated that the scope for new

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<sup>15</sup> The 2012 Budget Bill, p. 193.

<sup>16</sup> Ministry of Finance (2011a), p. 19.

initiatives for the years 2012–2014 came to about SEK 40 billion. Half a year later, in the 2011 Spring Fiscal Policy Bill, the Government thought the scope for new initiatives could be “slightly larger” than that given in the Budget Bill that preceded it. A more exact estimate was not provided. At that time, structural net lending in 2014 was expected to be 3.6 per cent of GDP, i.e. 0.4 percentage points higher than in the preceding Budget Bill.

In connection with the presentation of the 2011 Spring Fiscal Policy Bill, the Government submitted a ministry memorandum with several tax proposals. This memorandum included a discussion of a fifth step in the earned income tax credit, raising the lower income threshold for the state income tax and a reduction in income tax for pensioners. The net cost to public finances of these proposals was over SEK 15 billion in 2012.

In summer 2011 there were clear signals of a downward turn in the economy. The financial crisis in the euro countries deepened. In the 2012 Budget Bill, the Government chose not to propose the announced tax cuts, referring to given the increase in international uncertainty.

The Government thus came to the conclusion that the need of an extra safety margin was more important than the tax cuts of over SEK 15 billion announced in spring 2011. We do not share this view. Rather, the worsened economic situation argued in favour of a somewhat more expansive fiscal policy.

### 1.3.5 Accounting for uncertainty could be clearer

In order to demonstrate the uncertainty of the forecasts, the Riksbank has for several years used fan charts with forecasts of relevant economic variables and with uncertainty intervals for their development over time. Likewise, the Riksbank’s forecast of the key interest rate is published as the interest rate path with an uncertainty interval surrounding it.

Fan charts could also be produced for fiscal policy and for the variables relevant to fiscal policy.<sup>17</sup> Such charts would contribute to a more transparent communication of the uncertainty of future developments. Regardless of whether they are used or not, there also

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<sup>17</sup> Cronin and Dowd (2011) discuss such fan charts for Ireland.

needs to be a more qualitative way of describing stabilisation policy risks. This includes stating the risk factors that the Government considers most important, quantifying their consequences and describing in general terms how they can be met by economic policy measures should they materialise. One way would be to do stress tests in macro models based on the risks that were considered important. These tests should include feasible economic policy measures in crisis situations.

## 1.4 Macroprudential regulations and macrofinancial imbalances

The financial crises in other countries, caused by macrofinancial imbalances, invite questions about Sweden's economic policy and its financial framework. What lessons are there for the Swedish system for supervision and regulation of macrofinancial imbalances? Are the existing institutions for safeguarding financial stability adequate or do they need strengthening? How large are the current macrofinancial imbalances in Sweden? Do they pose an underestimated threat to public finances? These questions are discussed below.

### 1.4.1 Macroprudential supervision and regulation

The global financial crisis has provided a key lesson for economic policy: the objective of financial stability should be given higher priority. This lesson has become more specific. Macroprudential supervision and regulation should be strengthened in order to reduce the risk of future financial crises. At the international level, in the United States and the EU, a number of measures have been taken in recent years to improve macroprudential supervision.

In last year's report, the Council discussed the need for a macroprudential framework in Sweden. The Council emphasised that the largest budget deficits and the deepest recessions in Sweden have been caused by macrofinancial imbalances.

The Council pointed to what it perceived as a weakness of the current supervision and regulation of the financial system. There is no public authority with primary responsibility for supervising the risks of financial imbalances and with the remit to propose measures when such a risks approach a critical level.

The Council advocated strengthening financial stability policy in either of the following two ways. The first would be for the Riksbank to be given greater responsibility for macrofinancial stability, possibly with an expanded arsenal of instruments to achieve an additional objective. The second is to establish a new authority, a financial stability council, with the remit to identify macrofinancial risks and propose measures when appropriate.

The Council's May 2011 report is one of several contributions to the discussion about macroprudential supervision and regulation in Sweden. In an evaluation of the Riksbank's activities in the period 2005-2010 commissioned by the Committee on Finance, Goodhart and Rochet (2011) concluded that either the Ministry of Finance, the Financial Supervisory Authority, the National Debt Office and the Riksbank should be jointly responsible for macroprudential supervision via a systemic risk board or the Riksbank should be given full responsibility for financial stability. Bryant, Henderson and Becker (2012) also discuss whether the Riksbank and the Financial Supervisory Authority should be merged or whether a new authority responsible for macroprudential supervision should be established.

The Government has on several occasions drawn attention to the risk of financial imbalances and weaknesses in the current institutional set-up. In February 2011, the Government appointed the Financial Crisis Committee with a remit to consider measures to improve macroprudential supervision and regulation. The Committee will publish its report in autumn 2012.

In November 2011, the Government announced higher capital requirements for the four largest banks, Nordea, Swedbank, SEB and Handelsbanken, which are considered to be of systemic importance. The aim of the proposal is to “strengthen the stability of the Swedish banking system and reduce the vulnerability of Sweden's economy”.<sup>18</sup> The capital requirements, which will be phased in during 2013-2015, exceed the level stipulated in the Basel III rules. The Government justifies the higher requirements on the grounds that the Swedish banking system in relation to GDP is the third largest in Europe after the Swiss and UK systems, that the largest Swedish banks are highly dependent on foreign currency funding and that the Swedish

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<sup>18</sup> Ministry of Finance (2011b).

financial system is highly concentrated – four banks dominate the market.

Furthermore, the Riksbank and the Financial Supervisory Authority have begun to cooperate more closely by establishing a council for cooperation on macroprudential supervision. The two authorities will meet at least twice a year to discuss macroprudential issues. The first meeting was held in February 2012. The Fiscal Policy Council believes that this new council is a step in the right direction while awaiting the Financial Crisis Committee's report.

### 1.4.2 Macrofinancial imbalances in Sweden?

Every deep financial crisis is preceded by a steep rise in the volume of credit in relation to GDP and in assets prices, such as real estate prices. This was the case in Sweden in the second half of the 1980s. The credit expansion and the rise in real estate prices ended and both turned into a fall when the financial crisis erupted in 1992.<sup>19</sup> A similar pattern has been observed in a number of countries, such as the United States, Spain and Ireland in the last ten years.<sup>20</sup> First, credit supply and real estate prices have risen sharply. Then, the rise has turned into a fall and eventually into a crisis.

The real estate market has been an important factor in this boom-bust cycle. The reason is simple: the home is the largest item of wealth on households' balance sheets. If the value of this asset changes sharply, it will have an immediate impact on household consumption, savings and investment. How the financial system is affected depends on institutional factors such as competition laws and banking regulations.

Given the international crisis pattern, the question arises: how large is the risk of Swedish real estate prices being unsustainable and therefore falling sharply sooner or later? How serious would the consequences of a process like this be for the Swedish economy?

Those seeing a threat to financial stability emphasise a number of factors. Swedish real estate prices have risen sharply since the mid-1990s. The rise is larger than in countries like Ireland, Spain and the

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<sup>19</sup> This pattern was observed in all the Nordic countries which were hit by a deep financial crisis in the early 1990s. See Jonung, Kiander and Vartia (2009).

<sup>20</sup> See Gourinchas and Obstfeld (2012) for a description of the common factors in financial crises. Here the emphasis is on credit volumes and asset price growth.

United States during the same period – countries which, unlike Sweden, were hit by a deep financial crisis in the years 2007-2010 (see Figure 1.10).

There are other warning signs indicating financial imbalances or financial fragility. The volume of credit in relation to GDP has increased significantly in the last ten years. The same is true for household debt in relation to disposable income and household mortgage ratios. The repayment periods for loans for single-family houses and tenant-owned housing are very long.

The European Commission's Alert Mechanism for Macroeconomic Imbalances is also sending a warning signal (see Box 1.1 about early-warning indicators). The Commission identifies the high private indebtedness in Sweden as a cause for concern.<sup>21</sup>

There are also counterarguments to the view that Sweden's real estate prices are unsustainable. Sweden has enjoyed strong economic growth. Owing to low interest rates, the debt burden of households has been decreasing – even with higher mortgages. The reduction in the real estate tax has contributed to a permanent rise in real estate prices. New construction has been low, not least by international standards. These factors indicate that the rise in real estate prices may be based on fundamentals.<sup>22</sup>

Because the rental market is regulated, few private persons own and rent out apartments in order to make capital gains from rising real estate prices. Available studies tend to show that the majority of borrowers would cope with even a sharp rise in interest rates. Thus, rising interest rates and falling housing prices would not necessarily result in a severe banking crisis. The experience from the crisis of the early 1990 demonstrates that the Swedish banking system did not suffer significant losses from loans to households. The losses mainly arose from financing investments in commercial property.

A fall in housing prices normally has an adverse impact on consumption and thus on economic growth. As mentioned above, there has been little new construction in Sweden. The construction sector in Sweden has not grown as much as in Ireland and Spain. Thus, a fall in housing prices does not make it necessary to transfer a

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<sup>21</sup> An OECD study by Rousová and van den Noord (2011) where real estate prices in different countries are compared identifies the rise in Swedish prices as unbalanced.

<sup>22</sup> Sveriges Riksbank (2011) contains a detailed analysis of the forces driving the rise in real estate prices.

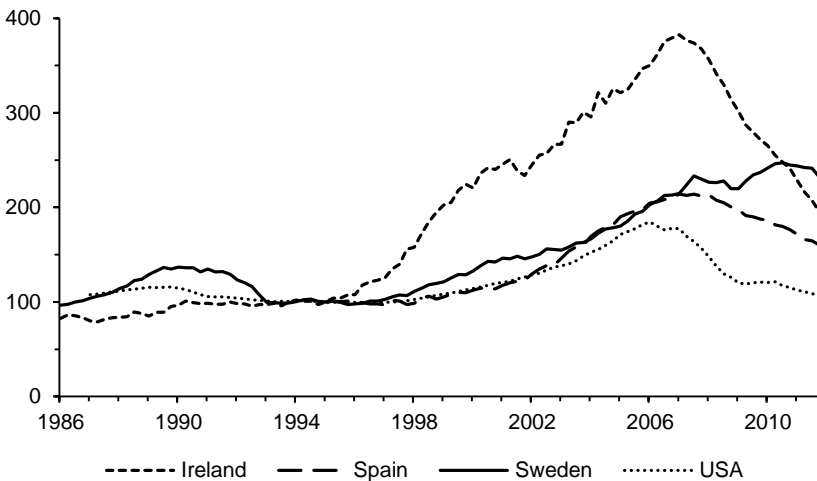
large part of the labour force from the construction sector to other sectors.

It is genuinely difficult to predict the timing of financial crises. We can only get a clear picture of the financial imbalances leading to the crisis *ex post*. Many attempts have been made to construct early warning systems, but so far they have as a rule failed.

It is the Council's view that the risk of financial imbalances in Sweden must not be ignored. There appear to be plausible reasons for the sharp rise in Swedish real estate prices. But we also know that such a rise may go too far and become an unstable process with large adverse effects on the economy. Even if this does not happen, it is conceivable that Swedish real estate prices will fall in the future.

### Figure 1.10 Real estate prices

*Index 1996 = 100*



Sources: BIS, Statistics Sweden and own calculations.

As a fall in housing prices cannot be ruled out, there should be a system in place that makes the consequences of a rapid downturn in housing prices as small as possible. It is essential to minimise the impact on the functioning of the financial sector. Even though Sweden appears to be well prepared in this respect by international standards, there are reasons to be vigilant. A high level of ambition for monitoring credit volumes and the indebtedness of households



and financial actors, for performing stress tests and developing better systems for macroprudential supervision and regulation is therefore justified.

**Box 1.1 Early warning indicators<sup>23</sup>**

The European crisis has resulted in demands for a better early-warning system for macrofinancial imbalances. Such a system would systematically seek to identify risk factors for financial and fiscal instability. The expanded Stability and Growth Pact, the Six Pack Agreement, which entered into force in December 2011, includes such a warning system. Current plans are to publish ten macroeconomic indicators. If a country's values deviate from established limits, more in-depth studies will be made to examine whether the deviation reflects a precarious imbalance.

In its first review of these indicators for 2010, the Commission finds that Sweden deviates from these limits with its strongly positive trade balance, a decreasing market share for its exports, sharply rising housing prices and extensive private indebtedness. It is not obvious to us that any of these conditions indicate an approaching crisis. We expect the Government to pay attention to the sharp rise in real estate prices and the large private indebtedness.

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[http://ec.europa.eu/economy\\_finance/economic\\_governance/marcoeconomic\\_imbalance\\_procedure/index\\_eu.htm](http://ec.europa.eu/economy_finance/economic_governance/marcoeconomic_imbalance_procedure/index_eu.htm)

**Table 1.4 Macroeconomic imbalances***Per cent*

External imbalances and competitiveness					
	3-year average of the current account balance, as a percentage of GDP	Net international investment position, as a percentage of GDP	3-year change in real effective exchange rate	5-year change in export market share	3-year change in nominal unit labour cost
Limit	-4/+6	-35	±5 & ±11	-6	+9 & +12
<b>Sweden</b>	<b>7.5</b>	<b>-6.7</b>	<b>-2.5</b>	<b>-11.1</b>	<b>6.0</b>
Denmark	3.9	10.3	0.9	-15.3	11.0
Finland	2.1	9.9	0.3	-18.7	12.3
Greece	-12.1	-92.5	3.9	-20.0	12.8
Italy	-2.8	-23.9	-1.0	-19.0	7.8
Portugal	-11.2	-107.5	-2.4	-8.6	5.1
Spain	-6.5	-89.5	0.6	-11.6	3.3
Germany	5.9	38.4	-2.9	-8.3	6.6
Internal imbalances					
	Annual change in real house prices	Private sector credit flow, as a percentage of GDP	Private sector debt, as a percentage of GDP	General government debt, as a percentage of GDP	3-year average of unemployment
Limit	+6	15	160	60	10
<b>Sweden</b>	<b>6.3</b>	<b>2.6</b>	<b>237</b>	<b>40</b>	<b>7.6</b>
Denmark	0.5	5.8	244	43	5.6
Finland	6.8	6.8	178	48	7.7
Greece	-6.8	-0.7	124	145	9.9
Italy	-1.4	3.6	126	118	7.6
Portugal	0.1	3.3	249	93	10.4
Spain	-3.8	1.4	227	61	16.5
Germany	-1.0	3.1	128	83	7.5

Note: When several thresholds are indicated for a variable, they refer to euro area countries and countries outside the euro area. The grey fields indicate values outside the maximum limits that the Commission uses and thus thinks should be monitored.

Source: EU Commission, Alert mechanism report, 14 February 2012.

## 1.5 The EU Fiscal Compact

On 2 March this year, 24 EU member states, including Sweden, entered into an intergovernmental Treaty – the Fiscal Compact fiscal compact (see Box 1.2).<sup>24</sup> The Treaty applies in full to the Contracting Parties whose currency is the euro. Under the Treaty, the budgetary position of the general government of a Contracting Party must be balanced or in surplus. This is the case if the annual structural deficit does not exceed 0.5 per cent of nominal GDP.

With the new requirement, a restriction is also imposed on fiscal policy in good times. A structural deficit of no more than 0.5 per cent in a boom means that the uncorrected net lending is in surplus. This is a step in the right direction compared with the requirement under the Stability and Growth Pact that the deficit in the uncorrected net lending may not exceed 3 per cent of GDP. But it would be desirable for the Fiscal Compact to go further in this direction with a stronger surplus requirement in good times and a greater acceptance of deficits in bad times.

There are practical problems in defining structural net lending, which may make it difficult to implement the Fiscal Compact. Structural net lending cannot be observed but must be estimated based on equilibrium paths for GDP and government revenue and expenditure. There is no generally accepted method for making such estimates. The methods currently used are not always reliable.<sup>25</sup> It remains to be seen how the Contracting Parties intend to solve these problems. This rule should be seen as an attempt to re-establish the original Stability and Growth Pact, which was watered down by the 2005 reform.

However, the surplus target in the Fiscal Compact is more rigid than the Swedish surplus target. The flexibility provided by the Swedish fiscal framework is preferable. A surplus in general government finances equivalent to an average of 1 per cent of GDP over a business cycle implies a lower risk of a procyclical fiscal policy. But this flexibility makes it more difficult to evaluate whether the target has been met in a particular year. It is reasonable to assume that such an evaluation would be an important element in the euro area cooperation.

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<sup>24</sup> European Council (2012).

<sup>25</sup> See the National Institute of Economic Research (2012) p. 56.

The surplus target requirement in the Fiscal Compact is not as ambitious as the Swedish surplus target. Also, the Fiscal Compact lacks the support system found in the Swedish framework: in Sweden, the surplus target is supported by nominal expenditure ceilings, an obligation on the part of local governments to budget for balanced finances and a decision-making process in the Riksdag where the total expenditure level is decided first. The Riksdag then decides how these expenditures will be allocated to each appropriation. But the Swedish framework lacks an automatic correction mechanism or specific sanctions.

It is the Council's view that the Swedish framework is better for Sweden than the Fiscal Compact. As long as Sweden is outside the euro area, there is no need for us to introduce the Fiscal Compact's annual surplus target, any automatic correction mechanism or any sanctions into the Swedish framework.

It is currently not clear that the Fiscal Compact will enter into force. Nor can future revisions of the Compact be excluded. It is also important to stress that the Fiscal Compact does not solve the problems in the European economy. The internal imbalances which have accumulated in the euro area over ten years and their structural causes remain.<sup>26</sup> The Fiscal Compact has no instruments specifically designed for solving these fundamental problems.<sup>27</sup>

We wish to emphasise that it is positive that Sweden has joined the Treaty. Stability and long-term sustainability in government finances in the EU are in Sweden's best interest. If the Fiscal Compact enters into force and is observed, it will probably contribute to the achievement of these objectives, at least in the long run. There is, however, no reason to change the Swedish fiscal framework in the direction of the rules in the Fiscal Compact.

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<sup>26</sup> See Chapter 1 and EEAG (2012), pp. 57-81, and OECD (2012).

<sup>27</sup> But when implementing the Stability and Growth Pact, structural reforms and the effects they may have on general government finances are now to be taken into account when monitoring compliance. See the Council of the European Union (2012), p. 7.

**Box 1.2 The Fiscal Compact**

On 2 March 2012, the Heads of State or Government of all the EU member states except the United Kingdom and the Czech Republic, signed an intergovernmental Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (the Fiscal Compact).<sup>28</sup> The Treaty will apply in full to the Contracting Parties whose currency is the euro. The aim of the Treaty is to strengthen fiscal discipline by introducing more automatic sanctions and strengthened surveillance, particularly by way of the balanced budget rule.

*Important rules in the Fiscal Compact*

Under the Treaty, the budgetary position of the general government of a Contracting Party must be balanced or in surplus. This is considered achieved if the annual *structural deficit* in the general government finances does not exceed the country-specific medium-term objective, as defined in the revised Stability and Growth Pact<sup>29</sup>, with a *lower limit of 0.5 per cent* of GDP. In the event that a country has a net debt significantly below 60 per cent of GDP, the lower limit is a structural deficit corresponding to 1.0 per cent of GDP. If a Contracting Party does not comply with the rule, a correction mechanism will be automatically triggered. The mechanism includes an obligation to implement appropriate measures over a defined period of time. Under the Treaty, the mechanism will fully respect the prerogatives of national parliaments.

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<sup>28</sup> European Council (2012).

<sup>29</sup> See the Council of the European Union (2005a, 2005b).

The euro area member states have an obligation to transpose the balanced budget rule into their national legal systems through binding and permanent, preferably constitutional, provisions. This transposition is to be completed no later than one year after the entry into force of the Treaty. If these rules have not been transposed into a national legal system within the stipulated time frame, the EU Court of Justice may examine the matter and impose sanctions. The Court of Justice is to decide whether the rules have been correctly transposed into the national legal system and the sanction to be imposed on the Contracting Party that has failed to comply. The judgment of the Court of Justice shall be binding. If the country in question fails to comply with the judgment, it may have to pay a fine that is not to exceed 0.1 per cent of its GDP. The amount will be payable to the European Stability Mechanism.

The Excessive Deficit Procedure of the Stability and Growth Pact will be implemented more automatically. The euro area member states commit to supporting the Commission's proposals, except when a qualified majority among them are opposed to the proposal. This means that the reversed qualified majority will be applied in more steps of the excessive deficit procedure than under the rules of the six-pack.<sup>30</sup>

#### *Coordination and convergence*

The euro area Contracting Parties to the Treaty will report ex-ante on their public debt issuance plans to the European Commission and to the Council of the European Union. They will coordinate ex-ante their plans of all major national economic policy reforms among themselves and with the EU institutions.

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<sup>30</sup> The EU Economic governance six-pack-agreement entered into force on 13 December 2011. It has two overarching objectives: (1) to safeguard sustainable public finances, and (2) to reduce microeconomic imbalances and strengthen competitiveness by preventive and corrective measures. The name six-pack refers to the six elements of the agreement: five Regulations and one Directive.

*Governance in the euro area*

The euro area Heads of State or of Governments will meet at least twice a year. The President of the Euro Summits shall be appointed by the euro area member states by simple majority. The other Contracting Parties will be invited to the Euro Summits at least once a year.

*The future*

The Treaty will enter into force as soon as it has been ratified by twelve Contracting Parties whose currency is the euro. According to the text of the Treaty, the Fiscal Compact is expected to enter into force on 1 January 2013. The Treaty will be legally binding like an international agreement and will be open to accession by member states of the European Union other than the original Contracting Parties. The Treaty is legally binding only on the euro area member states and on other member states which choose to join parts of the Treaty. The Treaty does not imply any specific legal obligations for Sweden. The contents of the Treaty will be assessed within five years, at most, of its entry into force and then be incorporated into the legal framework of the European Union.

## 1.6 Assessments and recommendations

The Swedish economy has thus far coped well with the global crisis that began in 2008. Fiscal policy appears to be broadly successful, taking into account the shocks that the Swedish economy has been exposed to. Comparisons with other countries' economic policy experiences in recent years support this conclusion.

In our view, economic policy to date has been in line with the current fiscal framework. Looking to the future, we are of the opinion that fiscal policy is compatible with long-term sustainable finances. Of key importance in coming to this conclusion is the reform of the Swedish pension system that has made it less generous than before.

We think that there is little risk of expenditures exceeding the expenditure ceiling in the next few years. In our opinion, the policy pursued is compatible with the surplus target.

We have a number of reflections on fiscal policy. The Council wants to emphasise the following:

First, we recommend that the Government provide a better explanation of how the scope for new policy initiatives arises and how it is divided between taxes and expenditures over the next few years. Decisions on the expenditure ceiling are of major importance not only for the expenditure level, but also for the level of taxes collected in the future. A clearer account of the relationships between the expenditure ceiling, the surplus target and the taxes collected would make an important contribution to improving fiscal transparency.

Second, the Government has used the economic crisis and the macroeconomic uncertainty as an argument for larger safety margins in fiscal policy. This argument has caused some confusion about whether the Government thinks that the fiscal framework is adequate or if additional safety margins in addition to the surplus target are needed. Regular use of safety margins risks introducing a procyclical element into fiscal policy which can lead to unnecessarily large cyclical swings.

Third, the tax changes announced in spring 2011 were not proposed in the 2012 Budget Bill. The Government referred at that time to the increased uncertainty. In our opinion, the worsened economic situation, if anything, argued in favour of a more expansive fiscal policy. We think that the Government's cautiousness lacked and still lacks a stabilisation policy basis.

Fourth, the global crisis shows the importance of strengthening macroprudential supervision and regulation. A number of steps have already been taken to improve supervision. We recommend that the Government soon decide how macroprudential regulation should be designed to reduce the risk of future financial crises.

Fifth, the Council is of the opinion that the macrofinancial risks in the Swedish economy should not be underestimated. Experience clearly shows that a rapid growth in the volume of credit together with rising real estate prices is often difficult to stop in time, even though there initially are sound reasons in the real economy for this growth.

Last, the Council welcomes Sweden's participation in the EU Fiscal Compact, but sees no reason to change the Swedish fiscal framework in the direction of the Fiscal Compact. The Fiscal



Compact in our opinion is compatible with the fiscal framework. But it remains to be seen how this international agreement will function.

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## 2 Fiscal instruments and analytical methods

The fiscal framework describes the circumstances in which an “active”, i.e. discretionary, fiscal policy should be used. As the surplus target is defined as general government net lending over a business cycle, active stabilisation policy measures are permitted in economic downturns while restraint is exercised in economic upturns.

