DENMARK'S CONVERGENCE PROGRAMME 2009

THE DANISH GOVERNMENT

February 2010

DENMARK'S CONVERGENCE PROGRAMME 2009

THE DANISH GOVERNMENT

February 2010

Index

Denmark's Convergence Programme 2009 5

1. Challenges and requirements in fiscal policies 15
   - 1.1 The global crisis has increased fiscal policy challenges 15
   - 1.2 Fiscal challenges in the medium and long term 22
   - 1.3 Objectives and requirements for public finances 27
   - 1.4 The challenge may be influenced by the macro-economic conditions 38
   - 1.5 Long-term challenges and retirement reform in the Welfare Agreement 41
   - 1.6 Overview of changes since CP08 43

2. Policy framework and objectives through 2015 45
   - 2.1 Introduction 45
   - 2.2 Objectives for economic policy 46
   - 2.3 Fiscal objectives in the 2015 Plan 51
   - 2.4 Tax policy 56
   - 2.5 Expenditure policy 58
   - 2.6 Structural and labour market policy 61
   - 2.7 Monetary and exchange rate policy 63

3. Short-term outlook and prospects towards 2015 71
   - 3.1 International economy and financial variables 71
   - 3.2 Short-term outlook for the Danish economy 74
   - 3.3 Employment and productivity assumptions through 2015 78
   - 3.4 Wages and prices 86
   - 3.5 Savings, investments and net foreign assets 88

4. Outlook for public finances to 2015 91
   - 4.1 Overview of public finances 91
   - 4.2 Structural budget balance 93
   - 4.3 Fiscal policy stance 97
   - 4.4 Revenues 99
   - 4.5 Expenditures 101
   - 4.6 Net lending by sub-sectors 106
   - 4.7 Public debt 107
   - 4.8 Institutional set-up 112

5. Long-term projection and fiscal sustainability 115
5.1 Projection principles and effects of the 2006 pension reform........................ 115

Appendix 1. Policy response to the global economic crisis 123
Appendix 2. Alternative scenarios and sensitivity analysis.. 127
Appendix 3. Comparison with Convergence Programme 2008 137
Appendix 4. Implemented labour market reforms 141
Appendix 5. Energy and climate objectives and public finances 153

Annex: Tables 159

Denmark's Convergence Programme 2009

Summary

Denmark's Convergence Programme for 2009 (CP09) describes the outlook for public finances and takes stock of the 2015 Plan in light of the global crisis and economic policy measures since Convergence Programme 2008[1]. Moreover, the Convergence Programme illustrates the policy requirements necessary to meet the targets in the 2015 Plan and an expected recommendation from the EU Economic and Financial Affairs Council (ECOFIN) under the Stability and Growth Pact. The short-term cyclical outlook presented in the Convergence Programme is based on *Economic Survey*, December 2009.

The global crisis which escalated in the autumn of 2008 has magnified the challenges in economic policies. In Denmark, GDP has fallen on the order of 4½ per cent in 2009 and unemployment has been rising since the summer of 2008. At the same time, the record-high fiscal surpluses during 2005-2008 have given way to substantial deficits. The public debt – and interest payments on the debt – is therefore growing and will rise further through 2015 in the absence of new policy measures. The aim in the 2015-strategy to bring down public debt and interest payments – thereby helping to provide scope for financing pensions etc. for an increasing number of elderly citizens going forward – has thus come under pressure.

Overall, the fiscal balance is expected to swing from a surplus of 3½ per cent of GDP in 2008 to a deficit of 5½ percent in 2010. Part of the deterioration is cyclical and essentially transitory in nature. But the structural balance[2] has also weakened markedly from a surplus of almost 2 per cent of GDP in 2008 to an expected deficit of around 1.7 per cent in 2010, mainly due to the expansionary fiscal measures taken to cushion the effects of the crisis on activity and employment. Meanwhile, the primary structural balance (i.e. the structural balance excluding net interest rate expenditures) is expected to be in deficit for the first time since 1990.

The structural deficit is projected to rise slightly from 1.7 per cent in 2010 to 1.8 per cent of GDP in 2015 in the absence of new initiatives. This is because rising interest payments on higher debt, adverse demographics and falling North Sea revenues are projected to offset the budget improvement from withdrawing temporary fiscal support. At the same time, gross public debt (EMU definition) may rise from around 27 per cent of GDP in 2007 to around 50 per cent of GDP in 2015.

---

[1] The Convergence Programme is prepared in accordance with the Stability and Growth Pact. Under the EU regulations, euro-area member states are required to prepare stability programmes, while other countries prepare convergence programmes. The Council issues an opinion on each national programme based on a recommendation from the Commission and discussions in the Economic and Financial Committee (EFC). The Danish convergence programme and the Council's opinion are considered by the Danish parliament (Committee for European Affairs).
[2] The structural balance is an estimate of the underlying position of public finances, i.e. adjusted for the impact of cyclical and other temporary factors, *cf. for example Economic Survey*, December 2009.

On this basis, the fundamental challenge is that debt is rising while public expenditures more permanently are projected to exceed revenues. Cyclical normalisation will not eliminate the deficit and it is therefore necessary to strengthen public finances.

The structural balance in 2015 is projected to be weaker than in Convergence Programme 2008 (in the absence of new measures) due to higher public debt and interest payments as well as higher public consumption spending, *cf. box 1*. The tax reform in *Spring Package 2.0*, which is under-financed initially in view of the weak cyclical position, is estimated to strengthen public finances in 2015, partly reflecting the phasing-in of the financing elements of the reform. Moreover, the tax reform is estimated to strengthen public finances over the long term (the fiscal sustainability indicator) by around 5½ billion DKK, mainly due to higher labour supply. The tax reform therefore dampens public debt in the longer term and yields a positive contribution to meet the fiscal targets in the 2015 Plan.

The fiscal sustainability indicator is estimated at -1.3 per cent of GDP in the absence of new initiatives. This is 0.5 per cent of GDP weaker than in Convergence Programme 2008, despite an estimated strengthening of around 0.3 per cent stemming from the tax reform in *Spring Package 2.0*. The downturn following the financial crisis (implying higher interest payments) and higher public consumption expenditures have weakened the sustainability indicator by some 0.8 per cent of GDP, cf. box 1.

The Convergence Programme targets balance by 2015 – and fulfilling the expected Council recommendation will be an important step on the way

The key fiscal policy target in the Convergence Programme is to ensure (structural) balance in public finances by 2015 in accordance with the 2015 Plan from 2007. Balance in 2015 will halt debt accumulation and allow fiscal policy to fulfil the long-term requirement of fiscal sustainability included in the 2015 Plan.

Structural balance in 2015 is therefore also the Convergence Programme's Medium-Term Objective (MTO). This entails a margin compared to the MTO-requirement of the Stability and Growth Pact, which implies that Denmark's MTO cannot be lower than -½ per cent of GDP. This lower limit for the structural balance reflects the Pact's requirement that the actual deficit should not exceed 3 per cent of GDP in a normal cyclical downturn. The lower limit should be seen in conjunction with Danish public finances being more sensitive to the cycle than in most other countries.

The target in the 2015 Plan of structural balance in 2015 requires substantial fiscal consolidation. As mentioned, in the absence of further initiatives the structural fiscal balance is expected to show a deficit of some 1.8 per cent of GDP in 2015, *cf. table 1*. This implies a total consolidation requirement of around 31 billion DKK in the years up to 2015 in order to ensure balance by 2015. The precise requirement is uncertain, but the challenge is at any rate considerable.

Box 1

The global crisis and higher public consumption spending have weakened public finances

In Convergence Programme 2008 (CP08) the fiscal challenge in terms of securing long-term fiscal sustainability (a sustainability indicator of 0) was estimated at around 0.8 per cent of GDP or around 14 billion DKK, *cf. table a*. Hence, the policy requirement was that new initiatives to raise employment etc. through 2015 should strengthen public finances by that amount.

The tax reform in *Spring Package 2.0* from 2009 strengthens fiscal sustainability by around 0.3 per cent of GDP, thus meeting close to half of the requirement in CP08.

Meanwhile, the fiscal challenges have increased, for two reasons in particular:

- The interest burden on higher debt (15-20 per cent of GDP higher net debt) incurred during the years of weak cyclical conditions after the financial crisis weakens fiscal sustainability by slightly more than 0.3 per cent of GDP.
- Public consumption expenditures are higher than expected. This weakens sustainability by around 0.3 per cent of GDP. Moreover, expenditures make up a larger share of GDP as potential GDP is estimated to be lower following the crisis. Lower structural GDP and higher real expenditures raise the expenditure share by around ½ per cent of GDP and weakens sustainability correspondingly.

By the same token, the structural balance in 2015 is 0.8 per cent of GDP lower than projected in Convergence Programme 2008 (excluding the reform requirement in CP08). This also reflects rising interest expenditures and higher public consumption spending as a share of GDP, cf. table a. The tax reform is estimated to strengthen the fiscal balance by some 0.4 per cent of GDP in 2015.

Table a

Weakening of long-term sustainability and structural balance in 2015 (excl. required reforms)

Per cent of GDP	Sustainability indicator	Balance in 2015
CP08 excluding required reform-contribution	**-0.8**	**-1.0**
- Contribution from tax reform in *Spring Package 2.0*	0.3	0.4
- Weakening due to the global crisis and increased expenditures	**-0.8**	**-1.4**
- of this interest rate burden on increased debt from 2015	-0.3	-0.9
- of this higher public consumption expenditures	-0.3	-0.3
- of this contribution from lower structural GDP	-0.2	-0.2
- Other factors(North Sea revenues etc., net impact)	0.0	0.2
CP09 in the absence of new initiatives	**-1.3**	**-1.8**

Note: The sustainability indicator indicates the magnitude of the permanent improvement of public finances as a share of GDP needed to ensure a stable net debt relative to GDP in the long term, cf. chapter 2.

With the prospect of a deficit of 5½ per cent of GDP this year, Denmark is expected – in line with the Stability and Growth Pact – to become subject to the excessive deficit procedure and receive a recommendation from the EU's Council of Ministers (ECOFIN) recommending that the deficit is brought below the 3 per cent of GDP reference value within a few years.

Table 1
Actual and structural deficits in absence of new initiatives

	2009	2010	2011	2012	2013	2014	2015
Balance (bn. DKK 2010-level)	-50	-94	-79	-71	-56	-42	-31
Balance (per cent of GDP)	-3.0	-5.5	-4.4	-3.9	-3.1	-2.3	-1.8
Structural balance (per cent of GDP)	-0.6	-1.7	-1.3	-1.6	-1.4	-1.6	-1.8

Note: The structural balance corresponds to the actual balance adjusted for estimated effects on public finances from cyclical fluctuations and other temporary factors.

Judging from the rules and practices of the Stability and Growth Pact and especially the ECOFIN Council recommendations that other countries have received until now, the recommendation to Denmark is likely to call for a strengthening of the structural balance by a total of 1½ per cent of GDP by 2013, i.e. by ½ per cent of GDP per year on average in the years 2011-2013. The expected recommendation does not specify how the tightening should be distributed over the years, and the recommendation may be changed subsequently if the economy develops less favourably than expected.

In that case, the recommendation will be in line with the one Germany received in December 2009, and with the benchmark requirement for annual efforts in the Stability and Growth Pact for countries with excessive deficits. Moreover, the required consolidation will in that case be smaller than for other EU member states subject to the procedure. This reflects that Denmark has a lower deficit (both actual and structural) than most other countries, relatively low debt and less extensive future sustainability challenges. In part, this is because the surpluses in the good years from 2005-2008 were higher in Denmark than in other EU member states.

Adhering to the expected recommendation implies that the structural deficit must be reduced from 1.7 per cent of GDP in 2010 to 0.2 per cent of GDP in 2013. That will be an important step on the way towards the primary objective of fiscal balance in 2015. Hence, the structural deficit will be reduced from around 1.8 per cent of GDP in the absence of new measures to around ½ per cent of GDP when the expected recommendation is complied with (given that the tightening is permanent). The longer-term technical projections, however, indicate that the deficit will rise again for a period of 20-30 years after 2015 due to, primarily, adverse demographics and declining tax revenues from the North Sea.

The objective of fiscal balance by 2015 dampens the debt accumulation and provides a better basis for handling these longer term challenges. Even so, public finances will remain under pressure after 2015 and further measures may well become necessary.

Against this background, the expected recommendation from the ECOFIN Council does not imply a heightening of the overall level of ambition, or that consolidation now has to be implemented which would otherwise not be necessary. The timing in the overall process means that the debt accumulation can be dampened relatively quickly, and that fiscal room of manoeuvre can be restored, which may be needed in case of subsequent serious setbacks.

A credible restoration of sustainable finances within the framework of the EU's overall efforts to ensure sound finances can also engender lower interest rates than otherwise and reduce vulnerability to renewed financial turmoil. At the same time, however, the consolidation challenge will require rather extensive measures, which relatively quickly and directly improve public finances.

Policy assumptions in the Convergence Programme and the future process

Concrete decisions on consolidation measures or their phasing-in have not been taken in the CP. Over the next years, however, the adjustment will be on the expenditure side, including public consumption expenditures. The Danish tax level is still among the highest in the world, and higher taxes can dampen growth potential and employment. At the same time a number of taxes and indirect taxes are set to go up over the coming years as part of the financing of the tax reform.

Moreover, public consumption spending has increased more than expected in the medium-term plans since 2001 and makes up a larger share of GDP (and cyclically-adjusted GDP) than ever before. With the expenditure growth towards 2015 that was planned up to now, public consumption would by 2015 be a good 1 percentage point above the benchmark in the 2015 Plan of 26½ per cent of (cyclically adjusted) GDP. In 2010 public consumption expenditures are approximately 13¼ billion DKK higher than expected in the 2015 Plan from 2007[3].

The second pillar in addressing the fiscal challenges is to implement initiatives that strengthen growth and employment in the longer term, thereby strengthening public finances. The tax reform in *Spring Package 2.0*, the pension reform in the Welfare Agreement (2006) and the series of adjustments in labour market policies since the beginning of the decade strengthen labour supply and employment and thereby public finances. In the longer term, the pension reform in the Welfare Agreement (2006) offsets the fall in the employment rate that would otherwise occur, especially since the age limits in the retirement system are linked to the life expectancy of 60 year olds. The agreement is therefore a key condition for being able to handle the challenges of financing health care and elderly care over the longer term.

---

[3] Real public consumption expenditures in 2010 are approximately 36½ billion DKK higher than in the 2010 Plan from 2001, where real growth was assumed to be 1 per cent per year in 2001-2005 and 0.5 per cent per year in 2006-2010. The planned real growth was adjusted upwards to 1 per cent per year from 2007 due to the Globalisation funds in the Welfare Agreement from 2006, cf. chapter 2.

Reforms that raise employment may relieve pressure on fiscal policy towards 2015, since higher employment increases tax revenues and lowers public expenditures. Reforms that strengthen public finances in the longer term cannot, however, contribute to fulfil the expected Council recommendation towards 2013. In the current situation with a fairly urgent need to strengthen public finances, the most immediate task is therefore to prepare changes that have a relatively quick impact on public finances.

The Convergence Programme incorporates consolidation of public finances so that structural fiscal balance is achieved by 2015 and the expected EU recommendation is complied with. Thus, the economic projection is in line with the guidelines for the Convergence Programmes and the key fiscal objectives set out in the 2015 Plan.

The policy assumptions in the Convergence Programme incorporate consolidation of public finances by around 31 billion DKK (2010-level) towards 2015. The projections include a reduction in total public expenditures of 24½ billion DKK compared to the expenditure growth path in Convergence Programme 2008. The expenditure reduction is, as a technical assumption, distributed proportionally between public consumption spending and other public expenditures.

Real growth in public consumption expenditures is set (technically) at 0 in 2011-2013 (and ¾ per cent per year in 2014 and 2015). This corresponds to a 13½ billion DKK reduction in expenditures (around 2¾ per cent of total public consumption) compared to the real growth assumed in CP08 for 2011-2013. The expenditure profile should be seen in light of public consumption expenditures being 13¼ billion DKK higher in 2010 than assumed in the 2015 Plan from 2007. In the Convergence Programme, public consumption expenditures amount to just over 26¾ per cent of (cyclically adjusted) GDP by 2015, which is a little above the benchmark in the 2015 Plan and higher than in every year from 1984 to 2007.

Furthermore, it is assumed that the remaining part of the reform requirement in the original 2015 Plan (i.e., the share of the reform requirement that has not yet been implemented) will be implemented by 2015. It is thus technically assumed that new initiatives increase employment on a scale that strengthens public finance sustainability by an additional 7 billion DKK (0.4 per cent of GDP).

The projection also includes a rolling-back of the temporary fiscal stimulus implemented in 2009 and 2010. Public investments will be reduced from the high level in 2010, while the financing elements in *Spring Package 2.0* are phased in as planned. The consolidation requirements and their contribution to meet key fiscal targets are summarised in *box 2*.

Box 2

Requirements for consolidation of public finances in order to achieve central objectives

The consolidation projection in CP09 has been built on the following fiscal objectives:

- Maintaining the key objective in the 2015 Plan of structural balance in 2015, with which fiscal policy fulfils the requirement of long-term fiscal sustainability– including adhering to the expected recommendation from the ECOFIN to bring the deficit below 3 per cent of GDP and ensure an improvement of the structural balance by 1½ per cent of GDP from 2010 to 2013.

- Consolidation will take place on the expenditure side and public consumption spending will be kept stable in real terms. The benchmark for public consumption expenditures of 26½ per cent of (cyclically adjusted) GDP is maintained. Furthermore, it has been technically assumed that the part of the reform requirement in the 2015 Plan that has not been implemented, will be fulfilled up to 2015.

- The tax freeze will be continued.

The withdrawal of temporary fiscal stimulus during the downturn– i.e. phasing in the financing elements in *Spring Package 2.0* and bringing public investment back down again – will strengthen the structural balance up to 2013 and 2015, but these gains are largely offset by rising interest expenditures on higher debt, falling North Sea revenues and the retirement of large cohorts. In sum, an improvement of the structural balance by 1.5 per cent of GDP from 2010 to 2013 is estimated to require new initiatives improving public finances in 2013 by 1¼ per cent of GDP. This requires new initiatives corresponding to around 24½ billion DKK (2010 level).

This would also mean that the long term sustainability indicator is approximately -0.2 per cent of GDP. In the projection there is still a deficit in 2015 of almost ½ per cent of GDP, *cf. table a*.

Structural balance in 2015 requires, based on current calculations, a further improvement in public finances via new initiatives for approximately 7 billion DKK.

Overall, the consolidation needs amount to some 31 billion DKK in order to fulfil the target of balance in structural public finances by 2015.

Table a

Consolidation requirements to ensure target compliance

Per cent of GDP	Consolidation requirement	Balance in 2015	Sustainability indicator	Balance in 2025
No-policy change	-	-1.8	-1.3	-4.5
Expected recommendation 2013	Around 24 bn. DKK	-0.5	-0.2	-2.5
Structural balance 2015	Around 31 bn. DKK	0.0	0.2	-1.8

Even though the budget is in balance in 2015 and fiscal sustainability is fulfilled in the Convergence Programme there is likely to be downward pressure on public finances for a couple of decades after 2015. The sustainability indicator is weakly positive (0.2 per cent of GDP) in the projection due to primary surpluses in the distant future – after 2050 – and also assumes tighter expenditure control than in the last 15-20 years. The long term improvement in the projection reflects shifting demographics in conjunction with estimated effects of the pension reform in the Welfare Agreement, cf. chapter 5.

The economic projection on which the fiscal assessment is based requires tight expenditure control and a successful recovery after the financial crisis with relatively high growth towards 2015, so that the currently rather large output gap gradually closes. It has been assumed that the recovery now under way in the world economy, and tentatively also in Denmark, will continue even as countries embark on the necessary fiscal consolidation. The recovery is supported by the current very expansionary monetary policies and lower market interest rates that support investment and consumption, including via the housing markets.

In most countries fiscal consolidation will have to start while the output gap remains quite significant. This is necessary in order to avoid a negative spiral of rising debt and interest expenditures, and to avoid the risks of weakened confidence and higher interest rates.

Fiscal consolidation will in itself dampen demand growth, but without consolidation there would be quite significant risks that interest rates could go up and confidence could be undermined, including through expectations of future (larger) tightening measures and this would also dampen demand growth, cf. chapter 1.

With the assumptions that form the basis for the projection, changes in fiscal policy since 2008 as well as the effects from lower interest rates are estimated to increase the activity level in 2010 and 2011 by up to around 4½ per cent of GDP, *cf. table 2*. The moderating effect of the consolidation assumed for 2011 is therefore on these estimates largely offset by the impact of earlier fiscal and monetary easing that is still feeding through with increasing force into 2011. In the years 2012 to 2015, however, the partial contribution from the assumed consolidation and gradually rising interest rates is estimated to reduce demand growth. The assumption of rising interest rates notably reflects the assumption that global growth is increasingly self-sustainable.

The prospects for the real economy are uncertain both concerning the short-term outlook – partly in light of the substantial need for fiscal consolidation in many countries and the effects on exports from reduced competitiveness – and more fundamentally as to whether the downturn after the financial crisis leads to a permanent reduction in potential GDP and possibly employment compared to the expectations in previous years' Convergence Programmes. It has been assumed that, as of 2015, the unemployment rate can be held at 3.6 per cent of the labour force on average over the business cycle, which requires a well-functioning labour market. Moreover it is difficult, especially in the current situation, to make an accurate estimate of the underlying position of the public finances (the structural balance).

The longer-term projections in the Convergence Programme – i.e. for the period after 2015 – should primarily be seen as a consistency check on whether there is broad balance between public revenues and expenditures in the longer term. It has been assumed that growth in total public consumption expenditures up to 2015 and thereafter – including what follows from the demographic pressures and technological development etc. in the health sector – is financed within an overall expenditure growth path that is lower than in the past 20 years. Possible effects on public finances from the objective of achieving independence from fossil fuels in the longer term, beyond the energy and climate targets in the Energy Agreement from 2008, have not been taken into account.

Table 2

Contributions to economic activity towards 2015 (the contribution from fiscal policy is excluding any dampening effects on interest rates from consolidation)

	2009	2010	2011	2012	2013	2014	2015
Per cent of GDP							
Multiannual fiscal effect (GDP level)	1.0	2.0	1.9	1.4	0.7	0.3	0.0
Special Pension scheme (SP) disbursement etc.	0.3	0.6	0.3	0.1	0.0	-0.1	-0.2
Fiscal policy since 2008 and SP etc.	1.3	2.7	2.2	1.5	0.7	0.2	-0.2
Changes in interest rates since 2008	0.4	1.8	2.3	2.0	1.5	0.8	0.1
Total contribution, fiscal effect, interest rates etc.	1.7	4.5	4.5	3.5	2.2	1.0	-0.1
Contribution to annual growth	1.7	2.8	0.0	-1.0	-1.3	-1.2	-1.1

Note: The multiannual effects on activity are calculated as the effects on activity from fiscal policy and changes in interest rates since 2008 and are quite uncertain.

It should also be stressed that it is the ECOFIN council that, on the basis of a recommendation from the European Commission, adopts the deadline for bringing the deficit below 3 per cent of GDP and the required improvement in the structural balance. The assessment of what is needed to comply with the recommendation also relies primarily on the Commission's estimate of the structural balance (and not the Ministry of Finance's estimate) and may also depend on the concrete implementation of the rules in the coming years. It can not be ruled out that the recommendation will be more demanding (for example ¾ per cent of GDP per year or a deadline of 2012 instead of 2013), while the probability that Denmark does not become subject to the excessive deficit procedure is currently considered to be minimal.

The need for consolidation may therefore be revised and updated over time in light of new information including on public finances and new policy decisions, as well as the specific content of the expected EU recommendation to Denmark.

Given the overall magnitude of the challenges, the Government has initiated a process preparing fiscal policy consolidation, aiming for balance in structural public finances in 2015, including adherence to the expected recommendation. The adjustments will take place on the public expenditure side as well as fulfilling the remaining reform requirement stemming from the original 2015 Plan. In order to reach the targets it is central that total public consumption expenditure is held broadly stable. The fiscal stance and measures in 2011 will be determined more concretely during the negotiations on the municipalities' economy in May-June and the process leading to the Fiscal Bill in the autumn, taking among other things the economic situation into consideration.

The Government will also initiate the preparation of a comprehensive plan towards 2020 which will outline key structural and fiscal policy requirements and initiatives to ensure consistency between public revenues and expenditures in the longer term. This should be seen in light of the expected requirement that Denmark by the end of this year – i.e. in the Convergence Programme for 2010 – should clarify further how the recommendations will be complied with. The plan will also put emphasis on how to secure favourable growth conditions after the global and financial crisis.

Table 3

Actual and structural deficits with new initiatives – the CP09-projection

	2009	2010	2011	2012	2013	2014	2015
Balance (bn. DKK, 2010-level)	-50	-94	-75	-57	-33	-15	approx. 0
Balance (per cent of GDP)	-3.0	-5.5	-4.2	-3.2	-1.9	-0.8	0.0
Structural balance (per cent of GDP)	-0.6	-1.7	-1.0	-0.7	-0.2	-0.1	0.0

Note: The structural balance corresponds to the actual balance adjusted for estimated effects on public finances from cyclical fluctuations and other temporary factors.

1. Challenges and requirements in fiscal policies

1.1 The global crisis has increased fiscal policy challenges

The global downturn following the financial crisis has been significantly deeper than expected in the Convergence Programme 2008 and has increased the economic policy challenges. The key priority in 2009 and 2010 has been to stem the negative effects from the crisis on financial stability, production and employment. A wide range of initiatives have been implemented, *cf. table 1.1 and annex A.1*.

Table 1.1
Overview: the most important initiatives to stem the negative effects from the global crisis

Financial stability	Bank rescue package and pension agreement (October 2008), Credit Package (January 2009), Business Package (August 2009).
Monetary and fixed exchange rate policy etc.	The key monetary policy interest rate has been reduced to historically low 1.05 per cent. Foreign currency reserves have increased to more than 400 billion DKK.
Liquidity support	Extended credit periods for firms, access to SP-savings etc. for households, eased access to liquidity in the central bank.
Fiscal policy	Significant fiscal easing in the Fiscal Bill for 2009, the agreement on green transport policy, the tax reform in *Spring Package 2.0* and the Fiscal Bill for 2010 etc.

Denmark appears to be among the OECD countries that have eased fiscal policy the most in 2009 and 2010 in order to support growth and employment. The fiscal stimulus over the two years has a budget impact of around 60 billion DKK in 2010 (3½ per cent of GDP measured by the direct budget impact, i.e. compared to an unchanged fiscal stance from 2008). Expansionary measures include planned growth in public investments by 30 per cent over two years and significant cuts in taxation especially in 2010. Growth in public consumption is also relatively high, cf. chapter 4. Since interest rates have also fallen to historically low levels since autumn 2008, economic policies provide a significant contribution to activity and employment in 2010, *cf. table 1.2*.

The temporary fiscal easing in the shape of frontloading of public investments and the tax reform in *Spring Package 2.0*, which is underfinanced the first years, does not weaken long term fiscal sustainability. The tax reform is estimated to strengthen public finances in the longer term, mainly due to increased labour supply, cf. chapter 2. Moreover, the initiatives to ensure financial stability are not expected to affect fiscal sustainability, but have led to higher exposure of public finances to risks in the private sector, especially the financial sector.

The sizeable fiscal expansion should be seen in light of surpluses on the structural fiscal balance of just under 2 per cent of GDP in the period 2005-2008, in line with the target in the 2015 Plan. Moreover, the favourable cyclical situation and related factors contributed to large fiscal surpluses in Denmark. The average surplus in these years was higher than in other EU member states, *cf. figure 1.1a*.

Table 1.2

Effects on activity and employment from expansionary policy measures in 2009 and 2010

The expansionary policy measures in 2009 and 2010 – including the disbursement of Special Pension (SP) savings etc. – are estimated to increase the activity level by 2¾ per cent in 2010 under normal circumstances. The employment level in 2010 may therefore be around 50,000 persons higher than if the fiscal policy setting had been neutral (1¾ per cent).

If the effects from lower interest rates since 2008 are included, the contribution would under normal circumstances lift GDP by around 4½ per cent in 2010 and increase employment by up to 80,000 persons (slightly more than 2½ per cent).

The structural fiscal balance is estimated to weaken from a surplus of around 1.9 per cent of GDP in 2008 to a deficit of around 1.7 per cent of GDP in 2010.

On average for the years 2005 to 2008 the planned fiscal policy stance in each year's budget was estimated to have a neutral impact on activity as measured by the fiscal effect, while the realized outcomes point to an average first-year growth impact of 0.1 per cent of GDP per year in the period. This is primarily because public expenditures have grown faster than planned, especially in 2006. Meanwhile, the very high surpluses reflect also the operation of automatic stabilizers that have had a dampening effect on economic activity during the cyclical upswing.

Figure 1.1a

Fiscal surplus or deficit in EU member states, 2005-2008

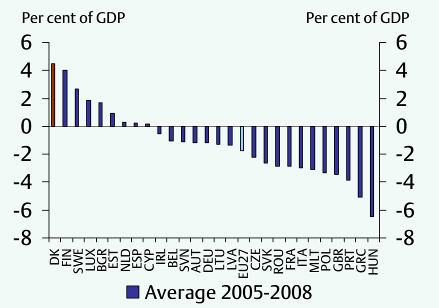
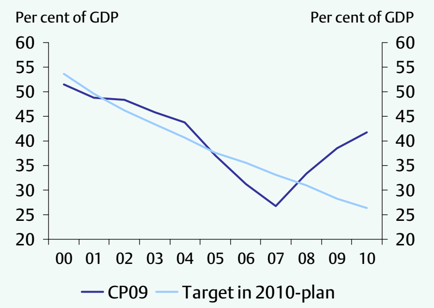


Figure 1.1b

Gross public debt (EMU definition): 2010 Plan and now



Source: European Commission, Statistics Denmark, Eurostat and own calculations.

The large surpluses before the financial crisis brought down public debt. Up to 2007 the debt reduction (gross public debt) was therefore ahead of the target in the original 2010 Plan from 2001, *cf. figure 1.1b*. The rise in gross debt in 2008 – when the budget balance was still in surplus – mainly reflects the issuing of 30-year government bonds for almost 90 billion DKK in the autumn, as part of efforts to restore financial stability. This has reduced borrowing requirements in the following years[1].

The gross public debt (EMU definition) is used in relation to the Stability and Growth Pact requirements. The gross public debt is still below the 60 per cent benchmark and is lower than in most other EU member states, *cf. figure 1.2a.* The net public debt, which includes both public financial assets and liabilities, declined up to 2008 when net debt turned into net assets, cf. chapter 4.

Figure1.2a

Gross public debt in EU member states, 2008

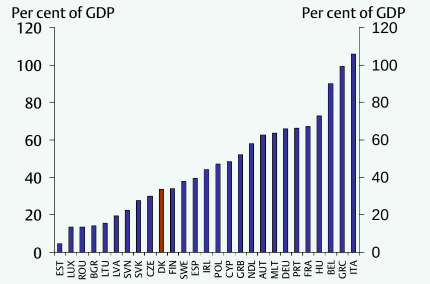
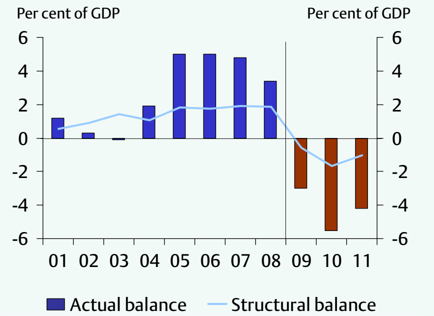


Figure1.2b

Actual and structural balance, 2001-2011



Source: European Commission, Statistics Denmark, Eurostat and own calculations.

The global crisis and the measures taken to cushion its effects have led to a significant deterioration of public finances. In just one year Denmark has gone from a surplus of 3½ per cent of GDP in 2008 to an estimated deficit in 2009 of 3 per cent of GDP, i.e. on the borderline of the EU's reference value for excessive deficits. The deficit is expected to grow to 5½ per cent of GDP in 2010, *cf. figure 1.2b.* Gross public debt may therefore rise from 27 per cent of GDP in 2007 to just over 40 per cent of GDP by the end of 2010.

Just over 1/3 of the weakening of public finances from 2008 to 2010 is estimated to reflect expansionary policy measures, while the remainder (almost 2/3) primarily reflects the direct budgetary impact from the economic slowdown, including the operation of automatic stabilisers that also help to dampen the loss of income in the private sector and thereby support demand.

Extraordinarily low interest rates in many countries and temporary contributions from fiscal measures have helped bring about renewed growth after the sharp setback in late 2008 and early 2009. In Denmark growth is expected to be relatively moderate at 1.3 per cent in 2010 and 1.6 per cent in 2011. This is less than in previous recoveries, reflecting adjustment pressures in the housing market and the finan-

[1] The proceeds were deposited into the government's account in the central bank and have subsequently been used to finance capital injections in financial institutions, among other things.

cial sector. Growth is supported by the easy monetary stance both at home and abroad, to which comes the expansionary fiscal measures in 2009 and 2010, *cf. figure 1.3a*. Prospects remain uncertain, however, including as to whether the global recovery is sufficiently self-sustaining when the expansionary fiscal measures are rolled back. In the same vein, there is uncertainty as to how quickly monetary policy will be normalised, which over time is necessary to prevent any build-up of new potential imbalances, for example in the financial markets.

Figure1.3a

GDP growth with and without expansionary economic policies

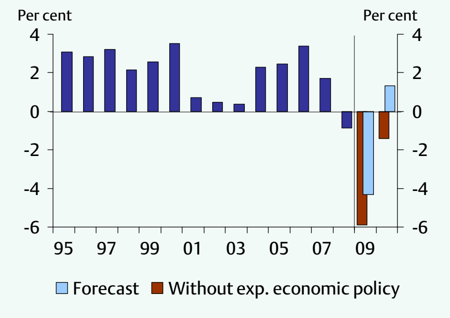
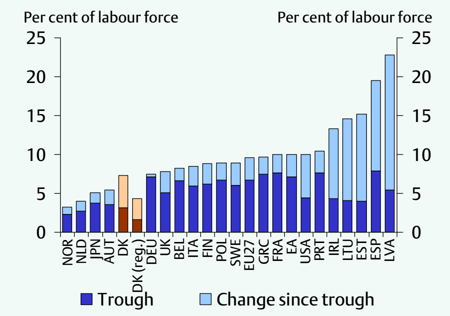


Figure1.3b

Unemployment now and since last trough in selected countries



Note: In figure 1.3b'DK' shows unemployment measured by the EU harmonized unemployment definition, while 'DK (reg.)' shows the registered unemployment as calculated by Statistics Denmark.
Source: Statistics Denmark, Eurostat and own calculations.

In Denmark unemployment has risen quite significantly after reaching an unusually low level in summer 2008, but it remains lower than in most other countries, *cf. figure 1.3b*. The registered unemployment is expected to rise for some time yet, due to the fall in production that has taken place. Hence, registered unemployment is expected to rise at a lower pace until the end of 2010, reaching the same level as during the previous cyclical downturn (earlier in the decade). Eventually, growth in production, which has picked up since summer 2009, is expected to feed through to the labour market and unemployment is expected to level off around the turn of the year 2010/2011 and then to decline slightly through 2011.