This chapter examines the possibilities of pursuing an active fiscal policy and what effects such a policy is expected to have. We begin with a summary of recent research in the area. Next we present estimates that the National Institute of Economic Research has made at our request. We study the effects on public finances if the current economic downturn deepens, what consequences different assumptions about the way in which the labour market functions have for determining the scope for new initiatives and the effects of a more expansionary fiscal policy. Then we discuss the estimates of the structural net lending.

### 2.1 Fiscal policy effects

In recent years the economists have shown considerable interest in fiscal policy as a stabilisation policy instrument. The literature has grown rapidly. Various theoretical approaches and empirical methods have been applied. The Council has in previous reports described this research; see Finanspolitiska rådet (2008) avsnitt 1.3, Fiscal Policy Council (2010) Section 2, Beetsma (2008), Dreyer Lassen (2010) and Bergman (2010).

One way of describing the effect of a fiscal policy measure is to calculate a multiplier. The multiplier describes how much the economic activity – most often GDP – changes if there is a one per cent change in public expenditure. A multiplier between 0 and 1 signifies a change in GDP that is less than the change in expenditure while a multiplier exceeding 1 signifies a change in GDP that is more than the change in public expenditure. A negative value for the multiplier means that GDP decreases when public expenditure increases and vice versa.

Empirical research supports the conclusion that the multiplier is positive, i.e. total demand in the economy rises if public expenditure is increased or taxes are reduced. But there is no consensus regarding the size of the multiplier, i.e. if it is more than or less than 1.<sup>1</sup>

In a review of recent studies of the US economy, Ramey (2011) finds that the multiplier is probably between 0.8 and 1.5, i.e. that a one per cent increase in public consumption results in an increase in GDP of between 0.8 and 1.5 per cent. Other studies find somewhat larger values for the multiplier, such as Shoag (2011) who estimates that the multiplier is about 2.<sup>2</sup> The OECD (2011) has estimated the multiplier for a number of other countries and reports multipliers between 0.2 and 1.6. This large variation clearly illustrates the uncertainty under which actual fiscal policy is conducted and the uncertainty of the expected effects.

Another key issue is how much time will elapse before the fiscal policy measures have an impact on the economy. The literature often distinguishes between an inside lag and an outside lag (see Finanspolitiska rådet 2008). The former describes how long a time it takes for the political system to make a decision about a fiscal policy measure. The latter is the time needed from the implementation of the measure to the time when it has its maximum effect.

Many economists' scepticism of fiscal policy measures is based on the risk that the measure will be delayed and in that case fiscal policy will contribute to strengthening cyclical swings instead of reining them in (see Finanspolitiska rådet 2008). Another possibility is that households will choose to save when public consumption increases. Another problem may be that local governments will choose to save their increased central government grants instead of using them for public consumption. Taylor (2011) argues that the large American stimulus package in 2009 did little to help increase public consumption. Local authorities saved a large part of the additional federal grants. Should this happen, total demand will remain unchanged and the fiscal policy will be ineffective.

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<sup>1</sup> Here we study the effects of an unfunded expansion of public consumption. Thus taxes are not raised; rather, funding is provided by an increase in the budget deficit, i.e. by government borrowing. The figures for the multiplier we give are larger than those that apply when there is an expansion of public expenditure funded by raising taxes (the balanced budget multiplier).

<sup>2</sup> Shoag estimates the multiplier for public expenditure funded with the help of an extra return on the state's financial assets so that there are no countervailing pressures from tax increases or a rising debt ratio.

The effects of fiscal policy measures also depend on the type of measures taken and the circumstances under which the policy is carried out. New research in the area shows that the general economic situation is important. Fiscal policy has more effect in an economic downturn, as documented by Auerbach and Gorodnichenko (2012), Shoag (2011) and Holden and Sparrman (2011). Corsetti, Meier and Müller (2010) find that the multiplier is larger during financial crises. Ilzetzi, Mendoza and Vegh (2010) conclude that the multiplier is smaller in countries which (i) have, like Sweden, a floating exchange rate (ii) are, like Sweden, small open economies, and (iii) have a high debt ratio.

What effects fiscal policy has also depend on the monetary policy regime, i.e. on how the central bank acts. Will it try to check a fiscal expansion by raising the key interest rate or support fiscal policy with an unchanged or lower rate? The monetary policy reaction to the fiscal policy is crucial to the total effect on the economy.

There are few estimates of the Swedish multiplier. Under the assumptions in the National Institute of Economic Research model for the Swedish economy, KIMOD, an increase in public consumption is met by a similar response in GDP (the multiplier is about 0.9). If instead taxes are reduced, the response in the model is considerably smaller (a multiplier of about 0.35).

Bergman (2010) studies the effects of fiscal policy measures in Sweden. He finds a multiplier of about 0.4 when there is a reduction in public consumption, with the greatest effect at the time of its implementation. In the same study, the effect of a tax increase is considerably greater, with a multiplier of almost 1 at the time it comes into effect and growing to almost 1.5 over time. The results from these two Swedish studies are both in the same range as the results for other countries. Perotti (2002) finds in his study of five large OECD countries that there is considerable variation both between countries and over time. His estimates show that the effect of an increase in public consumption on GDP is between 0.3 and 1.6 while the effect of tax cuts is between 0 and 1.6.

Based on these studies, we draw the following conclusions:

- Most empirical studies show that the multiplier is positive and thus an increase in public consumption or tax cuts result in an increase in total demand. But there is no consensus regarding the size of the multiplier. It can be both smaller and larger than 1.
- Several empirical studies indicate that fiscal policy has most effect in situations where the need for measures is greatest, i.e. in economic downturns or during financial crises.
- The multiplier is lower in a small open economy with a floating exchange rate like Sweden's. Compensating for this in Sweden is the low debt ratio, which tends to increase the effectiveness of fiscal policy.

## 2.2 Alternative scenarios

At the Fiscal Policy Council's request, the National Institute of Economic Research prepared five alternative scenarios of economic development in Sweden from 2012 onwards.<sup>3</sup> The basis for these scenarios is the forecast presented by the National Institute of Economic Research in the Swedish Economy, December 2011.

In the National Institute of Economic Research forecast, the Swedish economy is expected to be in an economic downturn in 2012. Unemployment is higher than equilibrium unemployment and the output gap is negative. The recovery is expected to be slower than what is normal in an economic upturn as after the debt crisis, the rest of the world is expected to recover more slowly than normal (see the discussion in Chapter 1). The Swedish economy is first expected to return to a neutral resource utilisation – neither economic upturn nor downturn – and unemployment of about 6.5 per cent in 2016.<sup>4</sup>

We study five different scenarios. In the first two, the Swedish economy undergoes a deeper and longer economic downturn than in the base scenario. In one of these scenarios, this is the result of an international downturn. The other studies a domestic demand that

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<sup>3</sup> The estimates are shown in more detail in the Council's publication series *Studier i finanspolitik* (Studies in fiscal policy) (Hjelm and Robling 2012).

<sup>4</sup> Since the forecast in December 2011, the National Institute of Economic Research has published a new forecast in March 2012. The latter has not been used in the alternative scenarios presented below.

could be the result of an adverse development in the housing market due to the bust of a housing bubble. The aim of these simulations is to illustrate how different kinds of crises lead to different developments for the public finances and for the labour market and show whether there is a systematic difference between a domestic and an external generated crisis.

Then there is a scenario with a more positive basic outlook of the functioning of the labour market. Finally, two scenarios with a more expansionary fiscal policy are studied. One case studies a development with higher public consumption and higher public investment, while the other case studies a development with higher disposable incomes for households, which may ensue from lower taxes or higher transfers. The aim here is to illustrate the efficiency of different fiscal policy measures and evaluate how a more expansive fiscal policy affects the public finances in the long run.

### 2.2.1 Deeper and longer economic downturn

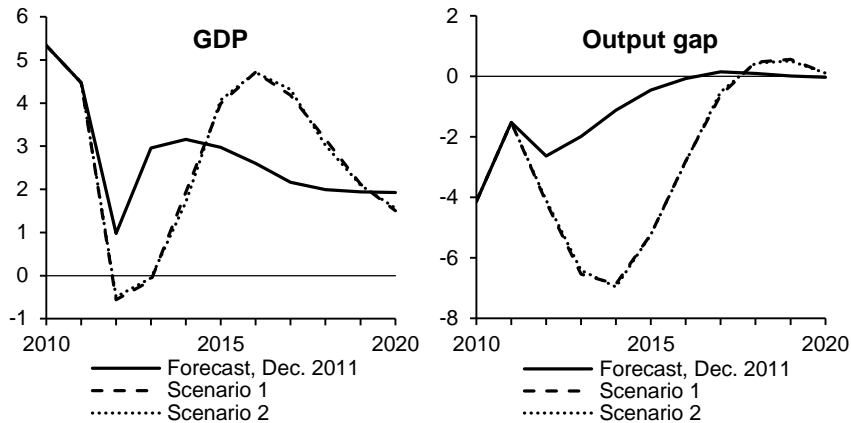
Based on the discussions about more uncertainty and a greater risk of a future economic downturn raised in the 2012 Budget Bill, two scenarios that are considerably worse than what was expected in December 2011 are studied.

Our two scenarios (designated scenario 1 and scenario 2 in the figures below) have in common that the downturn studied is about as severe as those in the two large crises Sweden has experienced in the last twenty years. In these crises, the output gap was very negative, in the range of 7–8 per cent of potential GDP. Moreover, annual growth was negative in the periods 1991-1993 and 2008-2009.

Against this background, in our first two alternative scenarios we study economic downturns where the output gap widens to -7 per cent and where GDP growth is negative in 2012 and 2013 (see Figure 2.1). This figure shows the change in GDP in the left graph while the right graph shows the output gap. After the downturn, the output gap narrows at a faster pace than in the base scenario, reaching a neutral level in 2020. The difference between the two scenarios is that in the first, the downturn is caused by a deterioration in the international economic outlook (scenario 1) while the economic downturn in the other is domestically generated (scenario 2). Both scenarios result in the same output gap of -7 per cent.

**Figure 2.1 Growth and output gap in an external (scenario 1) and a domestic (scenario 2) economic downturn**

*Left figure annual percentage change, right figure per cent of potential GDP*



Sources: Statistics Sweden and National Institute of Economic Research.

As scenario 1 illustrates an external downturn, Swedish export growth will be more negative than if the downturn is caused domestically (see Figure 2.2). The left figure shows export growth while the right shows the change in exports in the base forecast and the two scenarios. There is almost no difference between the 2011 forecast by the National Institute of Economic Research and scenario 2. Note that these effects are estimated on the basis of GDP growth and the output gap. The figure shows how much exports must fall to cause the GDP growth in Figure 2.1.

In scenario 1, exports decline by almost five per cent annually for two years in a row. As a result of a shock like this, exports will first reach the 2011 level in 2015 – and it will not be until 2020 that exports return to the same level predicted in the base scenario (see Figure 2.2).

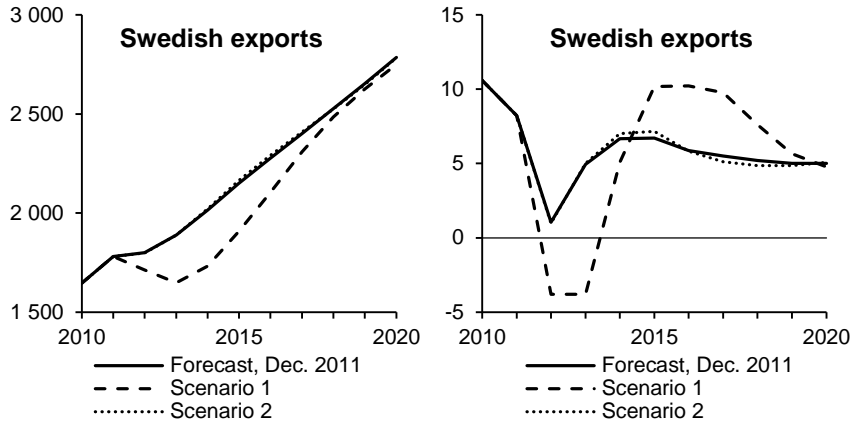
In the scenario with a domestic shock, global demand is assumed to be the same as in the base scenario. Instead domestic demand is assumed to fall. Household consumption is assumed to decline in 2012 and 2013, which could be due to uncertainty in the housing market and falling housing prices (see Figure 2.3). Investment in housing is also assumed to be lower than in the base scenario in 2012 and 2013. After that, the economy will return to its long-term growth



path and is expected to reach the same level as in the base scenario about 2020.

**Figure 2.2 Swedish exports in an external (scenario 1) and a domestic (scenario 2) economic downturn**

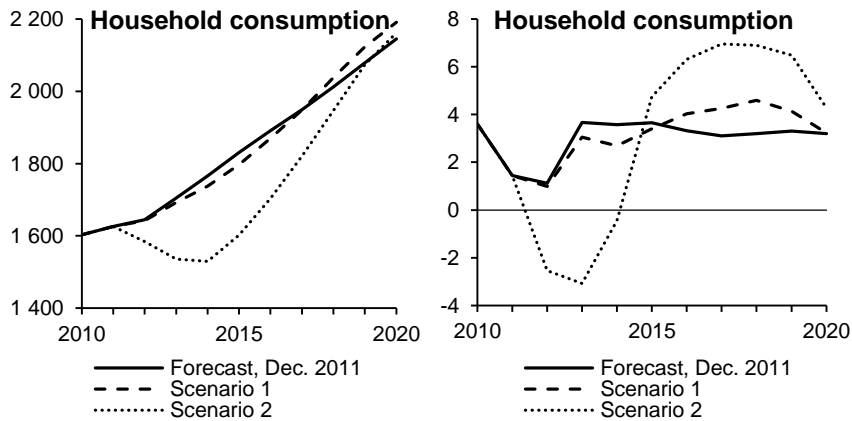
*Left figure SEK billion, right figure annual percentage change*



Sources: Statistics Sweden and National Institute of Economic Research.

**Figure 2.3 Household consumption in an external (scenario 1) and a domestic (scenario 2) economic downturn**

*Left figure SEK billion, right figure annual percentage change*



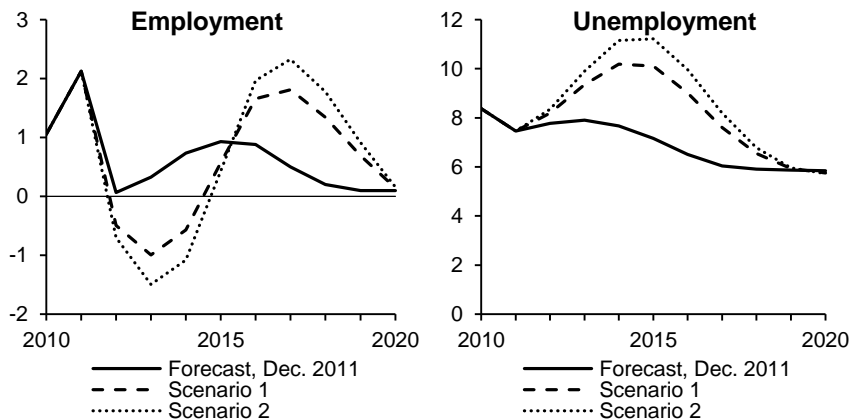
Sources: Statistics Sweden and National Institute of Economic Research.

The adverse shocks studied – one export driven and the other consumption driven – are designed to have the same effect on GDP

and the output gap. Employment, unemployment and public finances, however, are affected in different ways in the two scenarios. These effects are shown in Figure 2.4.

**Figure 2.4 Labour market developments in an external (scenario 1) and a domestic (scenario 2) economic downturn**

*Per cent*



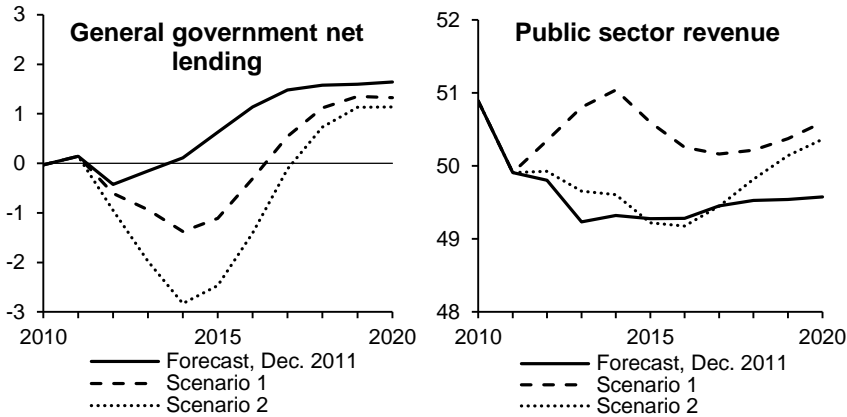
Sources: Statistics Sweden and National Institute of Economic Research.

A domestic downturn has greater impact on employment and unemployment than an export driven downturn. Average productivity in the export sector is higher than in the industries that produce for the domestic market. Thus, an equally large drop in GDP is matched by a smaller decrease in employment – and correspondingly, a smaller increase in unemployment – if the decrease primarily concerns the export industry than if the shock has its origin in domestic conditions. The difference between the two scenarios is at most about 1 per cent of the labour supply. Unemployment reaches its highest level of over 10 per cent and over 11 per cent respectively, compared to the highest level in the base scenario, which is 8 per cent.

In both scenarios, the public finances are weakened compared with the base scenario (see Figure 2.7). But the decrease in general government net lending is larger in the scenario based on a domestic shock than in the scenario based on a shock in the export market.

**Figure 2.5 General government net lending and public revenue in an external (scenario 1) and a domestic (scenario 2) economic downturn**

*Per cent of GDP*



Sources: Statistics Sweden and National Institute of Economic Research.

In the base scenario, public finances will be almost in balance in 2014. In the alternative scenarios, general government net lending is lowest in 2014. If the shock comes from domestic conditions, net lending will fall more quickly than if the shock comes from external sources. Net lending in the first case is approximately 3 percentage points lower – equivalent to about SEK 100 billion – than in the base scenario and 1.5 percentage points lower than if the shock in the economy comes from the export market.

A fall in GDP because of an export shock does not affect employment to the same extent as a domestic shock in household consumption – nor does it have as much impact as a broad downturn in all sectors. Therefore, tax bases, household consumption and total payroll increase in relation to GDP when the shocks are external. Public revenue as a percentage of GDP thus rises in the scenario studying an international downturn.

When the shock stems from domestic conditions, revenue as a percentage of GDP declines until 2016. The low consumption causes product and production taxes and thus VAT revenue to decline as a percentage of GDP.

Public expenditure growth is similar in both scenarios. Public consumption growth in real terms is assumed to be the same as in the base scenario. The higher unemployment contributes to higher

public expenditure. But counteracting the higher unemployment related expenditures in the scenario with the domestic shock is slower wage growth, which restrains public expenditure.

The two scenarios studied above are based on assumptions that would cause a severe economic crisis in Sweden on a par with the 1990s crisis. We do not consider any of the scenarios as a likely outcome. But these scenarios are relevant as they illustrate a course of events for which the Government may want to be prepared.

We note that an international downturn has less impact on Sweden's public finances than a downturn that has domestic causes. The most important explanation is that the decline in employment is less when the export market falls and thus tax revenue does not go down as much as if the crisis has domestic causes. A temporary decline in exports has fewer problematic repercussions in the economy than a temporary decline in domestic demand. But a lasting drop in exports may create more serious problems.

When the economic downturn is deepest, the output gap is -7 per cent. In that case there will be a deficit in the public finances of a maximum of 3 per cent of GDP. A deficit of this size does not conflict with the surplus target. Deficits at these levels in a severe economic downturn are within the bounds expected when fiscal policy is designed to achieve a surplus averaging 1 per cent over a business cycle. A crisis that justifies a more prudent policy must have developed differently than those described here. Larger deficits probably require financial market developments similar to those of the 1990s banking crisis. The scenarios studied here do not accommodate such developments.

The public finances are much more sensitive to a domestic downturn than an international downturn. Net lending in the public sector decreases twice as much as in the former case. An estimate of cyclically adjusted net lending should thus take into account developments in different sectors of the economy. These are discussed in the section on the structural net lending estimate below.

### 2.2.2 Different assessments of labour market performance

The Government's estimate in the 2012 Budget Bill of GDP and the number of hours worked in equilibrium up to 2015 is more positive

than the estimate made by the National Institute of Economic Research in December 2011. The Government expects unemployment to fall to a lower level of equilibrium unemployment and average hours worked to rise to a higher level in long-term equilibrium.

GDP in a neutral cyclical situation – potential GDP – is estimated as the number of hours worked in equilibrium multiplied by the productivity level. The number of hours worked in equilibrium in turn consists of three parts: labour force participation in equilibrium, the level of equilibrium unemployment and average hours worked. The difference between the Government's and the National Institute of Economic Research's estimates of equilibrium unemployment turns out to be 1.4 percentage points in 2015. The National Institute of Economic Research's estimate then approaches the Government's. The Government also expects that the average hours worked will rise to a level 0.9 per cent higher than that estimated by the National Institute of Economic Research

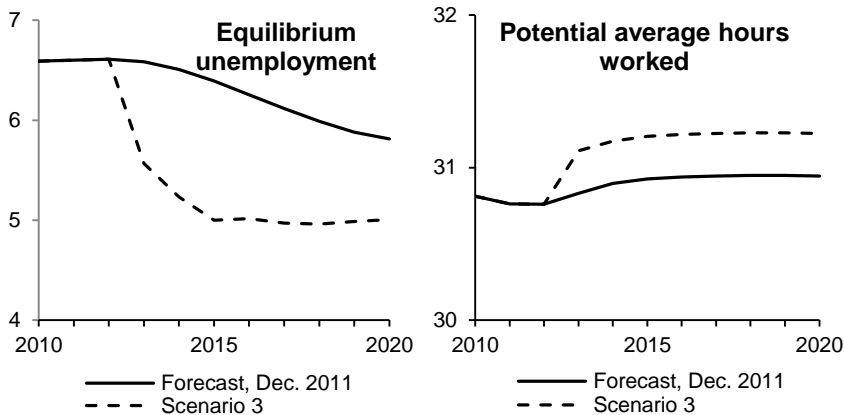
We do not take any position on which forecast is more credible. The difference between various estimates of equilibrium unemployment is generally substantially larger than the difference between the Government's and the National Institute of Economic Research's estimates.<sup>5</sup> The confidence interval for individual estimates can be to more than plus/minus 2 percentage points. However, we are interested in the effects that a possible miscalculation of the labour market has on the forecast of other variables. We therefore examine how more positive labour market developments affect public finances. Figure 2.6 shows the assumptions made in scenario 3 regarding equilibrium unemployment and average hours worked compared with the December 2011 forecast by the National Institute of Economic Research.

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<sup>5</sup> See, for example, Ministry of Finance (2011), p. 34 f.

**Figure 2.6 Different assumptions about equilibrium unemployment and average hours worked**

*Left figure per cent, right figure hours per week*



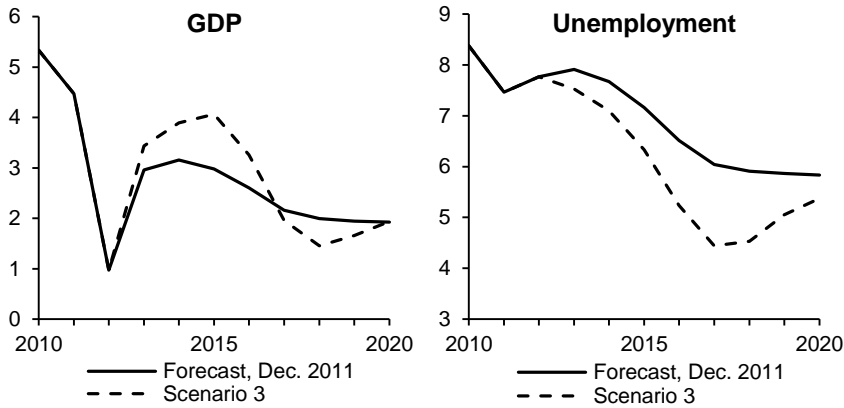
Sources: Statistics Sweden and National Institute of Economic Research.