The most recent indicators confirm that Denmark is coming out of recession. GDP grew by 0.6 per cent in the 3rd quarter 2009 and both car sales, debit card (dankort) sales and confidence indicators for the service sector and manufacturing sector have improved in the last part of 2009, while the fall in industrial production has slowed. The economic outlook is subject to considerable uncertainty, *cf. Economic Survey*, December 2009 and chapter 3.

Economic policy challenges in Denmark and abroad

The global downturn following the financial crisis may have drawn-out implications, both in terms of public finances and the challenge of ensuring renewed growth and lower unemployment.

Most countries are facing a major challenge in phasing out the extensive financial sector measures without weakening financial stability. Moreover, the exceptional fiscal measures implemented in order to mitigate the crisis need to be rolled back. However, this will not be sufficient. Public finances are under great strain in many countries and extensive consolidation is needed in most Western countries, *cf. box 1.1*. The challenges are enhanced by the growing demographic pressures on public finances stemming from an increasing number of elderly, longer life-spans and relatively fewer in the most active working ages.

In order to finance high deficits, many countries will have to issue large amounts of government bonds over the next years. This may lead to upward pressure on interest rates not least in small countries and especially if confidence in fiscal policies weakens. Moreover, most countries have become more exposed to developments in the financial sector due to guarantees and capital injections etc. These have increased borrowing needs and may potentially affect public finances if conditions in the financial markets again deteriorate.

The consolidation task is especially challenging because many countries will have to tighten fiscal policy at the same time and to an extent which has hardly been seen before and in many cases consolidation needs to be started when considerable uncertainty remains as to the sustainability and robustness of the recovery.

In most countries the required consolidation is larger than in Denmark, partly because many countries had considerable deficits and high debt also under the last cyclical upturn. A number of countries are facing consolidation needs of up to 10 per cent of GDP over the next years and in many cases the consolidation will start already in 2010, cf. box 1.1. This is necessary in order to prevent a negative spiral of high deficits, rising debt and increased interest payments.

For all countries it is key to ensure high credibility in handling the fiscal challenges, not least to underpin low interest rates. The potential effects on economic activity from fiscal tightening must be seen in relation to the risk of significantly higher interest rates if consolidation is not implemented. That would also have negative effects on activity and reinforce interest payments and debt dynamics.

Given the very expansionary stance of monetary policies and sizeable public deficits, the room for stabilization policies has been exhausted, and consolidation is therefore necessary also in order to secure room for manoeuvre in case of new setbacks at a later stage. The need for policy credibility is particularly strong in small countries which, like Denmark, are not part of the euro zone.

Box 1.1

Examples of planned fiscal consolidation in different countries

The economic crisis has led to a sharp deterioration in public finances in the OECD area and many countries are now facing significant multi-annual consolidation challenges. According to the OECD, gross public debt in the OECD area could rise by around 40 per cent of GDP over a decade (from around 73 per cent of GDP in 2007 to 113 per cent of GDP in 2017), even if public finances are consolidated by 1 per cent of GDP per year for seven years in the countries facing the highest challenges, including France, the UK and the US, and over three years in countries with more moderate challenges, including Germany[1].

In the EU, fiscal consolidation is coordinated within the framework of the Stability and Growth Pact, *cf. box 1.2*. Some examples of other EU countries' consolidation plans based on the countries' stability programmes for 2009/2010 are described below.

The Netherlands strengthened public finances in the years before the crisis and therefore had room for expansionary fiscal policy both in 2009 and 2010 in light of the crisis. As a consequence the fiscal deficit exceeded 3 per cent of GDP in 2009 and is expected to be just above 6 per cent of GDP in 2010. The Netherlands have therefore received an ECOFIN Council recommendation to bring the deficit below 3 per cent of GDP by 2013, to start the consolidation in 2011 and to implement fiscal tightening of ¾ per cent of GDP on average per year in 2011-2013. The Netherlands intend to comply with the recommendation and has decided on measures that are considered consistent with the average consolidation requirement in 2011, including reductions in transfers to municipalities and regions. During the summer of 2010 the Government will present further proposals to consolidate in order to bring the deficit below 3 per cent of GDP by 2013. The Government has set up 20 working groups to draw up a catalogue of proposals on how expenditures could be reduced to match the new economic situation.

Austria also had some room to ease fiscal policies in both 2009 and 2010. As a result of the expansionary policy and the economic situation etc. Austria's deficit exceeded 3 per cent of GDP in 2009 and is expected to be 4.7 per cent of GDP in 2010. Austria has therefore received an ECOFIN Council recommendation to bring the deficit below 3 per cent of GDP in 2013 by an average annual tightening of ¾ per cent of GDP. Austria intends to comply with the recommendation and to bring the deficit down to 2.7 per cent of GDP by 2013. It is Austria's plan that the tightening will primarily be implemented via lower expenditures and that around half of the spending cuts (0.9 per cent of GDP) will be implemented by dampening public consumption, including primarily the public payroll. The concrete initiatives have not yet been specified.

Ireland is one of the EU member states that have been hit hardest by the crisis. The public finances have deteriorated from roughly balance in 2007 to a deficit of almost 12 per cent of GDP in 2009. According to the ECOFIN Council recommendation, Ireland shall bring the deficit below 3 per cent of GDP in 2014 and implement average annual consolidation of 2 per cent of GDP in 2010-2014. However, Ireland has, due to the sizeable fiscal deficits and acute pressure on the interest rate spread, started consolidating already in 2009 with a tightening of around 5 per cent of GDP. In the stability programme for 2010 Ireland intends to comply with the recommendation and bring the deficit below 3 per cent of GDP in 2014, including by a 2½ per cent of GDP tightening in the 2010-budget and planned tightening of 1½-2 per cent of GDP in both 2011 and 2012. The consolidation is mainly implemented on the expenditure-side in the 2010-budget, where budget improvements include 1 billion euro in public salaries (that are reduced by 6 per cent on average and 15 per cent for employees with salaries exceeding 200,000 euro), 760 million euro on transfers etc. (especially by reducing unemployment benefits to unemployed between 20 and 24 years of age), 980 million euro on public expenditures (including efficiency measures in e.g. the health sector) and around 960 million euro on investment projects. In addition, some measures on the revenue side have been implemented, including a new carbon tax on fossil fuels. In the 2008 and 2009-budgets consolidation has to a higher degree been implemented on the revenue side, including via higher taxes, particularly for the highest incomes.

1) OECD Economic Outlook 86, Preliminary Edition, November 2009.

The economic crisis is also likely to lead to a lasting reduction in potential output in Denmark and in other countries compared to earlier expectations. Both the EU, the OECD and the IMF as well as national authorities in a number of countries have revised down expectations for structural or potential GDP on the order of 2 per cent and often more, since the crisis could weaken both productivity and increase structural unemployment. This increases the challenges, both in terms of ensuring prosperity and high employment after the crisis and regarding the public finances, since lower GDP weakens the base for funding public expenditures.

For Denmark the challenges include in particular:

1) Underpinning a reinforcement of the incipient cyclical recovery and allowing it to gradually become more self-sustaining. In the short term demand growth is primarily driven by the very expansionary fiscal policy in 2009 and 2010 and the fall in interest rates, which has been underpinned by the initiatives in the financial sector. The fiscal policy stance has been balanced with a view to avoid unduly large consolidation needs after the crisis, and with a view to the competitiveness, which has been weakening since the turn of the millennium. In this regard it is important that wage developments help to sustain Danish companies' market shares as demand picks up at home and abroad. The transition to a more self-sustaining recovery can also be strengthened by supporting an increase in labour supply and by avoiding initiatives that hamper structural change in the business sector.

2) Consolidating public finances so that the budget is in broad balance by 2015 (structurally). On current projections, this requires a strengthening of the structural balance on the order of 1.8 per cent of GDP compared to the previous assumptions in the 2015 Plan, including via lower expenditures or measures that increase employment and strengthen public finances over a relatively short number of years, cf. section 1.3. Such a consolidation would significantly dampen debt accumulation and reduce future interest payments – in 2020 by around 10 billion DKK in 2010-level and not including the risk of rising interest rates in the absence of consolidation.

3) Exit from the extraordinary measures to restore financial stability. Conditions in the financial markets have improved since the autumn of 2008, partly due to the extensive measures taken in Denmark and in other countries. It is a key challenge to withdraw and phase-out the initiatives without weakening financial stability. Especially phasing-out the guarantees for unsecured creditors requires international coordination. These guarantees as well as other measures aiming to strengthen the capital base in the financial sector and improve the private sector's access to liquidity are either temporary or contain incentives for exit when conditions normalise. There are still challenges in the financial sector related to a high number of bankruptcies, relatively high leverage in parts of the business sector as well as the adjustment that has taken place in the property and housing market, cf. chapter 2.

4) Ensuring the basis for growth after the crisis. Since the mid-1990s productivity growth has been lower in Denmark than in a number of comparable countries, even though the conditions for growth are normally considered to be relatively good. Despite a strong rise in labour supply and employment, GDP growth has been relatively moderate. In the next years the labour force is set to decline, and a central challenge is to take further measures to strengthen growth conditions. In this vein, a Growth Forum has been established, which in the course of 2010 will bring forward ideas and suggestions on how to enhance growth conditions in Denmark, cf. chapter 2.

5) Permanently lower growth in public expenditures and financing the ambition of a society independent of fossil fuels. Public consumption expenditures constitute a larger share of the economy than ever before, and real growth in public consumption has exceeded expectations for a number of years. At the same time, in international comparison Denmark has a high tax level and a tax freeze has been in force since 2001. It is therefore a central challenge to ensure a more moderate growth in expenditures, including in the years after 2015, where the rising number of elderly increases the need for care, nursing and health services. At the same time, funding will need to be created to cover the loss of revenue which may result from the long term ambition that Denmark eventually will be independent of fossil fuels like oil, coal and gas. The current revenues from energy taxes (around 40 billion DKK) relates primarily to fossil fuels. The Convergence Programme incorporates the effects from the energy and climate targets in the Energy Agreement from 2008, cf. annex A.5, but possible effects on public finances from the objective of achieving independence from fossil fuels in the longer term have not been taken into consideration. Assumptions regarding public finances after 2015 are reviewed in chapter 5.

1.2 Fiscal challenges in the medium and long term

As in the Convergence Programme from 2008 the key fiscal targets remains to achieve structural balance in public finances by 2015 and long term fiscal sustainability. In CP08 the state of play was that measures for example in the labour market should strengthen public finances by around 14 billion DKK (0.8 per cent of GDP) in order to meet the fiscal targets. The 2009 tax reform fulfils close to half of the structural policy requirement[2]. In the autumn of 2008 proposals were put forward to reform unemployment benefits also in order to meet the requirements, but the proposals failed to achieve a majority.

In the meantime, the fiscal challenges have increased significantly due to the financial crisis. The prospect of rising public debt and interest payments is in contrast with earlier convergence programmes, where debt and interest payments were falling as a share of GDP towards 2015. The strategy of saving (i.e. bringing down debt and interest payments) in the years with fairly large North Sea revenues and relatively fa-

[2] Around half of the original reform requirements of 0.8 per cent of GDP/14 billion DKK in the 2015 Plan has been met by the introduction of the tax reform in the *Spring Package 2.0* and the Job Plan from 2008 etc.

vourable demographics – to finance pensions etc. for an increasing number of elderly in the coming decades – has thus come under pressure.

Meanwhile, spending on public consumption has for some time increased more than planned, also as a share of GDP. This primarily reflects higher growth in public consumption than planned. In addition, potential GDP has been adjusted downwards. This gives rise to funding challenges, if planned real growth in public consumption is kept unchanged in a situation where growth in production and thus in the public revenue base more permanently have been weakened, cf. annex A.2.

As mentioned, the structural fiscal balance is projected to show a deficit of around 1.7 per cent of GDP in 2010. In the **absence of new initiatives** (i.e. given the expenditure assumptions etc. from 2010 to 2015 in the 2015 Plan and the Economic Survey from December) the structural balance is projected to deteriorate slightly towards 2015 to around 1.8 per cent of GDP, *cf. figure 1.4a*. The weakening from 2010 to 2015 primarily reflects falling tax revenues from the oil and gas extraction in the North Sea, increasing pension expenditures due to an increasing number of elderly and the interest burden from rising public debt. These factors more than offset the improvement in public finances that comes from the gradual withdrawal of the temporary fiscal stimulus as the extraordinary high public investment level is brought down again and the financing elements of the tax reform are phased in, *cf. box 1.2*.

Figure 1.4a

Structural fiscal balance in CP08 and CP09 without new initiatives

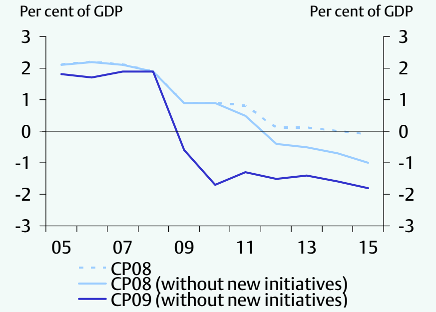
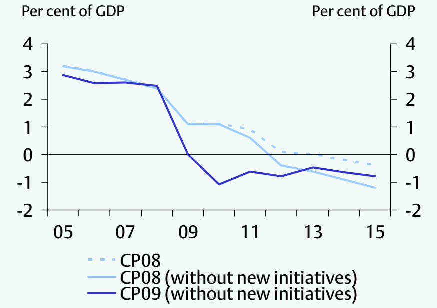


Figure 1.4b

Structural primary balance in CP08 and CP09 without new initiatives



Source: Own calculations.

Compared to the Convergence Programme from 2008 (without required structural reforms) the structural balance in 2015 is weakened by around 0.8 per cent of GDP. This reflects the effects of higher net interest payments, while the structural primary balance is broadly unchanged compared to last year's programme (excluding contributions from non-implemented reforms), *cf. table 1.3 and figure 1.4b*. This is mainly because the positive contributions from the tax reform etc. offset higher public expenditures as a share of GDP.

Box 1.2

Factors contributing to underlying weakening of public finances towards 2015

The structural fiscal balance is estimated to be around -1.7 per cent of GDP in 2010 and is weakened slightly to -1.8 per cent of GDP in 2015 in the absence of further initiatives.

The reduction in public investments from the high level in 2010 and the phasing in of the financing elements in the tax reform etc. strengthen the fiscal balance from 2010 to 2013/2015 by around 1¼-1½ per cent of GDP, *cf. table a*.

However, a number of factors pull in the opposite direction:
- (Net) interest payments are increasing with rising debt.
- North Sea revenues are expected to fall in line with lower production in the North Sea.
- Rising expenditures for example to pensions, as the number of elderly is rising.
- Fewer persons in the most employable ages and the up to now assumed real growth in public consumption.

In the absence of new measures the structural balance is strengthened by around ¼ per cent of GDP from 2010 to 2013. An improvement of the structural balance by 1.5 per cent of GDP from 2010 to 2013 will therefore require new initiatives that strengthen the structural balance in 2013 by around 1¼ per cent of GDP.

Table a

Primary contributions to changes in the structural balance from 2010 to 2013/2015 (in the absence of new measures)

Per cent of (cyclically adjusted) GDP	2010	2013	2015
Structural balance (without new measures)	-1.7[1]	-1.4	-1.8
Changes		**2010-2013**	**2010-2015**
Change in structural balance		0.3	-0.1
-of this change in (net) interest payments		-0.4	-0.4
-of this change in primary balance (structural)		0.6	0.3
Contributions to change in primary balance		**2010-2013**	**2010-2015**
Contributions to improved primary balance		1.3	1.5
Reduction in public investments		0.6	0.6
Spring Package 2.0 (including labour supply etc.)		0,7	0.9
Contributions to weakening primary balance		-0.7	-1.2
North Sea revenues		-0.3	-0.2
Pensions		-0.2	-0.4
Other[2]		-0.2	-0.6

1) Due to a higher estimate for the structural level of net interest payments, the structural balance is estimated to -1.7 per cent of GDP compared to -1.6 per cent of GDP in the *Economic Survey*, December 2009.
2) Fewer in the labour force, real growth in public consumption as in CP08 etc.

The expected fall in tax revenues from oil and gas extraction in the North Sea towards 2015 is smaller than in CP08 (almost 0.2 per cent of GDP). This primarily reflects that the expected oil price has been adjusted upwards after the incorporation of the International Energy Agency's oil price projection from November 2009. As mentioned, the revenues from the North Sea are expected to gradually taper off as the reserves are depleted.

Table 1.3
Public finances in 2015 (without new initiatives)

Per cent of GDP	CP08 (without new initiatives)	CP09 (without new initiatives)	Change
Structural balance	-1.0	-1.8	-0.8
Net interest payments	0.2	-1.0	-1.2[1]
Structural primary balance	-1.2	-0.8	+0.4[1]
Change in primary balance from:			**Contribution**
Tax reform (including timing shifts in revenues)			0.4
Higher revenues from the North Sea than expected in CP08			0.2
Higher real public consumption than expected in CP08			-0.3
Lower GDP (effect on consumption share)			-0.2
Other contributions (net)			0.3[1]

1) Higher net debt increases net interest payments by around 0.9 per cent of GDP. Moreover, in CP09 a distinction is made between the yield on government assets and liabilities, and the expected interest rates in 2015 are lower than in CP08. In total, the effects of these changes in the interest rate assumptions since the CP08 leads to an increase in net interest payments in 2015 by around 0.3 per cent of GDP, which is offset by a proportional strengthening of the primary balance. In total, the technical changes are neutral for the structural balance in 2015 and for the fiscal sustainability indicator, cf. section 4.7.

Higher growth in public consumption expenditures since CP08 weakens the primary balance in 2015 by 0.3 per cent of GDP[3]. Lower potential GDP also increases public consumption's share of GDP. The fall in potential GDP weakens the primary balance by around 0.2 per cent of GDP, when the estimate incorporates that lower production per employee reduce growth in both private and public wages, as well as public transfers, up to 2015, cf. annex A.2.

Without consolidation measures the outlook is therefore for a significant increase in debt. Gross public debt (EMU definition) will increase to just over 50 per cent of GDP in 2015, which is roughly twice as much as in last year's Convergence Programme, *cf. figure 1.5a*. Net public assets accumulated during the years with high surpluses will be turned into net debt. While net public assets were projected at almost 5 per cent of GDP in 2015 in last years Convergence Programme, the estimate is now for a net debt of up to 15 per cent of GDP.

With increased debt accumulation public net interest payments will rise to around 1 per cent of GDP in 2015, from close to zero in 2008, *cf. figure 1.5b*.

[3] In 2008 (the base year for the sustainability calculations) public consumption expenditures are around 4 billion DKK or 0.8 per cent higher than in CP08. This corresponds to just over 0.2 per cent of GDP. Real growth in public consumption in 2009 (and 2009-2010 combined) is around 0.4 per cent higher than expected in CP08, or around 0.1 per cent of GDP. Higher consumption expenditures therefore weaken the sustainability indicator by around 0.3 per cent of GDP compared to the CP08, *cf. annex A.2.*

Figure1.5a

Gross debt (EMU) and net debt without new initiatives

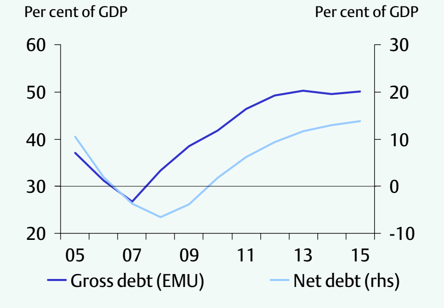
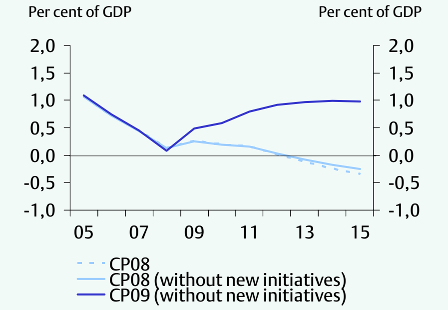


Figure1.5b

Net interest payments – without new initiatives



Source: Statistics Denmark and own calculations.

The long term sustainability indicator has weakened

Compared to last year's Convergence Programme the tax reform in the *Spring Package 2.0* has improved the sustainability indicator by around 0.3 per cent of GDP. In contrast, the debt accumulation following the sharp cyclical downturn and increased public consumption expenditures etc. have weakened the sustainability indicator by around 0.8 per cent of GDP. The improvement needed to ensure fiscal sustainability (the sustainability gap) can therefore be estimated at just over 1.3 per cent of GDP (around 24 billion DKK), *cf. table 1.4*.

As mentioned, part of the increase in public consumption expenditure's share of GDP (around 0.2 percentage points) reflects that future GDP has been adjusted downwards due to the global crisis. The consequences of the sharp downturn following the financial crisis can therefore be said to correspond to around 2/3 of the total weakening of the fiscal sustainability indicator. Public consumption accounts for the remaining third.

Table 1.4

The weakening of long term sustainability (without new initiatives)

Per cent of GDP	
Sustainability indicator (CP08 without measures, i.e. excluding required reforms)	**-0.8**
- Contribution from tax reform in *Spring Package 2.0*	0.3
- Underlying weakening	-0.8
- interest burden on increased debt from 2015	-0.3
- contribution from higher real public consumption	-0.3
- contribution from lower structural GDP	-0.2
- Other factors (net)	0.0
Sustainability gap, CP09 without measures	**-1.3**

The outlook beyond 2015 without further measures

The fiscal challenges are intensified by the prospect of continued underlying pressures on public finances after 2015. This reflects the demographic trends with a rising number of elderly, falling North Sea production as well as the energy and climate targets, cf. CP07 and CP08. For a rather long time the effects of these factors exceed the positive effects of the retirement reform in the Welfare Agreement, and a significant weakening of the structural primary balance may therefore be expected up to 2030, *cf. figure 1.6a.*

Figure1.6a

Structural balance and structural primary balance to 2030 (without new initiatives)

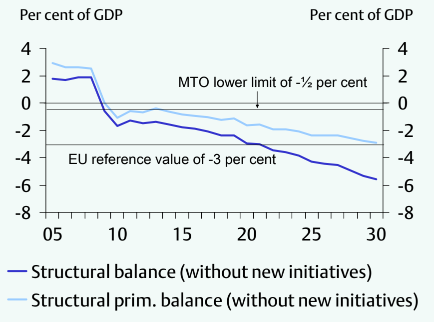
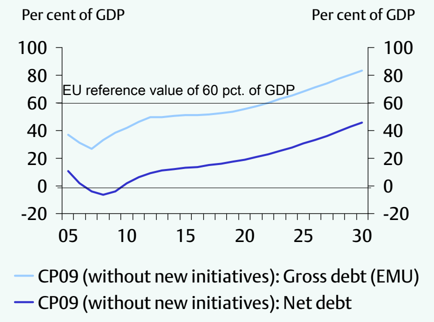


Figure1.6b

Gross public debt (EMU) and net debt to 2030 (without new initiatives)



Source: Statistics Denmark and own calculations.

Without consolidation up to 2015, debt and interest payments would rise further. Since fiscal policy in this case does not meet the sustainability requirements, debt will continue to increase as a share of GDP, without stabilising. The structural deficit may – in the absence of measures – increase to over 3 per cent of GDP in 2020 and up to 6 per cent of GDP in 2030 under the technical assumptions. In the projection, the gross public debt (EMU definition) will exceed the reference value in the EU treaty of 60 per cent of GDP from 2022 onwards.

The prospects of increasing deficits and debt after 2015 stress the need to consolidate public finances up to 2015. The need is underlined by the risk of increasing interest rates and weakened confidence in the absence of consolidation, which may weaken the expected recovery in private demand and increase debt and interest payments even further.

1.3 Objectives and requirements for public finances

In sum, the prospect of rising debt and interest payments requires fiscal consolidation in the coming years. The exact timing and content of the consolidation measures will be determined partly in connection with the annual Fiscal Budgets, and with a view to cyclical conditions. It is crucial, however, to ensure a relatively rapid deficit reduction to maintain confidence in fiscal policy as well as the fixed exchange rate policy, to avoid higher interest rate spreads and avoid that continuing debt accumulation leads to an excessive interest burden.

Meanwhile, fiscal policy also needs to take account of cyclical conditions, but since the output gap is large and negative it is quite certain that it will be necessary to embark on consolidation before capacity utilization reverts to normal. This is also the case for other countries, but credible consolidation will also lay the ground for easier monetary policies and lower interest rates than otherwise.

The longer consolidation is deferred, the larger the requirement will be due to a rising interest burden. Thus, it has a price if consolidation is deferred. If, for example, the requirement is an overall tightening of 2 per cent of GDP, postponing the tightening for five years will increase public debt, ceteris paribus, by about 180 billion DKK. Interest expenses will be increased by up to 10 billion DKK, and a further fiscal tightening at 3-4 billion DKK, which is maintained in all future years, will be necessary merely to stabilize debt at the new higher level (i.e., to ensure unchanged fiscal sustainability).

The key fiscal targets that the consolidation projection of the Convergence Program is founded on are:

- Maintaining the key objective of the 2015 Plan of structural balance in 2015 (Denmark's MTO)[4].
- A long run sustainability indicator of (at least) zero.

The Convergence Programme incorporates consolidation of public finances so that structural fiscal balance is achieved by 2015 and the expected EU recommendation is adhered to. As mentioned, detailed decisions have not been made at this point as to how the full consolidation challenge will be handled.

The policy assumptions in the Convergence Programme incorporate consolidation of public finances by around 31 billion DKK (2010-level) towards 2015. The projections include a reduction in total public expenditures of 24½ billion DKK compared to the expenditure growth path in Convergence Programme 2008. The expenditure reduction is, as a technical assumption, distributed proportionally between public consumption spending and other public expenditures.

Real growth in public consumption expenditures is set (technically) at 0 in 2011-2013 (and ¾ per cent per year in 2014 and 2015). This corresponds to a 13½ billion DKK reduction in expenditures (around 2¾ per cent of total public consumption) compared to the real growth assumed in CP08 for 2011-2013. The expenditure profile should be seen in light of public consumption expenditures being 13¼ billion DKK

[4] The target of structural balance in 2015 is Denmark's MTO (Medium-Term Objective of the Stability and Growth Pact). In general, the MTO for Denmark is that deficits cannot exceed ½ per cent of GDP.

higher in 2010 than assumed in the 2015 Plan from 2007. In the Convergence Programme, public consumption expenditures amount to just over 26¾ per cent of (cyclically adjusted) GDP by 2015, which is a little above the benchmark in the 2015 Plan and higher than in every year from 1984 to 2007.

Furthermore, it is assumed that the remaining part of the reform requirement in the original 2015 Plan (i.e., the share of the reform requirement that has not yet been implemented) will be implemented by 2015. It is thus technically assumed that new initiatives increase employment on a scale that strengthens fiscal sustainability by an additional 7 billion DKK (0.4 per cent of GDP).

The projection also includes a rolling-back of the temporary fiscal easing implemented in 2009 and 2010. Public investments will be reduced from the high level in 2010, while the financing elements in *Spring Package 2.0* are phased in as planned.

Acting on the expected ECOFIN Council recommendation

With the prospect of a budget deficit in the order of 5½ per cent of GDP this year, the projection is, as stated, based on Denmark receiving a recommendation from the Economic and Financial Affairs Council (ECOFIN) during this year to strengthen the structural balance by 1½ per cent of GDP from 2010 to 2013, *cf. box 1.3*. It is in this case a less strict requirement than for almost all other countries which are subject to the procedure, *cf. box 1.4*.

Denmark will be subject to the EU's excessive deficit procedure until an actual deficit of less than 3 per cent of GDP is achieved. Until the procedure for Denmark has been abrogated, the EU will continuously assess fiscal policy in relation to the recommendation, in particular whether effective action has been taken to ensure that the structural budget balance (measured by the EU's methodology) is strengthened by 1½ per cent of GDP over the 3 years 2011-2013.

On current estimates, strengthening the structural balance by 1½ per cent of GDP by 2013 requires new initiatives that strengthen public finances by around 1¼ per cent of GDP compared to the assumptions in the baseline projection.

The projection with consolidation in 2011-2013 and assumed annual activity growth of 2-2¼ per cent – mainly as a result of strengthening growth in exports, private consumption and investments – implies that the actual deficit is reduced to approx. 3 per cent of GDP by 2012 and to approx. 1½ per cent of GDP by 2013. Based on this projection Denmark will comply with the deadline for bringing the deficit below 3 per cent of GDP, implying that in 2014 it may be decided that Denmark no longer has an excessive deficit.

There is considerable uncertainty about the projection of the actual deficit which, as mentioned, is highly sensitive to the cycle. Moreover, certain revenues such as those from the taxation of North Sea activities and pension yield tax can fluctuate widely from year to year depending on developments in e.g. oil prices and financial markets. The deficit in 2012 may therefore be above or below 3 per cent of GDP, but if the deficit should fall below the limit and the prospect is that it will remain below 3 per cent, it could be decided during 2013 that Denmark no longer has an excessive deficit. Fiscal policy for 2013 is determined during 2012 in connection with negotiations with municipalities and regions and the Budget Bill.

In case of more negative cyclical developments there is also the opposite risk that the deficit will not come below 3 per cent of GDP until after 2013, cf. section 1.4.

The target of structural balance in 2015

Complying with the expected ECOFIN Council recommendation will contribute effectively to achieve the target that the (structural) deficit has to be eliminated in 5 years (in 2015). In a projection where the expected recommendation is complied with the estimated structural deficit is reduced to approx. ½ per cent of GDP in 2015. Hence, on the current basis there are further consolidation needs in 2014-2015 of approx. 0.4 per cent of GDP to achieve structural balance in 2015. In CP09, this is factored in through required employment-enhancing reforms.

By achieving the medium-term target of structural balance in 2015 fiscal policy meets the minimum requirement of a MTO of not less than -½ percent of GDP and broadly meets the fiscal sustainability objective (i.e. net public debt is as a minimum, stabilized as a share of GDP in the long term), *cf. table 1.5*. However, by merely complying with the expected recommendation, a small improvement of the sustainability indicator of 0.2 per cent of GDP remains required.

There is, however, in both cases the prospect that deficits could increase towards for example 2025 (cf. table 1.5), so that further initiatives will likely be needed to counteract the pressures on public finances. The sustainability criterion implies that public net debt is stabilized (or falls) as a share of GDP in the very long term, but it does not ensure that public finances fulfil for example the EU's fiscal requirements, cf. chapter 2.

Table 1.5

Consolidation Requirements for ensuring compliance with key targets

Per cent of GDP	Consolidation requirements	Structural budget balance 2015	Sustainability indicator	Structural budget balance 2025
Baseline (without initiatives)	-	-1.8	-1.3	-4.5
EU-recommendation 2013	Approx. 24 bn. DKK.	-0.5	-0.2	-2.5
Structural balance 2015	Approx. 31 bn. DKK.	0	0.2	-1.8

Box 1.3

The EU's excessive deficit procedure: key elements in relation to Denmark

- An EU country *enters the procedure for excessive deficits* when the country does not comply with the Treaty provisions to avoid excessive deficits. Excessive deficits are in principle an actual or estimated deficit above 3 per cent of GDP. If the deficit is close to and only temporarily above 3 per cent of GDP (in practice less than 3.5 per cent of GDP for one year), it is, however, possible to avoid entering the procedure.

- The deficit in Denmark's public finances is estimated at 3 per cent of GDP in 2009, 5.5 per cent of GDP in 2010 and 4.4 per cent of GDP in 2011. Against this background the EU Economic and Financial Affairs Council (ECOFIN) is expected to adopt a recommendation to Denmark during 2010. The exact content of the recommendation is currently unknown, but the expected content of the recommendation can be based on previous recommendations to other countries. The recommendation to Germany is the mildest given, and a similar recommendation to Denmark would involve the following:

  1) initiate consolidation of public finances in 2011 and *bring the deficit below the 3 per cent of GDP limit by 2013*

  2) *improve the structural balance (the budget balance net of cyclical and other temporary factors) by at least ½ percent of GDP (about 9 billion DKK) per year on average in 2011-2013, i.e. a total of 1½ percent of GDP over three years.* The recommended annual improvement may be larger than an annual average of ½, for example ¾ per cent of GDP, if for example the deficit is larger than currently estimated.

- *A consolidation strategy for compliance with the recommendations, especially for the measures in 2011, must be submitted within 6 months after adoption of the recommendation.* Hereafter, the Commission will assess the structural fiscal improvements ("effective action"), where the assessment is primarily based the on the structural balance (the EU methodology) and may also involve the direct revenue effects in an overall assessment.

The procedure can be abrogated when it is found that the actual budget deficit is less than 3 per cent of GDP and is expected to remain below 3 per cent GDP in the following years.

As mentioned, Denmark's compliance with the expected recommendation will be reviewed primarily based on the EU estimates of the improvement in the structural balance in part based on the projection included in the Convergence Programme. The EU methodology for calculating the structural balance differs from the methodology of the Danish Ministry of Finance, in part because it does not correct for fluctuations in the volatile revenues from North Sea and pension income tax, etc. (which collectively improved slightly from 2010 to 2013) and because there are differences in the method to estimate the output gap and the cyclical sensitivity of the finances, etc.

The consolidation projection presented in the Convergence Programme is based on the Ministry of Finance's estimate of the structural balance, and the consolidation efforts included in relation to the expected ECOFIN Council recommendation are in line with the 2015 Plan's requirement of sustainable public finances.

The EU principles for fiscal exit strategies involve among other things that all EU countries should initiate the fiscal consolidation in 2011 at the latest, provided that the Commission forecasts continue to indicate that the recovery is strengthening and becomes self-sustainable.

The Commission and the ECOFIN Council's precise interpretation of the Stability and Growth in the current extraordinary crisis, including in particular the principles regarding the assessments of the countries' compliance with the recommendations, will be determined more closely. In this regard, the first preliminary assessment of the countries that received recommendations in December 2009 is expected in the summer of 2010.

Structural balance in 2015 requires, as mentioned and based on current projections, a total improvement of the structural budget balance of approx. 1.8 per cent of GDP by 2015 – in addition to the already planned rollback of public investments and the contribution from the financing elements of the tax reform.

New measures that strengthen finances by around 1.6 per cent and are implemented with the main thrust toward 2013, will reduce interest payments in 2015 by 0.2 per cent of GDP – such that the overall improvement totals 1.8 percent of GDP.

The required budgetary improvement beyond what follows from the expected ECOFIN Council recommendation, is technically assumed to occur by implementing the remaining reform contribution from the 2015 Plan of 0.4 per cent of GDP. The contribution is equivalent to the original requirement of the 2015 Plan adjusted for the positive contribution of implemented reforms, including the tax reform from 2009 and the Job Plan etc. from 2008, cf. chapter 2.

The target of balance in 2015 helps stabilize debt up to 2020

The consolidation effort required to ensure structural balance in 2015 will clearly reduce debt accumulation and dampen interest expenses, not least on a 10-year horizon up to 2020. In 2020, total interest payments will be reduced by ¾-1 per cent of GDP as a result of the envisaged consolidation. In addition, in the absence of action there is a considerable risk of higher interest rates.