When the Government's more positive labour market outlook – with lower equilibrium unemployment and more hours worked in equilibrium – is introduced into the National Institute of Economic Research model, the result is lower unemployment and higher output in coming years (see Figure 2.7). For a given initial actual unemployment, the more positive assumptions in the model lead to lower wage demands, resulting in lower wages. This in turn makes it possible for the Riksbank to lower the interest rate more than would otherwise have been the case, as inflationary impulses will be lower. Household consumption increases rapidly with more hours worked, lower unemployment and a lower interest rate. Investment also increases more rapidly in the next few years.

The more positive assumptions about the labour market are accompanied by a more positive outlook of general government net lending (see Figure 2.8). The stronger public finances lead to lower government debt, which also leads to lower interest expenditure. The surplus in the public finances will at most be about 1 percentage point higher when the Government's assumptions about the labour market are entered into the National Institute of Economic Research model.

**Figure 2.7 GDP and unemployment under different assumptions about equilibrium unemployment and average hours worked**

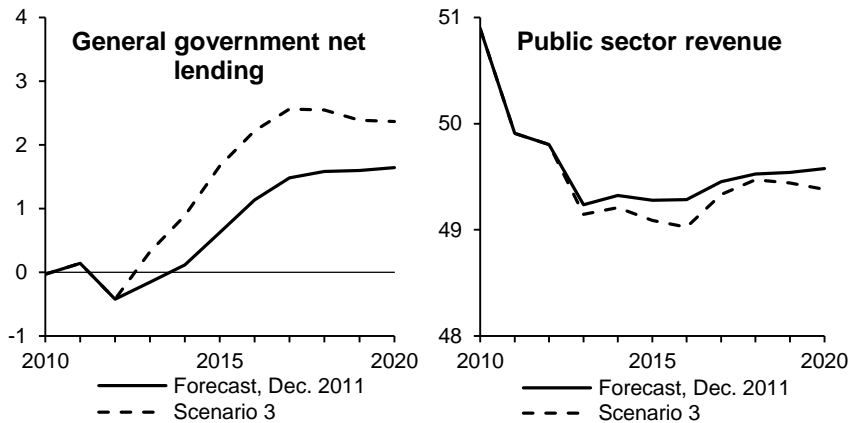
*Left figure annual percentage change, right figure per cent*



Sources: Statistics Sweden and National Institute of Economic Research.

**Figure 2.8 Public finances under various assumptions about equilibrium unemployment and average hours worked**

*Percentage of GDP*



Sources: Statistics Sweden and National Institute of Economic Research.

In this scenario, we have examined the impact of more positive assumptions about underlying conditions in the Swedish labour market. As an alternative to the National Institute of Economic Research estimate, we have entered the Government’s outlook for unemployment and average hours worked in equilibrium. All in all,

the Government estimates that Sweden's potential GDP is 2 per cent higher in the long-term equilibrium than the National Institute of Economic Research estimate.

The difference in the assumptions results in different estimates of general government net lending. The difference is approximately 1 per cent of GDP a year over the forecast period. This should be considered a significant difference. Miscalculating the underlying labour market developments can be a source of error in estimating the scope for new initiatives.

It is the Council's opinion that the Government's more optimistic view of equilibrium unemployment does not threaten long-term sustainability in the public finances, as it is regularly updated. Possible forecast errors will thus lead to an adjustment of the estimate of equilibrium unemployment, which in turn forms the basis when establishing the scope for new initiatives. For this reason, we do not see any risk to the long-term sustainability of the public finances in this particular connection.

### 2.2.3 More expansive fiscal policy in 2013-2015

The Government stresses the importance of a safety margin in fiscal policy, referring to greater uncertainty and the risk of a global downturn.<sup>6</sup> We examine in two scenarios the consequences of pursuing a very expansive fiscal policy. In one scenario (scenario 4) public expenditure is increased by SEK 30, 50 and 30 billion in 2013, 2014 and 2015 respectively. These temporary increases are divided equally between public consumption and public investment. In the second scenario (scenario 5) household disposable income in the model is strengthened by the same amount, which is possible via lower taxes and higher transfers. Other assumptions about the global economy and the labour market are unchanged vis-à-vis the base scenario. In both scenarios, government net lending is considerably lower than in the base scenario.

These two more expansive scenarios lead to a stronger macroeconomic outlook compared with the base scenario (see Figure 2.9). Capacity utilisation more rapidly reaches a balance, reflecting the positive fiscal multipliers in the National Institute of Economic

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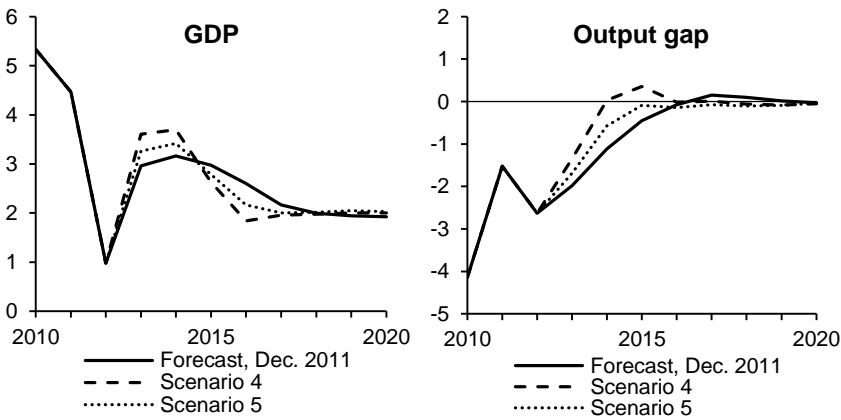
<sup>6</sup> See Chapter 1 for a more detailed discussion of the safety margin in fiscal policy.



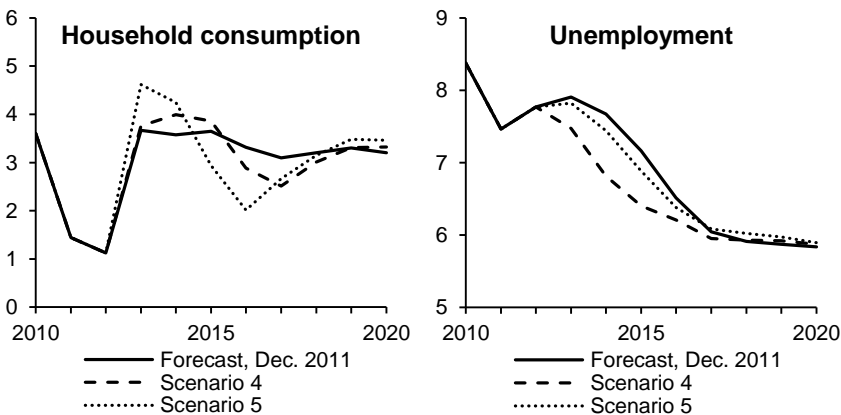
Research model. It can also be noted that GDP rises more rapidly in the scenario with higher public consumption and public investment than in the scenario in which household finances are strengthened directly. Public consumption and public investment affect GDP directly while households save some part of the additional resources. Furthermore, the import content in household consumption is higher than in public consumption.

**Figure 2.9 Scenarios with a more expansive policy, increased public expenditure (scenario 4) and lower taxes (scenario 5)**

*Left figure annual percentage change, right figure per cent of potential GDP*



*Left figure annual percentage change, right figure per cent*



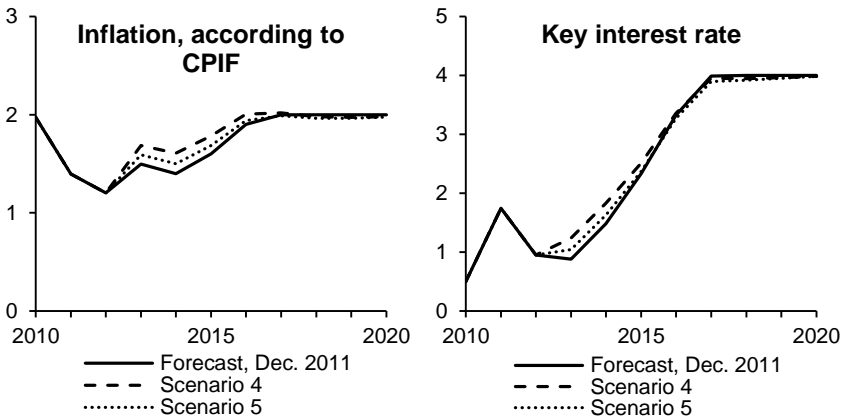
Sources: Statistics Sweden and National Institute of Economic Research.

Unemployment falls more rapidly when public investment and consumption increase than when household finances strengthen. This reflects the leakage to savings and imports. But it also reflects that an increase in public production is matched by an increase in public employment – as average hours worked and productivity growth are as stated in the base scenario. Unemployment is lower in the two scenarios with a more expansive fiscal policy than in the base scenario in the coming years.

A more expansive policy, with falling unemployment and rising capacity utilisation, leads to higher wage growth and higher inflation (see Figure 2.10). Therefore, in both scenarios the Riksbank is expected to raise the interest rate more rapidly than in the base scenario – which counteracts the effects of the fiscal expansion. The Riksbank is expected to react more strongly when public expenditure rises than when household incomes strengthen.

**Figure 2.10 Inflation and the key Riksbank rate with a more expansive policy, higher public expenditure (scenario 4) and lower taxes (scenario 5)**

*Per cent*

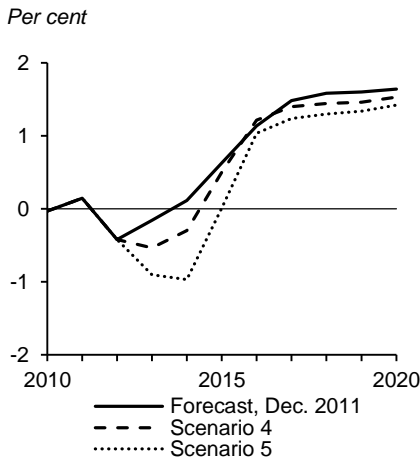


Sources: Statistics Sweden and National Institute of Economic Research.

In both scenarios, the public finances are clearly weaker than in the base scenario (see Figure 2.11). The lower general government net lending leads to higher interest costs and thus permanently weaker public finances. In both scenarios, net lending comes to 1 per cent in 2016. The output gap will close in 2014 when the expansion is due to public consumption and public investment, and 2015 when the

expansion is due to household disposable income. At that time, net lending is zero or negative. We therefore think that the two fiscal expansions are too large-scale to be compatible with the surplus target. However, we cannot, in light of the scenarios studied, dismiss a somewhat more expansive fiscal policy than that currently pursued.

**Figure 2.11 General government net lending with a more expansive policy, higher public expenditure (scenario 4) and lower taxes (scenario 5)**



Sources: Statistics Sweden and National Institute of Economic Research.

Based on the above calculations, we come to the following conclusions. We note that an international downturn has less impact on Sweden’s public finances and on the labour market than a downturn with domestic causes. The substantial deteriorations in the economy studied do not result in government deficits which are obviously incompatible with the surplus target or result in a risky accumulation of debt. An overly optimistic view of the functioning of the labour market may be of considerable importance for the estimate of the scope for new initiatives. An expansive policy with higher public consumption and higher public investment would presumably have more impact on GDP and employment than an expansion aimed only at strengthening household disposable income. At the same time, there is a risk that too expansive a fiscal policy will threaten long-term sustainable public finances.

## 2.3 The structural net lending estimate

Structural net lending is a measure of what net lending in the general government sector would be in a normal economic environment, i.e. a situation in which neither tax revenues nor public expenditures deviate from the normal for cyclical reasons. In an economic downturn, tax revenue automatically declines while some public expenditures, primarily for unemployment, increase. In an economic upturn, the reverse is true.

Structural net lending plays an important role in the fiscal framework. The surplus target requires public finances to show a surplus of 1 per cent of GDP on average over the business cycle. Structural net lending is one of two forward-looking indicators used by the Government to evaluate whether the target is being met. The change in structural net lending in the public sector is also usually used as a measure of the fiscal policy stance.

### 2.3.1 The Government's current calculation method

Structural net lending (as a percentage of GDP) is calculated by the Government as follows:

$$\text{structural net lending} = \text{actual net lending} - \text{automatic stabilisers} - \text{extraordinary tax revenue} - \text{one-off effects}.$$

One-off effects and extraordinary tax revenue are excluded so that structural net lending will not vary with temporary factors. One-off effects may, for example, be changes in rules that temporarily yield changes in tax revenue. In economic upturns, extraordinary tax revenue results when sharply rising asset prices lead to increases in tax revenue via the taxation of investment income and capital gains. The automatic stabilisers are derived as follows:

$$\text{automatic stabilisers} = \text{budget elasticity} \times \text{output gap}.$$

The output gap is the difference between actual GDP and potential GDP, i.e. GDP when capacity utilisation is normal. If the output gap is negative, then GDP is below its potential level and the economy is in a downturn. A positive output gap implies an upturn. Budget

elasticity measures the strength of the automatic stabilisers, i.e. how much net lending changes automatically in response to cyclical changes. The budget elasticity indicates how many percentage points government net lending as a percentage of GDP decreases if GDP falls by 1 per cent.

The Ministry of Finance assumes a budget elasticity of 0.55, which means that actual net lending decreases by 0.55 per cent of GDP if GDP falls by 1 per cent and vice versa. This estimate is based on OECD calculations. By using information on current tax rules and on how incomes are distributed across the population, the Government has estimated the cyclicity of different taxes: personal income taxes, social contributions, corporate taxes and indirect taxes. On the expenditure side, estimates of how expenditures for unemployment benefits vary with the business cycle have been made. These estimates have subsequently been summed for a measure of the total budget elasticity.

In our 2009 report, we updated these calculations using the same method. According to these calculations, budget elasticity was 0.53 in 2009, i.e. very close to the OECD estimate. From an international perspective, 0.55 is a high elasticity. According to the OECD, Sweden's elasticity is higher than all other OECD countries, most of which are in the interval 0.35-0.50. Sweden's high budget elasticity implies that the automatic stabilisers are considerably stronger in Sweden than in most of the other countries. There is thus less need for discretionary fiscal policy to influence the business cycle.

### 2.3.2 Covariation with the business cycle

Structural net lending covaried closely with actual net lending, i.e. varied with the cyclical situation, until the recent crisis. There may be different reasons why this covariation arises, although structural net lending is a measure of what net lending would have been in a normal cyclical situation. First, budget weakening measures lead to a lower structural net lending; second, severe economic downturns may lead to permanent lower employment and thus lower potential GDP. This in turn gives a lower output gap so that a larger part of the actual deterioration in net lending is regarded as structural.

Another possible reason for the positive covariation between the structural and the actual net lending are measurement errors in

structural net lending. Such measurement errors may occur if the output gap is underestimated and consequently the cyclical adjustment is smaller than it should be. Measurement errors may also be due to underestimating the cyclical effects on tax revenue.<sup>7</sup>

According to both the Ministry of Finance and the National Institute of Economic Research estimates, structural net lending has covaried with the business cycle to a lesser extent in the recent crisis than earlier in the 2000s. From 2000-2002, actual net lending fell about 5 percentage points and structural net lending about 3. In the recent crisis, actual net lending fell slightly less (about 4 percentage points) even though this economic downturn was considerably deeper. Structural net lending, however, increased almost 1 percentage point from 2007 to 2010 according to Ministry of Finance estimates. According to the National Institute of Economic Research, structural net lending was relatively unchanged. The weaker covariation with the business cycle is probably because the most recent crisis primarily affected the export sector. This has less impact on tax revenue. The lower covariation should thus not be interpreted as an indication of a structural change in the economy.

### 2.3.3 Weaknesses in the current calculation method

In our opinion, the Government's current method of calculating structural net lending has significant weaknesses. Its biggest weakness is that the cyclical adjustment is directly linked to the output gap and not to the growth in the individual tax bases. Thus errors occur when the tax bases and the output gap vary in different ways. The situation in 2009 is a good example of this. The financial crisis led to a sharp downturn in exports and thus in GDP. As the downturn in GDP was expected to be temporary, this led to a large negative output gap. In the estimate of structural net lending, a significant negative cyclical adjustment of tax revenue was thus made, with the result that the

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<sup>7</sup> In an analysis of selected EU countries for the period 1999-2007, Morris and others (2009) find that tax revenue varies procyclically to a greater extent than that normally assumed to be automatic. This is particularly true of taxes linked to profits, which vary considerably over the business cycle. Sancak and others (2010) get similar results in an empirical analysis of panel data for a large number of countries, 84 countries in all, both industrialised and developing. They show that the effective tax rate, measured as tax revenue as a percentage of the tax bases, is procyclical. Thus, for example, VAT revenue in an economic upturn increases in percentage terms more than private consumption. One explanation for this is that the composition of consumption changes with the business cycle. In an upturn a larger percentage of consumption consists of goods and services with high VAT than in a downturn.

actual deficit of almost 1 per cent of GDP was estimated to be equivalent to a structural surplus of 3 per cent. But this figure is misleading as the decline in exports had only a limited effect on tax revenue.

Alternative methods, where tax revenue instead is adjusted in relation to cyclical swings in the large tax bases (household consumption expenditure, payrolls, etc.), i.e. disaggregated methods, showed completely different results. The method used by the National Institute of Economic Research gave a structural surplus of 1.5 per cent and the ECB estimate showed a structural surplus of 0.2 per cent of GDP (2011 Spring Fiscal Policy Bill, pp. 197-198). The methods used by the National Institute of Economic Research and the ECB thus likely give a better measure of the “true” cyclically adjusted net lending by taking into account the composition of GDP.

One problem related to the current method is that tax revenue can vary considerably for reasons other than changes in GDP. In times of rapidly rising property prices, a boom in housing construction and strong corporate profits, tax revenue from such sources as capital income and capital gains may temporarily be much higher than justified by the economic situation.

The Ministry of Finance takes extraordinary tax revenue like this into account in its estimates of structural net lending by deducting the difference between the actual revenue from the taxation of capital income and 0.9 per cent of GDP (which is considered the level of revenue in a normal economic situation). This is a crude method that does not take any possible underlying trends in the tax base’s share of GDP into account. The National Institute of Economic Research’s and the ECB’s more disaggregated methods – which are also based on frequent trend estimates of tax bases – provide a better basis for dividing tax revenues into a structural and a cyclical component.

One particular problem with the current method is that the error that results by linking the estimate with the output gap is largest when the economy is exposed to a large shock where the different tax bases are affected in different ways by the change in GDP. In years when there are large shocks, it is particularly important for the indicator to give a correct picture of cyclically adjusted net lending.

Another problem with the Ministry of Finance’s calculation method is that the cyclical adjustments do not sum to zero over time. Estimates of the output gap do not intrinsically need to sum to zero

over time.<sup>8</sup> But for an estimate of structural net lending to be used in evaluating the surplus target, the output gap should sum to zero. If the sum of the output gap is negative over time, average actual net lending will be lower than structural net lending. Thus there is a risk that average actual net lending may be negative even though average structural net lending is positive.

There is an advantage if the structural net lending is estimated based on cyclical indicators (output gap or tax base gap) that sum to zero over time. The National Institute of Economic Research indicator does not meet this requirement but the ECB's does (2011 Spring Fiscal Policy Bill, pp. 197-198). This issue was discussed in detail by the working group in the Ministry of Finance responsible for a review of the surplus target in 2010, but the group came to the conclusion that the Government did not have any reason for changing its calculation method.<sup>9</sup>

Another problem is that the estimates do not take the balanced budget requirement for local governments into account. Local governments must budget for higher revenues than costs, and any deficit has to be remedied within three years. If local governments have to cut their expenditures when tax revenue falls in an economic downturn to meet the balanced budget requirement, then the automatic stabilisers will be weakened. In that case, it is no longer true that the budget elasticity is approximately equal to the consolidated general government's total expenditure share. Rather, it must be adjusted for local government expenditure which local governments finance themselves through taxation.

We developed these ideas in the Council's 2011 report and estimated that when the effects via the local government balanced budget requirement are taken into consideration, budget elasticity may decline substantially – by about 20 percentage points.<sup>10</sup> The conclusion was that the OECD and the Government probably overestimate the strength of the automatic stabilisers, particularly for economic downturns that are deep and prolonged.

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<sup>8</sup> There may be occasions when economic downturns are more severe and/or more prolonged than economic upturns, justifying a deviation from zero over time.

<sup>9</sup> Ministry of Finance (2010), pp. 203-209.

<sup>10</sup> Elasticity is estimated to decline from 0.55 to 0.35.



### 2.3.4 Better calculation methods are essential

As evident in the 2011 Spring Fiscal Policy Bill, the Government agrees that there are problems in the estimates of structural net lending. The Government commented on problems with both the aggregated method not capturing changes in the composition of the tax base and the risk of structural net lending being misleading as an indicator for the surplus target if the deviations do not sum to zero over time. However, the Government does not yet consider there to be sufficient reason to change the current method.

The Government maintains that the method of estimating structural net lending is much like those used by the EU Commission, the OECD and the IMF, all of which base cyclical adjustment on the output gap. These organisations, however, have to estimate structural net lending for many countries, often with limited access to data. There are also important differences in the tax structure in different countries and therefore a simple method that makes international comparisons possible is preferable for the international organisations. But these considerations are not relevant to the method used in any one country.

Both the ECB and the National Institute of Economic Research use disaggregated methods for their estimates of structural net lending. The same is true of the Ministry of Finance in Norway (2011). There are, however, major differences in the methods. The National Institute of Economic Research and the ECB methods are based on actual net lending and endeavour to adjust it for the economic situation (tax base gap). The Norwegian method is based on a direct estimate of the underlying levels for the large tax bases. One advantage of this method is that it is simpler to take structural changes in the tax system into account in estimating the underlying levels.

We raised the issues surrounding these estimates in the Council's 2011 report and stated our opinion that the Government needed to improve its calculation methods. The Government responded in the 2012 Budget Bill that there is no generally accepted method of estimating structural net lending and that all methods have their strengths and weaknesses. The uncertainty in the calculations is one of the reasons why the Government uses several indicators to follow up the surplus target. The Government also pointed out, as it

likewise did in the 2011 Spring Fiscal Policy Bill, that there is currently work under way analysing different methods of estimating structural net lending.

In our opinion, it is important that the Ministry of Finance improve the calculation methods for structural net lending and take the above mentioned weaknesses into account. The method should be disaggregated and the cyclical adjustments should sum to zero over time. The calculations should also include a concrete and thorough assessment of whether tax revenues are temporary or permanent and thus of what is structural and cyclical. A method like this could be an adjustment of the method used by the National Institute of Economic Research or the ECB, or the method used by the Norwegian Ministry of Finance. The Government should also analyse whether the balanced budget requirement for local governments affects budget elasticity. If so, it should also be taken into consideration in the estimate of structural net lending.

## 2.4 Assessments and recommendations

At the Council's request, the National Institute of Economic Research has estimated the effects on public finances if Sweden were to experience a severe financial crisis on a par with the 1990s crisis. The results indicate that an international downturn has less impact on Sweden's public finances than a downturn with domestic causes.

The Government uses in different contexts the argument that an extra safety margin is needed in case the European crisis worsens. The Council's estimates indicate that Swedish public finances are not very sensitive to a prolonged and deeper European crisis.

The Council also thinks that the Government's slightly more positive labour market outlook compared with that of the National Institute of Economic Research leads to a more positive view of the public finances. The Council does not take a position on which labour market forecast is more credible, but in its opinion, the underlying labour market developments may be an important source of errors when the scope for new initiatives is established.

The Council's estimates also show that a policy significantly more expansive than that announced by the Government for the next few years could result in a threat to the surplus target. But we cannot rule out a fiscal policy somewhat more expansive than that pursued today.

It is the Council's opinion that the Government should develop better methods of calculating structural net lending. The method currently used gives misleading results. The method should be disaggregated and be based on a measure of the output gap that on average is zero.

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## 3 The long-term debt ratio

### 3.1 A surplus target versus a debt target

The Government in its Communication, The fiscal framework (Ministry of Finance 2011), gives four reasons for the surplus target. First, the target should contribute to long-term sustainable finances. Second, the surplus target should contribute to “sufficient margins so that large deficits can be avoided in economic downturns even with a policy that actively works to counter economic downturns. A surplus target helps provide a buffer that makes it possible to counter sharp downturns in the economy without the risk that the increase in the public debt will be unsustainable”. Third, the surplus target should contribute to an equal distribution of resources between generations. Last, the target should contribute to economic efficiency by creating better conditions for smoothing the tax take over time.