The underlying structural balance, however, continues to weaken after 2015 and the deficit in 2020 – with the technical assumptions applied about fiscal policy, cf. chapter 5 – is projected to exceed the requirement of the Stability and Growth Pact that Denmark cannot plan for a structural deficit exceeding ½ percent of GDP, *cf. figure 1.7a-b.*

Figure 1.7a

Structural budget balance with and without consolidation, 2005-2030

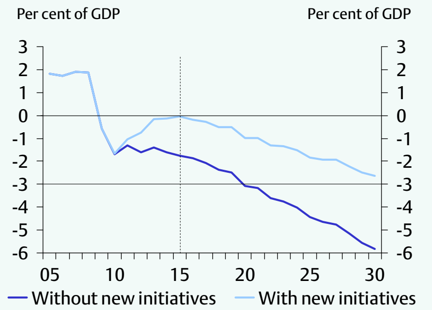
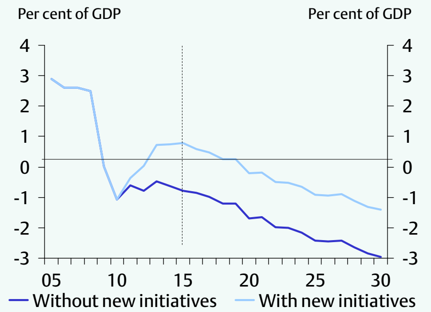


Figure 1.7b

Structural primary balance with and without consolidation, 2005-2030



Source: Own calculations.

Box 1.4

Fiscal exit and recommendations within the framework of the Stability and Growth Pact

The EU countries agreed in the autumn of 2009 on common guiding principles for *fiscal exit strategies*. The principles involve that all EU countries – on the premise that the Commission forecasts continue to indicate that the recovery is strengthening and becomes self-sustaining – should start fiscal consolidation in 2011 at the latest, while a number of countries need to consolidate before then. Consolidation in most countries would have to go well beyond the benchmark in the Stability and Growth Pact of ½ per cent of GDP per annum in structural terms for countries with excessive deficits.

The common EU principles on fiscal exit strategies have been implemented in the ECOFIN Council recommendations to countries that already in 2009 had a deficit above 3 per cent of GDP, *cf. figure a*. The chart summarizes the 13 recommendations adopted on December 2nd 2009.

The countries' recommendations can be divided into groups that depend on the countries' respective deficits and other key figures, particularly

- Countries with three-year deadlines to reduce the deficit to less than 3 per cent of GDP and recommendations of annual average structural budget improvements of ½-¾ per cent of GDP for three consecutive years.
- Countries with four-year deadlines to reduce the deficit to less than 3 per cent of GDP and recommendations of annual structural budget improvements at generally ¾-1½ per cent of GDP.
- Countries with five-year deadlines to reduce the deficit to less than 3 per cent of GDP and recommendations of annual average structural budget improvements at generally around 1¾-2 per cent of GDP.

Most countries should begin fiscal consolidation in 2010, and countries such as Spain, the UK and Ireland have to ensure a structural balance improvement of, 6 per cent of GDP over 4 years and approx. 9-10 per cent of GDP over 5 years respectively. The improvement of the structural balance must be achieved at the same time as rising debt interest payments and demographic challenges etc. may pull in the direction of weakening public finances.

Denmark is expected to receive an ECOFIN Council recommendation along the same lines as the recommendation to Germany, *cf. figure a-b*.

The EU countries already subject to the excessive deficit procedure, shall in their stability and convergence programs for 2009 outline their plans for complying with the recommendations. Some examples of other countries' consolidation plans are reviewed in box 1.1 (above).

Figure a

Recommendations to other EU countries

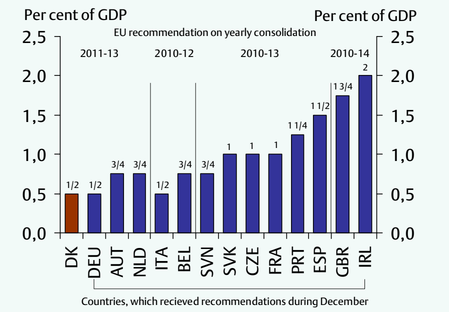
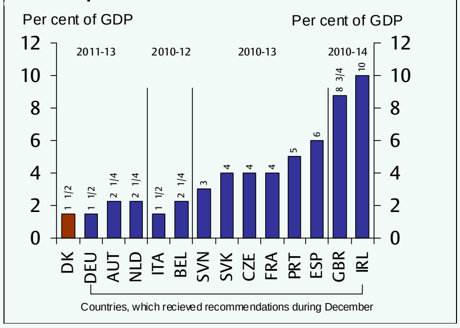


Figure b

Total requirement for other EU countries



Note.: Figure a and b contain countries that received recommendations in December 2009, including for some countries revised recommendations based on the common principles of fiscal exit strategies, October 20th 2009. A smaller group of countries has previously in 2009 received recommendations, which in the future are assessed for a possible revision in the light of common exit principles, etc.

Net public debt diminishes slightly in the consolidation projection from 2015 to 2020, but in the longer term the prospect is for a renewed increase in debt (given the underlying assumptions), *cf. figure 1.8a-b*. In the absence of consolidation, the prospect is for almost exponentially rising debt and interest payments after 2015.

Figure 1.8a
Net Interest expense with and without consolidation up to 2030

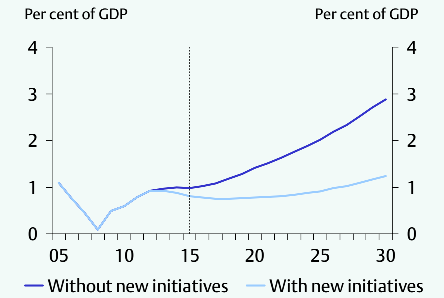
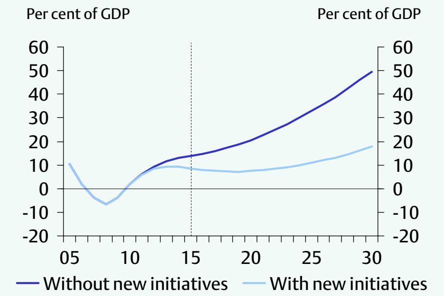


Figure 1.8b
Net debt with and without consolidation up to 2030



Source: Own calculations.

The economic projection, on which the assessment of the consolidation needs is founded, relies on a number of assumptions about macro economic developments, which in themselves may prove to be ambitious. Specifically, it is assumed that the incipient recovery since the summer 2009 will continue in 2010 and the subsequent years, and that the cyclical situation is gradually normalised towards 2015. The key assumptions with a bearing on public finances and public debt include:

- Growth exceeds 2 per cent on average from 2011 to 2015, implying that the current, relatively large output gap is gradually being closed, *cf. figure 1.9a*.
- Unemployment drops from 2011 until 2015, reaching 3.6 per cent of the workforce (equal to the estimated structural rate), *cf. figure 1.9b*. Total employment rises by nearly 25,000 persons from 2011 until 2015, such that the employment rate reaches almost 78 percent among 15-64 year olds.
- Growth is driven partly by fairly high growth in private consumption, reflecting that the savings ratio is gradually reduced from the current high level, *cf. figure 1.9c*. The normalization of private consumption in itself strengthens public finances in the projection due to the high tax content.
- Government revenues from pension taxation increase from 0.7 per cent of GDP to just over 1 per cent of GDP from 2010 to 2015, which roughly corresponds to an estimated normal level. Oil prices are assumed to rise gradually towards 2015, where they slightly exceed 90 USD per barrel (Brent). Interest rates are assumed to increase gradually up to 2015 from a historically low level and are thus relatively moderate in the period.

- Unit labour costs rise relatively moderately, which may facilitate a partial restoration of competitiveness. The relatively moderate wage growth will also imply a moderate increases in government wages and transfer rates, which ceteris paribus improves public finances. In the projection, the wage share falls back to a historical average, *cf. figure 1.9d.*

- For the longer term, the effect of the Welfare Agreement is crucial as increases in the retirement age, including those linked to increasing life expectancy, strengthens employment by up to 10 per cent in 2040, cf. section 1.5. Moreover, the long-term projection assumes unchanged compensation rates and tax burden, and public consumption spending "per user" rising in parallel with private wages. It is taken into account that increasing life expectancy also leads to better age-specific health status, which in itself reduces the increase in public spending. It is not taken into consideration that health spending may increase more than what demographics themselves imply e.g. as a result of technological progress, etc.

Figure 1.9a
Output gap, 1980-2015

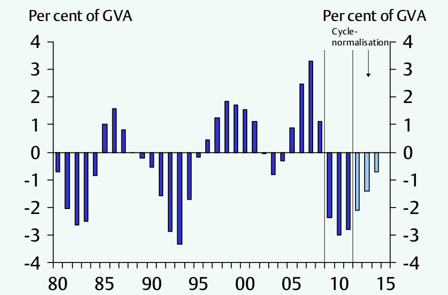


Figure 1.9b
Actual and structural unemployment, 1980-2015

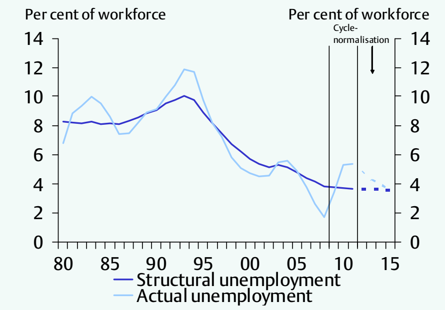


Figure 1.9c
Household consumption and savings

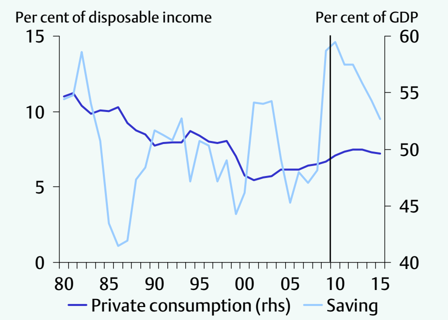
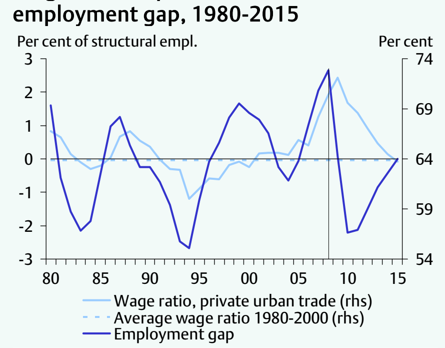


Figure 1.9d
Wage share in private urban functions and employment gap, 1980-2015



Source: Statistics Denmark and own calculations.

The assumptions in the Convergence Programme imply that the temporary fiscal measures will be gradually rolled back. The total contribution to the activity level from the actual and assumed fiscal stance etc., including the consolidation of public finances up to 2015, declines from an estimated activity impact of 2¾ per cent of GDP in 2010 to around ¾ per cent of GDP in 2013 and 0 per cent in 2015 – measured by the multi-annual effects of fiscal policy since 2008, when the financial crisis escalated. This implies that fiscal policy itself dampens the GDP growth in the period, cf. chapter 4.

However, the contributions from the fiscal policy stance must be seen in conjunction with interest rate developments, especially in the current junction with high public deficits and vulnerable financial markets. At the outset, the fall in interest rates since the autumn 2008 is expected to contribute positively to growth not only this year, but also in 2011, even if the policy rates probably will be higher than today.

In addition, in the absence of credible and efficient measures to correct the imbalance between government revenue and expenditure, there is a significant risk that both short and long term interest rates will increase. Higher interest rates would weaken demand for example via its effects on the housing market. Moreover, inaction may give rise to increased uncertainty due to expectations of future (stricter) consolidation measures and such uncertainty may also hamper demand. The total impact on economic activity from the necessary consolidation may be limited if interest rates are lower than otherwise, and it cannot be excluded that the net effects on activity may actually be positive, *cf. box 1.5*.

Box 1.5

Possible effects on economic activity of fiscal consolidation and interest rates

The main projection of CP09 includes fiscal consolidation that, *ceteris paribus*, dampens demand, while expansionary monetary policy together with recovery abroad and gradual normalization of savings and investment rates in the private sector contribute to a gradual normalization of the cycle in the projection towards 2015.

External growth is based on assumptions in the OECD's medium-term scenario where it is assumed that the output gap closes in 2017. In the OECD's projections it is assumed that countries implement significant fiscal consolidation, and that the impact on activity is offset by the effects from lower interest rates than otherwise, *cf. OECD Economic Outlook no. 86*.

In Denmark, the effects of fiscal consolidation must also be seen in the context that alternatively (without consolidation) pressure on both short and long interest rates and increased uncertainty or expectations about future (larger) tightening may otherwise occur, which in itself may dampen demand.

There is considerable uncertainty as to whether and when large government deficits impact interest rates and how interest rate changes affect activity. In a scenario where the basic premise is sound public finances and absence of negative global factors such as heightened risk aversion and increased supply of government bonds, a (permanent) increase in the deficit of 1 per cent of GDP as a starting point may increase interest rates by approx. 0.2 per cent, *cf. IMF, The State of Public Finance and cross-country Fiscal Monitor: November2009*.

On this basis a consolidation of 1¼ per cent of GDP (equivalent to the required strengthening of the structural balance from 2010 to 2013 via new initiatives) implies that interest rates will be about ¼ per cent lower than in the absence of consolidation. In a standard ADAM-model simulation with consolidation from 2011-2013, which is approximately proportionately distributed between lower government spending and lower transfers to the private sector, and interest rates as a consequence are about ¼ per cent lower from 2011, the consolidation will result in slightly lower economic activity and employment relative to a scenario without consolidation, *cf. table a*. The effect on house prices will be positive. The calculations are made on the economic model ADAM, where economic activity etc. is relatively strongly affected by interest rate changes.

In the coming years, however, many countries will have very large deficits, and consequently there will be very large supply of government bonds in a financial climate that may be fragile. Under such conditions the IMF study suggests that an increase in the deficit of 1 per cent of GDP could increase interest rates by up to 35-40 basis points. In that case consolidation of 1¼ per cent may lead to interest rates about 0.5 per cent lower than in the absence of consolidation. This case would imply that economic activity and employment will be slightly higher than in the absence of consolidation since the effect of lower interest rates dominates the effect of lower demand from the consolidation.

Box 1.5 (continued)

Table a
Short term effects of fiscal consolidation when interest rates are lower than otherwise

	2011	2012	2013
0. Excluding effects from interest rates			
GDP (rel. change in per cent)	-0.2	-0.6	-1.0
House prices (rel. change in per cent)	0	-1	-2
Employment (1,000 persons)	-3	-13	-22
1. Typical effects from interest rates			
GDP (rel. change in per cent)	-0.1	-0.2	-0.5
House prices (rel. change in per cent)	1	1	1
Employment (1,000 persons)	-2	-7	-11
2. Larger effects from interest rates			
GDP (rel. change in per cent)	-0.1	0.1	-0.1
House prices (rel. change in per cent)	3	3	4
Employment (1,000 persons)	-1	-1	-2
3. Typical effects from interest rates and strengthened confidence			
GDP (rel. change in per cent)	0.0	0.1	0.0
House prices (rel. change in per cent)	2	3	4
Employment (1,000 persons)	0	-1	-1

Note: Fiscal consolidation is technically assumed to around 5 billion DKK in the first year, around 10 billion DKK in 2012 and around 9 billion DKK in 2013, cf. chapter 4.

Moreover, in a scenario without consolidation it is likely that the confidence in the economic policy is weakened and that expectations of future (larger) tightening arises. This would dampen private consumption. In the 3rd scenario it has been assumed that around half of the consumers are influenced by such expectations, and that private consumption (other things equal) is around 0.6 per cent of GDP higher when confidence in economic policy is underpinned by consolidation efforts of 1¼ per cent of GDP. Hence, the total effect on GDP and employment may be broadly neutral, when calculations include typical interest rate effects.

Overall the model calculations indicate that the impact on economic activity from fiscal consolidation may be limited and it cannot be excluded that the net effects may be positive, compared to the no-consolidation scenario, bearing in mind that consolidation sooner or later is necessary to avoid rising public debt and interest payments.

1.4 The challenge may be influenced by the macro-economic conditions

There is great uncertainty about economic prospects including both the short-term outlook for the next few years and more fundamentally to what extent the global crisis leads to a lasting reduction in output (potential GDP) and possibly employment compared with expectations in the previous years' Convergence Programs.

In what follows the consequences for public finances and the overall consolidation task are considered in two alternative scenarios:

1) A *positive* scenario where there is a rapid return to a normal cyclical situation in the world economy from 2010 to 2013, among other things driven by the expansionary monetary and fiscal policies and a rather quick normalization of credit conditions and demand. The projection can be viewed in light of the fact that previous recessions, which have not been accompanied by financial crisis and weak housing markets, have typically been followed by relatively high growth in one or more years. For Denmark, capacity utilization is normalized already in 2013, when unemployment is reduced to 3.6 per cent in line with the estimated structural unemployment rate. Private consumption rebounds rapidly, which increases tax revenues. Oil prices and equity prices, etc. rise further and the proceeds from North Sea revenue and tax on pension fund yields reaches high levels.

2) A *negative* scenario with weak growth through 2012, and where employment opportunities are permanently weakened in the aftermath of the financial crisis. The risk of a more negative scenario relates in part to continued adjustment needs in the financial sector and the possibility that uncertainty about economic policies and regulatory frameworks could weaken confidence and investment in the private sector – including not least, if countries fail to establish credible consolidation plans or if actions are taken which undermine growth potential. For Denmark, unemployment is assumed to increase to 185,000 persons in 2012 before falling again, and capacity utilization is not normalized before 2017. Structural employment is assumed to be 1 per cent lower permanently (from 2015 onwards) than assumed in CP09.

In the *positive* scenario public finances are strengthened in the short term by the stronger growth in private consumption and GDP, while revenues from North Sea activities and the tax on pension funds are high. The actual balance is improved quite rapidly, and net debt declines relative to GDP from 2012 to 2015, *cf. figure 1.10a-b*.

The *structural* balance in 2015 – which is adjusted for cyclical effects and temporary fluctuations in revenues from pension yield, North Sea revenues, etc. – improves by approx. 0.2 per cent of GDP, mainly reflecting lower debt and thus lower interest payments, *cf. table 1.6*. Fiscal sustainability is improved by about 0.1 per cent of GDP.

Figure 1.10a
Actual balance of positive and negative scenario (including new initiatives)

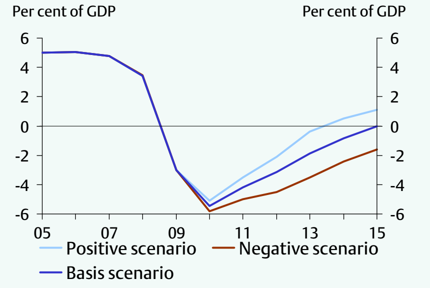
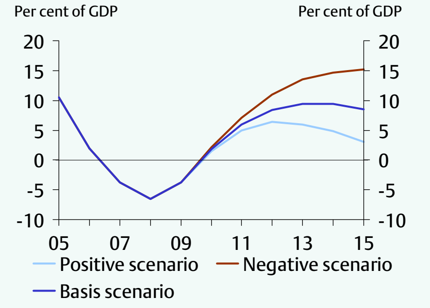


Figure 1.10b
Net debt of positive and negative scenario (including new initiatives)



Source: Own calculations.

In the positive scenario the budget deficit is reduced to below 3 per cent of GDP already in 2012, hence implying that the ECOFIN may decide in 2013 that Denmark no longer has an excessive deficit – one year earlier than in the CP09-projection. The positive scenario assumes that the expected ECOFIN Council recommendation of implementing effective consolidation measures in 2011-2013 is complied with.

Table 1.6
Effect on public finances of changing socioeconomic conditions

	Level			Changes compared to CP09	
Per cent of GDP	CP09-scenario	Positive scenario	Negative scenario	Positive scenario	Negative scenario
Effects on:					
Actual balance in 2012	-3.2	2.1	-4,5	+1.1	-1.3
Actual balance in 2013	-1.9	-0.4	-3.5	+1.5	-1.6
Actual balance in 2015	0.8	0.5	-2.4	+1.3	-1.6
Net debt in 2015	9	3	15	-6	+6
Interest expenditures in 2015 (net)	0.9	0.5	1.2	-0.3	+0.4
Structural balance in 2015	0.0	0.3	-0.9	+0.3	-0.9
Sustainability indicator	0.3	0.3	-0.4	+0.1	-0.6

In the *negative* scenario where the economic downturn is prolonged and employment is permanently lower – if for instance labour market structures are weakened or structural unemployment is higher than estimated – challenges to ensure sustainable public finances are significantly heightened. The actual deficit is higher by more than 1.6 per cent of GDP in 2015 and net debt is 6 per cent of GDP higher, thereby raising interest payments by about 0.4 per cent of GDP.

The sustainability indicator is weakened by about 0.6 per cent of GDP (about 10 billion DKK), and the structural balance in 2015 is weakened by almost 0.9 per cent of GDP. The scenario emphasizes that the outlook for structural employment is of central importance in determining whether the challenges following the crisis have increased more than assumed in the Convergence Programme. Consequently it is a key condition for the Convergence Programme that the structures of the labour market are not weakened.

In the negative scenario, the budget deficit is above 3 per cent of GDP until 2014 implying that it could not be decided before 2015 that Denmark no longer has an excessive deficit. The negative scenario also assumes that the overall recommendation for effective consolidation measures in 2011-2013 is complied with, although the growth cycle is weaker than assumed in the CP09-projection.

1.5 Long-term challenges and retirement reform in the Welfare Agreement

The Welfare Agreement contributes to long-term robustness and growth

The retirement reform in the Welfare Agreement from 2006 aims to ensure that longer longevity and better health also lead to more active years in the labour market. With the Welfare Agreement the early retirement age (for the partly self-financed Voluntary Early Retirement Pension, VERP) is gradually increased from 60 to 62 years in the period 2019-2022. The statutory pension age is raised gradually from 65 to 67 years during 2024 to 2027. The age thresholds for early retirement (and pensions) are indexed to life expectancy of 60 year olds as of 2025 (and 2030, respectively).

The basic principle of the indexation mechanism implies that the total period of early retirement pension and state pension – meaning the mean lifespan of 60-year olds beyond the early retirement age – is approaching 19 ½ years in the long run, *cf. figure 1.11a*.

The average retirement age is estimated to increase by slightly more than half as much as the adjustment of these age limits, mainly because some people are assumed to retire before the voluntary early retirement and state pension age (either with incapacity benefits, other transfers or with own funds). Thereby the adjustment of voluntary early retirement pension and state pension age limits implies a fairly unchanged balance between the average number of years spent working, and the average number of years spent on retirement and pensions, etc.

The initiatives in the Welfare Agreement increase employment by approx. 9 per cent in 2040 in the calculations, when the early retirement age, including the technical assumptions about rapidly rising longevity, is raised to 65 ½ years, *cf. figure 1.11b*. As a result, the Welfare Agreement also supports long-term growth and prosperity. The projection requires, among other things, the age limits to be raised in line with the indexation rule, which is described in the adopted legislation, and that the participation rate is increased to the assumed extent.

Figure 1.11a

Average number of years with voluntary early retirement pension and state pension

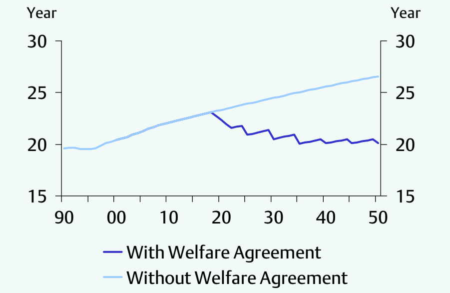
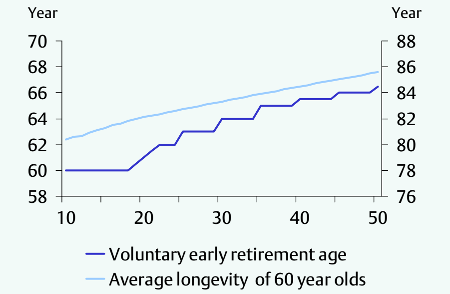


Figure 1.11b

Voluntary early retirement age and average longevity of 60 year olds



Source: Own calculations and DREAM.

The Welfare Agreement and in particular the longevity indexation of age limits in the pension system to a large extent handles the part of the long-term fiscal challenges that is related to the otherwise almost automatic increase in the number of years of retirement caused by increasing longevity, and the increased costs of healthcare and elderly care from rising longevity.

In the absence of the initiatives in the Welfare Agreement public finances excl. interest payments (the structural primary balance) would be weakened by up to 6 per cent of GDP from 2015 until around 2040, *cf. figure 1.12b*. This primarily reflects higher pension spending and lower employment in the absence of the Welfare Agreement. The initiatives in the Welfare Agreement – especially the retirement reform – are projected to reduce the weakening of the primary balance, but it is still considerable at almost 2 per cent of GDP from 2015 to 2035. After 2035 the Welfare Agreement along with relatively smaller cohorts of high-age imply that the primary balance is strengthened in the projection.

The underlying weakening towards 2035 should be seen in light of the demographic trends with large older cohorts, declining North Sea Revenues and the energy and climate change objectives, which reduce energy consumption relative to GDP. Lower energy consumption reduces revenues from energy taxes, as consumption of fossil fuels is more heavily taxed than other goods.

Figure 1.12a
Employment with and without the Welfare Agreement

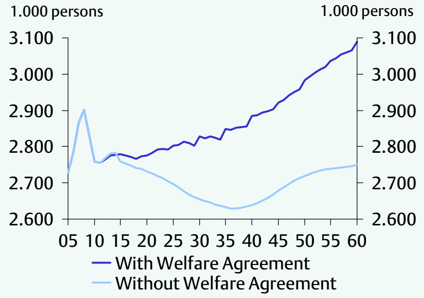
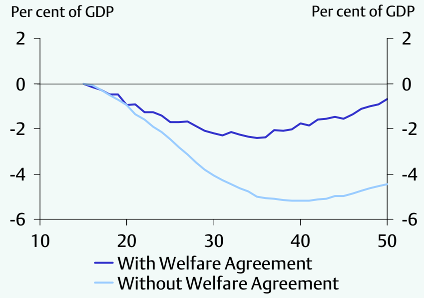


Figure 1.12b
Weakening of structural primary balance from 2015 with and without the Welfare Agreement



Source: Own calculations.

CP09 does not include lower revenues from energy taxes and other potential costs from meeting the long-term vision that Denmark eventually should be independent of fossil fuels like oil, coal and gas. The total energy taxes now account for approx. 40 billion DKK annually. A large share of these revenues is lost when the target of independence from fossil fuels is fulfilled at unchanged tax rules. Overall, the potential fiscal costs will depend on the measures taken and associated financing measures.

1.6 Overview of changes since CP08

Compared to the CP08-projection the CP09-projection includes new information about the economic outlook, labour market, demographics and public finances, and includes new initiatives, including the tax reform and other initiatives in the *Spring Package 2.0*:

- New estimates for oil prices, North Sea production and the dollar exchange rate and hence new estimates for the North Sea revenues. Overall, adjustments to the permanent revenue stream from North Sea activities ceteris paribus improve fiscal sustainability by 0.05 per cent of GDP, while the balance in 2015 is improved by 0.15 per cent of GDP.

- *Tax reform in Spring Package 2.0*. As mentioned, the tax reform is estimated to achieve nearly 5½ billion DKK or around 0.3 per cent of GDP of the reform requirement in CP08, due to positive effects on labour supply and savings etc., cf. section 2.4.

- Updated population projection *(DREAM2009)*. The new population projection does not cause any significant change in average longevity and does not affect the sustainability indicator significantly.

Table 1.7
Sustainability indicator – summary of Changes from CP08 to CP09

	Per cent of GDP
1. Convergence Programme 2008 (Excl. new initiatives)	**-0.8**
- New estimates of North Sea revenues	0.05
- Tax reform	0.3
- New population projection, DREAM 2009	0.0
- New data on labour market (RAS2007) etc.	-0.1
- *Economic Survey*, December baseline otherwise	-0.8
- of this higher real public consumption	-0.3
- of this lower structural GDP	-0.2
- of this interest on increased debt from 2015	-0.3
2. Convergence Programme 2009 (without new initiatives)	**-1.3**

- Updated information on the labour market attachment of the population by age, gender and ancestry, *RAS2007*, weakens the sustainability indicator by approx. 0.05 per cent of GDP, mainly due to a slightly lower participation rate in higher age groups than assumed in CP08. Updated estimates of structural unemployment, *cf. Economic Survey,* December 2009, implies that structural unemployment in the long term is assumed to make up 3.6 per cent of the workforce compared with 3.5 per cent in CP08. This change weakens ceteris paribus the sustainability indicator by 0.05 per cent of GDP.

- The updated cyclical outlook and prospects for public finances are based on *Economic Survey,* December 2009. The weakening of the economic cycle and public finances since CP08 implies higher public debt and interest payments. The increased debt in 2015 weakens sustainability by slightly more than 0.3 per cent of GDP. Increased expenditure on public consumption relative to GDP weakens the sustainability indicator by some 0.5 per cent of GDP. Close to half of this increase in consumption expenditure relative to GDP reflects that structural GDP is estimated to be lower in the wake of the global crisis.

Furthermore, the CP09-projection is based on the Danish Energy Agency's recent projection of energy consumption from April 2009 adapted to the growth and oil price assumptions used in CP09, cf. annex A5. Overall, the update of energy consumption does not affect sustainability. The total fiscal cost of the energy and climate policy agreements and objectives are estimated as in CP08 at around 5 billion DKK or approx. 0.3 per cent of GDP.

2. Policy framework and objectives through 2015

2.1 Introduction

The central objectives for fiscal policy in the 2015 Plan are to ensure structural balance for public finances in 2015 and long-term fiscal sustainability, cf. *Danmark 2015 – Mod Nye Mål*, August 2007. The planning of fiscal policy for each year is anchored in the fiscal objectives in the plan. The outlook for public finances is updated at least once a year in connection with the Convergence Programmes to the EU; most recently in *Denmark's Convergence Programme 2008*. Challenges for economic policy have since been substantially aggravated as a result of the global crisis.

After the financial crisis escalated in the autumn of 2008, a number of measures have been taken to strengthen confidence in (and within) the financial sector. The measures encompass, among other things, a number of extended loan facilities in Danmarks Nationalbank, guarantees for simple creditors and capital injections into financial institutions. Furthermore, the *Financial Stability Company* has been set up to ensure controlled unwinding of no longer viable financial institutions, and ensure that the claims of simple creditors are covered when financial institutions default. In addition, the Financial Stability Company can make arrangements for individual government guarantees to creditors, including for (existing and new) non-senior unsecured debt with a maturity of up to three years. From the government's side, liquidity in the private non-financial sector has also been eased by extending credit times for payment of certain taxes and fees, and by allowing households to take out their Special Pensions savings.

Since the crisis was at its peak, monetary policy interest rates have been reduced markedly, partly as a result of a normalisation of the monetary policy rate spread, and fiscal policy has gradually been eased. Over 2009 and 2010, fiscal easing amounts to an estimated total of 3½ per cent of GDP (measured by revenue effects, i.e. compared to neutral fiscal policy). The loosening reflects a planned growth in public investments (of 30 per cent over 2009 and 2010), lower taxes in 2009 and especially in 2010, while public consumption has risen more than planned.

Meanwhile, private consumption has dropped substantially during the crisis, and the automatic stabilisers, which help to curb the fall in economic activity, are larger in Denmark than in most other countries. The weakening of public finances in 2009 and 2010 is therefore relatively large. All in all, public finances will shift from record high surpluses of around 4½ per cent of GDP in 2005-2008 to a deficit of around 5½ per cent of GDP in 2010.

The target of structural balance in 2015 requires significant fiscal consolidation. The assessment is that the structural budget balance will show a deficit of about 1.8 per cent of GDP in 2015 if no further initiatives are taken. That implies a total consolidation requirement of around 31 billion DKK towards 2015 in order to ensure balance by then. The precise requirement towards 2015 is uncertain, but the challenge is in any case considerable.

With the prospect of a deficit of 5½ per cent of GDP this year, it is expected that Denmark – in accordance with the Stability and Growth pact – will enter the procedure for excessive deficits and will receive a recommendation from the Ecofin council, to reduce the deficit to below 3 per cent of GDP within a relatively short time span.

The specific content of the recommendation will be known later in 2010. Considering the recommendations that other countries have received up until now, it is assumed that Denmark shall improve the structural budget balance by a total of 1½ per cent of GDP, i.e. (at least) ½ per cent of GDP a year on average in the period 2011-2013. The expected recommendations are thereby in accordance with the central objective of the plan to ensure structural balance in 2015, which is also the MTO ("Medium Term Objective") of the Convergence Programme.

The prospects for public finances (towards 2015 and the years that follow) and the evaluation of fiscal sustainability is based on a long-term projection that also covers the period beyond 2015. The projection incorporates changes in demographics and other factors of importance to public finances, including the projected lower extraction of oil and gas from the North Sea. The long-term projection is based on technical assumptions after 2015 and on the effects of already decided economic policy measures extending beyond 2015, including the pension reform in the Welfare Agreement from 2006 and the tax reform in *Spring Package 2.0*. On top of this is the *Quality Fund* for public investments in 2009-2018 and energy- and climate objectives towards 2020 and thereafter, cf. chapter 5.

Especially in the current situation it is difficult to determine the underlying position of public finances (the structural budget balance) and the development towards 2015 and thus, the projections are more uncertain than normal. Updated evaluations of the projections will therefore be made in light of cyclical developments, the recommendation from the EU, and fiscal measures taken.

2.2 Objectives for economic policy

The central objectives for fiscal policy on which the consolidation projection in the Convergence Programme is founded are as follows:

- Keeping the central objective of the 2015 Plan of structural balance in 2015 (MTO of Denmark).
- A long-term fiscal sustainability indicator of (at least) zero.

- Implementation of the expected Council recommendation to improve the structural budget balance by 1½ per cent of GDP during 2011-2013.

Part of the necessary tightening of fiscal policy will take place automatically, when the financing elements of the tax reform are implemented and the acceleration of public investments is gradually withdrawn. On the other hand, public finances are weakened towards 2013 as a result of increasing interest payments on growing public debt, declining oil and gas production in the North Sea and because large cohorts are withdrawing from the labour market. In total, on the basis of currently available information, the structural budget balance is estimated to strengthen by ¼ per cent of GDP from 2010 to 2013. In order to fulfil the expected recommendation for a strengthening of the structural budget balance of 1½ per cent of GDP, new initiatives must improve public finances by 1¼ per cent of GDP by 2013 (corresponding to new initiatives for around 24½ billion DKK).

Based on current projections, structural balance in 2015 requires a further improvement of around 7 billion DKK through new initiatives. Hence, all in all there is a need for a total consolidation of around 31 billion DKK in order to reach the target of balance by 2015.

It should be stressed that the consolidation requirement may be re-evaluated for instance when the recommendation is known and that the EU requirement may depend among other things on the estimation of the structural budget balance by the European Commission. Furthermore, decisions have yet to be taken about the exact size and timing of the fiscal tightening. In the Convergence Programme, it is assumed that the adjustment is made through the expenditure side and that the remaining reform requirement from the original 2015 Plan will be met, cf. chapter 1 and section 2.5.

On the revenue side the tax reform in *Spring Package 2.0* is included through 2019. In isolation, the tax reform strengthens the long-term sustainability of public finances by around 0.3 per cent of GDP and strengthens public finances in 2015 by almost ½ per cent of GDP (including temporary time shifting effects in net pension contributions, notably as a result of the limit of new payments to pension schemes with less than life-long coverage of 100,000 DKK per year). Hence, the reform contributes to reach the key fiscal targets in the 2015 Plan.

In a projection where consolidation corresponding to the expected Council recommendation is implemented, the structural deficit is projected at around ½ per cent of GDP by 2015. In order to achieve balance on public finances it is thereby required – as it looks right now and with considerable uncertainty – that further consolidation of around 0.4 per cent of GDP towards 2015 is achieved. In the programme, this is achieved by meeting the remaining requirement for structural reforms of around 7 billion DKK from the 2015 Plan (corresponding to the reform requirement in CP08 adjusted for the positive contribution from the tax reform etc.).

Achieving structural balance in 2015 contributes to avoid sizeable deficits and debt build-up also after 2015 where pressures on public finances may continue as a result of demographics and falling oil revenues. With structural balance in 2015, prospects are for a deficit in 2020 between ½ and 1 per cent of GDP. In a scenario with no consolidation, however, the structural deficit could rise to around 3 per cent of GDP.

The need for a relatively rapid strengthening of public finances is furthermore underlined by the fact that absent credible consolidation there is a risk of higher interest rates and weakened confidence. That may potentially weaken the assumed upturn in private demand and cause interest payments on the public debt to rise. Moreover, the longer consolidation is postponed, the higher is the future need for consolidation due to higher interest payments. If the necessary consolidation is postponed e.g. by five years, it could require extra initiatives that strengthen public finances by up to 10 billion DKK, if the objective is to achieve the same structural budget balance by 2020. The pace and timeframe for normalisation of course also depends on the outlook for activity and inflation etc. Since the output gap is large and negative it will, however, be necessary to begin consolidation before the business cycle is back to neutral, cf. also chapter 1.

The key objectives for individual policy areas in the Convergence Programme are as follows:

- *Fiscal policy*: Stability oriented fiscal policy with focus on securing structural balance on public finances by 2015 and a sustainable fiscal policy. That requires the withdrawal of temporary easing during the crisis and relatively substantial consolidation towards 2015.

- *Tax and expenditure policy:* Tax policy includes the gradual implementation of the tax reform in *Spring Package 2.0* towards 2019, including the continuation of the tax freeze. As mentioned, the tax reform in *Spring Package 2.0* is fully financed (excluding the estimated dynamic effects on employment and savings). On the expenditure side, public investments are reduced after the relatively large planned increase in 2009 and 2010 to mitigate the economic crisis. Hence, public investments constitute 1.8 per cent of GDP in 2015 after a level of 2.5 per cent of GDP in 2010. The profile for public investments also includes *Quality Fund* of 50 billion DKK for public investments in hospitals, schools, and day-care institutions etc. towards 2018, cf. section 2.5. To achieve structural balance by 2015 it is also assumed that real public consumption is held unchanged from 2010 until 2013. In combination with other assumptions in the projection, this implies that public consumption constitutes about 26¾ per cent of (cyclically adjusted) GDP in 2015, which is a little higher than the benchmark of 26½ percent of GDP, which was launched in the original 2015 Plan. Furthermore, it is assumed that public transfers to the private sector are reduced proportionally compared to previous assumptions. These technical assumptions on the public expenditure side imply that the expected Council recommendation can be met, and will be around three-fourths of the way towards achieving balance by 2015.

- *Structural and labour market policy:* The Convergence Programme also includes the technical assumption that new initiatives will help to increase labour supply, such that the sustainability of public finances is strengthened by around 0.4 per cent of GDP. That corresponds to the requirement in the original 2015 Plan from 2007 (for initiatives to strengthen finances by 0.8 per cent of GDP through higher labour supply) corrected for the Job Plan and the measures to reduce sickness absence from 2008 and the tax reform in *Spring Package 2.0*, which have been passed since the plan was presented. These reforms are estimated to meet around half of the original requirement.

- *Growth initiatives:* The tax reform and the initiatives in the Welfare Agreement concerning education, research and innovation – as well as the changes in retirement age limits –contribute to increase the longer-term growth potential. It is a central focal point to ensure sound conditions for economic growth after the crisis. Thus, the government has set up a *Growth Forum*, which in the course of 2010 will contribute with ideas and suggestions on how best to ensure that the conditions for renewed growth are in place after the crisis.

- *Monetary and exchange rate policy:* A stable currency by virtue of the fixed exchange rate against the euro, which at the same time ensures low and stable inflation expectations. Responsible economic policies underpin confidence in the stable exchange rate so that low interest rates and a low interest rate spread against the euro can be maintained. Since the peak of the financial crisis, the monetary policy interest rate spread (vis-à-vis the leading ECB interest rate) has been lowered from 1¾ percentage points to 0.05 percentage points. The lending rate of the Danish central bank is historically low, which supports the housing market, private consumption and investments. Foreign exchange reserves are historically large (approx. 20 per cent of GDP) bolstering the stable exchange rate policy.

- *Financial markets:* Conditions in financial markets have improved markedly since the autumn of 2008, partly as a result of the extensive measures taken in Denmark as well as other countries. Risk premiums have fallen significantly, while the "deposit deficit" in banks (and hence their reliance on wholesale funding) has fallen somewhat. It is a central challenge to wind up and phase out the extraordinary measures without weakening financial stability. Particularly the phasing out of government guarantees requires international coordination, although as in other areas such as liquidity support, capital injections etc., exit-elements are built in to these arrangements, in the form of e.g. "sunset" clauses or incentives to exit the arrangements as conditions normalise. Challenges still remain in the financial sector, partly as a result of a high number of bankruptcies and high leverage in parts of the non-financial sector, and the drop in property prices, which have taken place since 2007.

Denmark's position in relation to the convergence criteria

The public surplus in 2008 was 3.4 per cent of GDP according to the reporting in October under the EU excessive deficit procedure (EDP)[1]. The public surplus in 2008 should be seen in light of still favourable cyclical conditions, large revenues from oil and gas activities in the North Sea and low net interest payments. The structural budget balance, which adjusts the actual balance for both cyclical and other temporary effects in order to obtain an indicator of the underlying state of public finances, is estimated at 1.9 per cent of GDP in 2008.

Table 2.1
Convergence criteria, 2008 and 2010

	Consumer Price Inflation (HICP)[1)]	Nominal long-term interest rate (10-year gov.)[1)]	Annual public balance (EDP-form)[2)]	Public debt (EMU-debt)[2)]
	Per cent		Per cent of GDP	
2008				
Denmark	1.1	3.6	3.4	33.4
EU27	1.0	4.1	-2.2	61.7
Euro Area	0.3	3.8	-2.0	69.3
Convergence criteria	1.5	5.9	-3.0	60.0
Estimates for 2010				
Denmark	1.2	-	-5.5[3)]	41.8[3)]
EU27	1.0	-	-7.1	75.3
Euro Area	0.6	-	-6.9	84.0
Convergence criteria	1.8	-	-3.0	60.0

Note: Furthermore, it is a convergence criterion that a country must have joined the exchange rate mechanism ERMII for at least two years without serious tensions and devaluations. Denmark fulfils this criterion.
1) For inflation and nominal long-term interest rate figures are based on available data up until Dec. 2009 and as concerns inflation, an estimate for 2010. Inflation is measured as the percentage change in the most recent available 12 months average of the HICP-index compares to the previous 12 month average of the HICP-index. The interest is calculated as an average of the last 12 months. The European Commission has not published estimates for interest rates for 2010.
2) The criterion of sound public finances is formally determined by whether the countries is subject to a council decision that deficits are excessive under the Treaty Article 104(6).
3) Own estimations for Denmark are based on *Economic Survey*, December 2009.
Source: Eurostat and the European Economic Forecast – autumn 2009 of the European Commission and own calculations.

Hence, Denmark fulfilled the convergence criteria for exchange rate stability, inflation, interest rates, and sound public finances in 2008, *cf. table 2.1*.

[1] The calculation of the public budget balance in the form of the EDP is in certain aspects different from the calculation in national accounts. However, the surplus on public finances in 2008 has been estimated at 3.4 per cent of GDP in terms of both EDP and national accounts, cf. chapter 4.

The estimated deterioration in public finances implies that Denmark is now expected to exceed the 3 per cent reference value for the public deficit. That is also the case for most other EU-countries.

As a consequence, Denmark is in 2010 expected to be subject to the excessive deficit procedure (EDP) and receive a Council recommendation to take effective measures to improve public finances. The procedure may be abrogated when it is ascertained that the deficit has returned below 3 per cent and is expected to remain so.

2.3 Fiscal objectives in the 2015 Plan

In the original 2015 Plan from 2007, the medium-term objective for the structural budget balance was a target interval for the structural budget surplus towards 2010 followed by a lower bound of at least balance from 2011-2015. In light of the economic crisis and the need for fiscal easing, the budget balance target has been waived in these years, but the objective of a structural budget balance by 2015 is maintained, cf. *Spring Package 2.0* and *Economic Survey*, May and August 2009.

Structural balance in 2015 implies that fiscal policy also satisfies the requirement of long-term sustainability (with a small margin), but will require considerable consolidation in addition to pulling back the measures taken during the crisis.

The objective of structural budget balance by 2015 is in accordance with the Stability and Growth Pact of the EU. The pact requires a structural budget balance that in general should be "close to neutral" or in surplus, and which should include a safety margin such that countries do not exceed the 3 per cent limit for the actual public balance during normal cyclical downturns.

The requirement for a safety margin currently implies that Denmark (as a minimum) must aim for a medium-term public balance close to neutral or a deficit of no more than ½ per cent of GDP. This margin allows the automatic stabilisers to work fully to dampen cyclical movements without exceeding the deficit limit of 3 per cent of GDP. The relatively large margin should be seen in light of the relatively high sensitivity of public finances in Denmark to cyclical movements. However, a structural budget balance of -½ per cent of GDP does not allow substantial discretionary measures during deep recessions since the limit of 3 per cent of GDP is easily exceeded.

The target of structural balance by 2015 satisfies the minimum requirements of the Pact with a margin (of ½ per cent of GDP). The more ambitious goal should be seen in light of a continued downward pressure on public finances in the decades after 2015 as well as the objective of fiscal sustainability; moreover, the more ambitious goal allows wider scope for action in case of larger setbacks.
The fiscal targets in the 2015 Plan require fiscal discipline and imply rather large public surpluses when cyclical conditions are favourable and unemployment is low. Over

time, this is the prerequisite for room to manoeuvre in case of large negative shocks to the economy causing obvious, large disequilibria. Economic policy must also underpin the fixed exchange rate policy by focusing on economic stability, low inflation and long-term fiscal sustainability.

Fiscal policy has been eased considerably in 2009 and 2010, primarily as a reaction to the crisis. The easing has been larger than in most other countries in the EU while the 10-year yield differential against Germany has been relatively stable. This has been possible because of the starting point with very large surpluses in the good years from 2005-2008. In these years, the surplus was larger than in other EU-countries, and the public debt was significantly reduced.

Figure 2.1a

Target for structural balance in 2015 and the development of structural and actual budget balance

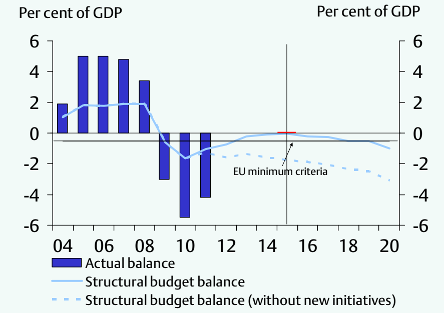
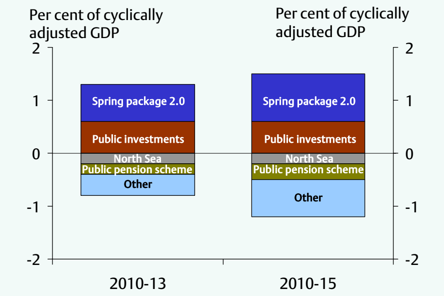


Figure 2.1b

Contributions to change in the structural primary balance from 2010 to 2013/15 – without initiatives



Note: "Other" in figure 2.1b covers mainly fewer persons in age groups with highest employment rates and real growth in public consumption in the projection with no new initiatives.
Source: *Economic Survey*, December 2009 and own calculations

The structural budget balance is estimated to weaken from a surplus of 1.9 per cent of GDP in 2008 to a deficit of 1.7 per cent of GDP in 2010. This mainly reflects the easing of fiscal policy. In the absence of new initiatives it is estimated that the public structural budget balance is weakened a little further to around -1.8 per cent of GDP by 2015, *cf. figure 2.1a*. The weakening from 2010 until 2015 reflects higher interest payments on the growing debt. The primary structural balance (which does not include net interest payments) is strengthened a little from 2010 to 2015 even in a projection with no new initiatives taken (i.e. excluding consolidation on the expenditure side and the required increase in structural employment), cf. chapter 1.

The marginal strengthening of the primary structural balance from 2010 to 2015 should be seen in light of the gradual phasing out of the temporary fiscal stimulus as the very high level of public investments is brought down again and as the financing elements of the tax reform are phased in[2]. This improves the balance by 1¼ per cent

[2] Developments in individual revenue and expenditure elements towards 2015 are described in chapter 4.

of GDP in the period. But at the same time the primary public balance is weakened by declining revenues from the North Sea, increasing expenditure for pensions and other factors, including fewer persons of working age and the assumed real growth in public consumption, which in this projection (where no new initiatives are assumed) corresponds to CP08, *cf. figure 2.1b*.

The objective of structural budget balance by 2015 thereby requires new initiatives, which strengthen the structural balance by around 1.8 per cent of GDP in 2015. With a relatively frontloaded effort in accordance with the expected Council recommendation, measures that strengthen finances by some 1.6 per cent of GDP will be sufficient, since this will reduce interest payments by around 0.2 per cent of GDP in 2015. At the same time, the projection with structural balance in 2015 satisfies the requirement of fiscal sustainability (with a small margin).

Long-term sustainability of public finances

The objective in the 2015 Plan for long-term fiscal sustainability implies that net public debt is stabilised in the longer term as a share of GDP. The assessment of fiscal sustainability depends on a number of technical assumptions and should be seen as a consistency check on whether public revenues and expenditures are roughly in line over the long term, cf. chapter 5.

Fiscal sustainability does not in itself put any special restrictions on the budget profile over time, or at which level debt should stabilise in the long term. The criterion of long-term sustainability does not, for example, ensure that the public balance and debt in all years meet the requirements in the Stability and Growth Pact and the euro convergence criteria (in particular deficits below 3 per cent of GDP and EMU debt not exceeding 60 per cent).

Partly for this reason, the requirement of fiscal sustainability in the 2015 Plan was supplemented by a more short-term requirement of (at least) balance on the structural budget by 2015. Until the financial crisis escalated late 2008, the aim was to achieve surpluses through 2015 to prepare for long-term challenges through public savings (i.e. paying back debt and lowering interest payments) when conditions are still relatively favourable. For instance, in the period towards 2015 the revenues from the North Sea are still relatively high, amounting to more than 1 per cent of GDP in 2015 and are thus some 0.7 per cent of GDP more than the "permanent revenue stream"[3]. Furthermore, demographics are still relatively favourable compared to the situation after 2015 when large age groups have retired while life expectancy increases. As mentioned, the strong downturn since 2008 and higher expenditures for public consumption have put strain on this part of the strategy (the savings element). In the projection **without new initiatives**, the sustainability indicator is calculated to be -1.3 per cent of GDP. This implies that an improvement of the primary budget

[3] The permanent revenues correspond to around 0.4 per cent of GDP. The "permanent revenue stream" corresponds to the present value of all future (estimated) revenues converted to a constant percentage of GDP (annuity) from today onwards.

balance by 1.3 per cent of GDP as of today and in all future years would render net public debt a constant share of GDP in the long run. The requirement of 1.3 per cent of GDP corresponds to roughly 23 billion DKK in 2010-level[4].

If the necessary initiatives are phased-in over some years (rather than immediately), the consolidation requirement would be slightly larger in order to stabilize the net debt to GDP ratio since the interest burden would increase. An improvement of the balance by 1¼ per cent of GDP, implemented towards 2013 (or 1¾ per cent implemented towards 2015), corresponds with the current assumptions to an improvement in the sustainability indicator of around 1.1 per cent of GDP (and 1.5 per cent of GDP, respectively).

The projection without new initiatives is not sustainable, and the net public debt to GDP ratio therefore continues to rise in the long term. Hence, interest payments also continue to increase and the structural balance deteriorates quite significantly, *cf. figure 2.2a-b*.

In a projection where of the expected Council recommendation is exactly met, the sustainability indicator is slightly negative (around -0.2 per cent of GDP). In that projection, the deficit in 2015 is around ½ per cent of GDP.

However, as mentioned, the prospects are that demographics, lower oil revenues and the objectives in the climate and energy policies etc. will continue to put a pressure on public finances following 2015. Hence, even if the expected recommendation is met, deficits, debt and interest payments are expected to rise towards the middle of the century. Given the technical assumptions in the projection, the structural deficit will peak at around 4 per cent of GDP, *cf. figure 2.2.c-f*.

With new initiatives that ensure **structural balance on public finances by 2015** (the CP09-projection), the sustainability indicator is 0.2 per cent of GDP. The requirement of structural balance will further dampen the build-up of public debt and hence the interest payments, which will e.g. in 2025 be reduced by around 1½ per cent of GDP compared to the projection without new initiatives. Still, also in this projection, rising deficits and debt levels could emerge due to ageing etc., cf. figure 2.2.c-f.

[4] The sustainability indicator is normally measured in percent of GDP because this fraction is constant from year to year. For instance, just over 1.3 per cent of GDP corresponds to around 23 billion DKK in 2010-level, 24 billion DKK in 2011-level and 25 billion DKK in 2012-level.

Figure 2.2a
Structural balance (with no new initiatives)

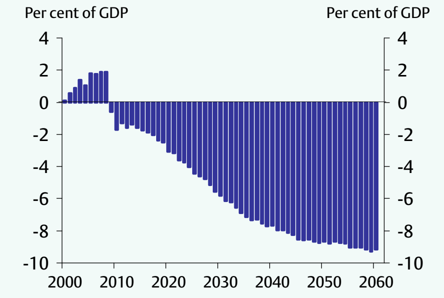


Figure 2.2b
Net public debt (with no new initiatives)

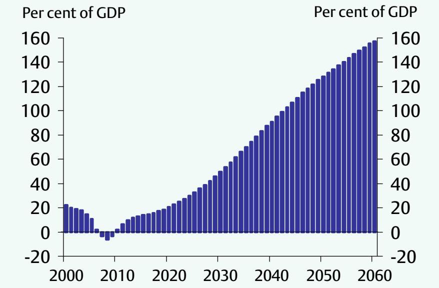


Figure 2.2c
Structural budget balance

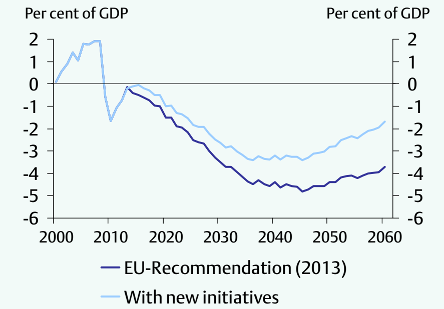


Figure 2.2d
Net public debt

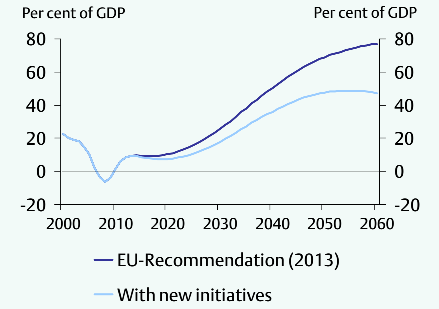


Figure 2.2e
Primary structural budget balance

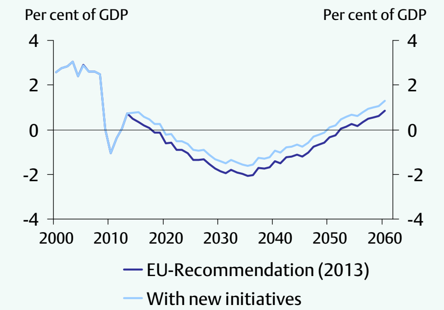
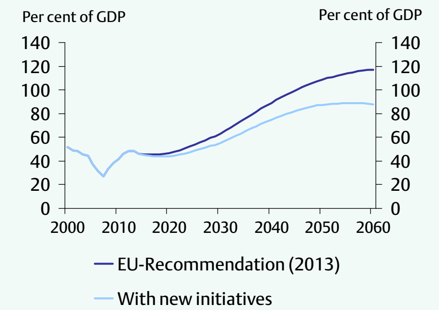


Figure 2.2f
EMU debt



The positive sustainability in this scenario (0.2 per cent of GDP) reflects that the primary balance turns positive in the (very) long run, after 2050, mainly due to the positive effects of the 2006 Welfare Agreement, cf. also chapter 5. The net debt will reach 50 per cent of GDP by 2050, while the "EMU debt" for a long period could surpass the 60 per cent-limit in the pact, cf. figure 2.2.c-d. Even when structural balance is achieved in 2015 a need for further initiatives could then emerge – but to a lesser extent than in the projection where the expected Council recommendation is only just met.

2.4 Tax policy

The tax reform in *Spring Package 2.0* from March 2009 contains a reduction of taxes on labour income financed by higher environmental taxes, higher taxes on unhealthy food, lower deductions and removing special arrangements for individual business sectors, *cf. box 2.1*. At the same time, the tax reform is fully financed without dynamic effects and, overall, the reform is expected to strengthen public finances permanently (sustainability) by around 5½ billion DKK as a result of the positive dynamic effects on labour supply and savings etc.

A primary focus of the tax reform in *Spring Package 2.0* is to increase labour supply and thereby strengthen longer-term growth prospects particularly through a lowering of marginal income taxes. Hence, the reform continues the efforts of the tax reforms of 2004 and 2007, and the three tax reforms taken together have implied that marginal taxes on labour income has been lowered considerably for the main part of all employed persons, *cf. figure 2.3a*.

Figure 2.3a

Marginal taxes, 2001-rules and *Spring Package 2.0*

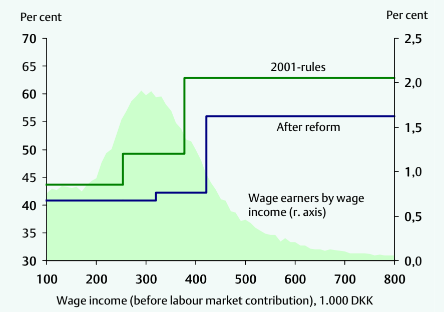
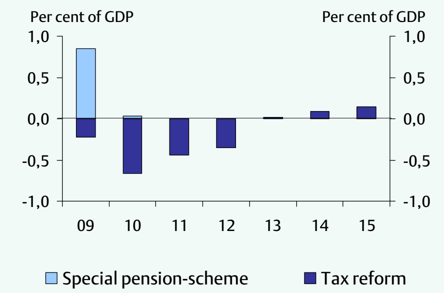


Figure 2.3b

Revenue effects from *Spring Package 2.0* towards 2015



Source: Own calculations.

The tax reform implies that the tax cuts are implemented quickly while the financing will be implemented gradually in the coming years. Thus, the tax reform in isolation implies an easing of around 12 billion DKK (0.7 per cent of GDP) in 2010 and around 8 billion DKK (0.4 per cent of GDP) in 2011, *cf. figure 2.3b*[5]. Hence, the tax reform contributes to support activity and employment in the short term.

[5] Including second order effects in the form of higher revenues from indirect taxes and fees, the short term budget impact is around -0.5 per cent of GDP in 2001 and around -0.3 per cent of GDP in 2011.

At the same time the release of the Special pension-scheme savings and the derived tax income results in a relatively mild debt accumulation as a result of *Spring Package 2.0* in the short term. Hence, the debt is expected to be roughly unchanged in 2010, while the accumulated debt effect is around 11 billion DKK (0.5 per cent of GDP) in 2015 (excluding the debt-reducing effects from higher consumption, increasing labour supply etc.).

Box 2.1

Main elements of the tax reform in *Spring Package 2.0*

- The middle-bracket income tax of 6 per cent is abolished.
- The top income tax bracket is increased, so that around 350.000 persons will no longer pay top-bracket income tax.
- The bottom-bracket tax is lowered by 1.5 percentage points.
- Fewer special tax arrangements and less direct support to businesses.
- The tax and excise duties system will to a higher degree be adapted to accommodate challenges towards the climate and the environment.
- Higher excise duties on unhealthy food, tobacco etc.
- The *additional public pension* is increased by 2.000 DKK per year.
- The tax value of the interest deductibility is maintained unchanged for families with interest payments below 100,000 DKK (50,000 DKK for singles). The tax value of large interest deductions and certain other deductions is gradually reduced from 33.5 per cent on average in 2012 to 25.5 per cent on average in 2019. At the same time, a special compensation arrangement is introduced for families with large deductions compared to the income.
- The existing supplementary deduction for commuting expenses for persons with low incomes is increased. The limit for the daily travelled distance that results in the high rate is also increased. Finally, the higher deduction for daily commutes over 100 km. based from non-central municipalities is continued until 2018.
- A *"green cheque"* of 1,300 DKK as a fixed, nominal yearly amount to persons above the age of 18 and 300 DKK per child (maximum 2 children). The green cheque is means-tested. The cheque compensates for the higher green taxes that households must pay.
- A ceiling of 100,000 DKK for deductions for pension contributions to pension schemes with less than life-long coverage.
- The tax freeze is continued.

In the coming years, the net tax reduction is gradually reduced, as the financing is phased in. It is estimated the reform will improve public finances in 2013-2015, even if the expected dynamic gains from the reform are not included Hence, the tax reductions are fully financed from increased revenues from other sources, while the dynamic effects on labour supply, consumption patterns and savings etc. fully contribute to strengthen public finances in the longer term.

Taken together, the reform is expected to strengthen public finances, both in 2015 and in the longer term. The contribution to the fiscal sustainability is estimated to around 5½ billion DKK as a result of the positive derived effects. That amounts to around 40 per cent of the original structural reform requirement in the 2015 Plan of 14 billion DKK. Hence, the tax reform is a significant step towards reaching the target set out in the 2015 Plan.

The tax freeze continues unchanged before and after the tax reform. The nominal principle in the tax freeze is included in the projection to 2019.

The tax freeze implies that no tax or excise duty can be raised regardless of whether it is fixed in percentage or nominal amounts. Furthermore, there is a ceiling for the nominal property value tax. Due to the nominal principle for excise duties (excluding energy duties, which are indexed) and the property value tax, the tax freeze in isolation contributes to a gradual reduction in the tax burden when prices are increasing. Following the tax agreement from the fall 2007, energy duties are indexed by 1.8 per cent per year.

The nominal elements in the tax freeze (i.e. the ceiling over the property value tax and fixed nominal excise duties) are extended from 2015 to 2019 as part of the financed tax reform in *Spring Package 2.0*. These elements result in a reduction of the tax burden and imply a weakening of public finances of around 3 billion DKK compared to a situation where these taxes and excise duties would follow price developments. This should be seen in connection with the other nominal elements in the reform that provide financing in the long term. The green cheque and the allowance for negative net capital income yield a permanent funding of around 7 billion DKK because these are not adjusted with increases in prices and incomes. The net contribution from the nominal elements in the tax reform is thus around 4 billion DKK. Furthermore, it is assumed that the compensation arrangement – that protects against losses as a result of the lower value of deductions from 2012 – is phased out after 2019.

2.5 Expenditure policy

In the medium-term plans it has generally been a prerequisite that real growth in public consumption should be lower compared to the last decades. In the original 2010 Plan from 2001 it was thus assumed that consumption growth should be 1 per cent per year until 2005 and ½ per cent per year from 2006-2010. The real growth targets have since been revised e.g. in connection with the *Welfare Agreement*, which implied a higher real growth in 2007-2012 within education, research, entrepreneurship and innovation. This higher growth was mainly financed through labour market reforms.

Since 2001 the real growth in public consumption has been 1.6 per cent a year on average. That is less than the preceding decade (where the increase was 2½ per cent on average), but somewhat more than the premise in the preceding medium-term plans. On average, the excess growth makes up around ¾ percentage points per year in the period 2002-2009, *cf. figure 2.4a*. This corresponds to around 3½ billion DKK per year or a total of around 27 billion DKK, or roughly 5 per cent of public consumption. Compared to the original 2010 Plan from 2001 (i.e. before the *Welfare Agreement* etc.), public consumption has grown by an excess 34 billion DKK (around 7 per cent of public consumption)[6].

In light of the expenditure overruns, measures have been taken to strengthen the control of expenditures. Among other things, as of 2009, a possibility has been introduced to make a portion of the block grant up to 1 billion DKK conditional on the aggregated local budgets being in line with the expenditure level agreed upon with the government. The conditional block grant can be seen as a solidarity premium to support that the municipalities in the aggregate fulfil the conditions for the municipal budgets that Local Government Denmark and the government has agreed upon.

In 2010, the conditional block grant is only enforced concerning the agreed level for service expenditures since, in light of the crisis, the upper bound for public investments has been suspended. The municipal budgets for 2010 show that the municipalities have budgeted service expenditures that correspond to the agreed level. On the revenue side, municipalities that raise taxes must pay a share of the revenue to the government if the municipalities in the aggregate are raising taxes and thereby violate the tax freeze.

Figure 2.4a

Planned and actual real growth in public consumption

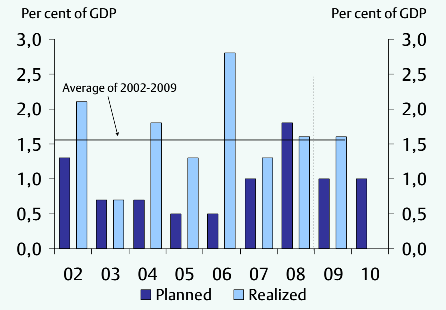
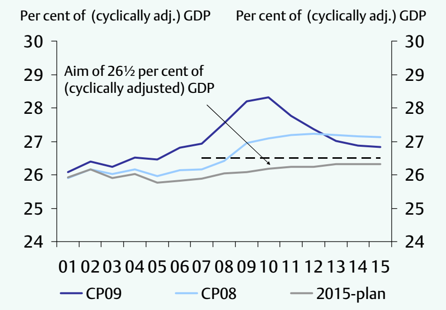


Figure 2.4b

Public consumption as a percentage of (cyclically adjusted) GDP



Note: Planned real growth is determined as in preceding 2010 and 2015 Plans, including changes according to the tax agreement of 2003 (concerning 2004-2005) and *the Welfare Agreement/the Globalisation Fund* (of 2007). The real growth of 2009 is as estimated in *Economic Review*, December 2009.

[6] The assumed real growth in public consumption was raised from ½ per cent to 1 per cent per annum from 2007 as a result of the *Welfare Agreement*. This increase is not included in the numbers for the original 2010 Plan.

Continued efficiency and productivity gains within the public sector can help to improve public services. The government and Local Government Denmark made a multi-annual agreement in 2008 on making resources available for improved service for citizens in the municipalities from 2009-2013. The agreement implies that the municipalities – due to productivity improvements – must redirect resources corresponding to around 1 billion DKK in 2009 increasing to 5 billion DKK in 2013. The government has agreed to implement measures that over time will release half of these gains – corresponding to ½ billion DKK in 2010 increasing to 2½ billion DKK in 2013.

A plan for government initiatives releasing 500 million DKK for services in the municipalities in 2010 was presented in the fall of 2009, cf. *Action Plan for releasing resources for services in the municipalities in 2010*, September 2009. With an extensive plan for reducing red tape *"Mere tid til velfærd"*, October 2009, the government has put forward 105 concrete initiatives with a view to simplify regulation and improve efficiency. Furthermore, a number of structural changes in the public sector have been made in recent years with the aim of increasing productivity and quality in service provision, including *Reform of Local Government* (2007), *Reform of the Police* (2007) and *Reform of the Judicial System* (2007). The benefits from these reforms are yet to be reaped.

The share of public consumption in GDP – the public consumption ratio – exceeds the benchmark of 26½ per cent of (cyclically adjusted) GDP, which was launched in the 2015 Plan, *cf. figure 2.4b*. In the period from 2009 until 2011, public consumption is estimated to constitute just above 28 per cent of cyclically adjusted GDP, which is around 1 percentage point higher than estimated in CP2008 and around 2 percentage points higher than in the 2015 Plan. This reflects a higher growth in expenditures than expected, but also a reduction in the estimate of cyclically adjusted GDP, *cf. also Economic Review*, December 2009. In the aggregate, public consumption constitutes a larger share of GDP these years than ever before.

In the Convergence Programme, it is, as mentioned, assumed that real growth in public consumption is around zero from 2011-2013. That means that nominal expenditures are rising in line with prices and wages, and that public employment as a benchmark can be assumed to me roughly stable. Hence – factoring in the other assumptions, including that the output gab will be closed and new initiatives should increase employment towards 2015 – public consumption expenditures are set to reach 26¾ per cent of GDP by 2015, which is only a little higher than the benchmark in the 2015 Plan (and higher than during the period 1984-2007).

Zero growth in public consumption from 2011-2013 implies that real public consumption expenditures will be some 13½ billion DKK less in 2013, than with the assumed spending path in Convergence Programme 2008. That corresponds to half of the excess growth that occurred in the years 2002-2009 and to some 40 per cent of the excess growth in public consumption compared to the assumptions in the original 2010 Plan from 2001.

In the beginning of 2009, it has been decided to implement and accelerate a long list of **investment projects** in order to support growth and employment in light of the international recession. In total it is assumed that public investments increase by around 30 per cent in 2009 and 2010. Historically, this is a strong increase and more than in most other OECD-countries[7]. With the planned increase in public investments, including growth initiatives in the approved budget bill of 2010, the investment level in 2009 and 2010 is well above the assumed level in CP08, *cf. figure 2.5a*. The current estimate is that total public investments will increase by just under ¾ per cent of GDP from 2008 to 2010, where the investment level is estimated at 2½ per cent of GDP. That is above the historical average of just under 1¾ per cent of GDP from 1993-2008, *cf. figure 2.5b*. For comparison, public investments constituted just above 1¾ per cent of GDP in 2009 and 2010 in CP08.

Figure 2.5a

Assumed projection for public investments

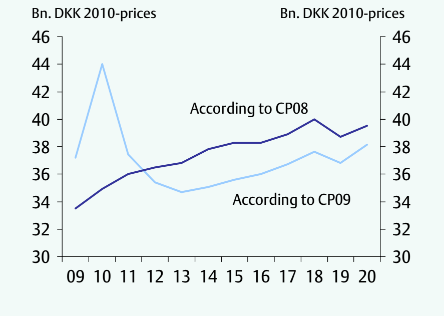
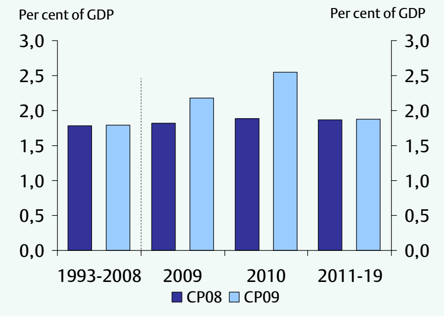


Figure 2.5b

Share of public investments to GDP



In the convergence programme it is assumed that public investments will back again after 2010 – especially the first couple of years, but the profile is difficult to predict, as some projects may come on line later than expected. Among other things the acceleration of the implementation of 2 billion DKK from the *Quality Fund* from 2013 to 2010 supports that an automatic adjustment downwards will occur. The decline in public investments from the relatively high level in 2010 dampens the demands for additional consolidation necessary to meet the expected Council recommendation and for reaching the medium-term objectives in the 2015 Plan. The projection of public investments includes the *Quality Fund* and the *Infrastructure Fund*, but the profile is of technical character.