From an economic perspective, it is important to note that these reasons are related to the level and growth of the public debt rather than the budget balance at a particular point in time. Long-term sustainable finances imply that the public debt can be financed and will not get out of control. The surplus target creates a government net wealth that makes deficit spending possible in an economic downturn – without calling the sustainability of the public finances into question. The intergenerational distribution of resources in terms of net wealth is summed up well by the debt and the assets that one generation leaves to the next. When expenditures and tax bases vary over time, an even level of taxation is possible if the debt can rise and fall without becoming so large that it becomes unacceptable to the financial markets.

Against this background the Government should provide a clearer discussion of the relationship between the surplus target and public debt development. The surplus target’s current formulation will over time result in a stable debt level with a specific expected adjustment path. The question the Government should answer is whether this level fills the need for a stabilisation policy buffer, provides sufficient intergenerational redistribution and to the extent desired makes it possible to smooth tax revenues over time. In the same vein, there should be a discussion of whether the adjustment path to the long-term debt level is well calibrated.

The Fiscal Policy Council is, however, aware that there are also direct arguments for a surplus target. The EU Stability Pact forbids a deficit in the public finances in excess of 3 per cent of GDP. The EU Fiscal Compact thus sets a limit on the size of the public deficit. To satisfy this requirement and at the same time have sufficient room for manoeuvre in stabilisation policy, a surplus target may very well be required in normal times.<sup>1</sup>

### 3.2 Comparison with an inflation target

In the 2011 Budget Bill and elsewhere, the Government has argued that the surplus target should not be interpreted as a debt target. In Ds 2010:4, it stresses that a debt target is inappropriate because it would result in future fiscal policy being affected by previous differences between the surplus target and the actual outcome.

A comparison can be made with monetary policy where the surplus target is compared to an inflation target while the debt target resembles a price level target. If monetary policy focuses on an inflation target, previous deviations between actual inflation and the inflation target will not affect the forward-looking policy. In contrast, with a price level target a relationship arises between previous deviations and the forward-looking policy. If inflation previously was higher (lower) than the target, then monetary policy will focus on compensating for this with higher (lower) inflation.

The argumentation and the analogy with monetary policy would be valid if previous deviations from the surplus target did not result in compensation *ex post*. This, however, is not the case.

The surplus target is formulated in terms of government net lending and thus includes financial charges and revenue. In practice, there is thus a direct link between previous differences between the surplus target and the actual outcome. A past deficit means higher interest costs now, which must be financed by reducing other expenditures or increasing revenue. In other words, previous

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<sup>1</sup> It is worth noting in this context that the one per cent target appears reasonably well calibrated. Both the National Institute of Economic Research and the Ministry of Finance find that the output gap in Sweden was approximately -7 per cent in the 1990s crisis and in the latest crisis. With the Government and the OECD expecting a budget elasticity for Sweden of 0.55, a deviation like this means that the public finances are expected to weaken by about four percentage points. If a sharp downturn does not give rise to decisions on new savings, a surplus of about 1 per cent of GDP is thus required in normal times, if the Stability Pact's provisions are expected to be honoured under all circumstances.

deviations from the surplus target necessitate adjusting the primary balance, which does not include interest costs and financial revenue. Current fiscal space is thus dependent on previous deviations from the target.

If the surplus target were instead formulated in terms of primary net lending – public revenue and expenditure excluding financial items – then past deviations would not affect fiscal space in the present. Unlike monetary policy, this would, however, result in unsustainable growth as public net debt would not follow a controlled path.<sup>2</sup>

### 3.3 The surplus target and the public debt

The link between historical deviations and the forward-looking surplus target, which is implied by previous deviations that affect the financial net costs of the central government debt and thus the primary balance, is sufficient for the public debt to develop towards a long-term level when expressed as a percentage of GDP.<sup>3</sup>

In the simplest model, the debt ratio  $d$  will approach  $(-f)/g$  where  $f$  is the surplus target and  $g$  is the growth rate in nominal GDP. With a surplus target of 1 per cent and a nominal growth rate of 5 per cent, the net debt would thus tend to be stabilised at the level -20 per cent  $(-0.01/0.05)$ . A negative net debt means that the public sector has a net wealth.

The surplus target is defined as mentioned in terms of general government net lending. In practice this measure has shortcomings. It is of particular interest that the appreciation of important parts of the asset side in the public portfolio, including shares in government owned companies, are not included in net lending. This is instead reported as a residual.

In the first decade of the 2000s, general government net wealth has gone from around zero to about 25 per cent of GDP. In the Fiscal Policy Council's 2008 report, it is clear that the most important explanation for the rapid growth of net wealth is that the residual has been strongly positive. As shown by Frycklund (2011) and SNS (2012) it can be expected that the residual is systematically positive

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<sup>2</sup> An inflation target leads to an uncontrolled path for the price level.

<sup>3</sup> The public sector consists of the central government, the municipalities and the county councils, and the old-age pension system.

and thus contributes to a more rapid increase in net wealth than that implied by net lending. The size of the underestimation is related to the size of government *gross financial assets*, as it is from these that the unrecorded valuation change is derived.

A more relevant measure of net lending should include appreciation of financial assets – but this is not the case now. This means that general government net lending in an economic context can be said to be underestimated. With a gross financial wealth of about 70 per cent of GDP, about half of which is in the form of shares, this is a significant underestimation. Since the surplus target was introduced, the residual has averaged about 2 per cent of GDP. A continued high residual is not unreasonable.

As stated above, about half of the gross financial assets are currently made up of shares. If 4 percentage points of the total return to shares is given in the form of appreciation, this contributes  $0.04 \times 0.35 = 1.4$  per cent to the residual. Actual net lending is thus 1.4 percentage points higher than the measure reported. If this extra surplus is added to the official surplus target of 1 per cent, the total is 2.4 per cent. With a four per cent increase in value, the value of the government owned shares increases at approximately the same pace as GDP. Without sales or new purchases, the residual could then continue to average 1.4 per cent. With a nominal growth of 5 per cent, general government net wealth will then converge towards  $0.024/0.05 = 48$  per cent rather than towards the 20 per cent calculated above.<sup>4</sup>

The link between the surplus target and the public debt is unclear – as the development of the debt depends largely on a residual that is not dealt with in the fiscal framework. This makes forecasts of the future growth in general government net wealth more difficult. Likewise, the lack of clarity makes a discussion of what constitutes an appropriate surplus target more difficult.

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<sup>4</sup> These rough calculations are close to those reported in Frycklund (2011) and SNS (2012), which make assumptions to the effect that the residual along a balanced growth path is 1.2 per cent of GDP. We assume in the estimate that the distribution by asset type in the government portfolio does not change.



### 3.4 Adjustment of general government net wealth over time

Regardless of the level of the actual surplus target (including systematic appreciation), a surplus target formulated in terms of net lending also implies a debt target. A key aspect that needs more analysis is how rapid the adjustment to the long-term balance point is and if this rate of adjustment is reasonable. Let us begin with a simple numerical example which shows both where the long-term balance point in the debt ratio is and how rapid the adjustment will be.

It can be shown that for a given surplus target  $f$ , the debt ratio  $d$  will change over time using the following expression.

$$d_{t+1} - d_t = -g_{t+1}(d_{t+1} - d^*) - d^*(g_{t+1} - g) - (1 + g_{t+1})(f_{t+1} - f) - f(g_{t+1} - g)$$

Here  $d_t$  is the debt ratio in period  $t$ ,  $g$  represents average nominal GDP growth,  $g_{t+1}$  is the actual growth rate between  $t$  and  $t+1$ ,  $f$  is the surplus target and  $f_t$  actual net lending.  $d^*$  is the long-term balance point and is expressed, as previously mentioned, by  $-f/g$ . The third term on the right side shows that the debt ratio falls if actual net lending exceeds the surplus target. The fourth term shows that the debt ratio falls if the growth rate is higher than average.

**Box 3.1 Debt ratio growth**

The debt carried forward for the year  $t$  is denoted by  $D_t$ , and the surplus in the same year by  $F_t$ . Then:

$$D_{t+1} = D_t - F_{t+1}$$

GDP in the year  $t$  is denoted by  $Y_t$  and grows during the year by  $g_t$ . Thus:

$$Y_{t+1} = Y_t(1 + g_{t+1})$$

We define the debt ratio  $d_t = \frac{D_t}{Y_t}$  and the surplus target as a percentage of GDP  $f_t = \frac{F_t}{Y_t}$ . The debt ratio thus grows as follows:

$$d_{t+1}(1 + g_{t+1}) = d_t - f_{t+1}(1 + g_{t+1})$$

Which we express as

$$d_{t+1} - d_t = -g_{t+1}d_{t+1} - f_{t+1}(1 + g_{t+1})$$

Along a balanced growth path, growth,  $g$ , and the surplus target as a percentage of GDP,  $f$ , are constant. We define the debt ratio along a balanced growth path,  $d^*$ , as  $d^* \equiv -\frac{f}{g}(1 + g)$ , which follows from the above equation.

Now we add  $gd^* + f(1 + g) = 0$ , and also add and subtract  $g_{t+1}d^*$  on the right side:

$$\begin{aligned} d_{t+1} - d_t &= -g_{t+1}d_{t+1} + g_{t+1}d^* + gd^* - g_{t+1}d^* + f(1 + g) \\ &\quad - f_{t+1}(1 + g_{t+1}) \\ &= -g_{t+1}(d_{t+1} - d^*) + d^*(g - g_{t+1}) - f_{t+1}(1 + g_{t+1}) \\ &\quad + f(1 + g) \end{aligned}$$

Last we add and subtract  $f(1 + g_{t+1})$  in the above expression. From this follows the expression used in the chapter:

$$\begin{aligned} d_{t+1} - d_t &= -g_{t+1}(d_{t+1} - d^*) - d^*(g_{t+1} - g) \\ &\quad - (1 + g_{t+1})(f_{t+1} - f) - f(g_{t+1} - g) \end{aligned}$$

If the surplus as a percentage of GDP,  $f$ , and the growth,  $g$ , are constant, then:

$$d_{t+1} - d_t = -g(d_{t+1} - d^*)$$

This can be expressed as:

$$d_{t+1} - d_t = -\frac{g}{1+g}(d_t - d^*)$$

This tells us that the debt ratio is approaching the level to be found along a balanced growth path at a pace that depends on the growth rate and the deviation from the balanced level.

From the first term on the right side, we can see that if the growth is equal to the average and the surplus target has been met, the change in the debt ratio will be 0 if  $d_t = d^*$ . If instead the debt ratio deviates from its long-term balance point  $d^*$ , then the percentage  $g/(1+g)$  of the deviation between the actual debt ratio and the long-term balance point will disappear, given that there is average growth and the surplus target has been met. This means that the adjustment will be made at an average pace (approximately) determined by the nominal GDP growth. Hence with a nominal growth rate of 5 per cent, about 5 per cent of the deviation is lost each year, which means that half of the deviation disappears in less than 14 years.<sup>5</sup> If a sharp downturn with a banking crisis were to lead to an increase in the central government debt by 50 per cent of GDP, for example, there would after 14 years thus be a government debt which deviates from the long-term balance point by 25 per cent after about two business cycles.

Let us now discuss how general government net wealth has actually grown since the end of the 1990s crisis. We choose 1997 as the start year when the general government net debt had reached

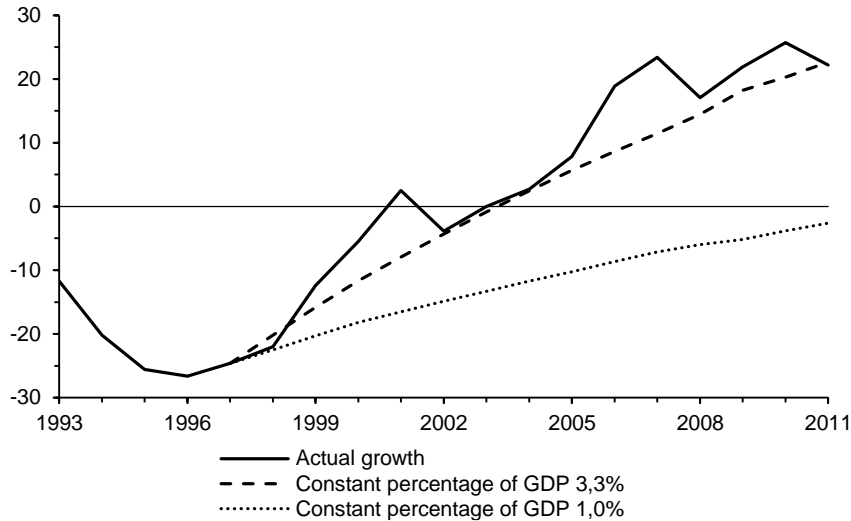
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<sup>5</sup> A simple calculation rule is that the halving rate of something that decreases by  $x$  per cent a year can be estimated as approximately  $70/x$  years. Similarly, something that is growing by  $x$  per cent a year will double in approximately  $70/x$  years. This calculation rule functions as long as  $x$  is not too large.

24.6 per cent of GDP and had stopped increasing.<sup>6</sup> From 1997 to 2011, nominal GDP grew at an annual rate of 4.3 per cent. With this rate of growth and a surplus in net lending of 1 per cent a year, the long-term balance point will be a net wealth of  $0.01/0.043=23.3$  per cent. The adjustment rate is slower than in the above calculation. The difference between the long-term balance point and the net wealth in 1997, the start year, was nearly 50 per cent of GDP.<sup>7</sup>

**Figure 3.1 General government net financial wealth 1993–2011**

*Per cent of GDP*



Note: The two dashed curves show how general government net wealth would have grown if net lending including appreciation (the residual) had been 1 per cent and 3.3 per cent of GDP respectively each year. The solid line shows the actual growth.

Sources: National Institute of Economic Research, *The Swedish Economy*, December 2011 and own calculations.

In Figure 3.1 the lower dotted curve shows how net wealth would have grown if net lending had been 1 per cent and the residual zero each year.<sup>8</sup> In the 14 years between 1997 and 2011, the distance to the balance point would have been almost halved. The net debt would

<sup>6</sup> The data source for the estimates in this section is the National Institute of Economic Research (2012).

<sup>7</sup>  $23.3+24.6$  per cent.

<sup>8</sup> We use the actual growth in nominal GDP for each year in the estimate.

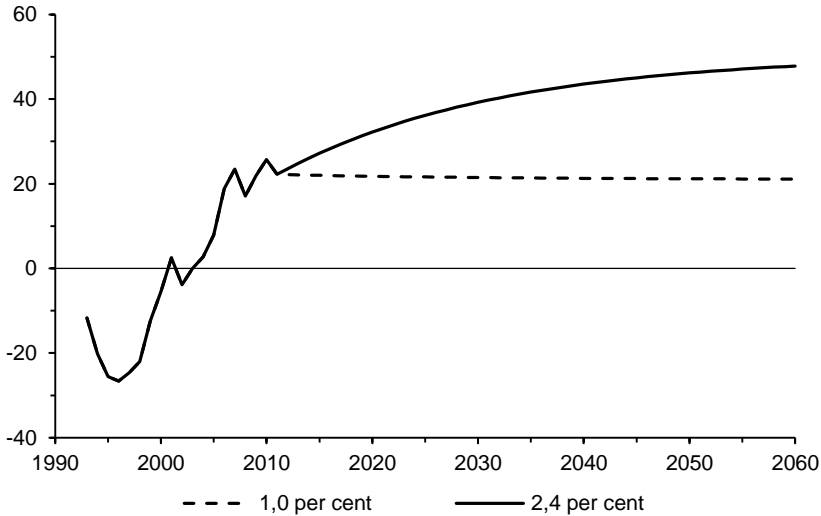
have been near zero.<sup>9</sup> In practice the accumulation of net wealth has taken place much more rapidly. This is shown by the solid curve that ends with an actual net wealth in 2011 of 22.2 per cent of GDP. It is easy to calculate that if net lending including the residual had been 3.3 per cent of GDP each year from 1997, then net wealth would also have been 22.2 per cent in 2011. Net wealth had in that case grown as shown in the upper dashed curve. Actual net lending as it is measured in the fiscal framework has averaged close to the surplus target of 1 per cent during this time. Figure 3.1 therefore shows that the rapid accumulation of wealth can mainly be attributed to asset appreciation outside the fiscal framework, that is to say, to the residual.

It is presumably not realistic to expect that the residual, which mainly consists of the appreciation of government financial assets, will in the future, be as large as it has been during the time covered in Figure 3.1. Above we described a simple calculation example where the residual was expected to be 1.4 per cent. In Figure 3.2 we show how general government net wealth would grow henceforth if the surplus target of 1 per cent is met, the residual is 1.4 per cent and nominal GDP grows by 5 per cent each year. This is shown in the continuous line (2.4 per cent).<sup>10</sup> If instead the residual (unrealistically) is assumed to be 0, the growth would be indicated by the dashed line (1 per cent). In this case, the current net wealth would be stable.

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<sup>9</sup> The 1998 Budget Bill also stated on page 18 that with the surplus target, “general government net debt may disappear by 2010”.

<sup>10</sup> The continuous line shows actual growth through 2011.

**Figure 3.2 General government net financial wealth to 2060***Per cent of GDP*

Note: The continuous line shows the actual growth through 2011. Thereafter the continuous line shows the growth if the surplus target is met, the residual is 1.4 per cent of GDP and nominal GDP grows by 5 per cent each year. The dashed line is based on the same assumptions except that the residual is assumed to be 0 per cent from 2012.

Sources: National Institute of Economic Research, The Swedish Economy, March 2012 and own calculations.

### 3.5 A rapid accumulation of net wealth was of value

Experience from the current European debt crisis clearly shows that too high a public debt is associated with very large macroeconomic risks. First, a high public debt ratio makes the public finances very sensitive to increases in the interest rate and decreases in growth. Second, a high government debt creates uncertainty about the will and the ability to meet repayment commitments. Thus high government debt can lead to an uncontrolled increase in the risk premium on government borrowing. This lies behind the current European debt crisis.<sup>11</sup> The Government evidently is fully aware of these risks.

<sup>11</sup> See Chapter 1 for a discussion of the European debt crisis.

In the Fiscal Policy Council's opinion, it is quite possible that the effects of the latest financial crisis could have been more serious for Sweden if general government net wealth had been 30 percentage points lower.<sup>12</sup> Even though a smaller net wealth would not have led to increasing risk premiums on Swedish government bonds, it seems reasonable that if the government finances had been that much weaker, this would have limited the stabilisation policy's scope. This could have affected the possibilities of acting if Swedish banks had suffered large losses in the Baltic States or if property prices had fallen in Sweden as they did elsewhere.

The value of a high net wealth should be weighed against the costs of the rapid increase in net wealth. Structurally warranted tax cuts or expenditure reforms could for example have been brought forward. The outcome of such a comparison is difficult to estimate. Our opinion is still that the higher net wealth has been of substantial value. As we show above, however, this accumulated net wealth has not been created as a direct consequence of following the surplus target. Instead it has primarily resulted from the appreciation of general government financial assets.

### 3.6 Should government net wealth grow?

Recent experience suggests that it is an advantage if general government net wealth accumulates more rapidly than directly implied by the surplus target, given that two criteria are met:

1. Net wealth is so low to begin with that it could constitute a constraint on fiscal policy if for example a banking crisis occurred and
2. The macroeconomic situation allows for a somewhat tighter fiscal policy.

The first of these criteria is in all likelihood not met at present. Current net wealth, about 20 per cent of GDP, is in our opinion a reasonable size to be a functioning buffer even in the event of a very serious domestic crisis. We thus conclude that continuing a rapid accumulation of net wealth is not called for in the current situation or

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<sup>12</sup> The importance of net wealth for stabilisation policy has not been fully explained. It is too early to decide what importance should be assigned to net wealth and to gross wealth in this context. We do not rule out the possibility that net wealth and its composition have a separate and significant importance.

for a number of years to come. Nor can the macroeconomic situation be said to require a tighter fiscal policy than what the surplus target entails. In the 2012 Spring Fiscal Policy Bill, however, there are estimates indicating that the accumulation of net wealth will continue and even accelerate in the long run.

General government net wealth is an important factor in assessing fiscal sustainability. We can establish that the growth in net wealth has mainly been driven by the residual. The residual's growth over time currently implies considerable arbitrariness in fiscal policy. Consideration needs to be given to how to better manage and monitor the growth of general government net wealth within the fiscal framework. This does not mean that we think the current definition of net lending should be changed. But a report of the Government's forecast of the residual's growth would seem to be a minimum requirement for analysing whether the stabilisation policy stance is reasonable.

After a possible future crisis – with the same consequences for the public finances as the 1990s crisis – again conducting a more rapid debt reduction than that provided by the one per cent target may be justified. The Government should clarify whether the public can expect an adjustment of this kind if it were to be necessary in the future. It is not necessarily advantageous to lay down rules on how a more rapid adjustment like this would take place. The costs of a higher savings target are highly dependent on cyclical developments. One alternative is therefore to make it clear that a temporarily high surplus target may be considered in the event that net wealth after a crisis is alarmingly low. Greater clarity in this regard can improve the public debate on fiscal policy.

A strict interpretation of a surplus target implies that the speed of adjustment to the long-term balance point for the debt is symmetrical. Deviations up and down diminish at the same pace. But it is not obvious that this symmetry is the best.

The costs of deviations presumably increase rapidly when nearing a debt level that creates confidence problems and rising interest rates.<sup>13</sup> As mentioned, this can create troublesome constraints for fiscal policy already before there is a confidence problem. There is therefore reason to believe that a debt reduction after a crisis should

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<sup>13</sup> Cf. Bi and Leeper (2011).



be carried out relatively rapidly – more rapidly than what an appropriate surplus target in normal times would entail.

The corresponding costs are difficult to conceive in a situation in which the government debt has become lower (or the net wealth greater) than the long-term debt level. In that case the argument ensuing from tax smoothing would if anything favour a slower recovery.

### 3.7 General government gross debt

In the above analysis, no distinction has been made between the gross and the net debt ratio. Under the simplified but unrealistic assumption that different financial assets are perfect substitutes and that tax efficiency, intergenerational equity and the need for sufficient fiscal space are the fundamental reasons for the surplus target level, the relevant measure of the debt is in all likelihood the net debt.

But in practice different financial instruments are not perfect substitutes. Risk and liquidity vary between different asset classes and thus the composition of general government financial assets, given a specified net debt, has economic significance.

It is important to maintain a market for Swedish government bonds. The reason for this is that there is a need for a safe and liquid asset class with sufficient volume to facilitate financial transactions. A liquid market for Swedish government bonds also makes it possible for the state to rapidly increase its borrowing if necessary.

The total volume of assets on the government balance sheet may be considerably larger than the net wealth. Despite a net financial wealth of about 20 per cent of GDP, government debt is about 40 per cent. As general government financial assets by definition must be equal to net wealth plus the debt, government ownership is substantial. The large balance-sheet total in the government portfolio of financial assets and debt justifies a more transparent portfolio policy.

Several important issues here have for the most part not been investigated. Let us first discuss issues on the debt side.

The first question is how strong the argument is for an active market for Swedish government securities. Given that such a market is needed, how large should it be and what combination of maturities is optimal? Here there are probably important lessons to be learned

from international experience in countries such as Denmark and Switzerland. Even Norway has a government debt despite a very large general government net wealth.<sup>14</sup> The situation is different in Sweden, however. For example, the monetary policy regimes differ in Sweden and Denmark (which has pegged its currency to the euro). This justifies an analysis of conditions in Sweden. The analysis can provide answers to the issue of a reasonable *minimum level* for the government gross debt.

The second question concerns what a reasonable *maximum level* of government debt is. The basic argument here is whether the level of gross debt, given a particular net debt, can also impose undesirable constraints on short-term fiscal policy in an economic downturn. Several arguments indicate that this may be the case.

First, some government financial assets have low liquidity – particularly in economic downturns. Selling such an asset to finance fiscal policy measures may thus be difficult or costly. Net wealth is thus not an adequate indicator of the fiscal space.

Second, a high gross debt may create a political temptation to use different means – default, renegotiation or inflation – to reduce the debt burden.