2.6 Structural and labour market policy

The 2015 Plan from 2007 (and CP08) included key structural policy requirements for employment and working hours necessary to ensure fiscal sustainability and struc-

[7] OECD, *Economic Outlook 86*, cf. also *Economic Review*, December 2009.

tural balance on public finances by 2015. The central requirements of the 2015 Plan were:

- New initiatives must *increase non-subsidised employment* by a further 20,000 persons towards 2015, corresponding to an increase in employment of ¾ per cent.
- *Average working hours must not decrease towards 2015*, corresponding to average working hours being 1.8 per cent higher in 2015 than in a projection based solely on demographics and other changes in the employment composition. Average working hours are thereby targeted at a – for Danish conditions – relatively high level, even though an increasing share of young and elderly persons in the work force points toward a decrease going forward.

The requirements strengthened public finances (fiscal sustainability) by 0.8 per cent of GDP (14 billion DKK), of which a good 1/3 was included as an increase in structural employment. Overall, this requirement was sufficient to ensure structural budget balance by 2015 and that the sustainability criteria was met.

Since the presentation of the 2015 Plan, reforms have been decided that are estimated to meet around half of the reform requirement included in the original 2015 Plan. The tax reform in ***Spring Package 2.0*** entails a significant reduction in marginal taxes and is estimated to increase labour supply corresponding to around 19,000 persons (assumed fully phased in by 2015) [8]. Overall, *Spring Package 2.0* improves fiscal sustainability by an estimated 5½ billion DKK, *cf. table 2.2*.

Table 2.2
Status for reform requirements since CP2007

	Effect on sustainability indicator	
	Per cent of GDP	Billion DKK
Original reform requirement	0.8	14
- Assumed contribution from employment	0.3	5
- Assumed contribution from work. hours	0.5	9
Contributions to meeting reform requirements		
- Job Plan and plan to reduce sickness absence	0.1	2
- Tax reform (*Spring Package 2.0*)[1)]	0.3	5
Remaining reform requirements included in CP2009	0.4	7
- Assumed contribution from employment	0.3	5
- Assumed contribution from work. hours	0.1	2

1) Includes behavioural effect on labour supply and other behavioural effect from e.g. increased savings.
Source: Own calculations

[8] For a closer description of *Spring Package 2.0*, see section 2.4.

Previously, a **Job Plan** and a **plan to reduce sickness absence** have been decided, and the two combined are estimated to increase average working hours by around 0.2 per cent and will improve fiscal sustainability by up to 2 billion DKK, cf. CP08. It is especially changed rules for supplementary unemployment insurance benefits that contribute towards a strengthening of public finances in the Job Plan.

Thus, in total, these reforms are estimated to improve fiscal sustainability by around 7 billion DKK (0.4 per cent of GDP). Hence, half of the original reform requirement from the 2015 Plan is considered to have been met, cf. table 2.2.

In the Convergence Programme for 2009, it is technically assumed that new initiatives will increase labour supply, such that fiscal sustainability improves by 0.4 per cent of GDP. That corresponds to the share of the original 2015 Plan that is still not met. Technically, this reform requirement is also included in CP09, partly as an increase in non-subsidised employment of 20,000 persons in the course of 2014 and 2015 and partly as an increase in average working hours of around 0.4 per cent during the same period. This increase in labour supply amounts to 30,000 full-time employed and around 1/5 of the (estimated) increase in structural employment as from 2000 until 2010.

Moreover, it is a central assumption in the projection that the structural unemployment rate is 3.6 per cent of the labour force over the long term. Such an unemployment rate requires a well-functioning labour market and that the implemented labour market reforms work as intended. Also, it is crucial that the age limits for receiving early retirement pension and public old age pensions are raised from 2019 and are indexed to changes in life expectancy for 60-year olds with effect from 2025; *cf. the Welfare Agreement of 2006*.

2.7 Monetary and exchange rate policy

Denmark has a fixed exchange rate within the framework of the European Exchange Rate Mechanism 2 (ERM2), which implies that the exchange rate between Danish krone and the euro is allowed to fluctuate within +/- 2.25 per cent from its central exchange rate at 746.038 DKK pr. 100 euro, *cf. figure 2.6a*. For several years the Danish exchange rate has been close to the central parity and there is strong political commitment and support towards the fixed exchange rate policy in the Danish Parliament. It is essential that the credibility of the exchange rate policy remains high. This calls for a high degree of economic discipline, in order to avoid increases in short-term interest rates in particular in periods with tension and uncertainty in the capital markets.

In connection with the escalation of financial turmoil in the autumn of 2008, the Danish krone came under pressure and Danmarks Nationalbank had to increase the interest rate several times, whereby the interest rate spread between Danmarks Nationalbank's lending rate and the ECB's minimum bid rate rose to 175 basis points, *cf. figure 2.6b.* After autumn 2008 the spread has gradually been reduced to a very low level at 5 basis points. Thus, the reduction in the ECB's interest rate since late 2008 is also reflected in the interest rate level in Denmark, albeit with some delay. The current level of key monetary policy interest rates in Danmarks Nationalbank and the ECB are historical low. The foreign currency reserves have also increased to 415 billion DKK to support the fixed exchange rate policy, *cf. figure 2.6c.*

Figure 2.6a
Exchange rate between DKK and EUR

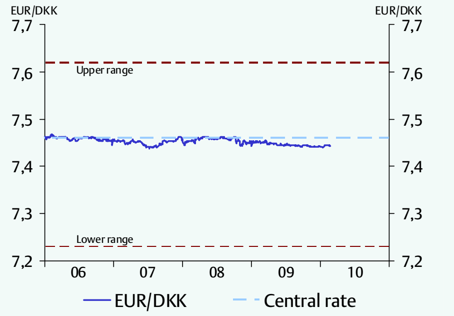


Figure 2.6b
Monetary policy interest rate, DK and euro zone including spread

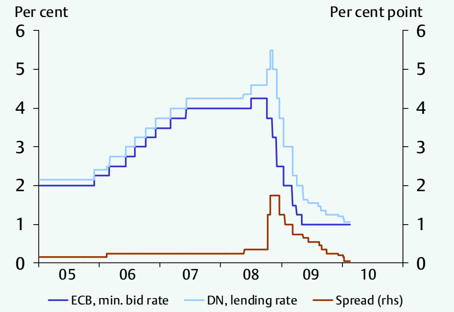


Figure 2.6c
The foreign currency reserves and Danmarks Nationalbank market interventions

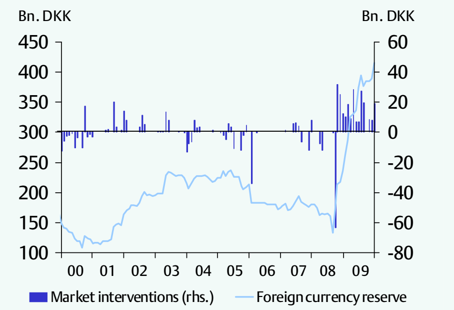
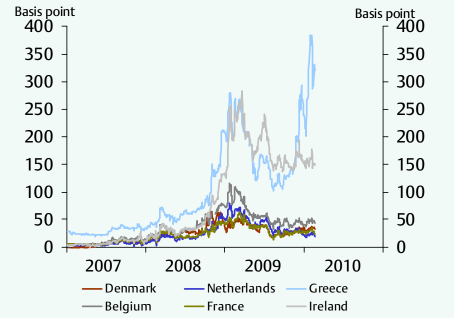


Figure 2.6d
10-year benchmark government bond spread to euro zone



Source: Danmarks Nationalbank, Reuters EcoWin and Bloomberg.

The strong reductions in the monetary policy rates have led to significant reductions in short-term interest rates, including short-term mortgage interest rates and the financial institutions' lending rates. The interest rate spread to German 10-year government bonds has increased less than in many other EU countries, which primarily can be explained by a better starting point for public finances, *cf. figure 2.6d.* Risk premiums on long mortgage bonds have also decreased since late 2008, but have not reached the same low level as before the financial turmoil started.

The spreads between secured and unsecured interest rates, which are often used as an indicator of the credit and liquidity risks of financial institutions, have also decreased to levels before the Lehman-collapse, *cf. figure 2.7a*. Moreover, expected future volatility in bonds and stocks appears to be decreasing, however, for bonds still not back to the level prevailing before the crisis escalated, *cf. figure 2.7b*. Finally, the financial institutions' substantial funding deficit (i.e., reliance on wholesale funding), which emerged before the financial turmoil, has decreased somewhat within the last year.

In addition, Danmarks Nationalbank's latest stress-tests indicate that there is currently no need for further initiatives to strengthen the capital base etc., *cf. stress-test, second half-year 2009, Danmarks Nationalbank.*

Asset prices have increased substantially since March 2009. House prices fell in all OECD countries since second half-year 2008, but have now stabilized or even increased. Many stock markets have increased by around 70 per cent since March 2009, and have regained some of the losses from 2007 to the beginning of 2009*,* cf. figure 2.7b.

Figure 2.7a
3-mm. money market interest rate spread

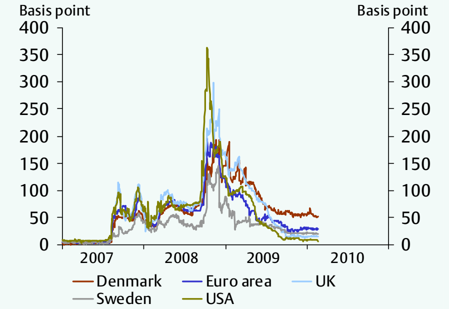
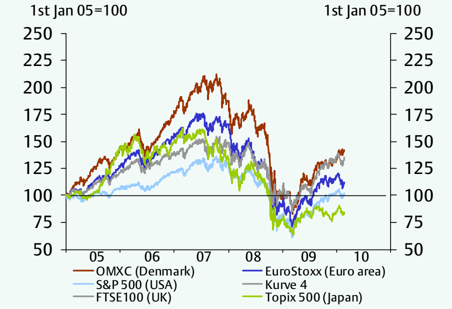


Figure 2.7b
Selected stock index, 01-01-2005=100



Note: Secure interest rates in figure 2.7a are OI-swaps and unsecure interest rates are money market interest rates (i.e. CIBOR).
Source: Reuters EcoWin.

Danmarks Nationalbank most recent lending survey indicates that the credit policy has remained largely unchanged in respect to businesses and private households throughout most of 2009. Thus, following a sharp tightening in 2008 and the beginning of 2009, credit policies have been roughly unchanged during the last three quarters. At the same time the institutions expect an unchanged credit policy in the 1st quarter 2010. The demand for financing from the business sector has declined slightly while the demand from private households generally is unchanged. In total, lending growth from mortgage- and financial institutions has slowed down considerably, which according to credit managers mainly is driven by lower demand. Overall there are no indications of a credit crunch.

Considerations regarding exit strategies related to financial initiatives

The global stance of fiscal and monetary policy is historically supportive. Interest rates are low, money markets have gained large amount of liquidity through assets purchases, different credit programmes have been established while others have been extended by the central banks, and direct types of quantitative easing have also been implemented. Moreover, many of the financial initiatives in different countries include capital injections, loan and issue guaranties, government purchases of risky assets and legislation designed to avoid selling off of assets such as stocks in for example pension funds or constrain short selling of stocks (i.e. speculation in falling stock prices).

The timing of the exit strategies is essential to ensure that the recovery of the international business cycle is not undermined and at the same time avoid unsustainable trends in financial markets and prices.

A quick and credible consolidation of the public finances will for most countries be necessary to offset an excessive increase in debt and increasing pressure on the long-term interest rates. Fiscal policy tightening will simultaneously reduce inflation expectations and create an option for a more accommodative monetary policy stance. If expectations of a more self-sustaining international upturn are not fulfilled, there is a risk of renewed turmoil in financial markets – particularly if the rise in asset prices is driven by more speculative factors. It is also uncertain how the exit strategies will affect financial markets and how the many emergency measures will affect risk taking in the financial sector.

Since the autumn of 2008, a number of different initiatives have been implemented, which in synergy with other economic policies have helped to underpin financial stability. The initiatives include:

- Liquidity support from Danmarks Nationalbank
- Government guarantee for simple creditors in banks
- Creation of Finansiel Stabilitet A/S to take care of distressed financial institutions
- Capital injections in banks and mortgage institutions
- Extended credit periods for VAT, income tax, and labour market contributions paid by firms

There are exit elements in all initiatives either in the form of sunset clauses (i.e., the initiative expire automatically at a given time) or economic incentives to exit the schemes as financial conditions normalize. A key requirement in designing exit is that the financial sector should be self-sustaining subsequently. It is furthermore an important consideration to reduce the direct exposure of public finances to financial market risks.

Liquidity support from Danmarks Nationalbank

In May 2008, Danmarks Nationalbank opened a new temporary 7-day lending facility where banks and mortgage companies can borrow against new, special bonds.

In September 2008, Danmarks Nationalbank introduced a new, temporary loan facility, which within certain limits can be 7-day loans to banks and mortgage companies on the basis of excess solvency (minus a margin of 1 per cent).

In September 2008, Danmarks Nationalbank made a temporary extension of the mortgage lending base for monetary policy loans and intraday credit with quoted senior debt issued in connection with SDOs ("junior covered bonds"), publicly traded investment fund shares and certain unlisted and unquoted shares.

In September and October 2008, Danmarks Nationalbank made swap arrangements with the Federal Reserve Bank and the ECB in order to be able to lend U.S. dollars and euro to monetary policy counterparties. The swap arrangements with the Fed expire in February 2010.

In June 2009, Danmarks Nationalbank extended the temporary collateral base with listed government guaranteed unsecured debts and listed senior unsecured debt and junior covered bonds with individual State guarantees.

In July 2009, Danmarks Nationalbank extended the temporary collateral base with unquoted government guaranteed unsecured debt and unquoted senior unsecured debt and junior covered bonds with individual State guarantee.

In January 2010, Danmarks Nationalbank decided to extend the temporary collateral base with bonds issued on the basis of individual loans with government guarantee from Financial Stability A/S (SPV-bonds). The bonds must meet certain conditions and be approved by Danmarks Nationalbank.

The temporary loan facilities cease on September 30 2010. The expansion of the collateral base with non-subordinated unsecured debt and junior covered bonds with individual is, however, December 31st 2013.

The balance sheet of Danmarks Nationalbank, as in a number of central banks, has expanded during the financial crisis, but primarily as a result of the increase in foreign reserves and – to a lesser extent – the extended swaplines with the ECB and Fed. Direct assets purchases or extended liquidity measures put forward to the market have not been used, as done by e.g. the ECB and the Fed. The measures of Danmarks Nationalbank are thus primarily related to collateral requirements and general interest rate reductions.

Bank guarantees

The bank guarantees include two schemes. One relates to the guarantees given by the Bank Package and the second relates to the transitional arrangements of the Credit Package.

Through the Bank Package, which was adopted in October 2008, the state guarantees unsecured creditors' deposits in banks in Denmark. The scheme runs until the 30th September 2010.

Through the Credit Package, which was adopted in February 2009, transitional arrangements for the guarantees in the Bank Package were established. The transitional arrangements imply that credit institutions can apply for an individual State guarantee with a maturity of up to 3 years for existing and new non-subordinated and unsecured debt and additional collateral on covered bonds (junior covered bonds). The EU Commission has tentatively approved that issuances can be made under the scheme until June 30th 2010.

Finansiel Stabilitet A/S

Finansiel Stabilitet A/S ('Financial Stability A/S') was established in October 2008 as part of the Bank Package with the aim to ensure that simple creditors of the banks and branches that participate in The Danish Contingency Association are covered when a bank becomes distressed. In addition, the aim is to ensure that unsecured creditors and depositors receive timely payment of outstanding claims. The agreement runs until the 30th September 2010.

The Bank Package implies that The Danish Contingency Association will cover losses in Finansiel Stabilitet A/S up to DKK 10 billion and pay a market based commission of DKK 7.5 billion annually for two years to Finansiel Stabilitet A/S.

After termination of the agreement the value of assets held by Finansiel Stabilitet A/S will be determined and, in consequence, any losses incurred. Losses will be divided into one part for those assets that have declined in value or are expected to do so with reasonable certainty, and another part where a provision for estimated future losses will be made.

If estimated losses, including return on invested capital in Finansiel Stabilitet A/S, exceed the initial loss coverage from The Danish Contingency Association, The Danish Contingency Association through an increased guarantee commission must cover losses of up to an additional DKK 10 billion. The total contribution from The Danish Contingency Association by way of guarantee commission and loss coverage may thus amount up to DKK 35 billion over two years.

The latest financial statement from Finansiel Stabilitet A/S from 3rd quarter 2009 showed an outflow of DKK 5.7 billion on the loss coverage and a loss from Roskilde Bank at DKK 4.1 billion. If the aggregate losses from the Bank Package do not exceed the bail of DKK 10 billion the entire guarantee provision of DKK 15 billion accrue to the state. The CIL-account and the public balance may in such case be expected to improve in 2010, equivalent to profits per September 30th 2010 minus the expected loss from Roskilde Bank. The EMU debt position will improve corresponding to the balance-improvement. Such a surplus has not been assumed in the Convergence Program.

The continued winding up of activities of Finansiel Stabilitet A/S is expected to be conducted over several years, with particular regard to minimize the economic loss and, more generally, the impact on the economy. Those assets that are likely to be disposed of over a longer time span include corporate exposures, e.g. in the property market.

It would be desirable that after the October 1st 2010 continued instruments remain available to support a controlled liquidation of failed banks when buyers are absent in the market and hence private sector solutions not viable.

Capital injections

By the Credit Package, adopted in February 2009, the state was given access to recapitalize banks and mortgage institutions for up to approx. DKK 100 billion. Capital injections could be made until the end of 2009. Approx. DKK 46 billion has been injected.

The capital injections take the form of hybrid core capital. Hybrid core capital is subordinated loans that may be included in institutions' core capital.

The state hybrid core capital is characterized by being perpetual (requirement to be included in the institutions' core capital), but with built-in incentives for repayment. There are embedded incentives in the form of, among other things, step-up clauses on the redemption price in the fifth year and further in the sixth year. In the agreement for some institutions the possibility of conversion of parts of the hybrid core capital to equity capital is included.

It is likely that at least some banks will seek to repay the state capital before the fifth year. Subsequently, the state will determine when the remaining assets can be sold. Through the agreements the state has a right to sell the securities individually or in aggregated, structured sales.

Extension of credit periods

During the first six months of 2009 credit periods for paying VAT, income tax and labour market contributions by firms were extended twice. In March the credit periods were extended 30 days for a period of six months resulting in postponement of payments of a total DKK 65 billion. A gradual termination of the extended credit period was decided on in May.

As part of the 2010 Budget credit extension for income tax and labour market contributions was expanded throughout 2010, such that companies receive around 12 days longer on these payments. However, the extension of credit for VAT payments ended in 2009.

The arrangement is comparable to an interest free overdraft facility. Thus, firms are offered a longer interest free credit period for payments of income tax etc. that they collect on behalf of the government. The corresponding loss of interest for the government is estimated at DKK 1½ billion in 2009 and DKK ½ billion in 2010.

Due to improved conditions on financial markets and the stimulus measures already taken by the Danish government the credit period has been extended for income tax payments only. Thereby, the scheme benefits essentially all firms with employment including those relying heavily on exports, which would not have been the case with an extension of the VAT credit period.

3. Short-term outlook and prospects towards 2015

3.1 International economy and financial variables[1]

The strong decline in global production since the summer of 2008, mainly caused by the international financial crisis, has been contained and there is now moderate progress in large parts of the world. GDP has increased in the second half of 2009 in both the USA, the euro area and in several of the Nordic countries. At the same time, growth is again high in Asia not least in China. The financial markets are functioning more normally, and the decline in house prices in all OECD countries in autumn 2008 have either moderated substantially or been succeeded by increases. Industrial production is stabilizing or increasing in most places, and world trade has risen by more than 10 per cent since May, when it reached a bottom.

Across most of the world the sharp decline in output and demand was countered by significant easing of monetary and fiscal policy. Meanwhile, the many interventions in the financial sector have stabilized financial markets. The counterpart to the easing of fiscal policy and the impact of automatic stabilizers is a marked deterioration of public finances. OECD expects in their latest forecast that the average public deficit in the OECD area will increase from 3½ per cent of GDP in 2008 to 8¼ per cent of GDP in 2009-2010 and 7¾ per cent of GDP in 2011. Virtually all countries in the EU will be required to consolidate substantially the coming years, and a number of countries must initiate the process in a situation where there is still no certainty of a self-sustained and robust recovery. However, consolidation is necessary to ensure against high interest rates and a downward spiral of high deficits, rising debt and increasing interest expenditures.

The outlook is for a moderate international recovery after the sharp decline following the escalation of the financial crisis. This reflects a need to restore balances in households and businesses, idle capacity, which reduces investment needs, and tighter credit access. The need for savings should be viewed in light of a period of high indebtedness and declining wealth due to decreases in housing equity and stock markets. Savings ratios have risen during the financial crisis, and are not expected to fall back to the low levels in the years immediately before the crisis. High and rising unemployment is also expected to contribute to households holding back spending.

There is considerable uncertainty about growth prospects the next few years, although risks are relatively well balanced. The very expansionary policy does not have full effect before 2010 and may have greater impact than expected, and Asia appears

[1] The projection underlying the Convergence Programme 2009 is based on the *Economic Survey, December 2009*. Assumptions about the developments in the international economy is mainly based on the OECD forecast in *Economic Outlook 86, Preliminary Edition, November 2009*. In accordance with the Code of Conduct for the preparation of stability and convergence programmes the programme must be based on the Commission's autumn forecast 2009. Annex 2 provides a sensitivity analysis showing the effects of basing the assumptions of foreign development on the Commission's autumn forecast.

to some extent as a driver of growth. The global imbalances, including the US deficit and China's surplus on the trade balance, have been somewhat reduced. However, imbalances are still substantial and there is continued risk of an abrupt rebalancing with rising interest rates in the US and exchange rate adjustments. If cyclical conditions become weaker, there is also a risk of renewed problems in the financial sector in a situation where many countries are facing the need to dismantle the massive intervention in the sector that has been implemented during the past year.

Growth in Denmark's export markets fell sharply in 2009, but is assumed to increase to just over 3½ per cent in 2010 and just over 6 per cent in 2011. From 2011-2015 a gradual normalization of the cycle is assumed such that foreign GDP growth is higher than the estimated trend growth in production potential.[2] The export market weighted GDP growth of Denmark's trading partners is assumed to constitute nearly 2½ per cent annually. Average export market growth is expected to be just over 6½ per cent annually over the same period, *cf. table 3.1*.

The somewhat higher export market growth than GDP growth reflects that world trade as in recent decades is still expected to grow more than the countries' output, which partially reflects the effects of increasing international division of labour. Similarly, greater international division of labour is assumed to lead to a continued increase in Danish import shares, since import growth is expected to exceed demand growth.

Table 3.1
Assumptions about the international economy

	2008	2009	2010	2011	2012-2015
Annual growth, per cent					
Real GDP, trading partners [1)]	1.3	-4.2	1.3	2.2	2.4
Export market growth, manufactures [1)]	2.0	-10.9	3.6	6.1	6.6

1) Trade weighted. Average real GDP growth in 2011-2017 corresponds to *Economic Outlook 86, Preliminary Edition*, November 2009.
Source: OECD and own calculations.

Crude oil prices have as most other commodities been increasing through 2009, which among other things should be seen in the light of the incipient recovery of global activity. Going forward, a further modest oil price increase is expected. Based on the International Energy Agency (IEA)[3] 2009 forecast real oil price is assumed to increase from 79 USD in 2010 to 91 USD per barrel in 2015 (denoted in 2009-level), *cf. table 3.2*. In the medium term the expected shortage of oil resources and growing

[2] The medium term outlook for the international economy is based on the OECD's medium term projection, which is based on the short term country forecasts and a closure of the countries' output gap in 2017. See also the remarks to table 3.1.
[3] Nominal prices of IEA, adjusted for the price differential between the aggregated oil prices of IEA and the price of the oil type Brent.

demand is expected to lead to further increases in oil prices. Based on the IEA's projection the real oil price consequently is assumed to be around 98 USD per barrel in 2030.

Table 3.2
Interest rate and oil price assumptions

	2008	2009	2010	2011	2013	2015
Crude oil price, Brent ($ per barrel, 2009 prices)	99	62	79	82	86	91
Denmark,10-year government bond yield	4.3	3.6	3.9	4.0	4.5	5.1

Source: IEA forecast 2009 and own calculations.

The key interest rate spread has been gradually brought down to a very low level since last autumn, when the financial crisis generated pressures on the Danish currency. Latest (and since the December projection) the Danish lending rate has been lowered three times in December and January by a total of 0.20 percentage points to 1.05 per cent without similar interest rate reductions of the ECB. Consequently, the spread between Danmarks Nationalbank's lending rate and ECB's minimum bid rate is narrowed to 5 basis points in January. The narrowing of the interest rate spread reflects that there is confidence in the fixed exchange rate policy and foreign reserves have increased sharply to around 415 billion DKK in the most recent statement from January as a defence against renewed pressure on the Danish currency. The decrease in monetary policy interest rates – along with the massive intervention in the financial sector – has created the basis for the large drop in particular short term interest rates since last autumn, which seems to have stabilized the Danish housing market.

The monetary policy being conducted by central banks around the world is historically expansionary. Interest rates are extremely low, and large amounts of liquidity have been supplied to the market through continued acquisitions of assets, expanded access to various credit programmes from central banks and direct quantitative easing. In USA, the key rate has been at 0.25 per cent since late 2008, while the ECB's minimum bid rate has been at 1 per cent since May last year. It is technically assumed that the ECB first will withdraw its cash-generating initiatives before raising the interest rates gradually from mid 2010 and onwards. It involves a relatively expansionary monetary policy in the projection throughout 2015. A parallel development has been assumed in Denmark.

The long term interest rates are expected to increase, which in addition to the increase in short term rates, partly reflects the increased issuance of government bonds, and greater uncertainty about public finances. In CP09 the 10-year government bond yield is assumed to increase from 3.6 per cent in 2009 to 5.1 per cent in 2015. [4]

3.2 Short term outlook for the Danish economy

Activity in the Danish economy has fallen well below its potential level in connection with the international economic crisis. GDP and gross value added fell by 4-5 per cent in 2009 as a result of the sharp decline in both domestic and foreign demand, and the output gap is estimated at -3 per cent of gross value added at the end of the year. The change in capacity utilization is very significant – in 2007 there was a positive output gap of 3¼ per cent of gross value added. Due to the capacity constraints and falling asset prises among other things, growth has been weak since spring 2007.

The Danish economy is closely linked to the EU and the rest of the world through trade, FDI and financial markets. About 90 per cent of movements in economic growth in the EU15 can also be found in the Danish GDP growth, *cf. figure 3.1a*. This pattern does not appear to have changed during the financial crisis. The turn has come a little later in Denmark than in several other countries, as production continued to decline relatively much in Denmark in the second quarter of 2009, while in other countries the decline of GDP ended – and in particular Germany and Sweden, GDP rose in the second quarter, *cf. figure 3.1b*.

The decline in GDP since the first quarter of 2008 has been greater than in the EU15. This partly reflects a large decline in private consumption, which decreased by 6½ percent in the same period. It is almost 3 times the decline in the EU15. The relatively large reduction of private consumption – combined with a high level of consumption taxation – results in a substantial drop in VAT and duties, which contributes to the decline in GDP of 5.5 per cent in the first three quarters of 2009 compared to same period the year before. By comparison, gross value added – which does not contain indirect taxes and is more closely linked to changes in employment – declined by 4.6 per cent in the same period. That is slightly less than in the EU15. Additionally, the large drop in VAT and duties has contributed to the weakening of public finances in Denmark.

In the third quarter the cycle also turned in Denmark, as GDP grew by 0.6 per cent relative to the second quarter. The improvement was mainly driven by increased private consumption, exports and public demand. At the same time a number of the available indicators pointed towards continued growth in the fourth quarter. For 2009 as a whole GDP is estimated to have declined by 4.3 per cent.

[4] In the longer term (after 2020) the effective bond yield – the interest rate used in the calculation of sustainability to discount future revenue and expenditures after 2020 – is assumed to be at 5¾ per cent. It is unchanged from CP08.

Figure 3.1a
GDP growth in the US and the EU15, annual averages

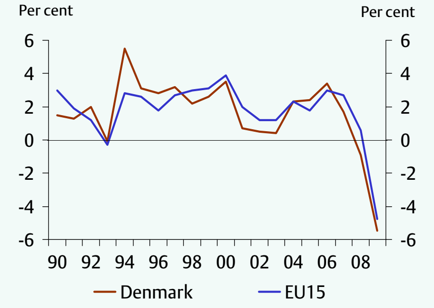
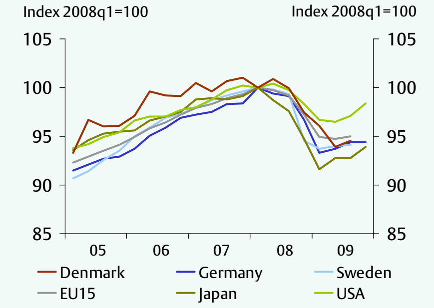


Figure 3.1b
Quarterly GDP in Denmark and other countries, indexed



Note: Figure 3.1a shows GDP growth in first to third quarter 2009 relative to the same period in 2008.
Source: Eurostat and Reuters EcoWin.

The effect on the Danish economy of the emerging international progress is impeded by the weak wage competitiveness built up over the past years through high wage increases, in interactions with a stronger Danish currency and weak productivity growth. The crisis may have led to greater focus on price competitiveness, and the relatively high labour costs may therefore make the Danish economy more vulnerable in the coming years as Danish companies have difficulties to gain from the progress that appears to be going on in other countries. The weakening of the wage competitiveness therefore has the potential to prolong the recession.

On the other hand, Denmark has had more room for discretionary easing and for letting the large automatic stabilizers have effect. With the 2010 Budget a very expansionary economic policy is planned also this year. In total, fiscal policy and other initiatives in 2009 and 2010 are estimated ceteris paribus to lift the level of activity by 2¾ per cent in 2010, and the effects are expected to occur with increasing strength through the year.

An increase in public investment of nearly 13 per cent in 2009 and approximately 18 per cent this year is planned. The increase in investments in these years constitutes about 0.6 per cent of GDP.[5]

At the same time household disposable income is estimated to increase by 5¼ per cent this year following an increase of 2¼ per cent in 2009, even though the decline in the labour force and employment dampens the income increase. The strong income increase is mainly due to the significant tax cuts from the turn of the year, reduced household interest payments as a result of the decrease in particularly short term interest rates and that the regulation of transfers is historically large. Growth rates in both years do not include the one-off increase of household incomes and cash flow last year due to the release of Special Pension savings. Including Special

[5] Measured as the change from 2008 until 2010 in the ratio of real public investments to real GDP in 2008.

Pension payments of just below 28 billion DKK after tax, income growth is estimated at 6 per cent in 2009. The strong income growth will strengthen private consumption, which as mentioned has declined markedly in Denmark.

Overall, it is estimated that fiscal policy in 2009 and 2010 and the reduced interest rates since 2008 under normal conditions can increase GDP by 4-5 per cent this year and dampen the decline in employment by about 80,000 persons. Economic policy thus provides a significant contribution to stabilizing the economy and is – together with the expansionary monetary and fiscal policy in the rest of the world – the main driving force behind the moderate economic progress, which is expected in the next few years.

In the forecast from December that underlies this convergence programme, GDP growth is estimated to 1.3 per cent in 2010 and 1.6 per cent in 2011. Unemployment is expected to increase to about 160,000 persons by the end of 2010 (national definition), before declining by approximately 10,000 persons through 2011. Annually, unemployment is expected at 155,000 persons in both years, equivalent to 5.3 per cent of the workforce. The output gap is estimated at almost -3 per cent of gross value added in 2011, while unemployment is 1.7 percentage points above the structural level.

Up to 2015 a gradual normalization of cycle is assumed, implying a closure of the output gap where output corresponds to the estimated potential gross value added, *cf. figure 3.2a*. The cyclical setback is thus assumed to be relatively protracted with capacity utilization below the normal level for 6 years. The growth in activity leads to a gradual reduction of unemployment which in 2015 is assumed to constitute 3.6 per cent of the labour force, equivalent to the estimated structural level, *cf. figure 3.2b*.

Figure 3.2a
Output gap, 1980-2015

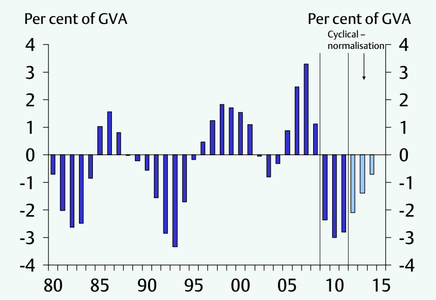
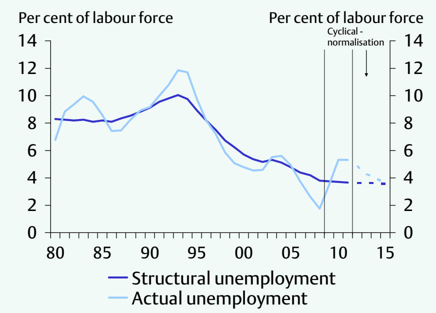


Figure 3.2b
Actual and structural unemployment, 1980-2015



Source: Statistics Denmark and own calculations.

In the projection the recovery is assumed to be gradually more self-sustaining as the consolidation of public finances takes effect and the highly expansionary fiscal policy in 2009 and 2010 is simultaneously withdrawn. It implies that the households' savings rate gradually declines from the current relatively high level and that growth in private investment increases somewhat. The gradually increasing capacity utilization is therefore based on strong growth in private consumption, investment and exports, *cf. table 3.3*.

Table 3.3

Key figures for Denmark, 2008-2015

	Short term outlook				Assumed normalization of the business cycle		
	2008	2009	2010	2011	2012	2013	2014-15
Outputgap and real growth rates							
Output gap (per cent of GDP)	1.1	-2.4	-3.0	-2.8	-2.1	-1.4	0.0[3)]
Gross value added	-0.5	-3.8	1.4	1.4	1.8	2.2	2.3
Real GDP	-0.9	-4.3	1.3	1.6	2.0	2.3	2.6
Demand components, real growth in per cent							
Private consumption	-0.2	-4.7	2.4	2.4	2.7	2.7	2.9
Public consumption[1)]	1.6	1.6	1.0	0.0	0.0	0.0	0.7
Fixed gross investment	-4.7	-10.9	-2.4	0.7	4.5	5.1	5.5
Change in inventories[2)]	0.3	-1.4	0.6	0.3	0.2	0.2	0.1
Exports	2.4	-8.8	2.8	3.7	4.7	4.6	5.0
Imports	3.3	-11.5	3.7	4.1	5.8	5.3	5.7
Contribution to GDP growth, percentage points							
Final domestic demand	-0.5	-5.5	1.6	1.7	2.4	2.5	2.8
Changes in inventories	0.3	-1.4	0.6	0.3	0.2	0.2	0.1
Net exports	-0.4	1.2	-0.3	-0.1	-0.3	-0.2	-0.2
Labour market indicators, per cent							
Employment growth	1.2	-2.5	-2.5	-0.1	0.3	0.4	0.4
Structural unemployment rate	3.8	3.7	3.7	3.7	3.6	3.6	3.6
Unemployment rate (per cent of workforce)	1.8	3.4	5.3	5.3	4.9	4.3	3.6
Hourly productivity, whole economy	-1.6	-0.3	3.9	1.3	1.6	1.7	1.6
Productivity (gross value added per employee)	-1.8	-1.3	4.0	1.6	1.4	1.8	1.9

Note: 2009, 2010 and 2011 are based on the latest short term forecast in *Economic Survey*, December 2009, while a gradual normalization of the cycle to 2015 is assumed, implying that the output gap closes in 2015. In 2011 the projection differs from *Economic Survey*, December 09 by assuming zero real growth in government consumption.