Third, a balance sheet with large total assets may cause greater financial vulnerability. Macroeconomic or other shocks may affect the asset and debt sides asymmetrically. The financial consequences of asymmetric shocks like these depend on the total balance-sheet. The consequences for the public finances depend on how this risk is correlated to other variations in government revenue and expenditure. If the value of the financial portfolio rises when government expenditure increases and revenue falls, this then helps stabilise public finances. If instead the portfolio's value tends to co-vary with the government budget balance, then a large balance sheet vulnerability in the public finances will increase.

A government portfolio with illiquid assets and a large gross debt may cause exposure to self-fulfilling “runs”. If a government needs to renew a large stock of debt and it is not expected to be able to honour its repayment commitments, this expectation can be self-fulfilling. But a country's access to its own central bank which is able

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<sup>14</sup> For the Norwegian experience and evaluations, see Norges Bank (2012) and the Ministry of Finance in Norway (2012).

to meet such a panic-driven increase in liquidity demand reduces the likelihood of such runs.

The Government has cited stabilisation policy considerations for transactions that change the gross debt without changing the net debt.<sup>15</sup> This indicates the importance that the Government attaches to the gross debt. We have given a number of possible justifications here for taking such a position. But that the gross debt in itself should currently be seen as worrisome is not one of them. On the contrary, the gross debt is now at such a low level that it can reasonably be increased without fiscal sustainability being called into question. But the Government should work out a clearer approach to choosing an appropriate gross debt. Both the highest and the lowest level of gross debt should be justified.

### 3.8 Financial assets management

As stated above, the current fiscal framework together with the fact that there is, at least for now, a large outstanding gross debt implies that the state will hold financial assets of considerable value. The principles governing their management need to be more clearly explained and be the subject of public discussion.

Current public discussion of state ownership is primarily conducted from a purely political perspective that is about the value in principle of government ownership or its costs. Other aspects of the question of portfolio choice appear to have been entrusted to financial market experts in government agencies and to the Government Offices. Because of the large balance-sheet total in the government financial portfolio, the portfolio policy may have significant budgetary and macroeconomic consequences and therefore requires additional analysis. There needs to be a deeper discussion on the extent to which the state should pursue an active portfolio policy, for example, over the business cycle.

A traditional view is that an information advantage is needed in order for it to pay to deviate from a balanced portfolio – i.e. to try following an index. With this view, no active portfolio policy is

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<sup>15</sup> The Minister for Financial Markets states, for example, in a speech at the IF Metall and Aktiespararnas seminar on 2 February 2011 that “economists are increasingly talking about the risks associated with balance sheets that are too big. This applies to households, to companies and to states. The Government is aware of this risk and therefore wants to reduce the state’s balance sheet” (Norman, 2011).

needed as the state normally does not have any information advantage. To the extent that it had, such insider trading would not be acceptable.

Another way of seeing this is based on the idea that the large price fluctuations observed on financial assets are due to large variations over time in the price of risk. Over time different actors may rate the risk differently. This may justify varying the composition of the state's financial wealth over time. At a time when the state does not have any liquidity problems but the private sector does (for example, during the financial crisis), it could be appropriate for the state's holdings of high-risk assets to increase. Central banks the world over, including Sweden's, have forcefully pursued a policy of this kind. Total assets on central banks' balance sheets have multiplied due to central banks' assumption of high-risk assets with low liquidity from banks and other financial institutions and have provided them with more liquid assets (money) instead.

Much suggests that this policy has been very valuable and may even have prevented a global depression. One obvious problem is that the boundaries between fiscal policy and monetary policy become blurred when central banks assume major credit risks on taxpayers' behalf. A discussion of the division of responsibilities with regard to this type of policy is important. It is important in this context to discuss what role the Swedish National Debt Office The should have.

The interest on Swedish government bonds is currently very low. This reflects the high demand for safe investments. Investors with a higher risk appetite may also be liquidity constrained. This may indicate that the expected return to shares is high. In a situation like this, solvent investors without liquidity problems should not sell their assets but rather increase their holdings. This argument can also be used for the Swedish state which thus on extremely favourable terms can increase its debt and use it to buy low valued, higher risk assets.

One particular complication is that large public wealth is to a large extent owned via companies. These companies' investment strategies have major consequences for the growth in the wealth owned by the public. It is not possible to express an opinion on whether a particular part of this ownership is managed using good principles without seeing the entire asset portfolio. If the risks in one part of the portfolio covaries with other parts, they amplify each other and

can thus reduce the portfolio's value. There thus needs to be a comprehensive analysis and investment strategy, which obviously imposes particular demands on public ownership in for-profit companies. To the extent that the balance-sheet total keeps on growing, this is all the more important.

We do not think that for-profit companies should be given broader objectives than they have now. It is basically a question of how the balance between risk and expected return in the public assets should be determined.

In conclusion, we want to emphasise that the Fiscal Policy Council does not have answers to these questions on how the state portfolio policy should look. It is not our task to prescribe this. But we consider it our duty to point out that the current policy leads to the accumulation of large state financial assets. The larger these assets are, the stronger the argument is for a thorough analysis and discussion of their management.

### 3.9 Public investment

For economic growth in the long run, the growth of the public capital stock is probably more important than the financial capital stock. Since the 1970s, gross public investment as a percentage of GDP has been on a downward trend.

In previous reports the Fiscal Policy Council has pointed out how little is known about how the public capital stock develops. The Government has begun work to better monitor its development. In the 2012 Spring Fiscal Policy Bill, there is an appendix that shows developments for public sector investments in real capital, capital stock and net wealth. The Government stresses that this “should be seen as a first step in a considerably expanded reporting of public sector investments, real capital stock and net wealth in the Spring Fiscal Policy Bill”. This is a very important step in the Council's opinion.

Better reporting makes it possible to conduct a more constructive discussion about the development of the public capital stock. Annual reporting, which should thus be seen as a first step, of course provides no answer to the question of whether the investments are adequate and have had the right focus. But this reporting can form the basis for an analysis of these issues. Further information should

be compiled whereby the Government in future bills describes the existing capital stock and the investments that have been made are economically justified.

In the 2012 Spring Fiscal Policy Bill, there is also a discussion of the issue of whether there should be targets for public investment and/or for capital stocks. There are theoretical arguments supporting the view that problems like those that tend to create a deficit bias in the public finances may also create underinvestment in public capital stock. If the public investment costs are paid now while revenues come in the future, a tendency to a myopic political view may lead to underinvestment. Political mechanisms may also lead to the implementation of economically unprofitable projects if they benefit more influential voter groups but are paid for by other less influential groups. In addition to leading to inappropriate investments, this may lead to too much public investment.

Regardless which of these policy failures is most relevant, they may in principle justify a rules system. In one sense the arguments for a rules system for public investment are similar to those that form the basis for the fiscal framework. There are, however, important practical problems. Compared to a rules system for net lending, it is considerably more complicated to set up operational targets that sufficiently correspond to the long-term target of implementing only economically justified investments. A target for the public investment level can obviously lead to a problem whereby skewed investment grows worse.

As the 2012 Spring Fiscal Policy Bill also makes clear, it is the Government's view that there should not be a quantitative target for public investment. The first argument mentioned is that the level of public investment does not appear to be too low. Mostly international comparisons are given as arguments for this position. The Fiscal Policy Council shares the view that an aggregated target for the investment level and capital stock should *not* be introduced.

However, we do not share the view that it has been shown that the investment volume and the capital stock's level are economically optimal. Even though international comparisons are valuable, they should be supplemented with more analysis.

It is perhaps more important to note that we still know very little about whether the investment direction including the trade-off between maintenance and new investment is economically

favourable. The 2012 Spring Fiscal Policy Bill states, for example, that road capital has increased only slightly since 1993 while railway capital has increased about 150 per cent. The fact that this kind of data is presented is obviously a stimulus for discussion and analysis of the direction of public investment. Even though there is currently no basis for proposing any form of rules system for public investment, we do not exclude such a proposal in the future. One possibility could be that the Government presents an economic analysis of the direction of investments implemented and those planned.

Nor does the Fiscal Policy Council see any convincing argument that the fiscal framework itself causes too small or too skewed an investment volume. An effect like this could possibly occur in an adjustment phase during an accumulation of public net financial wealth. In the 2012 Spring Fiscal Policy Bill, the Government cites roughly the same argument. The Government shows that public investment as a percentage of GDP declined in the latter part of the 1990s but increased after that.

In conclusion, we want to mention that it is important to the extent possible to control the timing of public investments over the business cycle. We are aware that many infrastructure projects have too long a planning and implementation horizon to make adjustment to the economic situation possible. Likewise, many projects depend on capital and machinery, the use of which does not covary appreciably with Swedish business cycles. Still we think that it may be possible to do more advance planning of smaller infrastructure projects – not least repair and maintenance – in order to implement them when demand in the economy is relatively low and the economic costs are thus also low.

### 3.10 Assessments and recommendations

Under the current surplus target, general government net wealth as a percentage of GDP should be stabilised at approximately the current level, i.e. about 20 per cent of GDP. In practice, a residual consisting of future appreciation of publicly owned financial assets has been the most important factor in the growth of net wealth. There is reason to believe that this residual will on average continue to be positive and will thus lead to a further rise in public sector net wealth. We

recommend that the Government clarify its view of how public sector net wealth should develop in future – and what role the residual should play.

In our opinion, the current level of net wealth is not unreasonable. But a further accumulation of net wealth may not be justified by the need for safety margins in an economic downturn. If the current surplus target is observed, it is unlikely that the public net debt would be alarmingly high, even after a deep and long economic downturn.

We recommend that the Government carry out a more thorough analysis of the question of how large a net wealth is desirable. Such an analysis would imply a clear explanation of the reason for public net wealth. Thus far these reasons have mainly been indirectly conveyed in the argumentation for a surplus target.

It is our view that the costs of a crisis in public finances such as that we currently see in the euro area is considerable greater than the possible costs associated with too large a public net wealth. This should justify an asymmetric adjustment so that a large government debt leads to a more rapid adjustment to the long-term stable level of net wealth.

We recommend that the Government explain the principles used in managing the public finance portfolio more clearly. The fiscal framework leads to a public sector accumulation of a considerable net wealth. The Government should more clearly specify how this net wealth is to be managed. Key issues are how large the gross debt should be, whether more active portfolio management should be used and whether the principles for managing public ownership via for-profit companies can be precisely defined. The importance of explaining these issues increases with the growth in the public assets portfolio.

In a special appendix to this year's Spring Fiscal Policy Bill, the Government discusses public investments in real capital and developments in general government real capital stock. This is a significant first step towards better analysis of whether the volume and focus of public investments is economically appropriate. The Fiscal Policy Council shares the Government's view that a quantitative target for public investment should not be introduced. But we do not share its opinion that it has been established that the volume and focus of government real capital investments are



advantageous from an economic perspective. Such a conclusion requires further analysis.

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## 4 Generational accounting

The Fiscal Policy Council has, ever since its first report in 2008, recommended that the Government develop and clarify its analysis of the long-term sustainability of the public finances. One of our recommendations has been a report on generational accounts. Generational accounts are increasingly being used internationally to analyse the long-term sustainability of the public finances.

Generational accounts make it possible to estimate the future “implicit” public debt. The implicit debt is estimated as the present value of the public sector’s future net payments to current and future generations. With a long-term sustainable fiscal policy, the sum of the implicit public debt and the current debt is zero. These conditions are usually called the public sector’s intertemporal budget constraint. If this is not satisfied, the government debt will increase indefinitely.<sup>1</sup> A current public debt must therefore sooner or later be offset by future surpluses.

Simulation models based on generational accounting make it possible to analyse issues concerning the distribution of taxes and public expenditure between generations. One such question is whether the current generation will leave behind a public debt that has to be paid by future generations. Another issue is how different generations are affected by major reforms, for example, a comprehensive pension reform or tax reform.

To illustrate these issues more concretely, we have commissioned a background report on generational accounting for Sweden. The report is the work of a research institute at the University of Freiburg in Germany.<sup>2</sup> This institute has previously carried out similar analyses of fiscal sustainability in Norway, Germany and elsewhere. Section 4.1 contains an overview of the calculation method. Section 4.2 summarises the report’s contents. In conclusion, our estimates and recommendations are presented in Section 4.3.

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<sup>1</sup> Provided that the inflation-linked interest is higher than economic growth.

<sup>2</sup> Hagist and others (2012).

## 4.1 Sustainability calculations

### 4.1.1 Calculation method

Long-term sustainability estimates for the public finances are now frequently found in many countries' official documents. For example, all EU member states report such calculations in their annual stability and convergence programmes.<sup>3</sup> These reports are evaluated by the European Commission.

Sustainability calculations can be designed in different ways. Common to most programmes is that they are based on very long-term projections of public sector (sometimes only state) revenue and expenditure. In the Spring Fiscal Policy Bills, the Government provides calculations to the end of this century. In many cases the perspective is even longer.

The generational accounts for Sweden described in the background report are based on relatively detailed descriptions of public sector revenue and expenditure by age group.<sup>4</sup> These age profiles are assumed to be unchanged over the projection period. Where there is no data set for the age distribution or an age distribution is not relevant, a uniform distribution is used. This applies, for example, to expenditures for public services such as police and military defence, which are distributed using the same amount per person regardless of age.<sup>5</sup> In some cases, the age profiles are also distributed according to gender.<sup>6</sup>

The real value per person of benefits and taxes is projected using the general productivity growth in the economy. Consequently the real standard for a particular service increases in per capita terms in the age group.<sup>7</sup> The projections assume that political decisions are taken to that effect, as many transfers are not protected in real terms.<sup>8,9</sup>

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<sup>3</sup> Euro countries submit stability programmes and other EU countries convergence programmes.

<sup>4</sup> About 40 items on the revenue side and about 60 items on the expenditure side.

<sup>5</sup> Similar age profiles are used in the Government's sustainability calculations for the Spring Fiscal Policy Bills and convergence programmes.

<sup>6</sup> In the report, however, there are no results with this grouping.

<sup>7</sup> This assumes that the share of users of the service is unchanged in each age group. If a growing share of people in a particular age group benefit from the service, for example, higher education, the assumption leads to a decrease in the real standard per user and vice versa.

<sup>8</sup> For transfers, the assumption leads to a preservation of the standard in relation to wage developments. For public services, the assumption leads to an unchanged number of hours the service is performed

With the help of a projection of the population's age structure, the net of each age group's tax payments and the receipt of tax financed services (including transfers) can be calculated. The present value of these transactions is summed to a balance account for the average individual in each age group. The sum of these accounts shows each generation's contribution to the implicit public debt (with reversed signs). If the balance in the account is positive, the generation contributes to reducing the future public debt. A negative value in the account shows that the generation instead contributes to an increase in the public debt.

### 4.1.2 Sustainability indicators

For public finances to be sustainable, the intertemporal budget constraint must be satisfied. Based on the generational accounts, different types of indicators can be estimated to illustrate the degree of long-term imbalance in the public finances. The background report discusses five main indicators.

1. *Fiscal gap*  
Indicates the total debt (explicit + implicit) as a percentage of base-year GDP.
2. *Future generations' burden*  
Indicates (in SEK thousand) the difference between the generational account for a newborn and an individual born one year later, given that all the sustainability adjustment is passed on to future generations. This is a measure of the debt burden passed on to future generations.
3. *Revenue gap*  
Indicates the percentage change in the tax take starting in the base year required for sustainability.

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per person in the age group. In those cases where productivity growth in public services is assumed to be = 0, it means that the standard is unchanged in the projection.

<sup>9</sup> The Government's long-term estimates are based on similar assumptions. The assumptions differ from those described in the medium-term estimates for the last 3-4 years. In the latter it is assumed that no new decisions are taken on taxes and grants. This means that some allowances and grants such as the child allowance and central government grants to the local government sector are not indexed. In a sustainability context, a technical assumption like this is not justified as it would automatically result in the abolition of the grant or allowance in the long run as a result of price developments in the economy.

4. *Expenditure gap*  
Indicates the percentage change in expenditure (excluding interest) starting in the base year required for sustainability.
5. *Annual fiscal gap, or S2 indicator*  
Indicates the change in public sector net lending (excluding interest on debt) as a percentage of GDP starting in the base year required for sustainability.<sup>10</sup>

### 4.1.3 Limitations

Sustainability calculations require projections with a very long time frame. There is obviously considerable uncertainty attached to such projections. Nor should the scenarios be regarded as forecasts but rather as illustrations of possible long-term imbalances in the public finances. It goes without saying that a good analysis must include informative sensitivity calculations. This also applies to demography which can usually be considered a relatively stable forecast variable for the next couple of decades.

A static model approach is often used in sustainability calculations. Therefore, economic adjustment mechanisms due to changes in taxes or transfers are not taken into consideration. This limitation is true of both the background report and the Government's current sustainability calculations. A dynamic generation model with built-in adjustment mechanisms has important analytical advantages.<sup>11</sup> Against this must be weighed possible pedagogic and technical disadvantages.

Sustainability calculations are usually based only on forward-looking generational accounts. They thus cannot be used for comparisons of the net contribution from the public sector between generations currently alive. To do this would require mapping different age groups' net benefits from the public welfare systems for several decades back in time, which is a very labour intensive task. An analysis of this kind for Sweden with data from 1930 onwards, including a forward-looking part, was published in 2006.<sup>12</sup>

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<sup>10</sup> S2 is one of the two sustainability indicators used by the EU Commission in evaluating sustainability in member states' public finances. It is also described in the Government's sustainability analyses in the Spring Fiscal Policy Bills and convergence programmes.

<sup>11</sup> In the Ministry of Finance a dynamic generation model is under development that will replace the current static model in the estimates for the 2013 Spring Fiscal Policy Bill.

<sup>12</sup> Pettersson and others (2006).

## 4.2 Generational accounts for Sweden

### 4.2.1 Base scenario

Figure 4.1 shows the generational account for 2009 according to the calculations presented in the base scenario of the background report.<sup>13</sup> For each age group ("generation"), the present value of future transactions with the public sector is given for an average individual in the group, calculated over the individual's remaining life expectancy.<sup>14</sup> The figure shows that each person aged 20-24 on average for the remainder of his or her life is expected to make a positive contribution to the general government financial position of about SEK 2.5 million in 2009 prices. This is because people in this age group pay relatively large amounts in taxes during the remainder of their working life while public expenditure on pensions and social services for this age group lies a relatively long time ahead. Furthermore, childcare costs and education earlier in life are not included in the generational account for this age group.

For people over 50, the generational account is negative and thus the present value of public expenditure for people in this age group for the rest of their lives is greater than the present value of the taxes and charges they are expected to pay.

It is important to understand that generational accounts in this sense are only forward-looking. The bar for the age group 20-24 thus does not show the total net position in relation to the public sector over the entire lifetime of the generation, but only the net position for the remaining years in its lifetime. The same applies to the description of the population groups over the age of 50 in 2009. Their negative values do not say anything about how these groups, seen over their lifetime, have benefited or not benefited from taxes and public expenditure in relation to other age groups. Figure 4.1 therefore does not provide any guidance on the total distribution of public revenue and expenditure between the different age groups. For this, generational accounts are also required for historical years.

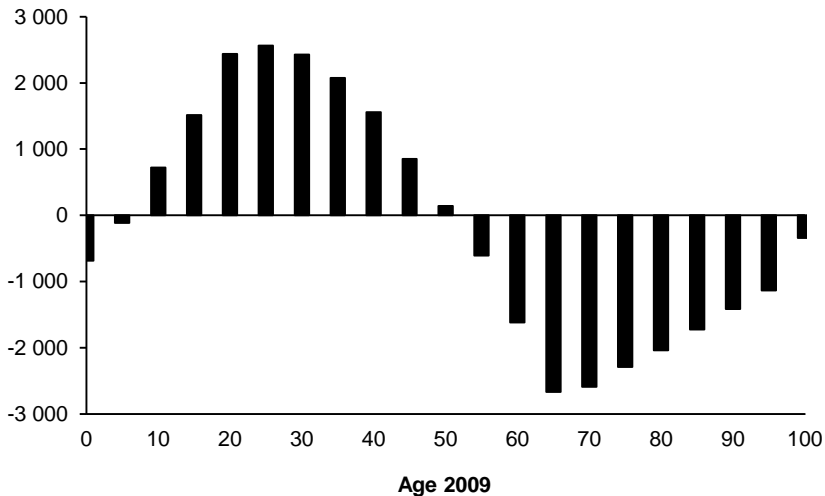
#### **Figure 4.1 The generational account in 2009**

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<sup>13</sup> The base year for the calculations is 2009. All the age profiles for public revenue and expenditure are calibrated in 2009 values. Productivity growth is assumed to be 1.5 per cent and the real interest rate to be 3 per cent.

<sup>14</sup> The calculation model uses data divided into five-year classes.

SEK thousand



Source: Hagist and others (2012).

The fact that the youngest age group has a negative generational account does, however, provide important information about fiscal sustainability. The generational account for this age group covers the entire life. The negative value indicates that the public welfare systems are not fully funded seen from a life cycle perspective. For each individual in the youngest age group, the present value of taxes and charges will not cover the present value of the services received. Government debt is expected to increase by SEK 800 000 per person under the current rules for taxes and public expenditure.

If the net position vis-à-vis the public sector is totalled for all age groups – both those now alive and future generations – a measure of the public sector implicit debt is obtained. The implicit debt thus describes the financial imbalance that exists in the public revenue and expenditure systems, given the expected age structure of the population in the future. A generous pension system together with a rapidly ageing population contributes to a large implicit public debt. If the pension rules are not changed, this implicit debt will in time turn into an explicit debt at risk of growing indefinitely.



The base scenario in the background report gives the following values for the different sustainability indicators described in Section 4.1:<sup>15</sup>

- The debt gap (indicator 1) is estimated at 85 per cent of base-year GDP (2009). Of this the implicit debt amounts to 45 percentage points.<sup>16</sup>
- If only future generations are charged to eliminate the long-term imbalance in the public finances, their generational account must be reduced by SEK 310 000 per person compared with the most recent age group born (indicator 2). Future generation's life income must thus be SEK 310 000 less in order for public finances to be sustainable.
- If all generations, i.e. both those now living and future ones, share the burden, the tax take must increase or expenditures decrease by over 2 per cent (indicators 3 and 4).
- This is equivalent to a permanent annual budget reinforcement of over 1 per cent of GDP (indicator 5).<sup>17</sup>

## 4.2.2 International comparisons

According to the background report, the implicit debt in Swedish public finances is low from an international perspective. As the explicit debt (the Maastricht debt) is relatively low to begin with, the total imbalance in the public finances is relatively limited.

The report also gives estimates for Germany and Norway, indicating much bigger imbalances for these countries. Germany's implicit debt is equivalent to almost 200 per cent of GDP in 2009. Its total debt is estimated at 275 per cent of GDP. See Figure 4.2. Norway's implicit debt is estimated at as much as 700 per cent of GDP. Added to this, the explicit debt is over 40 per cent. Its oil fund assets are stated at 95 per cent of GDP and the present value of its

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<sup>15</sup> Hagist and others (2012), Table 7.

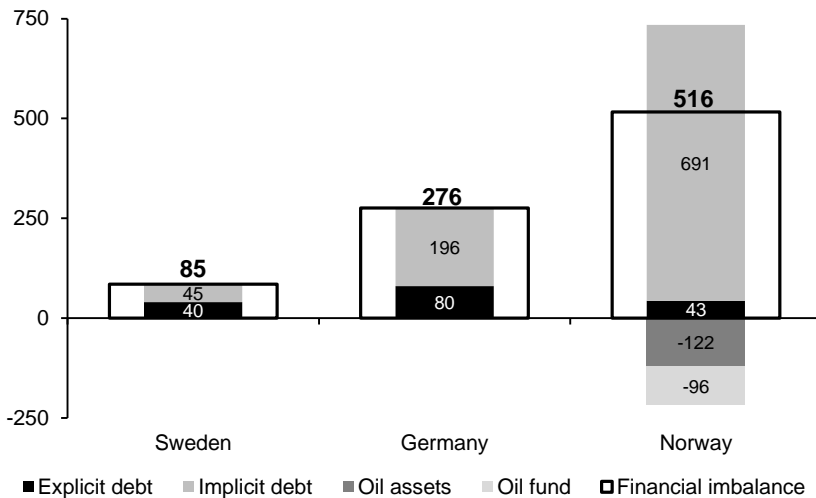
<sup>16</sup> The debt concept in the report refers to general government gross debt according to the Maastricht criteria.

<sup>17</sup> In the Government's base scenario in the 2012 Spring Fiscal Policy Bill, the corresponding indicator (the S2 indicator) is estimated at 3.9 per cent, which in principle means that the public finances can permanently *be weakened* by 3.9 per cent of GDP without jeopardising their sustainability. See the 2012 Spring Fiscal Policy Bill, p. 275.

remaining energy reserves are estimated at 120 per cent of GDP. In total the financial imbalance in the public sector in Norway is estimated at over 500 per cent of GDP in 2009, i.e. much higher than in Sweden. The corresponding value for the S2 indicator, i.e. the annual fiscal balance improvement required for sustainability, is estimated at 1.2 per cent for Sweden, 5.5 per cent for Germany and over 5 per cent for Norway.<sup>18</sup>

**Figure 4.2 Fiscal gap in 2009**

*Per cent of GDP*



Note: The white bar shows the sum of the net balances for the four variables.

Source: Hagist and others (2012).

### 4.2.3 Sensitivity calculations

Very long-term estimates of this kind are obviously uncertain. Small changes in the assumptions may have large effects on the results.<sup>19</sup> It is therefore important both that the assumptions used for the estimates are plausible and described clearly and that the sensitivity calculations are shown. This applies to both the macroeconomic

<sup>18</sup> The figures for Norway are not given in the background report, but can be estimated from the tax and transfer gaps.

<sup>19</sup> In the background report, additional reservations also surround the comparison of the public finance imbalances between countries.

assumptions and the assumptions about the tax and expenditure systems.

### *Real rate of interest and growth*

Generational estimates are based on assumptions about the real rate of interest and economic growth. The base scenario in the report rests on the assumptions of a real interest rate of 3 per cent and an annual productivity growth of 1.5 per cent. Both these assumptions remain unchanged throughout the forecast period. Alongside these assumptions, four alternative scenarios are presented where both the real interest rate and growth rates and the difference between them vary. The sustainability indicators are not significantly affected. This is largely because the Swedish pension system has been constructed to be financially sustainable.

### *Pensions*

The report also shows estimates for the generational accounts with a traditional benefits-based pension system, where the future pension benefits are determined by the average level in the base year and are indexed using real GDP growth. A system like this contributes to much larger long-term imbalances in the public finances. The implicit debt is expected to increase from about 45 per cent of GDP in 2009 to as much as 300 per cent. The reason is mainly that the reformed pension system with no change in the retirement age in the long run leads to lower pensions in relation to the average wage. Compared with a benefits-based system, such as the ATP system, the burden of the reformed system is borne almost exclusively by people of working age. But without the pension reform, the implicit debt would need to be reduced in some other way, thus probably having a relatively strong impact on people of working age. The calculation shows that a pure benefits-based pension system is at risk of becoming unsustainable in the long run.

In the base scenario in the background report, the pension age is assumed to be unchanged. In the reformed pension system, an increase in life expectancy automatically results in a decrease in the average pension in relation to the average wage. Consequently, according to the report, the pension system's "political" sustainability is questionable. A sensitivity calculation shows the effects of a

gradual increase of two years in the retirement age in the coming decade, which increases pensions in relation to wages. Even though this alone does not affect the sustainability of the pension system, the increase in the tax payments contributes to a further reduction of the implicit debt in the public sector. According to the estimates in the background report, a development of this kind would further strengthen the long-term sustainability of the public finances.

### *Demography*

Population developments are a major driving force behind future imbalances in the public finances. The base scenario in the background report is based on an extension of Statistics Sweden's population projections. These projections are relatively certain for the next couple of decades, compared with economic growth forecasts, for example.<sup>20</sup> But in the very long time frame covered by generational estimates, population projections will also be uncertain. Therefore two alternative scenarios are presented – one with a higher population than in the base alternative and one with a lower population. The differences between the scenarios refer both to birth rates and to life expectancy and net migration.

The different assumptions affect the share of older people in the population in different ways. The alternative with more rapid population growth results in a higher age dependency ratio for older people than in the base scenario despite higher birth rates and net migration. This is due to the assumption about an increase in life expectancy. A higher share of older people in the population aggravates the long-term imbalance in the public finances. The implicit debt in 2009 increases in this scenario from 45 per cent of GDP to nearly 200 per cent. Behind this sharp increase are both an assumption that the retirement age is unchanged (despite the increase in life expectancy) and an assumption that there is no change in age-related costs for health care and social services. A higher retirement age can, as shown in the sensitivity calculation above, substantially reduce the implicit debt. An alternative assumption about age-dependent costs for health care and social services would be to let

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<sup>20</sup> Statistics Sweden's forecasts extend to 2060.

these kick in a little later in life because of increasing life expectancy.<sup>21</sup>

For similar reasons the alternative with lower population growth results in a sharp decrease in the long-term financial imbalances in the public sector. Life expectancy is not expected to increase at all compared with the current level. The elderly ratio will admittedly rise in the next few decades but will not reach the same high levels it reaches in the other two scenarios. In this scenario the present value of all future net payments to the public sector is about the same as the explicit debt in 2009. Thus no imbalances in the public finances are expected to occur.

### 4.3 Assessments and recommendations

The estimates in the background report indicate that Swedish public finances may be regarded sustainable from a long-term perspective. The same conclusion can be drawn from the long-term estimates reported by the Government in the Spring Fiscal Policy Bill, even though the calculation methods differ in some respects.

In our opinion, the generational accounts represent a valuable tool for analysing the long-term sustainability of the public finances. The method is also able to help show with analyses and illustrations how taxes and public expenditure affect the intergenerational distribution using a life cycle approach. They are a valuable complement to the standard distributional analyses. As in earlier reports, we would like to emphasise the importance of allocating sufficient resources to continue developing analytical methods.

An important application for generational accounting is analysing the long-term effects of major reforms in the public revenue and expenditure systems. Analyses of the effects of such reforms on different age groups using a life cycle approach should be a part of the basis for decision-making.

At the same time, the uncertainty in the estimates needs to be stressed. With the very long time frame usually used in generational models, demographic developments are also uncertain. A full and informative account of the sensitivity of the results for alternative assumptions should therefore always be included in the discussion.

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<sup>21</sup> Arguments for and against this approach are discussed in the background report, but it does not present any scenario where health care and social service costs are shifted to later in life.

## References

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## 5 The labour market

Fiscal policy, in both the short and the long run, is closely related to labour market developments. Analysing the labour market situation and the effect of the policy pursued on employment and unemployment and the underlying methods of analysis is one of the Council's main tasks.

In this chapter, we address four aspects of labour market development. To begin with, there is a discussion of employment. We then discuss youth unemployment. Thereafter long-term unemployment is examined. Thanks to newly published data from Statistics Sweden, it can be analysed over a longer time period than before. Finally, there is a discussion of labour market mismatch. A method for measuring mismatch is presented.

The reduction of the VAT on restaurant and catering services is the single biggest measure that the Government has justified on the grounds of employment. It is treated separately in Chapter 6.

### 5.1 Employment

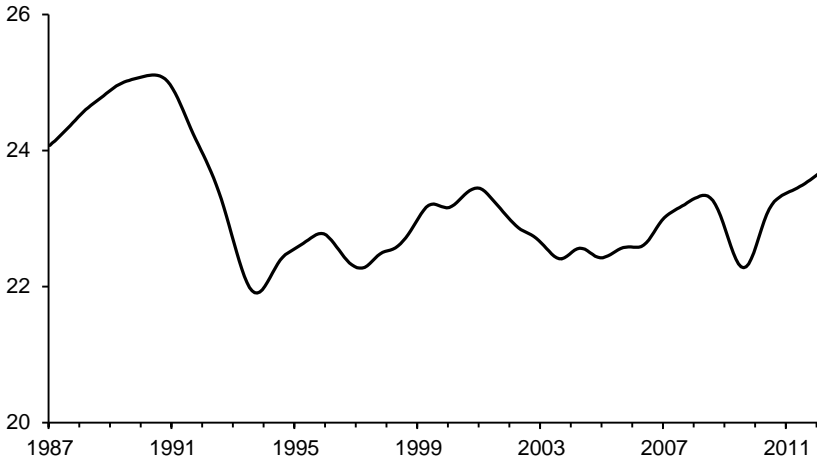
The labour market has to a large extent recovered from the effects of the financial crisis. This was shown in Figure 1.5 in Chapter 1. There it can be seen that unemployment has declined and employment has increased since the end of 2009. A more comprehensive measure of the volume of work in the economy, which the Council has previously advocated, is the average number of hours worked in the population.<sup>1</sup> Figure 5.1 shows how the number of hours worked per person developed from 1987 to February 2012. In the 1990s crisis, the number of hours worked per person fell sharply between 1990 and 1993, then recovered slightly and then fell again in 1996. In the IT crisis of 2001-2004, the total number of hours worked per person again declined, but not as much as in the 1990s crisis. The decrease in the number of hours worked per person during the most recent crisis took place from the second quarter of 2008 to the fourth quarter of 2009. Thereafter the number of hours worked increased again. The increase was rapid in 2010 and has continued to increase at a somewhat slower pace since then.

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<sup>1</sup> Fiscal Policy Council (2009), Section 2.3.2.

## Figure 5.1 Hours worked

Hours per week and per person in the population



Note: Data are calendar and seasonally adjusted.

Source: Statistics Sweden.

**Table 5.1 Hours worked per person and their components, quarter 4, 2009 - quarter 4, 2011**

Percentage change

Hours worked Population	Hours worked Employed	of which	Hours worked In work	In work Employed	Employed Population	of which	Employed Labour force	Labour force Population
<b>15-74 years</b>								
7.2	5.0		2.7	2.3	2.2		1.6	0.6
<b>15-24 years</b>								
15.8	7.8		5.2	2.5	8.0		4.2	3.8
<b>25-54 years</b>								
8.1	5.3		3.1	2.2	2.8		1.2	1.6
<b>55-74 years</b>								
1.9	3.8		1.4	2.5	-2.0		1.0	-3.0

Note: The table shows the percentage change in hours worked per person in the population and a breakdown of how this change is distributed among the underlying components. Hours worked in relation to the population can be divided into the percentage of the population employed and hours worked per employed (grey bars), and they can in turn be divided into the percentage of the population in the labour force and the percentage of the labour force that is employed and the percentage of the employed in work and hours worked per person in work. The changes are cumulative log differences, which approximately correspond to the percentage change in each variable. Data have been calendar adjusted.

Sources: Statistics Sweden and own calculations.



**Box 5.1 Decomposition of the change in the number of hours worked per person**

Let  $H$  be the total number of hours worked,  $P$  the population aged 15-74,  $L$  the number of people in the labour force,  $E$  the number of employed,  $A$  the number of people in work,  $U$  the number of unemployed and  $u$ , unemployment, i.e. the number of unemployed in relation to the labour force ( $U/L$ ).

In a first step, the number of hours worked per person can be decomposed into the unemployment rate ( $E/P$ ) and the number of hours worked per person employed, i.e. average hours worked ( $H/E$ ). In a second step, the employment rate can be attributed to labour force participation ( $L/P$ ) and employment as a percentage of the labour force ( $E/L$ ) and average hours worked can be divided into the percentage of people employed who are in work ( $A/E$ ) and the number of hours worked per person in work ( $H/A$ ).

$$\frac{H}{P} = \frac{E}{P} \frac{H}{E} = \frac{L}{P} \frac{E}{L} \frac{A}{E} \frac{H}{A}$$

If the above expression is logarithmised, we obtain

$$\ln \frac{H}{P} = \ln \frac{L}{P} + \ln \frac{E}{L} + \ln \frac{A}{E} + \ln \frac{H}{A}$$

Derivation gives:

$$\frac{d \left[ \frac{H}{P} \right]}{\frac{H}{P}} = \frac{d \left[ \frac{L}{P} \right]}{\frac{L}{P}} + \frac{d \left[ \frac{E}{L} \right]}{\frac{E}{L}} + \frac{d \left[ \frac{A}{E} \right]}{\frac{A}{E}} + \frac{d \left[ \frac{H}{A} \right]}{\frac{H}{A}}$$

The percentage change in the number of hours worked per person is thus equal to the sum of the percentage changes of the respective components.

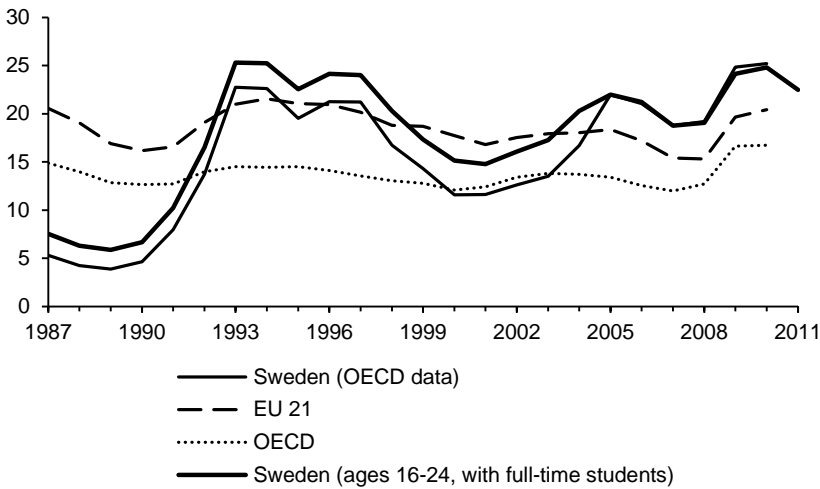
One advantage of this measure is that it can be broken down into smaller components, and can thus broaden the picture of the growth in the volume of work.<sup>2</sup> Table 5.1 shows this breakdown for different age groups.

<sup>2</sup> This distribution is explained in Box 5.1.

Hours worked increase for the population between 15 and 74 as a whole. The main explanation is that those who are employed work more. The increase is larger among the young than among the older. For young people, the increase is both because more people work and because those who work are working more hours. For older workers, employment decreases as a result of a high number of retirements but those who are still employed work more.

### Figure 5.2. Youth unemployment

Per cent 15-24 years



Note: The figure shows the percentage of unemployed in the labour force aged 15–24. Beginning in 2005, Sweden follows the ILO definition which includes full-time students looking for work. Countries in the EU 21 and the OECD have generally followed this convention for the entire period.  
Sources: OECD and Statistics Sweden.

## 5.2 Youth unemployment

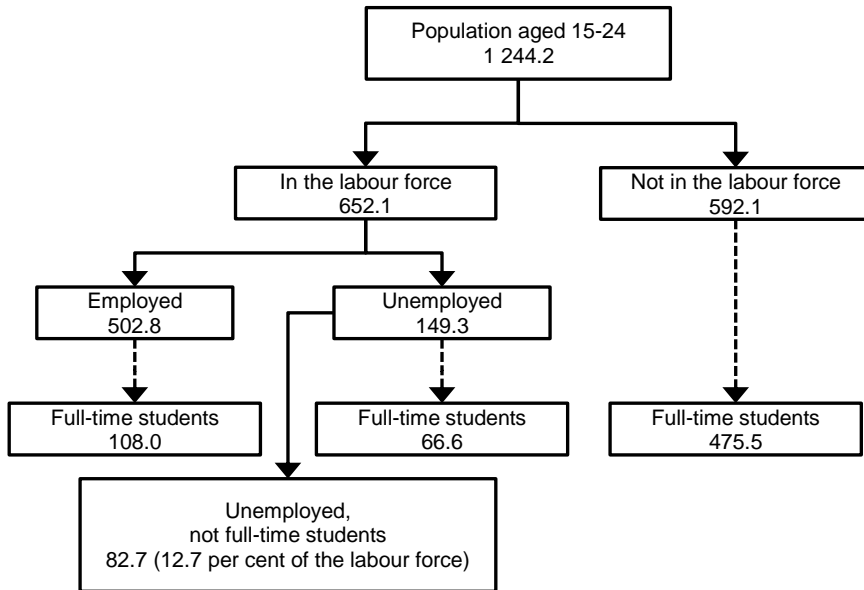
Even though unemployment among young people fell in the period 2009–2011, it is still high and was 23 per cent in 2011. It is a high figure both in a historical and in an international perspective. But the way in which youth unemployment is measured is somewhat misleading and can result in misconceptions about young people's labour market situation. This is true of comparisons with the rest of

the population, comparisons over time, and international comparisons.<sup>3</sup>

Youth unemployment is higher than unemployment in the population as a whole. This is not surprising. A large percentage of young people enter the labour market as unemployed, whereas older workers generally must lose their job in order to be counted as unemployed. The statistical definition of youth unemployment also differs from many people’s perception of the concept.

**Figure 5.3 Distribution of young people ages 15-24, average for 2011**

*Thousands*



Note: The number of full-time students in the category “Not in the labour force” is estimated based on flow data.

Sources: Statistics Sweden and own calculations.

We begin by explaining the concept (see Figure 5.3). People either participate or do not participate in the labour force. A person is in the labour force if he or she has a job or is actively looking for work. It is quite common among young people not to participate in the labour force as many are students. Approximately half (652 100) of

<sup>3</sup> For a detailed analysis of both youth unemployment developments and the measurement problems, see Nordström Skan’s background report to the Fiscal Policy Council (Nordström Skans, 2009).

all young people aged 15-24 (1 244 200) participated in the labour force in 2011. The rest (592 100) did not.

Those who participate in the labour market are either employed (502 800) or unemployed (149 300). Unemployment is usually reported as the percentage of the labour force that is unemployed. Twelve per cent of all young people are unemployed and thus youth unemployment is approximately half of total unemployment.

Full-time students are classified as employed (108 000) if they say that they work, as unemployed (66 600) if they say they are looking for work or will start a job within three months or as not participating in the labour force (475 500) if they say that they are studying without working or looking for work.

### *Comparisons over time*

The definition of unemployment has changed over the years, making backward-looking comparisons difficult. In 2007 the definition was revised to be consistent with the ILO definition. Previously full-time students looking for work were placed in the category “Not in the labour force”.

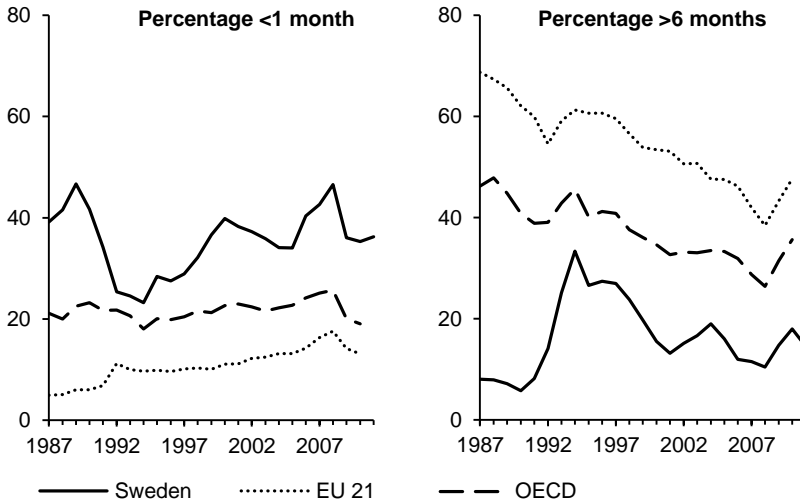
There was also a major change in 2005. At that time, the questionnaire used when Statistics Sweden conducted its Labour Force Surveys was adjusted. This makes comparisons over time more difficult. In the case of youth unemployment, for example, one problem is that since 2005 a person is classified as unemployed if he/she has got a job and is expected to start that job within three months. This revised definition affects young people to a greater extent as many young people look for and get a summer job in the spring.

### *Cross-country comparisons*

International comparisons are also problematic – even though Sweden now uses the same definition as the rest of the world. One example of this is the education system which differs from country to country. Young people’s attitude to work while studying can also vary. In Denmark, for example, students in apprenticeship programmes at vocational upper secondary schools are classified as employed. This can by definition reduce youth unemployment in Denmark compared with Sweden.

**Figure 5.4 Percentage of unemployed young people by length of unemployment spell**

Per cent



Note: The left figure shows the percentage of all unemployed in the 15-24 age group (16-24 for Sweden) who have been unemployed for less than one month. The right figure shows the percentage of the unemployed in the 15-24 age group (16-24 for Sweden) who have been unemployed for more than 6 months. Swedish data are based on chained series to facilitate comparisons over time which include full-time students. Swedish data are to 2011 while EU and OECD data are to 2010.

Sources: OECD and Statistics Sweden.

The youth unemployment picture in Sweden is complicated not just by measurement difficulties. Despite the high level, the flow of Swedish young people from unemployment to employment is very high compared with the EU and OECD averages (see Figure 5.4). Young people in Sweden have relatively short unemployment spells. The share of unemployed young people who were unemployed for less than one month was 35 per cent in Sweden in 2010. In the EU, the corresponding share was about 10 per cent. In the EU, almost 50 per cent of unemployed young people had been without work for more than 6 months. In Sweden, the corresponding share was 18 per cent. Long-term unemployment among young people in Sweden is thus comparatively low in international terms.

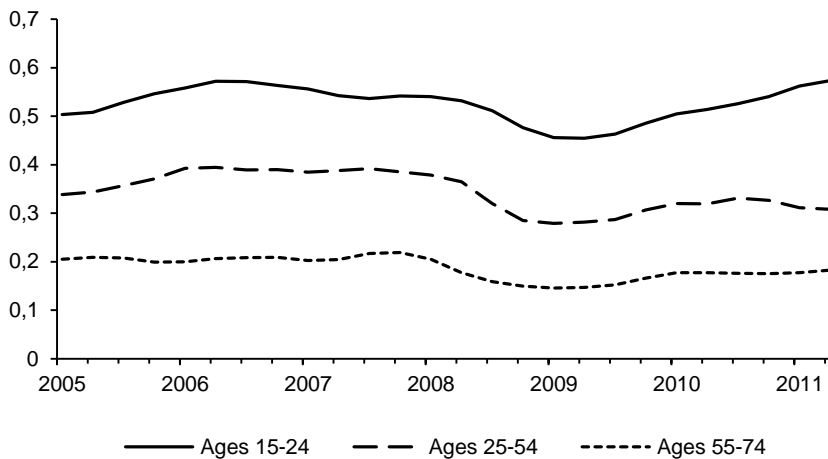
*Comparison between the labour market for young and older workers*

We have noted that unemployment is higher among young people than in the population as a whole. At the same time, young people

are unemployed for shorter periods than older people. Figure 5.5 shows the percentage of unemployed who from one quarter to the next leave unemployment for employment or studies. For unemployed young people, it is almost 60 per cent. This means that unemployment is generally of shorter duration among young people than among older people.

### Figure 5.5 Outflow from unemployment to work or studies between quarters

*Percentage of unemployed from unemployment to employment or education*



Note: The curves show the outflow from unemployment to employment or to full-time studies outside the labour force from one quarter to another.

Source: Statistics Sweden.

It is evident that the labour market for the young functions differently than the labour market for older people. Unemployment among young people is higher – while unemployment spells are shorter.

Another way of describing how the labour market works is to study the relationship between the labour market tightness and the possibilities of finding work.<sup>4</sup> A common measure of the labour market tightness is the relationship between the number of job vacancies listed and the number of unemployed in a particular period. When the number of job vacancies increases relative to the

<sup>4</sup> This analysis is based on Shimer (2005) and Elsby and others (2010).

number of unemployed, the labour market tightness improves. There are then more jobs available per unemployed person.

One way of studying how the labour market functions is to examine the cyclical relationship between job finding rates (the percentage of jobseekers who find employment in a particular period) and the labour market tightness for the population in general and for young people in particular. The cyclical variation is measured as changes around a trend.

**Figure 5.6 Job finding rates and labour market tightness for experienced workers**

*Deviation from trend, January 1997 - November 2011*



Note: The job finding rate is measured as the percentage of jobseekers who get a non-subsidised job in a month. The labour market tightness is measured as the number of job vacancies requiring work experience listed at the Public Employment Service compared with the number of jobseekers with work experience registered with the Public Employment Service. Both variables are seasonally adjusted, logarithmised and are measured as deviations from their trend. A positive value indicates that the job finding rate and the labour market tightness both exceed the trend during the period, with the reverse being true for a negative value. The grey lines indicate a 90 percentage prediction interval, within which 90 per cent of the future measurements are expected to fall. Above the black line, more are hired than expected – matching is relatively higher, and under the black line fewer are hired – matching is relatively lower.

Sources: The Public Employment Service and own calculations.