1) Real growth in public consumption in national accounts reflects growth in the consumption of resources – not improvements in services offered – mainly because productivity growth in the public sector is not measured.

2) Contributing to GDP growth.

3) Output gap in 2015.

Source: Statistics Denmark and own calculations.

Growth in demand is supported by the relatively low but gradually rising interest rates, improved credit conditions, and the foreign cyclical normalization. The projection thus assumes a successful exit from the interventions in the financial sector and subdued wage increases relative to productivity growth, which contributes to some recovery of wage competitiveness and corporate profitability.

In CP08 a subdued GDP growth of -¼ per cent in 2009 and ¾ per cent 2010 was assumed. Technically, it was based on a normalization of the cycle during 2009-2011 and that the levels of employment, unemployment and labour force thereby would return to their estimated structural levels in 2011. A turn in the labour market with an increase in unemployment of 56,000 people from 2008 to 2011 was assumed. In comparison, unemployment is increasing with 103,000 in CP09 to a level above the structural level, before slowly falling to the structural level of approximately 105,000 persons in 2015. The level of real GDP in 2015 is adjusted downward by 2 per cent compared to CP08, due to a reduction of the estimate for potential GDP.

3.3 Employment and productivity assumptions through 2015

The short term outlook for 2009-2011 and the assumptions thereafter imply annual average GDP growth of around 1 per cent during 2009-2015, *cf. table 3.4 (last row)*. To a large extent, the subdued growth rate reflects the steep fall in GDP in 2009 and moderate growth in 2010 and 2011. Towards 2015 GDP growth is expected to increase gradually to around 2½ per cent by the end of the period.

Table 3.4

Contribution to potential production and real GDP and gross value added

	1991-06	2009-11	2012-15	2009-15	2016-20	2021-50
Avg. annual growth, per cent						
Growth in production potential (GVA)	2.0	1.0	1.4	1.2	1.4	1.7
Of which:						
- Hourly productivity (structural)	1.5	1.2	1.5	1.4	1.4	1.5
- Structural unemployment	0.3	0.1	0.0	0.0	0.0	0.0
- Structural labour force	0.0	-0.2	-0.2	-0.2	0.0	0.2
- Working hours (structural)	0.2	-0.1	0.1	0.0	0.0	0.0
- Cyclical contribution	0.1	-1.3	0.7	-0.2	0.0	0.0
Growth in GVA	2.1	-0.3	2.1	1.1	1.4	1.7
Contribution from indirect taxes	0.1	-0.2	0.2	0.0	0.0	0.0
Growth in GDP	2.2	-0.5	2.4	1.1	1.4	1.8

Note: Working hours and the work force has been calculated including the reform requirements. Due to rounding the columns do not necessarily add up to the total.
Source: ADAM and own calculations.

The projection from 2009 to 2015 (including the sharp drop in activity in 2009) implies an average real growth in gross value added of just over 1 per cent a year, which is slightly lower than the growth potential. Growth in *potential production*[6] in the Danish economy is estimated to an annual average of 1.2 per cent in the years 2009-2015, 0.7 percentage points lower than in the period 1991-2006. This mainly reflects that the fall in the structural unemployment of more than 5 percentage points from the early 1990s cannot be replicated. The structural unemployment is at a historical low level and is estimated at 3.7 per cent of the labour force in 2009.

The decrease in structural unemployment partly reflects that a number of reforms have been implemented in the labour market over the last decade, cf. annex 4. With some uncertainty, the decrease in structural unemployment since 2000 is estimated to 50,000 persons (around 2 per cent of the labour force), while the structural labour force has increased by around 100,000 persons (3½ per cent), including an increased contribution from foreign workers. This partly reflects that many persons with a limited connection to the labour market have entered during the upswing. The counterpart is a significant increase in the structural employment to the highest level ever in 2008, *cf. figure 3.3a*.

In the projection, structural unemployment is expected to decrease slightly to 3.6 per cent, *cf. box 3.1*. Maintaining an unemployment level of 3½-3¾ per cent of the labour force across business cycles requires a very well-functioning labour market.

Besides the decrease in the structural unemployment, growth since 1990 has been supported by an increase in average *working hours* related to e.g. fewer part-timers and more people having two jobs. The increasing average working hours should be seen in light of high capacity utilisation, and tax reforms have also increased incentives for higher average working hours. Going forward, the latest collective agreements and changes in the age composition of the labour force etc. imply an underlying decline in working hours. The decline is partly offset by a number of reforms, including the Job Plan, the initiative to reduce sickness absenteeism and the tax reform from *Spring Package 2.0*. A required increase in the average working hours in 2014 and 2015 has been included in the projection. That is likely to require additional reforms. The assumption regarding the rise in working hours increases potential production by 0.1 per cent per year in 2012-2015.

[6] The potential growth in gross value added (GVA).

Box 3.1

Structural unemployment and wage growth rate

In light of the actual and estimated development in e.g. unemployment, wages and prices, the structural unemployment is estimated at 3¾ per cent of the labour force in 2009, which is ¼ percentage point higher than the annual average at actual unemployment, *cf. figure a*. The effect on the structural unemployment of initiatives in the Welfare Agreement and the Job Plan etc. is expected to have had nearly full effect in the course of 2009 and the structural unemployment is thus expected to be broadly unchanged in 2010 and 2011 at close to 3¾ per cent of the labour force. The increase in actual unemployment means that the unemployment gap (the difference between the actual unemployment and the estimated structural unemployment) is estimated to increase from zero around the third quarter of 2009 to 1½-1¾ per cent in 2010 and 2011, *cf. figure b*.

The structural unemployment is an estimate for the NAIRU (Non-Accelerating Inflation Rate of Unemployment), i.e. the level of unemployment that in the medium term is consistent with stable wage- and price developments.

The structural unemployment is estimated in a real wage Phillips curve that expresses that an unemployment level above (below) the structural level has a dampening (increasing) effect on wages, *cf. Economic Survey*, August 2009. The model incorporates that wage pressures in the short term also depends on the change in unemployment. This implies that the expected decrease in unemployment from 2011 will increase the wage pressure, while the positive unemployment gap will dampen the wage pressure. The effect on wages from the decrease in unemployment implies that a "short term NAIRU" can be defined, which – at this juncture – is higher than the medium term structural unemployment.

In the period 2012-2015 the structural unemployment ("the long-term NAIRU") is expected to be unchanged – meaning that the downturn will not have a long term impact on unemployment. This reflects that powerful setbacks can increase the structural unemployment for some years, especially the short term NAIRU, but this effect is not considered to be permanent. In Denmark the structural unemployment rate has been reduced further following the latest two downturns, and actual unemployment has fallen to new historical low levels. The increase in unemployment until 2011 is therefore assumed to increase only the short term NAIRU, which will be higher than the structural unemployment level when unemployment peaks in 2011. The implication is that it may take longer time to bring down unemployment than if the short term NAIRU did not increase. Towards 2015, unemployment is expected to gradually move towards the estimated structural unemployment level, so that the unemployment gap in 2015 is zero. The estimate for the structural unemployment is, however, adjusted upwards by just over 0.1 percentage point of the labour force compared to CP08.

Figure a

Structural and actual unemployment, 1980-2015

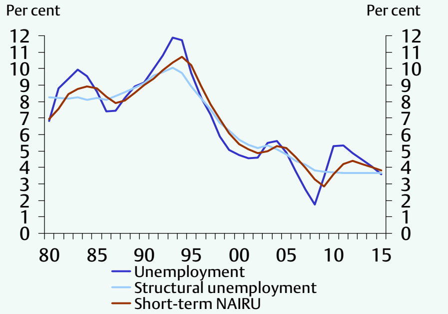
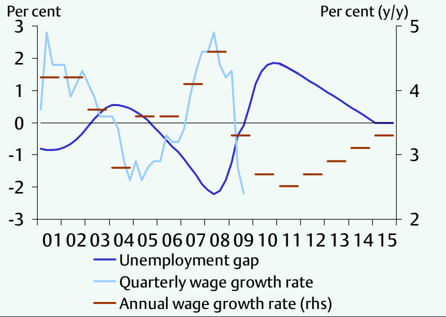


Figure b

Unemployment gap and wage growth rate, 2001-2015



Note: The annual wage growth is from The Confederation of Danish Employers' (DA) Strukturstatistik for 2001-2008, *Economic Survey*, December 2009 for 2009-2011 and the Phillips curve's projection for 2012-2015. The quarterly wage growth is DA's KonjunkturStatistik for the period 2001q1-2009q3.

Figure 3.3a
Actual and structural employment

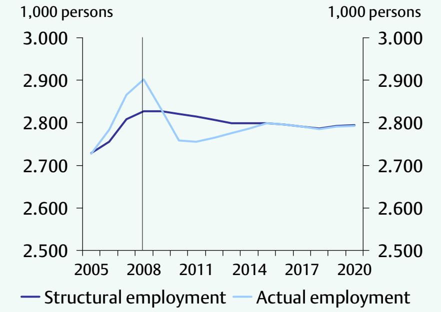
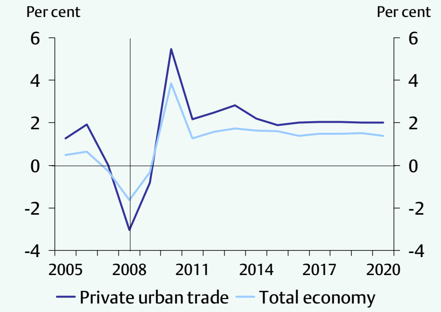


Figure 3.3b
Growth in hourly productivity



Source: Statistics Denmark and own calculations.

In the absence of significant contributions from lower unemployment as well as higher work force and working hours, the increase in potential output towards 2015 is exclusively driven by productivity growth. Average annual growth in *hourly productivity* is assumed to be 1½ per cent, *cf. figure 3.3b*.[7] This is in line with the historical development from 1991-2006, *cf. table 3.4*, but somewhat higher than in the last decade. Initiatives in the globalisation strategy and the tax reform in *Spring Package 2.0* support higher productivity going forward.

In the longer term, growth in potential production is predominantly driven by the assumed growth in productivity. However, it is also assumed that the age threshold for early retirement (VERP) is increased annually by ½ year from 2019-2022 and will later increase with increased longevity, as decided in the Welfare Agreement. This implies an increase in the labour force and therefore higher growth in potential output in the period 2021-2050, when the labour force otherwise is set to decrease, cf. table 3.4.

The prospect of a future pressure on the growth potential underlines the importance of securing good growth conditions also after the crisis. A number of initiatives have been implemented, aiming to strengthen the basis for growth, including the tax reforms, the reforms in the labour market and in the public sector and a strengthened effort in education and research as well as innovation and entrepreneurship, especially within the framework of the Globalisation Strategy. A Growth Forum has recently been launched and will give advice on how the Danish economy can be prepared to renewed growth.

[7] The national accounts do not include productivity growth in the public sector, which counts for about 30 per cent of total employment. Under the technical assumptions, no productivity growth is included for the public sector. Productivity in private urban trade sector is assumed to grow by 2 per cent per year, whereas it has been growing by just under 1½ per cent in the period 1991-2006 and by ¾ per cent in the period 1998-2008.

The projection of the labour force and employment towards 2015 is based on the population projections from DREAM 2009 and assumes among other things the following:

- *Reforms are implemented to increase labour supply by 20,000 persons and counter the underlying reduction in average working hours.* Relative to a baseline without new initiatives, the presumed reforms augment total labour supply by some 1 per cent by 2015.

- *Structural unemployment amounts to 3.6 per cent of the labour force corresponding to about 105,000 persons from 2015 and ahead.* This means that the decrease in structural unemployment over the last 15 years can be upheld over the projection, so that unemployment is 3.6 per cent on average over the cycles during the next decades, which is a historically low level.

- *The structural labour force declines from about 2.93 million in 2007 to about 2.9 million in 2015, i.e. by about 30,000 persons.* The starting point for the projection is a demographic scenario in which participation rates conditional on age, gender and country of origin are constant at their 2007 levels (adjusted for assumed cyclical effects). Further included is a likely reduction in the number of border workers related mainly to reduced activity in construction, whereas the very high (job-oriented) net immigration in 2007, 2008 and to some degree 2009 is expected to normalize. In addition, the projections include estimated effects of implemented reforms etc. and for larger benefit schemes also information on changing inflow patterns etc., *cf. box 3.2*. The projected structural labour force includes a contribution to employment of 20,000 persons by 2015 from assumed reforms.

- *Already implemented reforms and the required employment impact of new reforms counteract the demographic dampening of labour supply.* Structural employment decreases by around 10,000 persons in the projection from 2007 towards 2015. This reflects that the decline in structural unemployment from 2007 to 2009 and the weak decline up to 2015 partly off-sets the incorporated reduction in the structural labour force of about 30,000 persons during the same period. The decrease in the structural labour force reflects that already implemented reforms partly counteract a large fall in the labour force caused by demographic changes.

Box 3.2

Key assumptions about labour supply and benefit recipients etc.

The projection of the number of active labour market participants and recipients of benefits is based on a demographic scenario in which participation rates etc. by age, gender and country of origin are held constant at their 2007 level (excluding cyclical effects). The projected number of recipients of early retirement and disability pension incorporates information about recent inflows by age, gender and origin. Effects are also included from the education targets in the Welfare Agreement and the Globalisation Strategy, which raise the number of students and hence reduce the labour force up to 2015.[1] Further included are the forecasts for 2009-2011 of the number of recipients of various benefits etc. that are entailed in *Economic Survey*, December2009.

Voluntary Early Retirement Pension. With VERP participation rates by age, gender and origin held at their 2007 levels, the number of early retirement recipients (aged 60-64 years) would have increased by about 6,000 by 2009, but in fact the number is estimated to have decreased by about 7,000 persons, *cf. figure a*. The inflow of new VERP recipients for 60 year olds and 61 year olds has decreased as a result of the VERP reform from 1998, and in particular for 60 year olds there are indications that the extraordinarily good job opportunities until 2009 have deferred retirement from the labour market, *cf. figure b*. In light of the expected cyclical developments over the next years the number of VERP recipients is expected to rise slightly towards 2015, where the number of beneficiaries is expected to be normalised, so that the number of VERP recipients in 2015 is in line with the expectations in CP08. From 2008 to 2015 the calculations include e.g. initiatives in the Welfare Agreement and the Job Plan initiative to grant a tax allowance for 64 year olds who still work full-time, which are estimated to reduce the number of VERP recipients by up to 4,000 by 2015. In sum, the projection implies a reduction in the number of VERP recipients by about 15,000 from 2007 to 2015.

Disability pension. The number of disability pensioners is projected to decline marginally from 2007 to 2015 in the absence of new reforms. The projection is based on recent patterns for in- and outflows as well as estimates in *Economic Survey* etc. and should be viewed in light of the demographic scenario, which also indicates a small decrease in the number of disability pensioners.

Study grants. The number of students receiving study grants, and who do not work alongside their studies and consequently are not counted in the labour force, increases by about 25,000 up to 2015. Of these, an increase of about 8,000 is a result of demographic developments while the remaining reflects the targets that at least 95 per cent of a youth cohort should complete secondary education and at least 50 per cent of a youth cohort should complete a tertiary education by 2015. The number of recipients of study grants who also has a job grows proportionately.

Sickness benefits. The number of recipients of sickness benefits is unaltered from 2007 to 2009. Based on demographics as well as a contribution from the initiatives to reduce sickness absence, the number of sickness benefit recipients counted as employed is relatively unaltered from 2009 to 2015.

Box 3.2 (continued)

Key assumptions about labour supply and benefit recipients etc.

Figure a

Early retirement recipients, 60-64 year olds

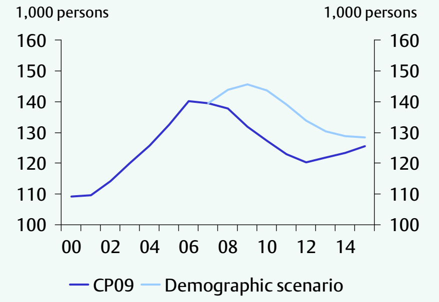
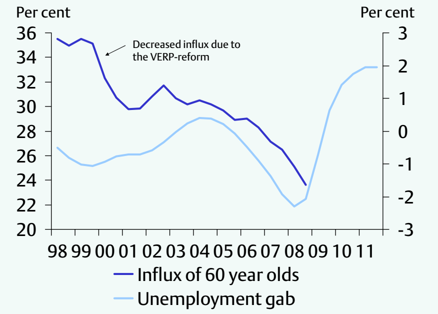


Figure b

Inflow of VERP recipients for 60 year olds and unemployment gab



1) Meanwhile, the increased enrolment in education increases employment in the longer-run as a higher level of educational attainment is typically associated with a higher employment rate, cf. CP06.

Source: Statistics Denmark, National Directorate of Labour and own calculations.

Overall, the medium term projection reflects that actual employment may decline by about 70,000 persons (just under 2½ per cent) from its high level in 2007, where capacity constraints peaked and towards 2015 (where cyclical conditions are assumed normalised), *cf. table 3.5 (row 6)*. This reflects a relatively large decrease from 2007 to 2010 in connection to the crisis and an increase in the years following.

Demographic trends – including fewer in cohorts with the highest participation rates, more old citizens and a growing share of immigrants and descendants, as well as a decrease in the number of border workers – imply a decrease in employment by 48,000 persons from 2007 towards 2015, which in particular reflects a large decrease from 2010-2015, (row 1).

The adverse drag from demographic factors is partly offset by structural improvements in the labour market, which mainly stem from implemented reforms as well as rising educational attainment and increased average residence periods for immigrants as well as other contributions that – taken together – is estimated to raise employment by around 18,000 persons from 2007 to 2015, (row 2). In the period 2010-2015 the fulfilment of the educational targets is assumed to increase the number of students and thereby reduce the labour force such that the included reforms are contributing slightly negatively to structural employment in these years.

In addition, the required labour market initiatives are assumed to raise employment by 20,000 persons up to 2015 (row 3). This requirement should be viewed in light of the already significant contributions from earlier labour market reforms etc. In total, structural employment is projected to fall by around 11,000 persons from 2007 to 2015 (row 4).

Table 3.5
Contributions to the increase in employment

	2007-15	2007-10	2010-15
1,000 persons			
1. Demographic factors etc.[1]	-48	-8	-41
2. Assumed contribution from already implemented reforms, including effects of the Welfare Agreement etc.[2]	18	22	-4
3. Structural reform requirements for increased employment etc.	20	0	20
4. Structural employment (1+2+3)	-11	14	-25
5. Cyclical contribution[2]	-56	-121	64
6. Change in actual employment (4+5)	-67	-107	39
- of which related to change in unemployment	-26	-76	50
- of which change in labour force	-41	-31	-11

Note: Due to rounding the columns do not necessarily add up to the total.
1) Assumes an unchanged aggregate unemployment rate and unchanged participation rates broken down by gender, age and origin from 2006 to 2015. A net reduction of the contribution from foreign labour relative to the high level in 2007 is also included.
2) The calculation incorporates higher participation rates for higher educated groups and changes to the average residence period for immigrants.
Source: Own calculations.

Working hours

Average annual working hours have, as mentioned, increased since the mid-1990s after a considerable decline in previous decades.

Looking forward, the growing share of young and elderly workers in the labour force may reduce the average number of working hours, as these groups on average work fewer hours than middle-aged. At unchanged hours in each age group (etc.), the changing age composition may reduce average hours worked by 1.1 per cent from 2009 to 2015.

Moreover, an increase in education enrolment (with some students working part-time and thus counting in the labour force) as well as an adverse change in the number of ordinary jobs relative to subsidized employment may also reduce average working hours. Persons in subsidized employment generally work fewer hours than persons in ordinary employment. The increase in subsidized employment relative to the number of ordinary jobs in the projection reflects partly a presumed decrease in ordinary employment and initiatives in the Welfare Agreement intensifying on-the-job training for the unemployed.

In the original 2015 Plan it was a requirement that average working hours should not decline from 2009 to 2015, and this corresponded to an increase in average working hours of 1.8 per cent relative to the baseline traced out by changes in the age composition, ordinary employment, subsidized employment and estimated effects of the tax agreement etc.

The tax reform in the *Spring Package 2.0* lowers taxes on earned income. The tax reform is assumed to increase average working hours in 2015 by 0.7 per cent due to behavioural effects in the period from 2009 to 2015, *cf. table 3.6*.

Moreover, the Job Plan and initiatives to reduce sickness absence have been implemented. These initiatives primarily increase labour supply through higher average working hours corresponding to about ¼ percent. The shift in taxes from the agreement "Lower tax on labour" from 2007 does also contribute to an increase in working hours by around 0.3 per cent.

As a result of the reforms the requirements for working hours have been reduced in CP09, so that average hours worked must be increased by 0.4 per cent in 2015, *cf. figure 3.4 and table 3.6*. The requirement is calculated as compared to a baseline that includes the effects of changes in the age composition of the workforce etc., and ensures that the required labour market reforms in total contributes to an improvement of the sustainability indicator by 0.4 per cent of GDP, cf. section 2.6.

Figure 3.4
Working hours requirement

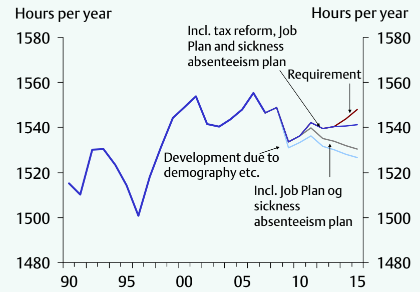


Table 3.6
Contributions to the change in average hours worked from 2009 to 2015

	2009-2015
- 'Lower tax on labour', 2007	0.3
- Job Plan and sickness absence plan, 2008	0.2
- *Spring Package 2.0*, 2009	0.7
- Requirement for working hours	0.4

Source: Statistics Denmark and own calculations.

3.4 Wages and prices

Danish competitiveness has deteriorated over the last decade. Since 2000, wage increases per employee have been around 1 per cent higher on average than in the euro area, and at the same time growth in productivity has been lower than in other countries. The strengthening of the euro, and thus Danish kroner, compared to other currencies has also contributed to weakening the competitiveness, *cf. figure 3.5a*. The deteriorating competitiveness has contributed to losses in market shares in the domestic market and in export markets.

Due to the development in wages and productivity the wage share in the private urban trade sector have increased by around 9 percentage points since 2000 to a historically high level. A lag in the adjustment of employment to the lower production following the international economic crisis has led to a further increase in the wage ratio in 2009. The extraordinary high wage ratio reduces profitability and hence investments.

Wage growth in the private sector has decreased significantly since the first quarter of 2009 due to the declining pressure on the labour market, and in *Economic Survey*, December 2009, labour market pressures are expected to decline further in line with the increase in unemployment. Wage growth is, however, expected to remain higher than in the euro area up to 2011, and wage competitiveness may continue to deteriorate, *cf. table 3.7*. In 2010 and 2011 hourly wages are expected to increase by 2.7 per cent and 2.5 per cent respectively.

The technical projection to 2015 assumes increased but still moderate wage growth. Growth in hourly wages is expected to increase by 0.2 percentage point per year from 2.5 per cent in 2011 to 3.3 per cent in 2015. Real wages is expected to grow annually by 1 per cent on average in 2011-2015, since wage growth is slightly higher than the medium term inflation rate (lower, but close to 2 per cent). Prices are, on the other hand, increasing more than unit labour costs and thereby reducing the wage ratio and gradually restoring the enterprises' earnings capacity. In 2015 the wage ratio is expected to be back at its historical average, *cf. figure 3.5b*.

Figure 3.5a
Development in competitiveness since 2000

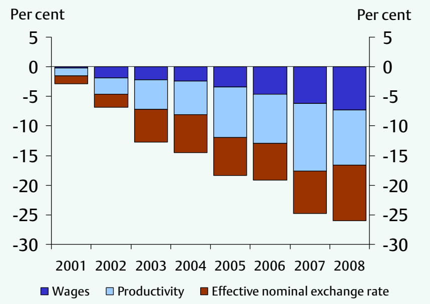
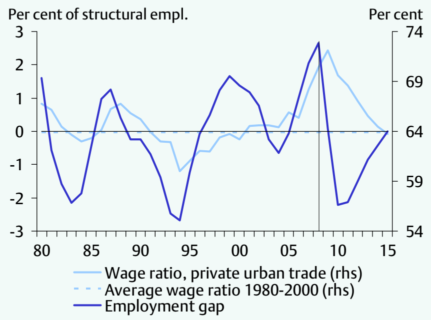


Figure 3.5b
Employment gap and wage ratio



Note: The employment gap shows the difference between actual and structural employment.
Source: OECD, Statistics Denmark and own calculations.

Increasing unit labour costs have contributed to higher inflation in Denmark than in the euro area over the last years. In 2010 growth in Danish consumer prices is expected to increase to 2.0 per cent, compared to 1.4 per cent in 2009, partly due to higher indirect taxes as a result of the tax reform and a moderate increase in oil prices. In 2011 inflation is expected to gradually decrease to the same level as in the euro area, as growth in consumer prices is estimated to fall to 1.7 per cent, partly due to lower growth in energy prices, *cf. table 3.7*. Up to 2015, inflation is expected to be at just below 2 per cent in light of the fixed exchange rate policy and ECB's objective of keeping annual inflation under, but close to 2 per cent.

Table 3.7
Price indices and deflators

	2008	2009	2010	2011	2012	2013	2014-15
Annual growth, per cent							
Consumption deflator	3.2	1.4	2.0	1.6	2.0	1.9	1.8
Consumer price index	3.4	1.4	2.0	1.7	2.0	2.0	1.9
Do. EU-harmonized HICP	3.6	0.8	2.1	1.5	2.3	2.1	1.9
GDP-deflator	3.6	0.5	2.0	1.7	2.3	2.4	2.5
Hourly wage rate	4.6	3.3	2.7	2.5	2.7	2.9	3.2
Wage costs per employee (NA-based)	4.3	3.4	3.3	2.5	2.6	2.9	3.4
The euro area							
HICP	3.3	0.3	1.1	1.5	-	-	-
Compensation per employee (NA-based)	3.4	1.6	1.6	1.8	-	-	-

Note: For 2014-2015, *average* annual growth rates are reported.
Source: Statistics Denmark, European Commission autumn forecasts 2009, DA's StrukturStatistik and own calculations.

From 2009 to 2015 the GDP-deflator increases more than consumer prices. This partly reflects an improvement in terms of trade and that national accounts do not include productivity growth in the public sector production, which is why the deflator for value added in the public sector tend to grow at a higher rate than prices in the private sector.

3.5 Savings, investments and net foreign assets

The economic crisis has led to a significant increase in the savings rate in the private sector – including household savings, *cf. table 3.8*. This partly reflects deteriorating asset positions due to the fall in stock prices and house prices in 2007 and 2008 and parts of 2009. Private investments also dropped sharply following the sharp fall in demand, higher risk premiums and a tightening of credit policies.

In the short term outlook the consumption ratio is expected to increase in 2011. This improvement is expected to continue towards 2015 as the cyclical conditions normalise and household savings are reduced to a more normal level. The projection implies a relatively high real growth in private consumption after a significant drop during the crisis. However, private consumption still makes up a relatively low proportion of GDP compared to the three decades from 1970 until the end of the 1990s, *cf. figure 3.6a*.

Table 3.8

Current account, net foreign assets, savings and investments

	2008	2009	2010	2011	2012	2013	2015
Per cent of GDP							
Private sector investment share	20.1	16.5	15.6	16.2	16.9	17.7	19.1
Private sector savings share	18.6	22.6	23.3	22.9	22.8	22.6	22.7
Private financial savings	-1.2	5.9	7.9	6.6	5.8	4.8	3.5
Public financial assets	3.4	-3.0	-5.5	-4.2	-3.2	-1.9	0.0
Current account	2.2	3.8	2.4	2.4	2.6	2.9	3.5
Net foreign assets	-8.8	2.5	4.9	7.1	9.9	12.9	19.0

Note: In 2009 the latest data for the current account (December 2009) and net foreign assets (third quarter 2009) are shown. Compared to *Economic Survey*, December 2009, numbers for net foreign assets for 2010 and 2011 are adjusted upwards corresponding to the difference between the estimation for net foreign assets in *Economic Survey*, December 2009 and the published figure for net foreign assets for third quarter 2009.

Source: Statistics Denmark and own calculations.

The private sector investment share is expected to decrease in 2010 with falling residential investments and business investments. This reflects falling house prices and tighter credit conditions as well as weaker demand prospects. Private investments are expected to recover to some degree, including an increase in residential investments as house prices are set to increase moderately. However, the underutilisation of production capacities means that business investments will remain at a moderate level in historical perspective.

Figure 3.6a

Household consumption and saving

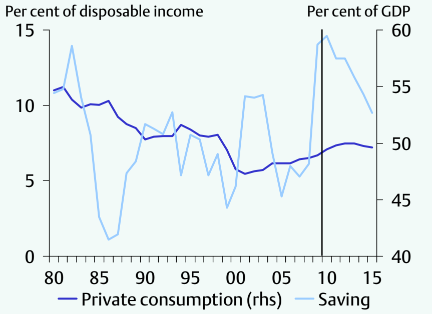
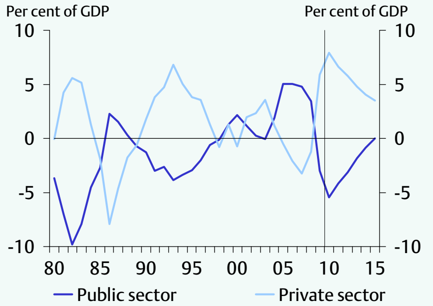


Figure 3.6b

Savings balances



Note: In figure 3.6a household savings rate corresponds to *gross saving as a share of gross disposable income*. In figure 3.6b private sector financial savings correspond to changes in net assets caused by savings and capital transfers minus gross fixed investments etc., and public savings corresponds to the fiscal balance.

Source: Statistics Denmark and own calculations.

The increase in private sector gross savings has implied that private sector financial savings has turned into a surplus in 2009 after several years of deficit, and significant surpluses are expected going forward, despite healthy growth in private domestic demand. In the years 2011-2015 private sector financial savings are at the highest level observed over a 5 year period since 1970, *cf. figure 3.6b*. On the other hand, expansionary fiscal policy measures and automatic fiscal stabilisers have led to very large public savings deficits. Private savings are, however, only partly offset by the large – but decreasing – public sector savings deficit and external net lending (which broadly corresponds to the current account) is therefore strengthened up to 2015.

A steeper fall in imports than in exports, which partly should be seen in light of the fall in private consumption, has contributed to a large surplus in the current account in 2009. According to preliminary calculations the surplus is 15 billion DKK higher than expected in the latest economic outlook. In addition to a large surplus on the external balance of goods and services the surplus on the current account is due to large surpluses on the balance of primary income, while current transfers have worked in the opposite direction. The surplus in the current account is expected to be almost 3 per cent of GDP on average in 2012-2015.

Net foreign debt turned into a net foreign asset position of around 42 billion DKK in the third quarter of 2009. This reflects a revision of the statistics by 80 billion DKK in line with new accounting methods and the development in the 3rd quarter, where there was a surplus on the current account of just over 23 billion DKK and net capital gains on external assets in Denmark of almost 70 billion DKK. Net foreign assets are often subject to revaluation due to changes in the valuations of exchange rates, as well as prices on shares and bonds. Abstracting from the often quite substantial revaluations net foreign assets are expected to increase to around 20 per cent of GDP by 2015.

4. Outlook for public finances to 2015

4.1 Overview of public finances

The assessment of public finance developments is based on the short term outlook in *Economic Survey,* December 2009 covering the years up to 2011, as well as an updated projection towards 2015 (and the years after). The outlook for public finances towards 2015 is based on a scenario, which includes consolidation and reform requirements of 31 billion DKK to ensure structural budget balance by 2015.

Based on the macroeconomic projection and the Fiscal Bill for 2010 the general government deficit is estimated at 3.0 per cent of GDP in 2009 and 5½ per cent of GDP in 2010, *cf. table 4.1*.

For 2011, the forecast points to a general government deficit of 4.2 per cent of GDP –0.2 per cent of GDP lower than estimated in *Economic Survey,* December 2009. The estimate for 2011 is based on technical assumptions about overall fiscal policy, while incorporating the phasing-in of financing elements in the tax reform and that very high public investments are brought down again. In addition, as a part of the consolidation requirement, public consumption expenditures are assumed constant in real terms in 2011-2013 (in *Economic Survey*, December 2009 the real growth of public consumption was set at 1 per cent in 2011).

Table 4.1
Public finances and debt

	ESA	2008	2009	2010	2011	2012	2013	2015
Per cent of GDP								
Revenues	ESA	54.3	53.4	52.4	52.4	51.8	51.8	51.9
- of which taxes		48.3	47.5	46.7	46.9	46.5	46.5	46.6
Expenditures	ESA	50.9	56.4	57.9	56.6	55.0	53.7	52.0
Public budget balance[1)]	B9	3.4	-3.0	-5.5	-4.2	-3.2	-1.9	0.0
Structural budget balance		1.9	-0.6	-1.7	-1.0	-0.7	-0.2	0.0
EMU debt		33.4	38.5	41.8	46.2	48.3	48.1	45.0
Public net debt		-6.5	-3.8	1.8	6.0	8.4	9.4	8.5
Net debt in central and local governments		-6.5	-3.8	1.8	5.9	8.4	9.4	8.5

1) National accounts. Estimates for the public balance (EDP-basis) are presented in annex table 2.
Source: Statistics Denmark and own calculations.

The large public deficits in 2009-2011 should mainly be seen in light of the recession following the financial crisis and the measures taken in order to counter the negative effects of the crisis on the Danish economy. Moreover, public consumption expenditures as a share of GDP are at a historic high.

Public finances are estimated to be weakened by approx. 9 per cent of GDP from 2008 to 2010. Around 1/3 of this reflects a structural weakening of public finances, partly due to measures taken during the crisis, while the rest must be seen in light of a large drop in private consumption and hence indirect tax revenues as well as generally large automatic stabilizers. The high sensitivity of Danish public finances to cyclical developments stems mainly from high compensation rates in the unemployment benefit scheme and high taxation that weaken public finances during downturns and strengthen public finances when the cyclical position is favourable. These automatic budget effects also contribute to stabilize economic developments.

Box 4.1

Public balance and debt reporting under EDP

In accordance with the Stability and Growth Pact Denmark routinely submits general government deficit and public gross debt (EU-definition) to the European Commission under the Excessive Deficit Procedure (EDP). The EDP-reporting of October 2009 was based on the short term outlook of *Economic Survey, August 2009.*

The public balance on EDP-basis differs in some aspects from the balance according to the national accounts.