Job finding rates improve when the labour market improves. Each additional vacancy is expected to improve the job finding rate more if

the number of vacancies per unemployed person is low than if the number of vacancies per unemployed person is high.<sup>5</sup>

Figure 5.6 shows the relationship between job finding rates and the labour market tightness for experienced workers.<sup>6</sup>

When the labour market tightness improves, jobseekers' probability of finding a job increases. In the labour market for *experienced* workers, the probability of finding a job rises by approximately 0.26 per cent if the number of job vacancies per unemployed person rises by 1 per cent. In the recent crisis (square points in Figure 5.6), the chances of finding a job worsened considerably. The deterioration was greater than expected, given the worsening labour market tightness. This could be interpreted to mean that the labour market had begun to function worse. But recent years' observations are in line with the historical relationship.

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<sup>5</sup> In the literature on matching in the labour market, the probability of finding a job ( $f$ ) is often assumed to be a function of the labour tightness ( $\frac{v}{u}$ ), i.e. the relationship between the number of vacancies ( $v$ ) and the number of unemployed ( $u$ ). The function is assumed to have the form  $f = \left(\frac{v}{u}\right)^\alpha$  where ( $\alpha$ ) is a constant. The constant ( $\alpha$ ) reflects the matching elasticity, i.e. the proportional change in the job finding rates ( $f$ ) for the same proportional change in the labour market situation ( $\frac{v}{u}$ ). The constant ( $\alpha$ ) is expected to take a value between 0 and 1. A higher matching elasticity ( $\alpha$ ) means that the probability of finding a job increases more when the labour market situation improves. Note that the matching elasticity can be estimated with a linear regression of the logarithmised function:  $\ln(f) = \alpha \ln\left(\frac{v}{u}\right)$ .

<sup>6</sup> In its statistics, the Public Employment Service records both if the jobseeker has experience and if job vacancies refer to jobs that require experience. This makes it possible to categorise both jobseekers and job vacancies with respect to experience. Figure 5.6 examines the market for experienced workers and Figure 5.7 the labour market for those who lack experience using the Public Employment Service's statistics.



**Figure 5.7 Job finding rates and the labour market tightness for inexperienced workers**

*Deviation from trend, January 1997 - November 2011*



Note: See above, Figure 5.6. In Figure 5.7, data are shown for jobseekers without work experience and job vacancies with no work experience requirements.  
Sources: The Public Employment Service and own calculations.

The relationship between the possibility of finding a job and the labour market tightness for inexperienced workers is shown in Figure 5.7. For *inexperienced* workers, the probability of finding a job depends more on the labour market tightness than it does for experienced workers. The probability of finding a job rises by approximately 0.34 per cent if the number of job vacancies per inexperienced unemployed person rises by 1 per cent. This implies that unemployment among the inexperienced is more cyclically sensitive than among the experienced. The chances of inexperienced labour finding a job deteriorated to an unusual extent in the recent crisis.

*Measures to combat youth unemployment*

As shown above, young people and labour without experience are the groups hit hardest by cyclical fluctuations but many leave unemployment after a short time. The Government generally shares this analysis, as seen in the 2012 Spring Fiscal Policy Bill.<sup>7</sup> But the concrete measures taken for young people, such as the reduction in

<sup>7</sup> 2012 Spring Fiscal Policy Bill, p. 48.

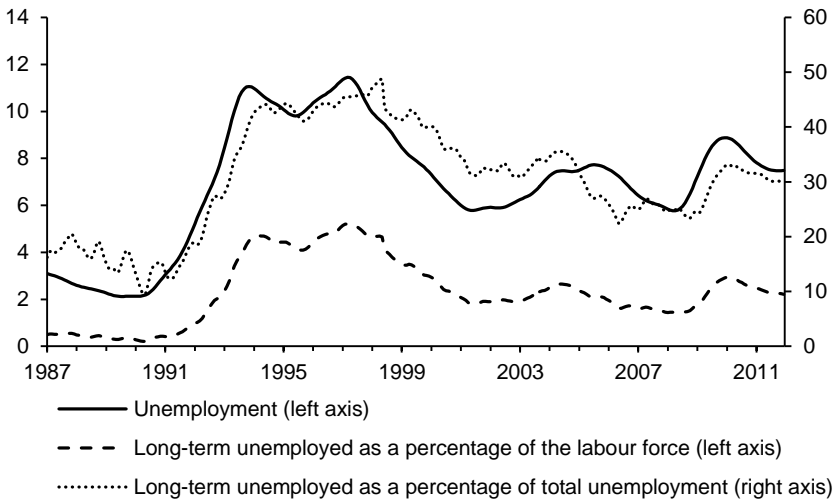
the social contributions, are in our opinion not particularly effective. Regarding young people as a homogeneous group may result in overlooking groups in the young workforce with a weak foothold in the labour market, such as those born abroad, the low-skilled and the disabled.<sup>8</sup>

### 5.3 Long-term unemployment

The Council has previously drawn attention to the lack of statistics on long-term unemployment from a longer-term perspective. We are pleased that this lack has now been rectified. Statistics Sweden now publishes linked series back to 1987 on the length of unemployment spells. Figure 5.8 shows long-term unemployment trends between 1987 and 2012. Long-term unemployment follows total unemployment with a short lag.

**Figure 5.8 Unemployment and long-term unemployment**

*16-64 years, per cent*



Source: Statistics Sweden.

Figure 5.9 shows the average unemployment spell for different age categories.<sup>9</sup> People who are 55-64 have a considerably longer

<sup>8</sup> There is a detailed discussion of this in Nordström Skans (2009) and the Fiscal Policy Council (2011).

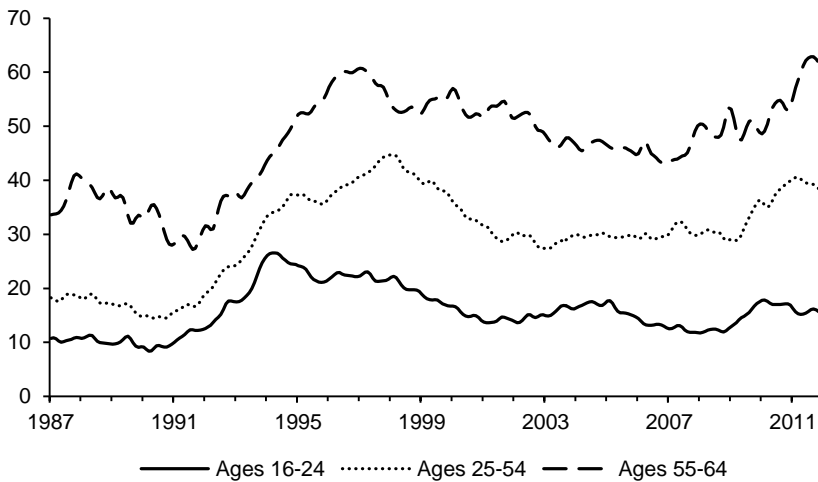
<sup>9</sup> Data from the period up to 2005 for long unemployment spells should be interpreted with caution. In this period, registered unemployment spells had a maximum value of 98 weeks (almost 2 years). In 2005,

unemployment spell than the average. Young people have much shorter unemployment spells than the population as a whole.

In recent years, the average unemployment spell has increased – particularly among older workers. In addition to the worse labour market situation, one explanation may be the decrease in early retirements.

**Figure 5.9 Average unemployment spell**

Weeks



Source: Statistics Sweden.

In 2012 Statistics Sweden will publish data for additional groups among the long-term unemployed. Education level and country of origin will be included, making more in-depth analyses possible. An initial analysis of these yet unpublished data has been done by Zetterberg (2011). He finds that the share of long-term unemployed is highest among older workers and people born abroad. This can be seen in Figure 5.10.

A rather unexpected result in Zetterberg’s study is that those with only a compulsory school education are not long-term unemployed to any greater extent than those with more education. The author thinks that one explanation may be that education is a more important factor in getting a job for young than for older people.

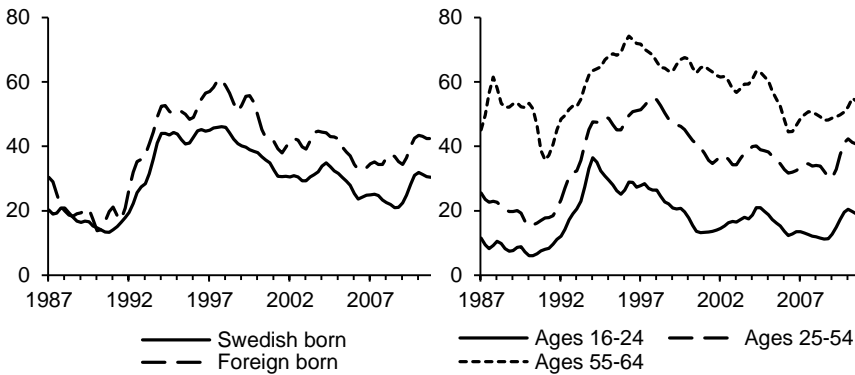
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this maximum value was adjusted upwards to 887 weeks (about 17 years). Therefore, the average unemployment spell is underestimated, particularly in the 1990s.

With rising age, experience becomes more important for the chance of finding a job. It is also possible that the low-skilled more often than other groups are assigned to labour market programmes and thus leave unemployment.

**Figure 5.10 The long-term unemployed as a percentage of total unemployment**

*Quarterly data, per cent*



Note: The figures show the percentage of long-term unemployed in relation to the total number of unemployed in each category.

Source: Zetterberg (2011).

## 5.4 Mismatch

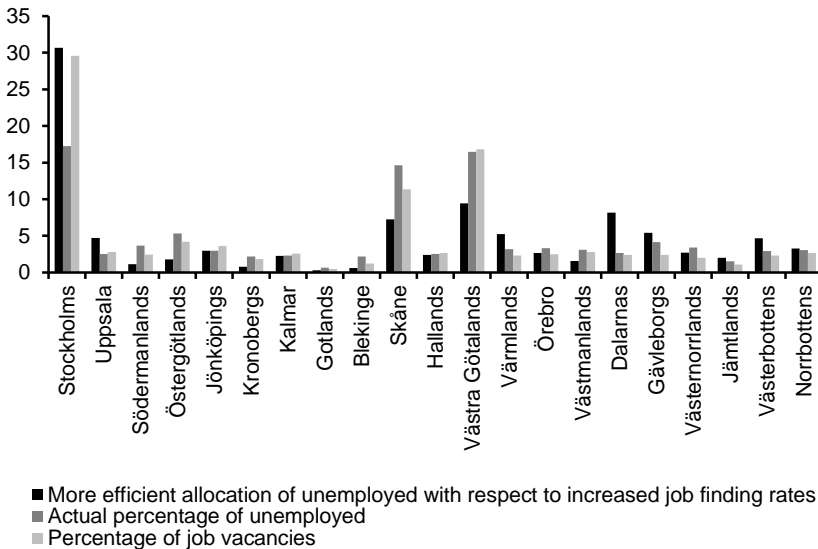
When the labour market improves, it is important for matching between job vacancies and the unemployed to function as efficiently as possible. The shorter the recruitment periods and unemployment spells are, the higher employment will be. Further analysis of the Swedish labour market's matching problems has been requested, most recently in the 2012 Spring Fiscal Policy Bill. In a background report for the Fiscal Policy Council, Marthin (2012) develops a possible measure of labour market mismatch across different dimensions.

For this analysis, data are needed on the unemployed, job vacancies and hiring/flow probabilities sorted by the different sectors to be analysed. In Marthin (2012) these sectors are counties (geographic dimension) and occupations (occupational dimension) and are based on Public Employment Service statistics on job vacancies and jobseekers. The basic idea is that the relationship

between job vacancies and jobseekers should be equal in different sectors. If there are many job vacancies in Stockholm or the mining industry, for example, jobseekers should also be in these sectors. An estimate of different sectors’ matching efficiency and their productivity is also taken into account in the model. If, for example, the mining industry were shown to have a low matching efficiency, it is inefficient to place jobseekers there, even though there are many job vacancies in this sector.

**Figure 5.11 Distribution of unemployed across counties November 2011**

*Per cent*



Source: Marthin (2012).

The method does not take into account the costs of better allocating jobseekers; its only aim is to make a quantitative estimate of how large the efficiency losses are because of mismatch in the labour market. Nor does it explain why these mismatches occur and therefore serves primarily to show where the problems are greatest and how they have developed over time.

Our estimates indicate that a more efficient geographic allocation of jobseekers would be possible. An allocation of this kind would lead

to more jobseekers looking for work in Stockholm in particular – and fewer in most other counties (see Figure 5.11).

About 3 per cent of possible hirings per month are lost because of geographic mismatch compared with this more efficient allocation. A reallocation in accordance with Figure 5.11 would, by increasing job finding rates, reduce unemployment by 0.2 percentage points. An increase in geographic mobility could thus lead to some improvement in the way in which the labour market functions in Sweden. A well-functioning housing market making it possible for more to move to the Stockholm region, better opportunities for commuting to work and more efficient employment services across regions would reduce unemployment.<sup>10</sup> The link between geographic mobility and the functioning of the labour market deserves more attention when designing future labour market initiatives.

## 5.5 Assessments and recommendations

Hours worked per person in the population have increased since the end of 2009. The percentage increase has been largest among young people. Looking at the population as a whole, the increase is primarily due to an increase in the number of hours worked.

We have noted that youth unemployment in Sweden under the current ILO definition is high and that it rose sharply in the last crisis. Youth unemployment in Sweden is also higher than in other countries. But the method of statistically measuring youth unemployment is problematic, particularly with regard to those who both study and look for work. The picture of youth unemployment is nuanced because young people in general find jobs much more rapidly than older workers and thus have shorter average unemployment spells. Compared with other countries, Swedish young people have short unemployment spells. Young people's chances of finding a job are also more cyclical than older workers'. Regarding young people as a homogeneous group may lead to ineffective labour market measures. It is more important to clarify which groups of young people have difficulty finding employment

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<sup>10</sup> Since autumn 2011, the Swedish National Audit Office has been conducting an evaluation of the Public Employment Service and its efficiency. The geographic aspect and possible improvements that the Public Employment Service can implement to increase the labour market's geographic flexibility are among the matters being examined.

and have a greater risk of long-term unemployment and to target measures directly at these groups.

Long-term unemployment follows total unemployment with some lag. In recent years, the average unemployment spell has increased – particularly among older workers.

By way of conclusion, we present a method for measuring mismatch in the labour market. We use this method for measuring geographic mismatch in Sweden. The model indicates that matching in Sweden could function more efficiently by facilitating geographic mobility.

## Appendix 5.1 Measuring mismatch

The method used for estimating mismatch is based on Sahin and others' (2011) mismatch index. The basic idea is that the relationship between job vacancies ( $v$ ) and the number of jobseekers ( $u$ ) should be the same in different sectors. If there are many job vacancies in some sectors, jobseekers should also be in these sectors.

This method is expanded with an estimate of different sectors' matching efficiency ( $\phi$ ) and their productivity ( $z$ ), where the matching efficiency is derived from a panel regression with time dummies and fixed sector-specific effects and where the fixed sector-specific effect is the matching efficiency and productivity is the normalised relative wage movement in different sectors.<sup>11</sup> If, for example, a sector is shown to have a low matching efficiency, consideration should be given to whether jobseekers should be placed there even though there are a high number of job vacancies. Likewise, more jobseekers should look for work where productivity is high.

With these basic assumptions, the following optimality conditions are derived, meaning that the most efficient allocation of jobseekers results in all sectors having the same relationship between productivity, matching efficiency, job vacancies and jobseekers. This can be written as

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<sup>11</sup> The regression function:  $\ln\left(\frac{h_{it}}{u_{it}}\right) = \ln\Phi_t + \ln\phi_i + \alpha \ln\left(\frac{v_{it}}{u_{it}}\right)$ .

$$z_1 \phi_1 m_{u_1} \left( \frac{v_1}{u_1^*} \right) = \dots = z_i \phi_i m_{u_i} \left( \frac{v_i}{u_i^*} \right) = \dots = z_I \phi_I m_{u_I} \left( \frac{v_I}{u_I^*} \right)$$

From this we can derive what the most efficient number of jobseekers in sector  $i$  at time  $t$  is.

$$u_{it}^* = (z_{it} \phi_i)^{\frac{1}{\alpha}} \frac{v_{it}}{\sum_{i=1}^I (v_{it} (z_{it} \phi_i)^{\frac{1}{\alpha}})} u_t$$

The relationship between a matching function with a more efficient allocation of jobseekers and a matching function with the actual allocation of jobseekers gives us

$$M_{xt}^h = 1 - \sum_{i=1}^I \left( \frac{\phi_i}{\bar{\phi}_{xt}} \right) \left( \frac{v_{it}}{v_t} \right)^\alpha \left( \frac{u_{it}}{u_t} \right)^{1-\alpha}$$

This is a measure of how large a share of matches are lost because of inefficient allocation of jobseekers.

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## 6 Reduced VAT on restaurant and catering services

On 1 January 2012, the value-added rate for restaurant and catering services was lowered from 25 to 12 per cent. The tax reduction is expected to reduce tax revenue by SEK 5.5 billion a year. According to the Government's estimates, employment will increase by 6 000 full year workers, which would result in a somewhat smaller permanent effect on tax revenue, SEK 4.6 billion. The reduced tax on restaurant and catering services is thus the single most costly measure in the 2012 Budget Bill.

The Government justifies the tax reduction, arguing that it will both increase efficiency in the tax system and reduce structural unemployment. Efficiency is expected to increase because the administrative costs for businesses and government agencies decrease, resource allocation will improve when the difference in the taxation of restaurant services and food is eliminated and an increase in the consumption of restaurant and catering services leads to an increase in the labour supply. Structural unemployment is expected to decline with the increased demand for restaurant and catering services as it is a sector that employs groups in which unemployment is high.

In 2010 the Government appointed an "Inquiry on lowering the VAT on some services" (*Utredningen om sänkt moms på vissa tjänster*) to analyse the effects of a reduction in the value-added tax on certain services, among them restaurant and catering services. The analysts used both existing studies and expert reports from researchers. There was some disagreement on the effects among the different reports. There is thus considerable uncertainty about what the effects may be. Both the Inquiry and the Government also stress that the estimates of the employment effects are very uncertain.<sup>1</sup>

This chapter analyses the main arguments for a reduced VAT rate on restaurant and catering services. Its effects on the tax system's efficiency are well described by the Inquiry. Our discussion will focus on the most important arguments and attempt to evaluate whether the arguments are reasonable. The effect on structural unemployment is not equally well described either by the Inquiry or

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<sup>1</sup> The 2012 Budget Bill, p. 269.

in the 2012 Budget Bill. The chapter therefore includes a schematic review of the possible effects in order to explain the channels by which a lower value-added tax on restaurant and catering services may affect unemployment among young people, the low-skilled, and immigrants as well as total unemployment in the economy.

## 6.1 Theoretical arguments for differentiated consumption taxes

The theory of optimal taxation is a useful conceptual framework for analysing the impact of a lower tax on restaurant and catering services on the tax system's efficiency.<sup>2</sup> The main question posed by this theory is as follows: how should the tax system be designed to generate a particular tax revenue in as efficient a way as possible while redistributing some income from high-income to low-income earners?

Taxes generally cause efficiency losses because they drive a wedge between the social and private returns.<sup>3</sup> Thus taxes involve costs to society in the form of lower output and welfare. The design of the tax system is therefore of great importance for the allocation of resources in society. The question we want to answer here is thus the following: for a given amount of revenue and a given income redistribution, can a lower value-added tax on restaurant and catering services be expected to reduce the distortions caused by the tax system?

There is a relatively large body of theoretical research analysing whether differentiated consumption taxes are efficient and, if they are, what goods and services should be taxed at a higher rate. An early contribution to the literature is Ramsey (1927) who studies how differentiated consumption taxes can increase efficiency in a world where the state only has access to consumption taxes and is not interested in income redistribution. His analysis shows that it is possible to increase efficiency by raising taxes on goods and services where the demand is relatively inelastic to price changes. The

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<sup>2</sup> Chapter 8 of Fiscal Policy Council (2011) has a longer discussion of the theory of optimal taxation and a broader analysis of the entire tax system.

<sup>3</sup> Taxes can also be used to increase efficiency when the private and social returns differ. This is true, for example, of environmental taxes where the producer and consumer do not take into account the effect output and consumption have on the environment.

explanation is that a price-inelastic demand involves a tax that has limited effect on the consumption pattern and therefore has few distortionary effects on resource allocation in society.

The limitation of this model is that it does not take into account that the state wants to redistribute resources and that the state also can also tax incomes. If we take these aspects into consideration, there are other reasons for differentiated consumption taxes, namely that they can be used to reduce distortions that arise because of progressive income taxes. The argument is as follows: to achieve income redistribution, it is desirable to tax highly productive individuals more than those with low productivity. The difficulty is that it is only possible to tax incomes (and not ability), and thus highly productive individuals may find it optimal to “imitate” low-productive individuals’ income by working fewer hours. This reduces the state’s ability to redistribute income through the income tax.

In that case, under certain conditions, differentiated consumption taxes can reduce the efficiency loss that arises from taxing earned income. Specifically, goods/services positively related to leisure – in the sense that more leisure leads to increased consumption of the good/service – will be taxed harder than other consumption. By taxing goods and services that are consumed together with leisure, it becomes less attractive for highly productive individuals (who have to give up less leisure time to earn a particular sum) to imitate the income earned by low-productive individuals.<sup>4</sup> However, if leisure is not related to the consumption of particular goods and services, then a uniform tax is most effective.<sup>5</sup>

The above reasoning does not take into account that the production of some services and products can be done by households themselves in their spare time. As an efficient tax system will create as few market distortions of consumption and production as possible, it does play a role if taxes affect households’ choice of buying the service in the market or performing it themselves. A high tax on goods and services that are a close substitute for unpaid labour may result in households choosing to reduce their labour supply in the market and produce the service themselves instead of buying it in the market.

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<sup>4</sup> This is shown by Christiansen (1984).

<sup>5</sup> More specifically, when individuals’ preferences can be separated into leisure and consumption of other goods, a uniform tax is optimal, Atkinson and Stiglitz (1976).

The reason is that income and consumption taxes give rise to a tax wedge and thus the price including the tax paid by the buyer for a product or service is higher than the amount excluding tax received by the seller. The tax leads to a price difference between untaxed unpaid labour (or undeclared labour) and the purchase of declared labour in the market, and thus leads to less consumption of services in the market. The taxation of goods and services that easily move to untaxed sectors thus gives rise to greater efficiency losses.

One category of services that, probably more than others, is a substitute for unpaid labour in the home is household work. As cleaning, garden work and simpler repairs are close substitutes for unpaid labour performed in people's spare time, it is likely that a lower tax on these services results in an increase in the labour supply.<sup>6</sup> In previous reports, the Council has therefore argued that a tax deduction for services covered by the tax credit for household services can increase efficiency in the tax system.<sup>7</sup>

Another argument, which also aims to reduce the taxes' distortionary effect on the choice between jobs in the labour market and untaxed activities such as unpaid labour and leisure, is that the consumption taxes should be designed so that the tax is higher on the consumption of goods and services that require considerable spare time to consume.<sup>8</sup> By favouring the consumption of goods and services that require relatively little of a person's own time to consume, the tax system's distortionary effect declines. The conclusion is that the tax on restaurant and catering services can be justified if eating in a restaurant is a service that requires relatively little leisure. If consumption of restaurant and catering services is time-consuming, the tax should instead be higher.

### 6.1.1 Labour supply effects

A lower value-added tax on restaurant and catering services may be justified if i) more restaurant visits are consumed instead of leisure<sup>9</sup>, ii) households go to restaurants instead of preparing food themselves and use part of the freed up time to work more, or if iii) restaurant

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<sup>6</sup> See Kleven, Richter and Sørensen (2000) for a theoretical model.

<sup>7</sup> See Fiscal Policy Council (2011 Section 8 and 2010 Section 7).

<sup>8</sup> Kleven (2004) shows this in a theoretical model.

<sup>9</sup> This is true for a given income.

visits are an activity requiring less leisure than other consumption. There are thus theoretical reasons for a lower VAT rate on restaurant and catering services if consumption of these services increases the labour supply.