The public balance on EDP-basis includes net interest income from central government interest rate and currency swaps and a different treatment of central government revenues from selling UMTS-licenses. Also, the general government surplus on the EDP-basis corrects for certain neighbourhood-regeneration measures and infrastructure investments.

For EDP purposes all government revenue from the sale of UMTS licenses is accrued to the year 2001. In other words the revenue is considered to be a one-off income, even though the government *de facto* will receive revenue from this source until 2011. In the national accounts, Statistics Denmark has chosen to spread the total revenue over the 20-year period for which the licenses are valid.

In total these corrections have only marginal effects on the general government balance. The treatment of central government interest rate and currency swaps, UMTS-licences and infrastructure investments reduces the public balance on EDP-basis in 2008 (0.05 per cent of GDP), while the corrections regarding city regeneration support improves the balance slightly (0.0 per cent of GDP). The public balance on EDP-basis is in line with the balance according to the national accounts in 2008.

Towards 2015 the general government deficit is gradually reduced owing to the assumed normalisation of the business cycle and the consolidation requirement to ensure budget balance in 2015 in line with the target in the 2015 Plan (MTO).

The projected general government budget balances are uncertain. This reflects among other things uncertainty with respect to cyclical developments. In addition, some important revenues are highly sensitive to changes in oil prices and financial market developments, including changes in interest rates and stock prices. This applies for instance to the revenues from the North Sea oil and gas production , which depend on oil prices and the dollar exchange rate, and the pension yield tax, which is determined on an accrual basis and may fluctuate sharply from year to year.

The global crisis and deteriorating public finances imply that EMU-debt is estimated to rise to 46¼ per cent of GDP by end-2011. From 2011-2015 EMU-debt is estimated to decrease slightly in per cent of GDP in the scenario with structural balance in 2015. Public net debt (which also includes financial assets) deteriorates from a net asset position of 6½ per cent of GDP by the end of 2008 to net debt of approx. 6 per cent of GDP by end-2011. In the scenario with consolidation debt accumulation is curbed, but net debt is estimated to increase a bit further to 9½ per cent of GDP in 2013, and subsequently decrease to approx. 8½ per cent of GDP by 2015.

4.2 Structural budget balance

Of the total weakening of public finances of approx. 9 per cent of GDP from 2008 to 2010 around 3½ percentage points reflect a reduction of the structural budget balance, which measures the budget balance corrected for the impact of business cycle developments and other temporary factors.

In 2008 the estimated structural budget balance is 1.9 per cent of GDP, which is about the same level as estimates for the previous years. In 2009 and 2010 the estimated structural deficits are 0.6 per cent of GDP and 1.7 per cent of GDP, while the structural deficit in 2011 is estimated to be 1.0 per cent of GDP, *cf. table 4.2*.

Table 4.2
Structural budget balance

	2008	2009	2010	2011	2012	2013	2015
Per cent of GDP							
1. Actual balance	3.4	-3.0	-5.5	-4.2	-3.2	-1.9	0.0
2. Cyclical adjustment	1.5	-1.0	-2.1	-2.0	-1.5	-0.9	-
3. Special items in total	0.0	-1.4	-1.7	-1.1	-0.9	-0.8	-
- of which							
Corporate tax[1)]	-0.1	-0.5	-0.3	-0.2	-0.2	-0.2	-
Vehicle registration tax	-0.1	-0.5	-0.4	-0.4	-0.4	-0.3	-
Pension yield tax	-0.5	-0.7	-0.4	-0.3	-0.2	-0.2	-
Net interest payments	0.5	0.1	0.0	-0.1	-0.1	-0.1	-
Revenue from the North Sea[2)]	0.5	-0.3	0.1	0.1	-0.1	-0.1	-
Others[3)]	-0.4	0.5	-0.6	-0.2	0.1	0.1	-
4. Structural balance (1.-2.-3.)	**1.9**	**-0.6**	**-1.7**	**-1.0**	**-0.7**	**-0.2**	**0.0**
Memorandum items							
Output gab	1.1	-2.4	-3.0	-2.8	-2.1	-1.4	0.0
Employment gab	2.6	0.1	-2.2	-2.1	-1.5	-0.9	0.0

1) Excl. hydro carbon tax and corporate taxes from corporations liable to carbon tax payments.
2) Hydro carbon tax and corporate taxes from corporations liable to carbon tax payments, excise tax on oil pipelines and profit sharing.
3) Including net current and capital transfers, e.g. EU-contributions, foreign aid, block grants to the Faroe Islands and Greenland, purchase and sale of land and rights. These special items can vary considerably from year to year. Special notice has been taken to the capital transfer of 5 billion DKK in 2010 concerning the pension yield tax so that this does not enter the structural budget balance.

Source: Statistics Denmark and own calculations.

The consolidation of public finances from 2010 to 2011 should be seen in light of a presumed reduction in public investments following the extraordinary high levels in 2009 and 2010, and the gradual phasing in of the financing elements in the tax reform in *Spring Package 2.0*. The consolidation requirement to achieve structural balance in 2015 furthermore implies that real public consumption is constant in 2011 (and in 2012 and 2013).

Including the consolidation measures, the structural budget deficit is reduced to 0.2 per cent of GDP in 2013. The structural budget balance thus improves by 1½ per cent of GDP from 2010 to 2013, in line with the expected EU-recommendation, *cf. box 4.2*. The projection furthermore implies that the actual public deficit is reduced to below 3 per cent of GDP in 2013, in accordance with the expected EU-recommendation.

In all the years 2009-2014 the actual public deficits are larger than the estimated structural deficit.

In 2009-2011 the revenues from corporate taxes, vehicle registration fee and pension yield tax are expected to be lower than the estimated trend level, and (other) cyclical developments also contribute negatively to the actual budget balance.

From 2011 to 2015 the cyclical position is technically assumed to revert to neutral implying output and employment gaps of zero in 2015. At the same time, the correction for special items is assumed to disappear gradually, reaching zero in 2015. This implies that projected economic developments in 2015 are assumed to be on the structural path, and that the actual budget balance is thus equal to the structural budget balance in 2015.

The impact of discretionary one-off measures on total public finances (net lending) and the central government CIL-balance is – according to the guidelines for Stability and Convergence Programmes – outlined in *box 4.3*.

Box 4.2

Impacts of the presupposed fiscal consolidation of the public balance by 2013

It is assumed that the structural public balance must be improved by 1.5 per cent of GDP from 2010 to 2013. Compared to the no-policy-change scenario this calls for an improvement of the structural public balance by 1 ¼ per cent of GDP in 2013, cf. chapter 1 (box 1.2).

The assumptions regarding public spending (including constant real spending and constant public employment from 2010 to 2013) implies that public spending is reduced by some 2.7 per cent (0.7 per cent of GDP) compared to the real growth path assumed for public spending in CP08, *cf. table 1*. However, the GDP share of public spending in 2013 in CP09 remains higher than in CP08. Constant real spending from 2010 to 2013 corresponds to a 13½ billion DKK reduction compared to the real growth path in CP08 (2010-prices).

Furthermore it is assumed that other expenditures (i.e. notably public transfers to the private sector or abroad, subsidies etc.) are reduced by approx. 0.5 per cent of GDP compared to the no policy-change scenario – measured net of taxes etc. This corresponds to a reduction in gross terms of around 11 billion DKK measured in 2010-level (depending on which specific initiatives are invoked)[1]. The key is that the reduction in other expenditures provides a 0.5 pct. of GDP improvement of the structural balance in 2013 (corresponding to 8½-9 billion 2010-DKK), in order to improve the structural balance in 2013 by a total amount of 1¼ pct. of GDP.

Impacts on fiscal sustainability
The assumed fiscal consolidation of approx. 24½ billion DKK (2010-prices) – yielding an improvement of 1¼ per cent of GDP on the structural balance in 2013 – improves fiscal sustainability by approx. 1 per cent of GDP or 19 billion DKK (using cyclically adjusted GDP in 2010). The effect on the fiscal sustainability indicator is smaller than the primary balance impact because of the gradual phasing in of the fiscal consolidation as the initiatives do not take full effect before 2013. In addition, there are indirect effects from lower tax revenue (i.e. the 11 billion DKK reduction in other expenses improves the structural balance by 8½-9 billion DKK).

The assumed contribution from the required structural reforms improves the primary balance in 2015 and the sustainability indicator by an additional 0.4 pct. of GDP (corresponding to approx. 7 billion DKK in 2010-level).

In total the primary balance is improved by 1.6 per cent of GDP and due to lower interest rate payments, the total structural balance is improved by approx. 1¾ per cent of GDP in 2015.

Table a

Impacts of fiscal consolidation- and required structural reforms towards 2015 on the primary public balance and the fiscal sustainability indicator (SI)

							Annuity (SI)	
Per cent of GDP	Initiatives (Billion DKK)	2011	2012	2013	2014	2015	Pct. of GDP	Billion DKK
Reduced expenses (net)[1)]		¼	0.8	1.2	1.1	1.1	1.0	19
Of which:								
- Public spending	13½	¼	0.5	0.7	0.7	0.7	0.7	12
- Other expenses[1)]	11	-	0.3	0.5	0.4	0.4	0.4	7
Required structural reforms	7[2)]				¼	0.4	0.4	7
Total (primary balance)		¼	0.8	1.2	1.4	1.6	1.5	26
Total (structural balance)		¼	0.9	1¼	1.5	1¾		
- , billion (2010-DKK)		4½	15½	22½	26½	31		

1) The impacts on the primary public balance are measured net of taxes etc.
2) The included remaining structural reforms requirement from the 2015 Plan corresponds to a 30,000 full-time employed increase in employment that strengthens public finances by 7 billion DKK.

1) The reduced spending is included as a non-specified transfer from the public sector to the private sector or abroad with an implicit tax rate (on average) of approx. 20 per cent.

Box 4.3

Discretionary one-off measures in 2009 and 2010

Based on the fiscal bill for 2009 and 2010, the total impact on the central government CIL-account of discretionary measures is estimated to be 21 billion DKK in 2009, *cf. table a.* Extended credit periods for income tax and labour market contributions lower the CIL-account in 2009, while the tax on special pension-scheme savings has a positive effect.

The general government budget balance is estimated to be increased by around 5½ billion DKK in 2009 due to discretionary one-off measures etc. This mainly reflects taxes on special pension-scheme savings, as it is only the interest effect from the extended credit periods that affect the public balance.

In 2010 discretionary one-off measures etc. are expected to increase the central government CIL-account by a total of 20 billion DKK, of which 18½ billion DKK is due to the extended credit periods.

One-off expenditures due to the change in pension yield taxation in 2010 (from institutional to individual basis) is the main reason for the reduction of the general government balance of around 5¾ billion DKK in 2010 owing to discretionary one-off measures.

Table a

Discretionary one-off measures in 2009 and 2010

	CIL-account	Public balance
Billion DKK		
Tax on payments from the special pension-scheme	17.0	17.0
Increased pension deposits due to *Spring Package 2.0*	-7.1	-7.1
Extended credit periods for income tax and labour market contributions incl. interest	-21.0	-2.0
Disbursements from IØ and IFU	0.2	0.2
Temporary compulsory central government saving scheme	-0.9	-0.9
One-year funds	-2.1	2.1
Closure of Fiskeribanken	0.2	-
Commitment regarding closure of the activities in the North Sea	-3.0	-
Higher EU-contributions 2007-2009	-1.1	-1.1
Reduced revenues regarding agricultural aid due to EU decision	-0.7	-0.7
Capital increase in SAS	-0.6	-
Capital investment in Vækstfonden and Eksport Kredit Fonden	-0.9	-0.9
Revenue from closure of Skibsgarantifonden	0.1	-
COP15	-1.0	-1.0
2009 total	**-20.9**	**5.6**
Tax on payments from the special pension-scheme	0.5	0.5
Extended credit periods for income tax and labour market contributions incl. interest	18.5	-0.5
Payment of personal tax to local government etc. for income year 2007	0.9	-
Portfolio reallocation of central government assets	2.0	-
Disbursements from IØ and IFU	0.1	-
One-year funds	-0.9	-0.9
Sales of upper secondary schools etc. (independent institutions)	3.3	-
Labour Market Holiday fund	0.5	-
One-off expenditure due to the change in pension yield taxation	-4.9	-4.9
2010 total	**20.0**	**-5.8**

Note: A positive value reflects an account increase while a negative value reflects an account decrease.
Source: Budget Outlook 3, December 2009.

4.3 Fiscal policy stance

Fiscal policy has been eased markedly in 2009 and 2010 in view of the financial crisis. Policy measures in 2009 and 2010 include high growth in public investments and considerable tax reductions in the tax reform in *Spring Package 2.0,* cf. chapter 1. Denmark appears to be among the OECD countries that have eased fiscal policy the most in 2009 and 2010. In light of the economic crisis and the need for fiscal support, the original target for the structural budget surplus in the 2015 Plan (Denmark's MTO in CP07 and CP08) was departed from in 2009-2010, but the target of structural budget balance in 2015 has been maintained and is the Programme's MTO in CP09.

Fiscal policy is estimated to impact demand growth by 1.0 per cent of GDP in 2009 and 0.8 per cent of GDP in 2010 as measured by the first-year fiscal effect, *cf. table 4.3*. The fiscal effect does not include the activity effects of payouts from SP and private pension accounts, since these schemes are private saving schemes.

Table 4.3
Policy impact on economic activity

	2007	2008	2009	2010
Per cent				
GDP growth	1.7	-0.9	-4.3	1.3
Output gap	3.3	1.1	-2.4	-3.0
Percentage points				
First year fiscal effects	0.0	-0.3	1.0	0.8
SP-payments	-	-	0.3	0.0
Private pension accounts	-	-	-	0.1
Total first year impact (yearly growth)	0.0	-0.3	1.3	0.9

Source: Statistics Denmark and own calculations.

In 2009 the impact on activity from discretionary easing and SP-payouts is estimated at around 1¼ per cent of GDP. The measures include for instance the agreements made last spring in connection with *Spring Package 2.0*, including higher local government investments, a home repair and renovation scheme and SP-payments.

In 2010 activity is strengthened by an additional 0.9 per cent of GDP following the growth initiatives in the Fiscal Bill for 2010, the initial under financing of the tax reform in *Spring Package 2.0*, and the impact of payouts from certain private pension accounts.

The total discretionary easing etc. in 2009 and 2010 is estimated to increase the GDP-*level* by 2¾ per cent in 2010, including second year effects of the easing in 2009.

The CP09-projection implies that the temporary fiscal stimulus during the recession is gradually withdrawn and fiscal consolidation to achieve structural budget balance in 2015. Meanwhile interest rates are assumed to increase gradually towards 2015, as the global recovery is assumed to become more self-sustaining.

This implies that policy stimulus in 2009 and 2010 – that is estimated to increase GDP by approx. 4½ per cent in 2010 – is gradually withdrawn. The assumed fiscal policy and interest rates imply negative contributions to economic growth of around 1 per cent of GDP from 2012 to 2015, measured by the multi-annual effects, *cf. table 4.4*. In 2011 the total effect on economic growth is roughly neutral, reflecting that fiscal policy easing in 2009 and especially in 2010 and lower interest rates since 2008 increase economic growth in 2011, counteracting the effects of stimulus withdrawal and consolidation in 2011.

Table 4.4

Policy impact on economic activity towards 2015 (excluding possible effects of fiscal consolidation on interest rates)

	2009	2010	2011	2012	2013	2014	2015
Percent							
Multi-annual fiscal effect (GDP level)	1.0	2.0	1.9	1.4	0.7	0.3	0.0
SP-payments etc. (GDP level)	0.3	0.6	0.3	0.1	0.0	-0.1	-0.2
Fiscal policy since 2008 and SP etc.	1.3	2.7	2.2	1.5	0.7	0.2	-0.2
Fiscal effect and SP (contrib. to growth)	1.3	1.4	-0.5	-0.7	-0.8	-0.5	-0.4
-of which first year fiscal effect (growth)	1.0	0.8	-0.7	-0.4	-0.4	0.0	0.0
Chng. in interest rates since 2008 (level)[1]	0.4	1.8	2.3	2.0	1.5	0.8	0.1
Total (fiscal effect, interest rates etc.)	1.7	4.5	4.5	3.5	2.2	1.0	-0.1
Contribution to annual growth	1.7	2.8	0.0	-1.0	-1.3	-1.2	-1.1
Memorandum item							
Average interest rate on bonds	3.8	3.4	3.9	4.2	4.4	4.7	5.0

Note: The multi-annual fiscal impact is calculated as the policy impact from 2009 (2009 incl.).
1) The impact from the changes in the interest rates since 2008.
Source: Statistics Denmark and own calculations.

The multi-annual fiscal effect takes into account that policy measures in a given year impact economic activity over several years, but is also more uncertain than the first-year effect. The calculated partial impact of fiscal policies does not take into account that interest rates may be higher because of the fiscal easing in 2009-2010, but this effect is presumably limited, since public finances were healthy to begin with and the projection entails balanced public finances and fiscal sustainability going forward. Without consolidation the dampening impact from fiscal tightening would diminish or disappear, but higher interest rates and possible hesitance in private spending as a result of increased debt accumulation could exert a dampening impact.

The release of the SP-savings in 2009 and private pension accounts in 2010 are – in line with the assumptions in *Economic Survey,* December 2009 – assumed to increase private consumption and thus estimated to increase activity by 0.6 per cent of GDP in 2010 after which the effects decline to about zero by 2013.

It is important that confidence in sustainable policies is maintained. A credible restoration of public finances will underpin low interest rates and thus reduce vulnerability to renewed turmoil in the financial markets. Low interest rates are key to support growth and employment prospects after the crisis, cf. box 1.5 (chapter 1).

The projection assumes that the recovery strengthens and becomes more robust abroad and in Denmark, so that the very loose monetary stance is gradually withdrawn, and interest rates increase gradually towards 2015. The effect on the GDP level from changes in interest rates since 2008 is estimated to peak at around 2 per cent in 2010-2012, after which the effect declines to around zero by 2015 given the assumed interest rate path in line with cyclical normalisation, cf. table 4.4.

Taken together, fiscal policy and lower interest rates since 2008 are estimated to increase the activity level by some 4½ per cent of GDP in both 2010 and 2011, cf. table 4.4. The negative impact of the assumed consolidation in 2011 is thus countered by the fact that previous years' fiscal and monetary easing works with increasing force into 2011.

In 2012 to 2015, meanwhile, the assumed consolidation and gradually rising interest rates act to restrain demand growth. The assumption of gradually rising interest rates reflects the assumption that recovery abroad becomes increasingly self-sustaining. If the global (and thus Danish) recovery turns out weaker, monetary policy rates may remain low for a longer time and this may keep a hand under economic activity. Credible consolidation, including in the euro area, will improve the conditions for maintaining relatively low monetary policy rates in the coming years.

4.4 Revenues

Total public revenues decrease from 54¼ per cent of GDP in 2008 to 52½ per cent of GDP in 2011 in the Convergence Programme. Towards 2015 public revenues decrease further to around 52 per cent of GDP, *cf. table 4.5*.

The decline in revenues as a share of GDP from 2008 to 2015 mainly reflects a reduction in the tax-to-GDP ratio of approximately 1¾ per cent of GDP[1].

[1] The tax reform in *Spring Package 2.0* includes a reduction of personal taxes and an increase in indirect taxes that contributes to a technical reduction in the tax burden in per cent of GDP. This reflects that indirect taxes are included in GDP, which is measured at market prices. The increase in indirect taxes, which are included in GDP, corresponds to approx. 0.8 per cent of GDP and reduces the tax burden by approx. 0.4 per cent of GDP in 2015 due to this denominator effect.

The tax reform in *Spring Package 2.0* strengthens public finances in 2015, since reduced personal taxes is countered by higher green taxes, higher taxes on unhealthy food, lower deductions and abolition of special arrangements for the business sector etc. The declining tax-to-GDP ratio partly reflects lower personal taxes as a result of the 2007 tax agreement and a decrease in revenues from corporate taxes in per cent of GDP from a relatively high level in 2008. In addition, decreasing energy consumption in per cent of GDP – following technological improvements and the initiatives in the Energy Agreement 2008 etc. – reduces revenues from energy taxes in per cent of GDP. Finally, the nominal principle of the tax freeze towards 2015 contributes to an underlying reduction in the tax-to-GDP ratio[2]. The effect is moderated by the indexation of energy taxes, which was introduced in 2007.

A normalisation of the revenues from pension yield taxation from a relatively low level in 2008-2009 on the other hand, tends to increase the tax burden. Towards 2015 the revenues from taxation of accrued returns on pension savings increase to 1 per cent of GDP in line with, notably, growing pension assets relative to GDP.

Table 4.5
Public Revenue

	ESA	2008	2009	2010	2011	2012	2013	2015
Per cent of GDP								
Public budget balance (National account definition)	B9	3.4	-3.0	-5.5	-4.2	-3.2	-1.9	0.0
Public expenditures		50.9	56.4	57.9	56.6	55.0	53.7	52.0
Public revenues		54.3	53.4	52.4	52.4	51.8	51.8	51.9
- Taxes (tax burden)		48.3	47.5	46.7	46.9	46.5	46.5	46.6
- Personal taxes etc.[1)]		21.4	22.0	20.5	20.4	20.0	19.8	19.4
- of which property value tax		0.7	0.7	0.7	0.7	0.7	0.7	0.6
- Labour market contributions		4.6	4.8	4.7	4.7	4.6	4.6	4.5
- Pension yield tax		0.5	0.4	0.7	0.8	0.9	0.9	1.1
- Corporate tax		3.4	2.4	2.7	2.8	2.7	2.8	3.1
- VAT		10.1	9.9	9.9	9.9	10.0	10.0	10.0
- Land tax etc.		1,2	1.3	1.4	1.4	1.4	1.4	1.4
- Excise duties etc.		6.0	5.6	5.8	5.9	5.8	6.1	6.2
- Social contributions		1.0	1.0	1.0	1.0	0.9	0.9	0.9
- Interest income	D41	1.7	1.7	1.6	1.5	1.4	1.5	1.6
- Other revenues		4.2	4.2	4.1	4.1	4.0	3.8	3.8

1) Personal taxes etc. cover withholding taxes (including property value tax), annual motor vehicle fees paid by households, inheritance tax and other personal taxes.
Source: Statistics Denmark and own calculations.

[2] Following *Spring Package 2.0* the nominal principle in the tax freeze is included towards 2019. The tax reform is fully financed over time and strengthens public finances in 2015 (and thereafter), cf. chapter 2.

4.5 Expenditures

The share of public expenditures in GDP is estimated to increase from around 51 per cent of GDP in 2008 to 56½ per cent in 2011, before subsiding to 52 per cent of GDP in 2015 (including consolidation). Higher expenditures from 2008 to 2011 reflect higher primary expenditures as well as higher interest payments, and to cyclical developments including a large drop in GDP in 2009. Measured relative to cyclically adjusted GDP, primary expenditures increase from 50½ per cent in 2008 to 52¼ per cent in 2011, before declining to 49½ per cent of cyclically adjusted GDP in 2015.

Table 4.6

Composition of general government finances

	ESA	2008	2009	2010	2011	2012	2013	2015
Per cent of GDP								
Public budget balance (National account definition)	B9	3.4	-3.0	-5.5	-4.2	-3.2	-1.9	0,0
Public revenue		54.3	53.4	52.4	52.4	51.8	51.8	51,9
Public expenditures		50.9	56.4	57.9	56.6	55.0	53.7	52,0
- Primary expenditures		49.0	54.2	55.7	54.4	52.7	51.2	49,6
- Public consumption	P3	26.7	29.3	29.4	28.9	28.3	27.7	26,8
- Public investments		1.8	2.2	2.6	2.1	2.0	1.9	1,8
- Income transfers	D62	15.1	16.9	17.7	17.7	17.3	17.0	16,3
- Subsidies	D3	2.1	2.7	2.6	2.5	2.5	2.5	2,4
- Other primary expenditures		3.2	3.1	3.4	3.1	2.6	2.2	2,2
- Interest expenditures	D41	1.8	2.2	2.1	2.3	2.3	2.4	2,4
Per cent of cyclical adjusted GDP								
Public expenditures		52.5	54.3	55.7	54.4	53.1	52.3	52,0
- Primary expenditures		50.6	52.2	53.6	52.2	50.9	49.9	49,6
- Public consumption	P3	27.5	28.2	28.3	27.8	27.4	27.0	26,8
- Public investments		1.9	2.1	2.5	2.1	1.9	1.8	1,8
- Income transfers	D62	15.6	16.3	17.1	17.0	16.7	16.5	16,3
- Subsidies	D3	2.2	2.6	2.5	2.4	2.4	2.4	2,4
- Other primary expenditures		3.3	3.0	3.3	3.0	2.5	2.2	2,2
- Interest expenditures		1,9	2.1	2.1	2.2	2.3	2.4	2.4

Note: The public expenditures as per cent of cyclical adjusted GDP controls for the estimated part of the changes in the expenditures' share of GDP that is due to the denominator effect of the business cycle etc. I.e. the public expenditures (in the nominator) to e.g. unemployment benefits are not controlled for the impact of the business cycle. The cyclical adjusted GDP is estimated by a Kalman filter.

Source: Statistics Denmark and own calculations.

The large increase in primary expenditures as a share of GDP in 2009 and 2010 reflects the economic recession and the measures taken in order to reduce the impact on the Danish economy. Public social transfer expenditures have thus risen sharply, and public investments are extraordinary high in light of measures to bring forward investments. In addition, the nominal growth rate of public consumption is as high as 5.5 per cent in 2009 as a result of public collective agreements etc.

From 2011 to 2015 the share of primary expenditures in GDP falls back. In part, this reflects the assumed consolidation of public consumption and transfers, reduced public investments in light of measures to bring forward investment to 2009-2010 and lower social transfers in light of gradually declining unemployment towards 2015. In addition, given the assumed closing of the output gap towards 2015, GDP is assumed to show fairly high growth rates. In 2015 primary expenditures are approx. ½ per cent of GDP higher than in 2008.

Furthermore, public interest payments are estimated to increase from 1.8 per cent of GDP in 2008 to 2.4 per cent of GDP in 2015. This reflects rising public debt, primarily towards 2011, and the assumed gradual increase in interest rates from 2011 to 2015, cf. section 4.7.

In light of the consolidation requirements towards 2015 the projection includes the following assumptions with respect to public expenditures, *cf. also box 4.4*.

- The real growth rate of public consumption is 0 in 2011-2013 (and ¾ per cent in 2014-2015). This corresponds to reduced spending of approx. 13½ billion DKK or approx. 2¾ per cent of total public consumption compared to the assumed real growth rate in 2011-2013 in CP08. The reduced spending should be seen in the context of public consumption in 2010 being 13¼ billion DKK higher than assumed in the 2015 Plan from 2007. In the projection, public consumption expenditures thus amount to a good 26¾ per cent of GDP in 2015, which is slightly above the benchmark in the 2015 Plan and higher than in all the years 1984-2007.

- Technically, a proportional reduction in other public expenditures is assumed, corresponding to a reduction of approx. 2¾ per cent of total expenditures on transfers and subsidies etc.

- The part of the reform requirement in the 2015 Plan that has not yet been implemented is fulfilled towards 2015. As a technical assumption, new initiatives thus increase employment to an extent that strengthens the sustainability of public finances by another 7 billion DKK.

Public consumption

In 2009, the real growth rate of public consumption is estimated to 1.6 per cent, which is 0.4 percentage points higher than in CP08. Since 2001 the real growth rate of public consumption has been ¾ percentage points higher per year on average than assumed in the previous medium term plans, cf. chapter 2. In 2010, the real growth rate is estimated to 1.0 per cent in line with the assumptions in CP08.

Box 4.4

The effect of fiscal consolidation on structural primary balance and primary expenditure

In the years 2000-2008 there was a surplus on the structural balance excl. net interest rate payments (the primary structural balance) of 2½-3 per cent of GDP, *cf. figure a*. The primary structural surplus of 2½ per cent of GDP in 2008 is estimated to decrease to around 0 in 2009 and turned to a deficit of 1 per cent of GDP in 2010. The sharp decline mainly reflects the large fiscal policy easing implemented in light of the financial crisis.

The primary structural balance is expected to be in deficit in 2010-2011 for the first time since 1990 – even though the structural unemployment is estimated to have decreased from 9 per cont of the labour force in 1990 to barely 3¾ per cent of the labour force in 2010-2011.

In the absence of new initiatives ongoing primary structural deficits are expected towards 2015, where the deficit could correspond to 1 per cent of GDP even though the high public investment level is normalised and the financing elements of the tax reform are phased in.

In the CP09-scenario with fiscal consolidation and required structural reforms primary structural balance is expected in 2012 and primary structural surpluses are expected from 2013 and on. The surplus is expected to be ¾ per cent of GDP in 2015 which is an improvement of 1¾ percentage points compared to 2010, but still some 2 per cent of GDP lower than the surpluses in 2000-2008.

Figure a

Structural primary balance with and without new initiatives

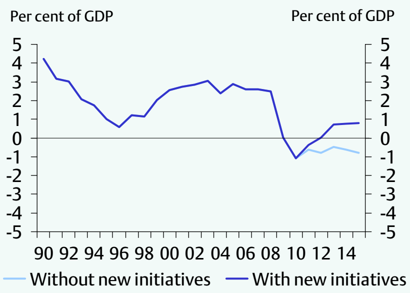
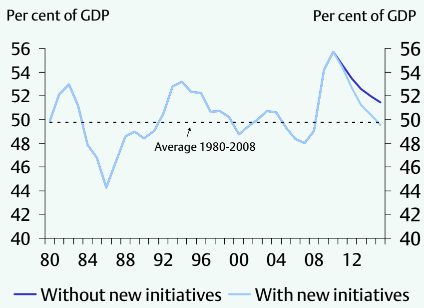


Figure b

Primary expenses with and without new initiatives



Public spending excl. interest rate payments (i.e. primary spending) relative to GDP is at the highest level ever in 2010, *cf. figure b.* The high level at a good 55½ per cent of GDP partly reflects a decrease in real GDP in 2008 and 2009. The primary spending includes in particular spending on public consumption, investment and income transfers.

The assumed fiscal consolidation, including constant real public spending in 2011-2013, a reduction in public transfers to the private sector and abroad and the required structural reforms towards 2015, that increases GDP, contributes to a reduction in the GDP-share of total public expenses of 1.9 percentage points compared to the scenario in absence of new initiatives. The total primary expenses are thereby reduced to approx. 49½ per cent of GDP in 2015, which is in line with the average for the period 1980-2008.

In relation to the policy targets of structural balance in 2015 and fiscal sustainability, what matters is the development in nominal expenditures compared to the tax base. In the consolidation scenario nominal expenditure growth is around 2¾ per cent per year on average from 2010 to 2015. With a nominal growth rate of 2¾ per cent per year, public consumption decreases as a share of cyclically adjusted GDP from 2010 to 2015.

From 2008 to 2010 public consumption as a share of GDP increases by 2¾ percentage points, reflecting a real growth of public consumption expenditures of 1.4 per cent on average in 2008-2010 and a high price growth of public consumption following public-sector wage agreements. Furthermore, GDP developments are relatively weak. Public consumption is estimated to 29.4 per cent of GDP and 28.3 per cent of cyclically adjusted GDP in 2010, and public consumption as a share of (cyclically adjusted) GDP is thus higher than ever.
The assumed real growth of public consumption in 2011-2015 and a supposed normalisation of activity etc. imply that public service expenditure as a share of GDP declines to around 26¾ per cent in 2015.

Public consumption as a share of GDP in 2015 is thus slightly higher than the guideline in the 2015 Plan, according to which public consumption in percent of GDP cannot exceed 26½ per cent of cyclical adjusted GDP in 2015, *cf. figure 4.1a*. In the absence of new initiatives public consumption is estimated to 27.8 per cent of GDP in 2015.

The projection reflects that the (potential) GDP-level as a consequence of the financial crisis is assumes 2 per cent lower than otherwise. This corresponds to the assessments in international institutions like EU, IMF and OECD, even though the downward adjustment in a number of cases is larger than 2 per cent. Even so, the downward adjustment of (potential) GDP is uncertain. If GDP is not lower, public consumption expenditure is 26.6 per cent of GDP in 2015. If potential GDP on the other hand is reduced by more than 2 per cent, public consumption at unchanged real growth etc. may amount to a larger share of GDP in 2015 than in the main scenario, cf. annex 2.

The projected public consumption in per cent of GDP towards 2015 is thus relatively uncertain, reflecting uncertainty about the projected nominal GDP in 2015 etc.[3] In general, public consumption as a share of GDP is still slightly above the guideline in the 2015 Plan.

[3] Including uncertainty on the pace of the adjustment of wage shares and the composition of demand in 2015, that affects revenues from indirect taxes which are included in GDP.

Figure 4.1a
Public service expenses as per cent of GDP, 1980-2015

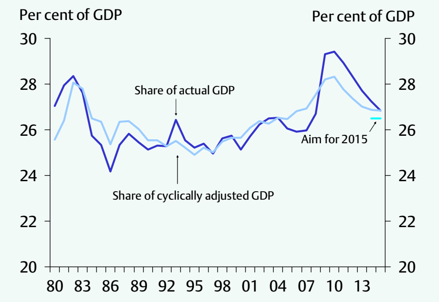
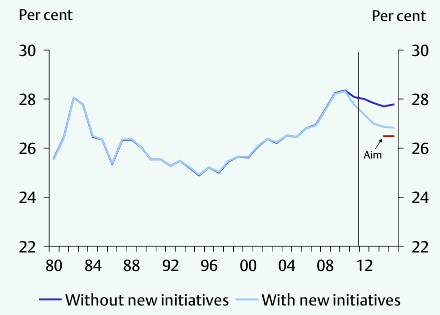


Figure 4.1b
Public service expenses as per cent of cyclically adjusted GDP with and without new initiatives



Kilde: Danmarks Statistik og egne beregninger.

The assumption of zero growth in real public consumption in 2011-2013 implies that public employment and real public purchase of goods can be maintained at 2010-levels. In the projection, public employment is thus technically assumed to be constant towards 2013, while the remaining part of the consolidation is borne by public purchase of goods. This implies that public purchase of goods decreases as a share of total public consumption towards 2015, when the level (technically) corresponds to the level in 2008, *cf. figure 4.2a*.[4]

The National Accounts do not assess overall productivity growth in the public sector. With the applied principles productivity improvements in the public sector do not enter into the real growth rate of public consumption, even when public services are improved.

The technical projection implies that public employment is unchanged from 2010 to 2013 and increases slightly from 2013 to 2015. This can be seen in light of public employment being around 8,000 persons higher this year (2010) than in CP08. The technical assumptions imply that public employment in 2013-2015 is roughly in line with CP08 (and 6,000-8,000 persons higher than in the original 2015 Plan). In line with the original 2015 Plan, public employment is assumed to equal 30 per cent of total employment in 2015, i.e. the same share as in 2005 (when cyclical conditions were largely neutral in terms of employment), *cf. figure 4.2b*.

The evolution of public employment towards 2015 will depend on how resources for public services are allocated between public employment and (net) purchases of goods and services from the private sector. This partly hinges on local decisions made by the individual units of the central government, regions and municipalities.

[4] Public purchase of goods as a share of GDP is measured net of public sales to the private sector, and the technical reduction may thus reflect reduced purchase or increased sales of public services to the private sector. No technical assumptions have been made on the distribution on public purchase and public sales, respectively.

The 2015 Plan does not include targets for public employment (and neither did the former 2010 Plan).