What does the empirical literature say about the relationship between the consumption of restaurant and catering services and the labour supply? The Government estimates that the labour supply will increase by 0.06 per cent or 2 500 full time workers. Is this a reasonable estimate? For this to happen, the consumption of restaurant and catering services would have to increase when the price falls, ii) increased consumption of these services would have to free up time and iii) at least part of the time freed up would have to be used for work in the market. In its estimates, the Government assumes that halving the VAT will free up 1 per cent of the time allocated to buying and preparing food, i.e. 4 hours a year, by purchases in the market. Of these 4 hours, households are expected to use 3 hours for leisure and 1 hour for work in the market. If all those of working age increase their labour supply by 1 hour a year, the labour supply will increase by 2 500 full time workers.<sup>10</sup>

It is difficult to determine whether this is a reasonable estimate since there are only a few empirical studies that examine the relationship between labour supply and consumption composition and none of them use Swedish data. A study of Finnish data, which could be informative thanks to the substantial cultural similarities between Sweden and Finland, finds that individuals who work more hours spend a larger part of their budget on meals in their workplace canteen but that the relationship with the consumption of other hotel and restaurant services is weak (Pirttilä and Suoniemi, 2010). A study using British data does find a relationship between labour supply and the consumption of restaurant services but the authors conclude that the effects are too small to justify a differentiation of VAT rates (Crawford et al 2010).

In the absence of studies of Swedish data, Christiansen (2011) examines the relationship between the labour supply and the composition of consumption using an indirect method. According to

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<sup>10</sup> The inquiry Consequences of a reduced VAT on restaurant and catering services (*Konsekvenser av sänkt mervärdesskatt på restaurang- och cateringtjänster, SOU 2011:24*) also uses another calculation method based on a model developed by Copenhagen Economics to estimate the effects. The effect on employment will be about the same with this method.

his calculations, there is no positive relationship between labour supply and the consumption of restaurant services in Sweden. The estimated employment effects must thus be regarded as highly uncertain.

## 6.1 2 Impact on the consumption pattern

Lower consumption taxes on particular goods and services affect the consumption pattern. It is however difficult to draw any conclusions on whether the lower tax on restaurant and catering services leads to a more or less efficient consumption composition. This is due both to the affect that the tax reduction has on the demand for restaurant and catering services and on the demand for other goods and services as well as on the taxation of other goods and services. A lower VAT on restaurant and catering services leads to lower demand for goods with theoretically too low taxation such as food, the distortion will be less than if it results in an increase in demand for these (already subsidised) goods.<sup>11</sup> If, however, a tax reduction leads to an increased demand for goods and services where there are efficiency reasons for tax subsidies, a lower tax will result in increased efficiency.

The above reasoning shows the difficulties associated with estimating possible distortionary effects on the consumption pattern. It requires not only knowledge of how price changes affect the demand for the goods and services in question, and the demand for other goods and services, but also an understanding of what goods and services should be more heavily taxed.

The Government argues that the difference in the taxation of food and restaurant and catering services creates distortions in the consumption and allocation of resources in the economy.<sup>12</sup> Even though it is intuitively possible that an increase in the consumption of restaurant and catering services leads to households devoting a smaller part of their budget to food, there is no empirical evidence to support this conclusion. Assarson (2004), which is the only Swedish

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<sup>11</sup> The justification for a reduced VAT on food is distributional. Evaluations made within the framework of the Inquiry on lowering the VAT on some services (SOU 2006:90) indicates small redistribution effects.

<sup>12</sup> The 2012 Budget Bill, p. 268.



study in the area, finds no evidence indicating that the consumption of food and restaurant services is interdependent.

### 6.1.3 Administrative costs and demarcation problems

In addition to the taxes' distortionary effects on consumers' behaviour, the tax system's efficiency is also determined by the administrative costs the taxes cause businesses and the state. Different tax rates on different goods and services involve major difficulties as to implementation and demarcation both for companies and for the Tax Authority. Food and hotel services have previously been taxed at a lower rate. Lowering the VAT on restaurant services leads to a decrease in the administrative costs for companies that offer both restaurant services and food for sale. Companies that sell both hotel stays and meals will also have lower administrative costs when the tax on these services is harmonised.

According to the Government's calculations, the reduction in administrative costs is estimated at SEK 0.2 billion a year. Unlike the Inquiry on lowering the VAT on some services (*Utredningen om sänkt moms på vissa tjänster*), the Government emphasises this aspect as one of the most important justifications for the tax reduction. Even if this estimate is correct, it probably is an expensive way of reducing companies and the Tax Authority's costs. If the Government wants to reduce administrative costs and demarcation problems, a uniform VAT rate would be preferable.

## 6.2 Structural unemployment effects

The unemployment rate is determined by short-term fluctuations in the demand for labour and by factors that affect potential employment. Structural unemployment – also called equilibrium unemployment – is unemployment in a normal cyclical situation.

A useful conceptual framework for analysing the effect of the tax reduction on structural unemployment is the search and match model.<sup>13</sup> What causes unemployment in the model are “search frictions” that make matching job vacancies with available labour

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<sup>13</sup> The model is described in Pissarides (2000) and the Ministry of Finance (2011), for example.

take time. Companies' decision to post vacancies are governed by expectations of the profitability of hiring, which depends on the costs associated with recruiting and wage costs. The unemployed's efforts to find a job depend on the expected value of jobseeking, which in turn depends on the probability of finding a job and the income the employment provides compared with the income from unemployment. Wages are decided in negotiations between employers and employees. Wages will be higher if the employer has much to lose by not filling the position and if employees have little to lose by leaving their position, for example, because there are many other jobs to be found.

Engström, Holmlund and Kolm (2005) use a model like this to study the effects of lowering a tax on services that are close substitutes for unpaid labour. They find that when taxation becomes more efficient by making it more profitable to work, employment increases. Whether or not a lower VAT on restaurant and catering services increases employment depends on the same factors discussed earlier, namely, whether restaurant services are close substitutes for unpaid labour and the effect of the tax reduction on the prices of restaurant services.

But the Government's argument for why structural unemployment should decrease is not based on this standard model but rather on the premiss that employment among the low-skilled, immigrants and young people is low as the minimum wages in sectors (for example, the restaurant sector) which employ these groups are too high. Structural unemployment occurs because wages that have been set in equilibrium are incompatible with full employment. Increasing demand for restaurant services, and thus for low-skilled labour, immigrants and young people, will increase employment. The argument is that high minimum wages lead to a pool of labour that can begin working at existing wages when demand increases. Wages are therefore not expected to increase even though the demand for labour increases. In other words, by increasing the demand for labour employed in the restaurant and catering sector, the Government wants to reduce the problems that occur because wages in these groups for some reason are too high.

### 6.2.1 Employment in the restaurant and catering business

To analyse this issue, we can begin with a discussion of whether a lower value-added tax on restaurant and catering services can be expected to increase employment in this sector. The answer is probably yes: a lower consumption tax on restaurant and catering services can be expected to lead to lower prices and increased demand for these services, which in turn should induce businesses to employ more staff. Whether the quantitative effect is significant depends on i) the tax reduction's impact on the price, ii) the price reduction's effect on demand and iii) how much the demand for labour is affected by an increased demand for restaurant services.

The Inquiry and the Government assume that the tax reduction is fully passed on in the price, which means that restaurant prices should fall by 10.4 per cent.<sup>14</sup> A 10 per cent reduction in the price is estimated to increase demand by 5-10 per cent. If demand increases 8 per cent, the number employed in the restaurant and catering sector is estimated to increase by about 3 400 workers.

The price of restaurant services and the reflection of the tax reduction in the price depend on how the competition functions in the restaurant market and on factors that affect what selection businesses offer and what consumers demand. Most often a full reflection in the price is based on the argument that this is the outcome when there is perfect competition and a fully elastic supply. An elastic supply means that the costs per product are not affected by how much is produced. Under other assumptions, less of the tax reduction may be passed on in the price. A study of the reduction of the restaurant VAT in Finland shows a limited impact on the consumer price, which could indicate that a full pass-on cannot be expected even in the long run. Should only a third of the reduction be passed on, as indicated in the Finnish study, the increase in employment using the Government's estimates would only be 1 100 workers.

A key assumption in the estimates is that wages are not affected by the increased demand for labour in the restaurant and catering sector. The reason for this assumption would be that because of too high minimum wages, there is a pool of available labour willing to

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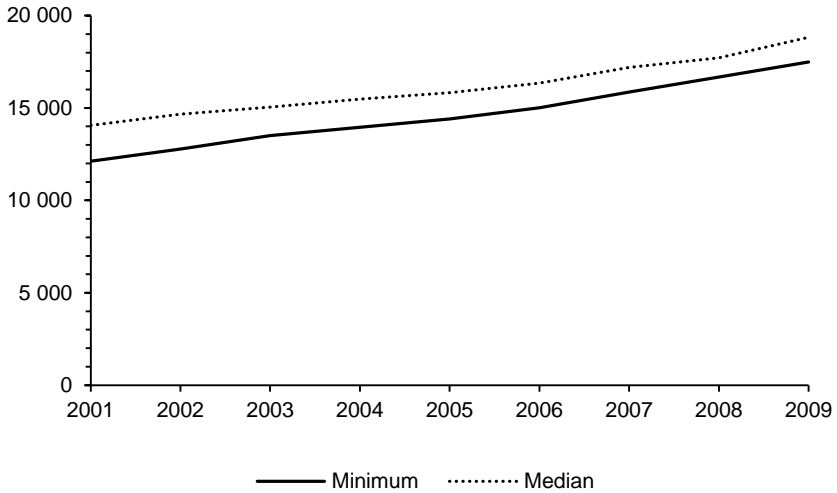
<sup>14</sup>  $(1.25-1.12)/1.25$ .

work at existing wages. Were (minimum) wages to increase, the effect on employment in the restaurant sector would be less.

In a standard model of the labour market, an increase in the demand for labour would result in upward wage pressure. The assumption that wages will not be affected is thus unconventional and deserves a more in-depth analysis. There is however limited guidance from the research literature on the determinants of minimum wages in a system like Sweden's where they are decided by the social partners through negotiation.

**Figure 6.1 Minimum and median wage in the restaurant and hotel business**

*SEK per month*



Note: The minimum wage refers to the minimum wage that the Hotel and Restaurant Workers' Union has agreed with Visita, the trade and employer organisation of the Swedish hospitality industry in their collective agreement for wage group 2 without work experience.  
Sources: Wage structure statistics and the National Mediation Office.

Figure 6.1 which shows how the median and minimum wages in the restaurant sector have changed over time, indicates that minimum wages are decided by the same factors that affect the general wage level. Nor is it evident that a VAT reduction would change wage formation in the restaurant business. The most likely conclusion is therefore that minimum wages also are affected by increased demand.

## 6.2.2 Employment in the economy as a whole

An increase in employment in the restaurant sector does not necessarily mean a decrease in structural unemployment. An increase in demand for restaurant services reduces demand for other goods and services and thus reduces the demand for labour in these sectors. A more interesting question is what is required to increase employment in the economy as a whole.

Layard, Nickell and Jackman show in their 1991 book that large differences in unemployment across groups on the labour market mean higher structural unemployment. Their main argument is that the relationship between wages and unemployment is such that low unemployment results in increases in wages that are larger than the wage reductions that occur with high unemployment. Thus wages in equilibrium are higher if unemployment differs substantially between different groups.

To analyse the issue more closely, we need to know why the unemployment level differs across groups. Here it is important to distinguish between a situation where the size of the labour force in different groups is fixed and one where labour can migrate between groups. Often it is reasonable to assume that the size of the labour force is not affected in the short run but that migration between groups is possible in the long run. This is true, for example, for different occupational and education groups and for regions. But it is not possible to affect migration between different age groups. First we will the case where belonging to the group is exogenous (determined by factors outside the individual's control) – which is the case with young people and immigrants. Second we analyse the case where the labour force can migrate between different groups and there is equilibrium in the labour market in the long run. The latter example is relevant in analyses of the differences in unemployment between the skilled and low-skilled, different occupational groups or regions.

In the standard model used to describe and analyse the labour market, the level of unemployment is determined by factors affecting search and matching processes or wage formation.<sup>15</sup> According to the model, high staff turnover can lead to wages that are higher than the

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<sup>15</sup> This model is also used by the Ministry of Finance and is well described in Finansdepartementet (2011).

wage that clears the labour market as companies may want to pay to retain staff. The existence of trade unions with negotiating strength and high wage demands can also lead to higher unemployment in some sectors or for certain types of labour.

Another explanation for the higher unemployment may be that some groups have lower productivity. As a result, their wages are close to the benefit levels in the insurance systems, which means that taking a job is not very financially attractive. Higher unemployment among young people, immigrants and the low-skilled would according to this reasoning be explained by wages that are too high compared to productivity owing to the potentially high turnover of staff, strong trade unions in sectors that employ these groups or weak economic incentives to take a job.

If it is not possible to migrate between different groups, which is the case for young people and immigrants, stimulating employment for groups where wages are relatively rigid could be effective. To understand why, we can study a stylised case where the wage for young people is fixed and the wage for other groups is completely flexible. If the wage for young people is higher than the equilibrium wage, not all young people will get jobs, while there will be full employment among other groups as wages are completely flexible. A subsidy of employment for young people by, for example, lower social contributions financed by a tax on other groups, would then increase total employment in the economy. As the wage was fixed, lower social contributions lead to an increase in employment among young people, while the higher income tax on other groups (where wages are completely flexible) results in lower wages but continued full employment. Even though this stylised example is an unrealistic description of wage formation in different groups, it does illustrate a more generally applicable point, namely that stimulating employment for groups whose wages are relatively rigid is effective.

Is it efficient to stimulate demand in the restaurant sector? A first requirement is that the total demand for young people has to increase. In other words, the demand for young people has to increase more in businesses that are growing than it decreases in businesses that are contracting. Table 6.1 shows the share of those employed aged 15-24 in selected sectors. As a relatively high share is in the restaurant and hotel sector, it is fair to assume that the total demand for young people will increase if the restaurant sector grows.

**Table 6.1 Share of the employed aged 15-24 for different sectors***Per cent*

	2008	2009	2010	2011
Industry, etc.	9	7	7	8
Construction	14	12	13	14
Retail	19	18	18	18
Other private services	14	14	14	13
<i>of which hotels &amp; restaurants</i>	37	35	34	33
Transport	12	11	10	11

Source: Statistics Sweden.

If instead wage determination in different sectors is more or less flexible, rather than wage determination for different age groups, tax cuts that favour a sector in which wage adjustment is better may reduce structural unemployment. Holmlund and Kolm (2002) study sector specific taxation in an open economy with a sector producing goods that are traded in the world market and a sector producing domestic services. A lower tax (value-added tax or social contributions) for a specific sector leads in general equilibrium to a reallocation of labour to this sector. The increase in employment is tempered by the increase in wage demands in the tax-favoured sector when unemployment falls. At the same time the demand for labour in other sectors declines, leading to lower wage pressure in these sectors. If flexibility in wage determination does not differ between sectors, there will be no change in aggregate unemployment. But if wage determination is more flexible in the tax-favoured sector, in our case the restaurant sector, then aggregate wage pressure will fall and unemployment decrease.<sup>16</sup>

Union density would potentially affect wage determination as a high union density is likely to increase the employed's negotiating strength. Another relevant indicator may be the collective agreements' coverage rate. Table 6.2 shows union density and collective agreements' coverage rate among the employed for selected sectors. The relatively low density in the restaurant sector could indicate that wage determination in the sector is more flexible than in other sectors. The coverage rate is also lower than average, albeit still

<sup>16</sup> Helpman and Itzhoki (2010) model a similar mechanism when they analyse the effects of trade on unemployment. Trade can lead to reallocation between sectors in a country. This may affect unemployment, depending on whether wage earners are reallocated to or from markets with more or fewer search frictions.



high. In 2007 83 per cent of the employed were covered by collective agreements.

**Table 6.2 Union density for the employed by industry and sector**

*Per cent*

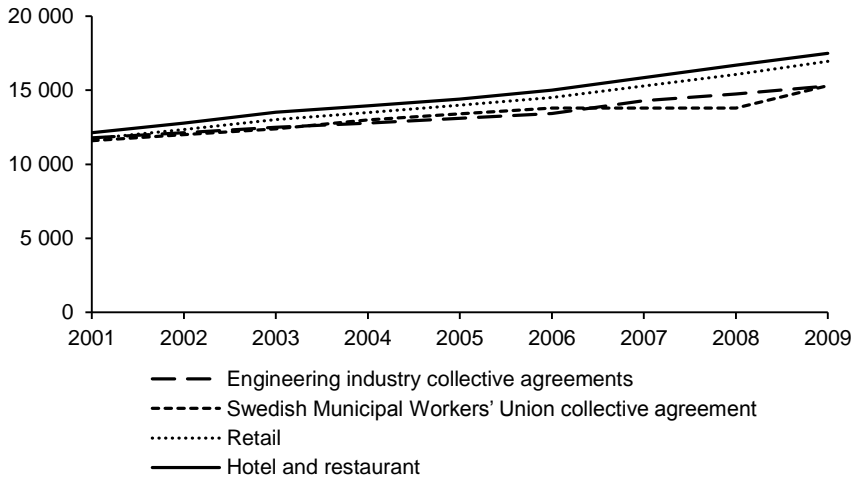
	2006	2007	2008	2009	2010	2011
Industry, etc.	82	79	79	79	78	78
Construction	79	75	71	71	70	68
Retail	63	60	57	57	58	57
Other private services	67	63	60	61	61	61
<i>of which hotels &amp; restaurants</i>	52	49	41	36	38	37
Transport	73	69	66	65	65	63
Total private services	66	62	59	60	60	60
Total private sector	71	68	65	65	65	65
Public sector	88	86	84	84	85	83
Collective agreements' coverage 2007 for all the employees in some industries in the private sector						
Industry	Excluding local collective agreements		Including local collective agreements			
Construction	80		93			
Retail	69		73			
<i>Hotel and restaurant</i>	67		83			
Cleaning	81		86			
<b>Total private sector</b>	<b>78</b>		<b>87</b>			

Source: Kjellberg (2009, 2012).

On the other hand, minimum wages, measured in kronor, are higher in the hotel and restaurant agreement than in other large agreements (see Figure 6.2 which shows minimum wages for the engineering, municipal, retail and hotel and restaurant agreements for 2001-2009). This is true even though the median wage is lower in the businesses covered by the hotel and restaurant agreement than in the businesses covered by the other agreements (see Figure 6.3).

**Figure 6.2 Minimum wages in different agreements**

*SEK per month*

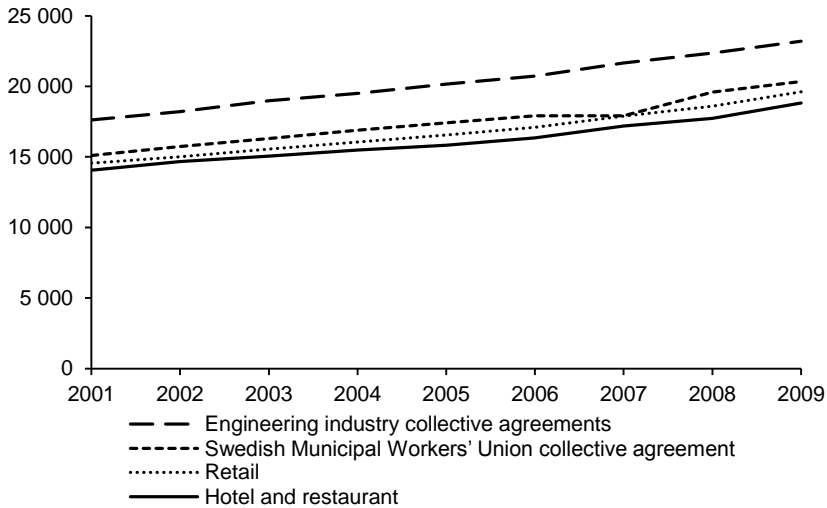


Note: See Figure 6.1.

Source: National Mediation Office.

**Figure 6.3 Median wages in industries covered by different agreements**

SEK per month



Source: Wage structure statistics.

Another factor indicating that wage determination is more flexible in the restaurant sector is that there are many small businesses. As they are not covered by wage and working hours agreements, self-employed people and family members who work in the business may have incomes below the minimum wage. Many of the self-employed in the restaurant sector also have low incomes, indicating that the labour market in the restaurant sector (at least for some groups who can start their own business) are very flexible and that minimum wages are not in fact binding.

The discussion thus far has dealt with the case where group affiliation cannot be influenced (for example, young people). As we will see, the conclusions are radically different when it is possible to migrate between groups. This assumption is more relevant in a study of the differences in unemployment between low-skilled and skilled workers or between different occupations as it is possible to get an education. The reasons for the differences in unemployment between different groups and sectors is in that case not only due to trade unions' negotiating strength, staff turnover, etc., but also to the cost of migrating to a group with lower unemployment. The lower

unemployment among the skilled can therefore to a large extent be explained by the cost associated with getting an education.

To understand this, assume that the demand for skilled workers increases for some reason. With unemployment declining and wages increasing among the skilled, the incentive to get an education is stronger. This means that more people choose to get an education, which in turn leads to wage moderation among the skilled and higher wages among the low-skilled. In equilibrium, when it no longer pays for the low-skilled to get an education, unemployment will be higher among the low-skilled than among the skilled. The higher the cost of migrating to a group, the lower the unemployment in this group will be.

In this case it is inefficient to subsidise employment for a group with high unemployment (the low-skilled) as it discourages migration to a group with lower unemployment (the skilled).<sup>17</sup> Stimulating employment in the restaurant and catering sector, a sector with relatively low training requirements, can thus reduce the incentives to get an education. This reasoning may to some extent also be valid for other groups such as young people and immigrants. Subsidising the restaurant sector may reduce incentives to move to another sector where unemployment is lower.

### 6.3 Other countries' experience

A majority of countries in the EU have a reduced tax rate for restaurant and catering services. There are few evaluations of a reduced tax rate, even though it is commonly used. The exception is Finland, where researchers have evaluated the reduced VAT for hairdressers and restaurants. The evaluation of the reduced VAT for hairdressers shows that half the tax reduction has been passed on in consumer prices after 2.5 years. But lowering the price does not appear to have led to any increase in consumption and thus to no increase in employment. Even less of the reduction in the VAT on restaurant services appears to have been passed on in prices, about a third. Unfortunately there are no analyses of the employment effects of lowering the VAT on restaurant services.

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<sup>17</sup> See Chapter 6 in Layard, Nickell and Jackman (1991) for a more detailed discussion of the mechanisms.

What lessons can Sweden learn from evaluations from other countries? The Finnish studies indicate that only a little of the tax cut is passed on in prices and thus the effects on consumption and employment are limited.

## 6.4 Assessments and recommendations

In our opinion the Government's estimate of the effects of the reduced VAT on unemployment and employment are exaggerated. The theory of optimal taxation provides theoretical grounds for reduced VAT rates on some goods and services but it is difficult to apply the theory in practice. When applied to restaurant and catering services, the arguments for a reduced tax rate are in our opinion weak.

The effects on structural unemployment are probably also exaggerated as the Government does not take into account that minimum wages may be affected and employment in other sectors may decrease. The reduced VAT on restaurant and catering services is more like sectoral support.

In the 2012 Budget Bill the Government points out the reduced implementation costs for companies that provide restaurant and catering services, food and hotel stays. "Simplified implementation and reduced administrative burden are compelling reasons for reducing the VAT rate for restaurant and catering services to the same level as food." We think that the reduced VAT rate on restaurant and catering services is an inefficient way of reducing the administrative costs. For a cost of SEK 5.5 billion a year to the public purse, administrative costs are only reduced by SEK 0.2 billion. The cost to the public purse will be even higher in the future if the restaurant and catering services sector grows more rapidly than other sectors.

The Government should instead consider introducing a uniform VAT on all goods and services. It is a considerably more efficient way of reducing the administrative costs and demarcation problems. In addition a uniform tax rate would probably reduce the distortions that differentiated consumption taxes give rise to. Sørensen (2010) estimates the effects of replacing the current system with a revenue neutral uniform VAT rate and finds that it would lead to efficiency gains of approximately SEK 9.5 billion a year.

A common problem with differentiated tax rates is that they risk increasing the incentives for interest groups to lobby for sectoral support. If more sectors were to benefit from reduced VAT rates, there is a risk of undermining the consumption tax as a tax base. A tax system able to take in revenue at low cost is important for government finances in the long run. In a globalised world with increasingly mobile tax bases, consumption taxes cause relatively small efficiency losses.<sup>18</sup>

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<sup>18</sup> See the discussion in Chapter 8 in Fiscal Policy Council (2011).

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