Figure 4.2a
Public goods purchase quota

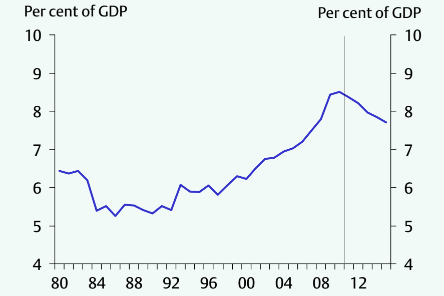
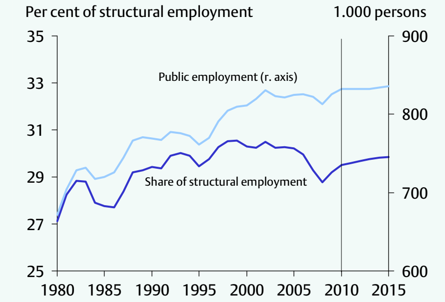


Figure 4.2b
Public employment, 1980-2015



Other expenditure

The share of social transfer expenditures in GDP depends *inter alia* on cyclical conditions. From 2008 to 2011 transfer expenditures are thus expected to increase by 2½ per cent of GDP, after which the assumed normalisation of the cyclical position reduces transfer expenditures to 16¼ per cent of GDP in 2015.

Increased expenditures on retirement pension and student grants in light of the fulfilment of educational targets in 2015 (cf. chapter 3) contribute to an underlying increase in social transfer expenditures in per cent of GDP from 2008 to 2015.

The reduction of other primary expenditures towards 2015 reflects the included technical consolidation requirement of around 11 billion DKK that reduces the growth rate of public transfers to the private sector or abroad, and thus strengthens the general government budget balance by approx. 0.5 per cent of GDP in 2013.

4.6 Net lending by sub-sectors

Central government finances are projected to show deficits towards 2011, while local government's finances are assumed to be in balance in the projection period, c*f. table 4.7*. The central government surplus of 3.4 per cent of GDP in 2008 is projected to deteriorate to a deficit of 3 per cent of GDP in 2009 and 5½ per cent of GDP in 2010. In 2011 the outlook for public finances and fiscal policy is – as previously mentioned – based on technical assumptions, and central government deficit is estimated to 4.2 per cent of GDP.

Given the assumed consolidation of public finances and the normalisation of the activity level towards 2015, central government finances is expected to in balance by 2015.

Table 4.7
Public finances by sub-sectors

	ESA	2008	2009	2010	2011	2012	2013	2015
Per cent of GDP								
General government budget balance	S13	3.4	-3.0	-5.5	-4.2	-3.2	-1.9	0.0
Of which:								
- Central government	S1311	3.9	-3.0	-5.5	-4.2	-3.2	-1.9	0.0
- Local government	S1313	-0.4	0.0	0.0	0.0	0.0	0.0	0.0
- Social funds	S1314	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: It is technically assumed that net lending of the local government as whole is balanced for the period 2009-2015.
Source: Statistics Denmark and own calculations.

The finances of local governments should in principle balance on a cash basis. The annual agreements on local government finances ensure full financing of the agreed expenditure growth, in part through the local government block grant. This applies within the framework of the tax freeze, which applies, respectively, for the municipalities as a whole and for the regions as a whole.

In individual years there may be local government surpluses or deficits – on a national accounts basis (net lending) – of a certain magnitude. Statistics Denmark's latest figures for public finances in 2008 (published on November 3rd 2009) implied a deficit on national accounts basis (net lending) in local governments of 7.1 billion DKK or 0.4 per cent of GDP. In the distribution of the government budget surplus across sectors in table 4.7, the local government budget balance is assumed to balance from 2009.

The *social funds* include the unemployment funds and the employees' wage guarantee fund (LG). Net lending in social funds rounds off to 0.0 per cent of GDP in each of the years 2008-2015.

4.7 Public debt

Based on the development of the public finances in the Convergence Programme and policy measures, among other things related to the financial turmoil, public debt is expected to increase considerably over the next few years. The EMU-debt is estimated to increase by approx. 8 per cent of GDP from 26¾ per cent of GDP in 2007 to 46¼ per cent of GDP by the end of 2011. From 2011-2015 EMU debt is relatively constant in per cent of GDP following the considerable consolidation of public finances, *cf. table 4.8*.

The EMU debt started rising in 2008 despite a surplus in public finances at approx. 3½ per cent of GDP. To improve the Danish pension sector's opportunities for hedging in DKK a 30-year Danish government bond was issued in November 2008.

The revenue from this amounting to up to 90 billion DKK was placed on the government's account in Danmarks Nationalbank. The large issuance of government bonds increased EMU-debt in 2008 by 5.2 per cent of GDP due to the increase in liabilities of the government. The corresponding increase in assets of the government's account does not affect the EMU-debt as such assets are not deducted (except for government bonds held by government subsectors). A major portion of the revenue was subsequently used as an injection of hybrid core capital in credit institutions and lending to Financial Stability A/S.

In addition there was a change in the asset composition of the Social Pension Fund (DSP). As part of government debt management, the operating procedures of the DSP were adjusted in order to extend the possibility of investments in other assets including mortgage bonds. The adjustment seeks among other things to give the government the opportunity through the DSP to hedge the government's interest rate risk in connection with the financing of public housing. By letting the government borrow and invest in the same bonds, the government's interest rate risk is hedged, i.e. any higher interest expenditures savings are offset by higher interest income.

Table 4.8
General government gross debt (EMU-debt)

	2008	2009	2010	2011	2012	2013	2015	2008-15
Per cent of GDP								
EMU-debt (end-year level)	33.4	38.5	41.8	46.2	48.3	48.1	45.0	
Change in debt ratio		5.1	3.3	4.4	2.0	-0.2	-1.0	11.6
Contribution to the change in debt ratio:								
- Primary budget balance		2.5	4.9	3.4	2.2	0.9	-0.8	13.1
- net interest payments		0.5	0.6	0.8	0.9	0.9	0.8	5.4
- Nominal GDP growth		1.5	-1.4	-1.5	-2.1	-2.3	-2.3	-10.5
- Financial conditions etc.[1]		0.6	-0.8	1.8	1.0	0.3	1.3	3.6

1) Financial conditions etc. reflect e.g. the Social Pension Fund's stock of government bonds, which is deducted in the EMU debt. To this is added the effect of restructuring of government assets and liabilities (privatization etc.), payment changes in the tax area, issuance price losses, relending to state guaranteed entities etc.

Source: ADAM Database and own calculations.

It is overall assumed that the EMU-debt to increase by approx. 11½ per cent of GDP from 2008 to 2015, cf. Table 4.8.

The projected developments in the primary balance of the central and local governments tend to increase the EMU-debt by approx. 13 per cent of GDP from 2008 to 2015, while the cumulated net interest balance of central and local governments in the same period amounts to approx. 5½ per cent of GDP, cf. Table 4.8.

The growth in nominal GDP contributes in isolation to a reduction of the EMU debt of approx. 10½ percentage points when the debt is measured as a share of GDP.

Finally, other financial items – reflecting among other things the issuance price losses, relending to state guaranteed entities, restructuring of government assets and liabilities and the Social Pension Fund's holding of government bonds – contributed to an overall increase in the EMU debt of approx. 3½ per cent of GDP from 2008 to 2015

The public sector's financial assets are not included in the EMU-debt. The net public debt as measured by Statistics Denmark based on the national accounts, in contrast, takes into account all government financial assets and liabilities in the central and local governments and in social funds, *cf. box 4.5*. As a consequence assets in the form of loans to state-guaranteed entities and shareholdings are included in the case of the central government[5]. Net public debt is used in the assessment of fiscal sustainability[6].

In 2000, net public debt amounted to 22½ per cent of GDP. By the end of 2008, the net public debt had turned into a net asset position of approx. 6½ per cent of GDP, *cf. table 4.9*. The budget balance development implies a build-up of public net debt at 9½ per cent of GDP towards 2013, after which the net debt decreases slightly to 8½ per cent of GDP in 2015 in the projection incl. consolidation and reform requirements.

Table 4.9

Different public debt concepts and trends, end-year

	2000	2008	2009	2010	2011	2012	2013	2015
Per cent of GDP								
EMU-debt	51.5	33.4	38.5	41.8	46.2	48.3	48.1	45.0
Net public debt [1)]	22.5	-6.5	-3.8	1.8	6.0	8.4	9.4	8.5
Net debt of central and local governments[2)]	23.6	-6.5	-3.8	1.8	5.9	8.4	9.4	8.5

1) 2009-2015 is technically projected based on the development of the general public balance etc.
2) 2009-2015 is technically projected based on the development of the budget balance of the central and local governments.
Source: Statistics Denmark and own calculations.

Net wealth in the social funds (i.e. the unemployment insurance funds and the employees' wage guarantee fund) amounts to close to 0 per cent of GDP for the years 2008-2009. Thus, there is only a marginal difference between the national account figures for total public net debt and net debt of the central and local governments.

[5] The net public debt (as opposed to the EMU-debt) valued at market value. Changes in net debt follow primarily the public balance (net lending), but is also affected by exchange rate adjustments.
[6] Net debt is definitional aligned with net lending in national accounts.

Box 4.5

Technical assumptions about the state and municipal financial assets

Since the financial crisis escalated in the autumn of 2008, the government's financial assets increased from below 40 to approx. 50 per cent of GDP. The increase in the financial assets should among other things be seen in light of the actions taken to support financial stability, see figure a. Going forward several assumptions have been made with respect to the reduction of a number of assets, including:

- Government account at Danmarks Nationalbank
- Government capital injections in credit institutions
- Re-lending to Finansiel Stabilitet A/S
- The Social Pension Fund (SPF) portfolio

The Balance of the central government's account at Danmarks Nationalbank is assumed to decline from a high level of around 10 per cent of GDP to a more normal level of approx. 3 per cent of GDP in 2015 and thereafter. The return on Government's account is set to equal Danmarks Nationalbank discount rate from 2011 onwards.

Repayment of the state capital injections in financial institutions of 46 billion DKK is projected in accordance with the reimbursement mechanisms, the capital injection was administered under. It is technically taken into account that around 10 billion DKK of the subscription is repaid in 2012, while the remaining approx. 36 billion DKK is repaid in 2014.

Finansiel Stabilitet A/S is expected to have repaid their lending during 2013, when the last re-lending is due.

Finally, the expected market value of the Social Pension Fund (SPF's) total portfolio is assumed to be exhausted in the 2034th. SPF's portfolio of government bonds, which are deducted in the EMU debt, is expected to be reduced to zero in the 2028th. The time difference of approx. 6 years is attributable to the Fund's holdings of other bonds, including mortgage bonds. The stock of non-government bonds are not counted in the EMU debt.

Other assets – i.e. beyond the four mentioned above – are technically considered to be a constant proportion of GDP in the long run.

Reduced borrowing needs in connection with liquidation of assets will in isolation reduce the EMU debt. The reduction of assets does not change the net debt, which is used to evaluate the fiscal sustainability.

Figure a

State and municipal financial assets, per cent of GDP

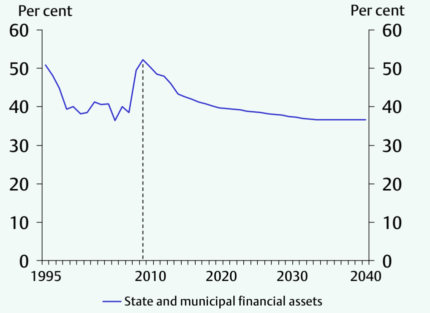
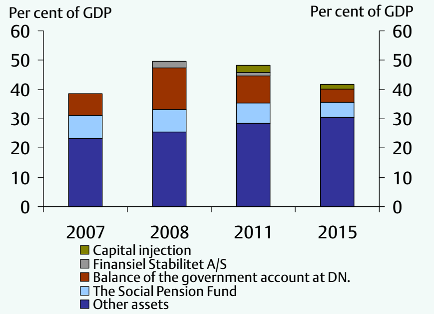


Figure b

State and municipal financial assets in selected years, per cent of GDP



Source: ADAM data base and own calculations.

Assumptions about the return of central and local governments' financial assets and liabilities

In the Convergence Programme a gradual normalization of the currently low interest rates is assumed as the economic situation in the euro area and Denmark is assumed to gradually become normalized. The 10-year government bond rate increases in the projection gradually from the low level of 3.6 per cent in 2009 to 4 per cent in 2011 (*cf. Economic Survey,* December 2009) and then to just above 5 per cent in 2015, *cf. Figure 4.4a.* The short-term money market interest rates increase from the record low level of 1.7 per cent in 2010 to 2.5 per cent in 2011 and then gradually to 3.5 per cent 2015.

The public debt had in 2009 an average interest rate around 4.9 per cent (measured by the implicit interest rate, i.e. interest payments as a share of total liabilities of the previous year). When the implicit interest rate was higher than e.g. the 10-year government bond yield (at 3.6 per cent in 2009), it is, among other things, because that a portion of the debt is issued earlier where interest rates were higher. The implied rate is in *Economic Survey,* December 2009 estimated to decrease to approx. 4½ per cent in 2011, partly reflecting that a larger proportion of the debt is rolled over at lower interest rates. Towards 2015 it is assumed that the implicit interest rate gradually increases again to approx. 4.8 per cent, which are lower than in 2000-2008, *cf. Figure 4.4b.*

Figure 4.4a

Assumed10 year government bond rate and money market rate, 2000-2020

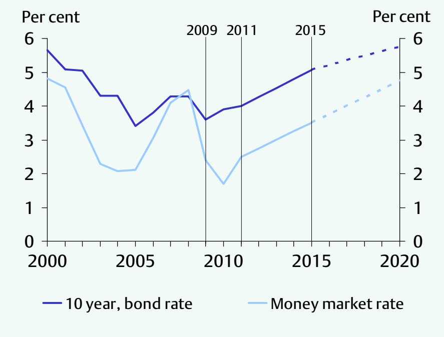
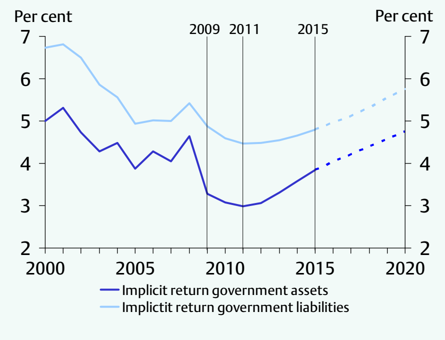


Figure 4.4b

Return on government financial assets and liabilities, 2000-2020



The public assets gave in 2009 a return of approx. 3.3 per cent, and the return is estimated to decrease to 3 per cent in 2011. This reflects the low level of interest rates, and that the state due to the financial crisis has increased its deposits in its account in Danmarks Nationalbank. Towards 2015 it is assumed that the return of public assets will rise to just 3.8 per cent, which is approx. 1 percentage point less than the return on liabilities. This is in line with experience from the past 15 years where the return on the liabilities on average has been approx. 1 per cent higher per year than the return on the assets included in the balance of public finances. In the last 15 years there has furthermore on average been positive (net) revaluations equivalent to approx. 1 per cent of the value of assets so that the total return (i.e. interest, dividends and revaluations, etc.) has been virtually the same on the asset and liability side[7]. It is the total return (including revaluations), which helps to determine the development of net debt.

4.8 Institutional set-up

As previously mentioned, the key guideposts for the planning of public finances and fiscal policy are:

- *Fiscal policy*: Should contribute to economic stability and sustainable developments in public finances over the longer term, as well as maintaining structural balance in 2015, cf. chapter 2.
- *Expenditure policy*: The planned growth in real public consumption expenditures, including technical assumptions of zero growth in 2011-2013, reflects the consolidation requirement in order to fulfil the target in the 2015 Plan of structural balance in 2015 and the expected EU recommendation. As mentioned, the plan contains a guideline for nominal public consumption expenditure of 26½ per cent of cyclically-adjusted GDP in 2015.
- *Tax policy*: The tax reform in *Spring Package 2.0* and the tax freeze are the cornerstones of tax policy, cf. chapter 2.

Fiscal policy objectives are based on the national accounts specification of public expenditures and revenues, whereas the concrete implementation of fiscal policy is based on the fiscal bill and local government budgets that are specified according to other accounting principles, classifications etc. than the national accounts. To be able to compare the actual budgeting to the fiscal policy objectives, Statistics Denmark provides a detailed specification of public budgets on a national accounts basis.

The budget process and agreements on the economy of local governments

The annual process of budgeting in the central government begins in early spring, as the government determines the overall allocation of real public consumption growth to expenditure areas, including the scope for public consumption in municipalities

[7] In the technical projection after 2015, a gradual adaptation to the long-term level of return of 5.75 per cent is assumed, as included in the 2015 Plan, *cf. Technical Background Report to the 2015 Plan, Ministry of Finance 2007*. In CP09 the return on the assets side is split into an interest rate of 4.75 per cent (included in net interest payments) and an average annual revaluation of 1 per cent. (not included in the balance, but affect the net debt equivalent to a yield premium of 1 per cent). Thus, the total return of 5.75 per cent on both the asset and liability side in the calculation of the Sustainability Indicator. (The growth adjusted real interest rate is also still around 2 per cent).
Compared to the assumption in CP08 the public budget balance is weakened in isolation by the lower return on the public assets compared with the return on liabilities. Conversely is the interest rate level lower towards 2015 than in CP08. In total the net interest expenditures is increased in 2015 with approx. 0.3 per cent of GDP due to the changed assumptions. The structural budget balance in 2015 is unaffected, because the primary budget balance is strengthened by approx. 0.3 per cent of GDP, mainly due to the slower increase private interest expenditures, which reduces the tax value of interest deductions and increase consumer spending and VAT revenues, etc. The reported changes are also approx. neutral to fiscal Sustainability Indicator, which is strengthened marginally.

and regions. On this basis, expenditure ceilings are reported to the individual ministries.

The individual ministries allocate the reported expenditure ceilings between government administrations and institutions etc., which draw up a budget complying with the assigned expenditure levels. The budget proposal is subsequently compiled from the individual ministerial contributions.

Part of the central government cost-budget rests on fixed expenditure allocations. This applies for central government current expenses and some grants. The fixed expenditure allocations imply that the individual ministries are to a large extent allowed to make reallocations within the determined expenditure ceiling. The fixed expenditure allocations do not apply for cyclical expenditures, statutory transfer expenditures, interest expenditures on central government debt and EU-contributions.

In June, the central government enters an agreement with municipalities and regions on their overall expenditure and tax levels and guidelines for political and economic priorities. The agreements are collective and apply for all municipalities and all regions as a whole, respectively. The agreement is thus not legally binding.

The framework for agreements on the economy of the municipalities has been adjusted in the spring 2008 in order to ensure that the budget set up induces local government budgeting in line with the tax freeze and the agreements with the government.

Following the agreements on the economy in local governments, municipalities and regions adopt budgets for the coming year in October. Annual accounts for municipalities and regions are normally available in May (after the end of the budget year).

The government presents the budget proposal for the coming year in August.[8] Subsequently, the budget proposal is subject to political reading in the Danish Parliament. Typically, a political agreement on the fiscal bill is reached between the government and one or more political parties in November, and the fiscal bill is thus normally adopted in December.

During the fiscal year the ministries are responsible for monitoring expenditure developments. The ministries are obliged to seek to finance any additional expenditure through savings elsewhere. The ministries are also obliged to inform The Ministry of Finance and the Danish Parliament about changes in the assumptions/premises for example in relation to cyclical expenditures. During the fiscal year the ministries prepare two or three reports on expenditure developments to the Ministry of Finance.

[8] The fiscal year follows the calendar year.

The Ministry of Finance therefore has the means to monitor developments in total central government expenditures. Expenditure developments are reported to the Danish Parliament in Budget Outlooks published in May, August and December. The public accounts are usually available in April, i.e. about 4 months after the end of the fiscal year.

5. Long-term projection and fiscal sustainability

5.1 Projection principles and effects of the 2006 pension reform

The long-term projection underlying Convergence Programme 2009 essentially assumes unchanged structures in the economy from 2015 and unchanged policies, while including the effects of certain central already-decided policies reaching far ahead in time (after 2015). Hence, the programme scenario takes into account the projected effects of the Welfare Reforms (notably the pension reform, which essentially takes effect from 2019), the tax reform in the *Spring Package 2.0* up to 2019, the Quality Fund for public investments until 2018 and the objectives in the energy and climate policy areas covering the period to 2020 and beyond.

Fiscal sustainability implies that the tax and expenditure priorities that have been decided up to 2015, and the public expenditure path that occurs in the projection thereafter, can be financed without raising the tax burden and with net public debt stabilizing as a share of GDP in the (very) long term. Hence, the determination of fiscal sustainability can be seen as a "consistency check" of whether the policies planned until 2015 can be sustained after 2015, given unchanged taxes, public expenditure standards etc. In this vein, the projection for the period after 2015 reflects an extrapolation of the economic structures as they appear in 2015, and not an actual forecast.

The following *calculation principles* are applied <u>after</u> 2015:

- Public consumption expenditure is projected according to the principle that nominal expenses *per user* grow in line with wages and the number of users of public services evolves in line with the calculated impact of changing demographics (the so-called demographic "pull" or demographically-induced "demand" for public services). Public sector wages grow in line with private wages, and public net purchases of goods and services from the private sector make up a constant share of public consumption expenditures. These principles imply that the number of employees (whether in the private or public sector but providing tax-financed services) can be unchanged relative to the number of users of public services and that the implied real growth in public consumption expenditure will depend on private sector productivity growth, *c.f. box 5.1*.
- Income benefits are assumed to rise in line with private sector wages such that income replacement rates remain constant overall (in case of e.g. job loss or retirement).
- Labour participation rates, and the propensities at which various income benefits are received, are assumed constant by age, gender and ancestry. The overall (structural) unemployment rate is constant (3.6 per cent). Further included is a contribution to employment from a gradually higher level of education in the workforce, and for immigrants also gradually higher employment rates as the av-

erage number of years of residence in Denmark increases. The assumed effects of the Welfare Agreement beyond 2015 are added to these basic assumptions. This mainly concerns the pension reform, including the agreed indexation of the age thresholds in the Voluntary Early Retirement Pension scheme (VERP) and public old-age pension in line with longevity, which has a substantial impact on employment in the long run.

- The projections of public investments are derived from the principle that the ratio between the gross public capital stock and public production of goods and services is constant after 2018, when the Quality fund ends.
- Public subsidies and net foreign transfers are constant relative to GDP.
- The nominal principle of the tax freeze is included until 2019. After this, the tax burden is unchanged. Hence, tax rates remain constant (in line with the tax freeze) while excise duties etc. are indexed to prices.
- The revenue from taxation of North Sea activities is projected on the basis of The Danish Energy Authority's long run forecast of oil and gas production and the oil price projections of the International Energy Agency (IEA) from 2009.
- A gradual improvement in energy efficiency is assumed in both consumption and production. The estimated fiscal consequences of the objectives in the energy and climate strategies are also included. This mainly concerns lower revenue from energy taxes because of lower energy consumption relative to GDP.

Box 5.1

Public consumption expenditures in the projections and real growth in public consumption

In the long-term projections, it is assumed that public consumption expenditures "per user" follow wage changes while the number of "users" follows demography.

This implies that public consumption expenditures *constitute a constant share of GDP* when demography (and the wage ratio) is stable. In the projections it is, thus, assumed that the public sector share of the economy remain unchanged (at unchanged population composition).

These assumptions imply, in principle, that public employment can remain constant year by year while at the same time, public purchases from the private sector (net) can increase with wages (in a situation with stable demography).

There are, on the other hand, no explicit assumptions regarding real spending growth in the longer term. Real growth will depend on productivity growth, namely in the private sector.

If productivity growth in the private sector is present, wages increase more than prices, including prices on private sector goods and services bought by the public sector. In that situation, there will be room for real growth in public purchases (because expenditures on purchases, as mentioned, are assumed to increase with wages). Subject to the standard assumptions in the projections, real growth in total public consumption is, thus, about 0.7 per cent per year (in a situation with stable demography) as a result of continuous increases in real public purchases and an assumed productivity growth of about 2 per cent (including industries that produce goods and services for the public sector).

If, on the other hand, there are no productivity gains in the private sector, wages do not increase more than prices. In that situation, there will be no real growth in public purchases – nor in public consumption – in the projections, but public consumption expenditures continue to make up a constant share of GDP (at stable demography).

Box 5.1 (continued)

Public consumption expenditures in the projections and real growth in public consumption

If, nevertheless, – i.e. in spite of no productivity growth in the economy as in the example above – real public purchases grow (and public employment is unchanged), public expenditures will rise as a share of GDP – and public finances will be weakened compared to the assumptions that are employed in the projections.

Zero growth in public consumption (real growth rate of zero) implies that public consumption expenditure can increase in line with wages and prices. This means that municipalities, regions and the state in principle can keep the number of employees unchanged (wages) and buy the same products as the year before (prices). Furthermore, productivity gains in the government "stays in the sector" – i.e. contribute to enhance service levels.

As mentioned above, there will be zero real growth with the principles applied in the long-term projections, if there is no productivity growth in the economy. In recent years, productivity growth in the private sector was very weak (even negative in 2008-2009 in the non-primary business sector).

In the scenario that incorporates the Welfare Agreement, consolidation up to 2013 and the reform requirements in 2014 and 2015, the technical projection indicates that the structural deficit will rise for a period of just over 25 years after 2015. The rising deficits are due to relatively large cohorts of high age and particularly many pensioners etc. relative to the labour force, while revenues from oil and gas extraction in the North Sea are declining, *cf. figure 5.1a-d*.

In the longer term (after 2040), a rise in the labour force and smaller cohorts of high age are expected to contribute to a period of structural surpluses (excluding interest expenditures) implying that the projected path is sustainable and debt is stabilised. If the assumptions about consolidation and reform requirements towards 2015 are not met, the structural balance will deteriorate significantly (for example to up to 10 per cent of GDP in 2060 given the technical assumptions after 2015), and debt will not be stabilised (fiscal policy does not satisfy the requirement of sustainability), cf. figure 5.1a and 5.1b.

The post-2015 paths for primary revenues and expenditures as shares of GDP are mainly determined – aside from the Welfare Agreement – by higher expenditure for health and long-term care owing to demographics, increasing tax revenues from private pension schemes and declining tax revenues from energy taxes and declining revenues from the North Sea activities, as oil and gas reserves are gradually depleted.

In the projection, primary revenues are fairly constant relative to GDP after 2015, while primary expenditures are rising until about 2030-2040 and decline thereafter, *cf. figure 5.2a.*

Figure 5.1a

Structural balance and primary structural balance

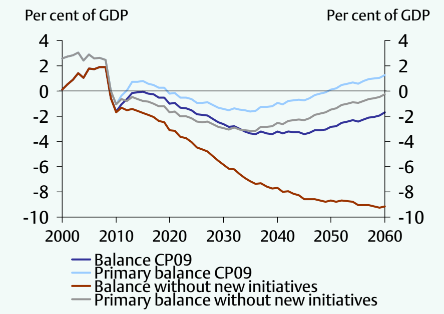
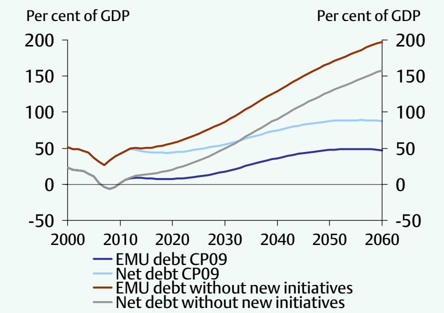


Figure 5.1b

Net debt and gross debt (EMU definition)



Source: Statistics Denmark and own calculations.

Figure 5.1c
The labour force share of the population

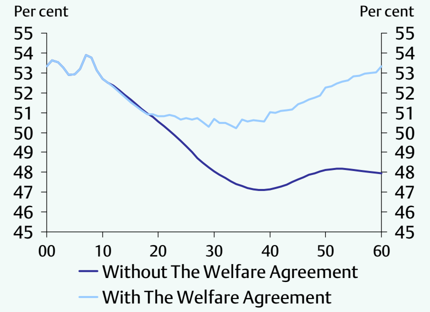
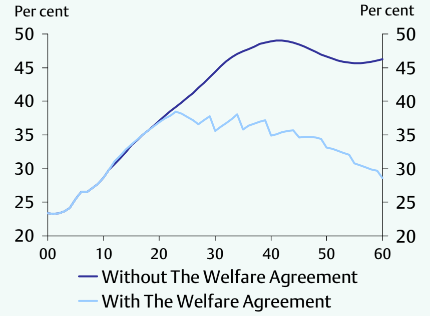


Figure 5.1d
People on old age pensions relative to the labour force



Source: Statistics Denmark and own calculations.

The increase in expenditures up to 2030-2040 mainly reflects higher expenditures for health and long-term care related to demographics. Hence, total public consumption accounts for an increasing share of GDP from 2015 to about 2040, which is when the elderly age groups are largest relative to the labour force, *cf. figure 5.2b*. After 2040 the public consumption-to-GDP ratio subsides, mainly as a consequence of the ongoing indexation of the age thresholds for early retirement and old age pension that enlarge the labour force and thereby GDP (without affecting real public service spending in the projection). According to the population projection, the cohorts of high age are relatively smaller after 2040.

The projection of health expenditure includes the effects of so-called "healthy aging" and it is therefore assumed that the age-specific health costs are gradually reduced in line with increasing longevity and better health, *cf. towards new goals – Denmark 2015, Technical Background Report to the 2015 Plan, December 2007*. In particular since the turn of millennium, health expenditures have increased more than what the technical projection would warrant. If the trend continues, the implication is that expenditure growth in other areas must be reduced, or that future generations will have to find other ways to generate the necessary funding.

Figure 5.2a
Primary revenues and expenditures in central and local government (cyclically adjusted)

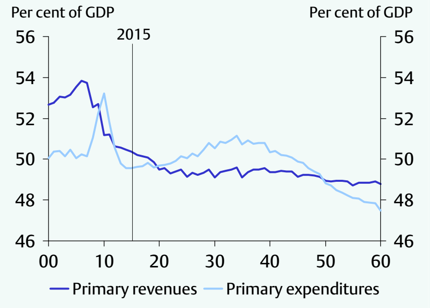
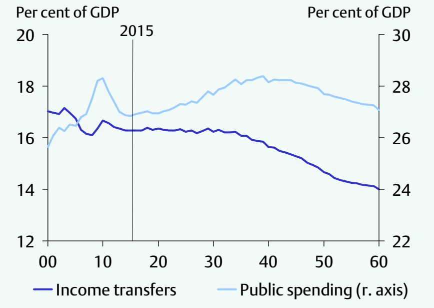


Figure 5.2b
Income transfers and public spending



Note: Expenditures in figure 5.2a and b are relative to GDP corrected for cyclical effects. Towards 2015 the expenditures are roughly corrected for cyclically determined changes in unemployment benefits etc. Revenues in figure 5.2a are corrected for temporary deviations from the structural level of revenue from the North Sea activity and pension tax.
Source: Statistics Denmark and own calculations.

Expenditure on income transfers is projected to decrease relative to GDP as the adjustment of pension age thresholds in the Welfare Agreement begins to take effect from 2019 when the initial 2-year increase of the age thresholds for VERP and public pension is phased in (during 2019-2022 for the VERP age and 2024-2027 for the pension age) and as the indexation of the age thresholds starts taking effect from 2025 for the VERP age and 2030 for the public pension age. The decreasing income transfer expenditures mainly reflect lower pension expenditure due to increases in the pension age in line with the expected remaining lifetime for 60-year olds, in conjunction with demographic factors implying gradually fewer pensioners compared to the labour force – and hence less pension expenditure relative to GDP. At the same time, the maturing of the labour market pension schemes over time means more pensioners will have income over and above their public pension, which reduces government outlays for pension supplements and housing allowances etc.

The revenue from direct taxes (excl. corporate taxes from carbon tax liable companies) is relatively constant as a per cent of GDP from 2015 to about 2030 and increases gradually after 2030, *cf. figure 5.3a*. This increase in taxes relative to GDP after 2030 reflects in particular the effect of increasing (net) pension payments in line with the maturation of labour market pensions coming to taxation, *cf. figure 5.3b*. North Sea revenues decrease in per cent of GDP through 2050 (and thereafter) in line with the depletion of oil and gas resources.

Figure 5.3a
Direct taxes and indirect duties

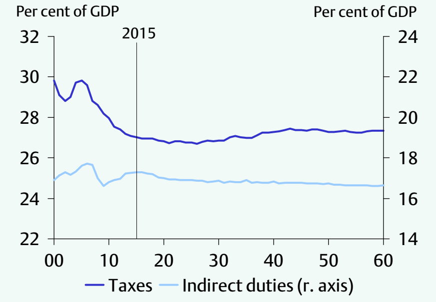
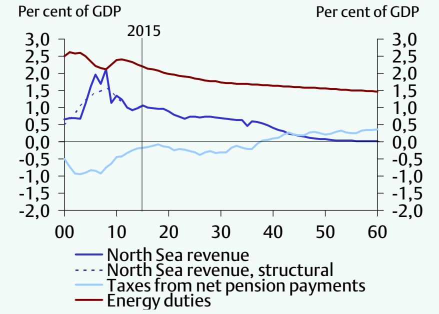


Figure 5.3b
North Sea revenue and taxes from net pension payments



Note: The direct taxes in figure 5.3a do not include corporate taxes from carbon taxable companies. 3-year moving averages of direct taxes are displayed in figure 5.3a and net pension payments in figure 5.3b.
Source: Statistics Denmark and own calculations.

The revenue from indirect taxes increases relative to GDP towards 2013 mainly as a consequence of the phasing in of the financing elements of the *Spring Package 2.0*. Thereafter revenues are set to decrease up to 2019, partly due to the objectives in the Energy Agreement of reduced energy consumption in 2020 and the nominal principle of the tax freeze. After 2020 revenues continue to decrease, mainly due to declining energy consumption relative to GDP and a higher share of renewable energy that reduces the revenue from energy taxes.

Effects of the pension reform in the 2006 Welfare Agreement

The Welfare Agreement passed in 2006 provides increased assurance against substantial fiscal imbalances developing over the longer run as life expectancy and the number of elderly citizens is set to increase, *cf. CP06* and *CP07*.

Without the initiatives in the Welfare Agreement, the primary structural balance for central and local governments would deteriorate by up to 5½ per cent of GDP from 2012, *cf. figure 5.4a*. This mainly reflects higher pension expenditure and lower employment in the absence of the Welfare Agreement, *cf. figure 5.4b*. The initiatives in the Welfare Agreement – primarily the pension reform – improve the structural balance by 3½ per cent of GDP in 2040, implying that the balance in total is weakened by 1¾ per cent of GDP from 2015-2040 and not by 5¼ per cent of GDP. The Welfare Agreement implies – in conjunction notably with the relatively smaller cohorts of high-age – that the primary balance improves after 2035 in the projection.

Figure 5.4a
The change in the structural primary balance from 2012 with and without The Welfare Agreement

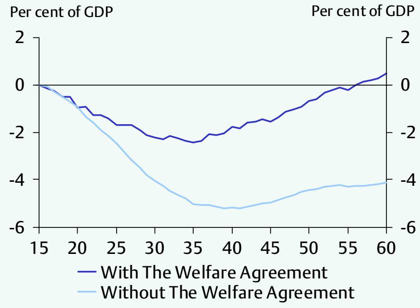
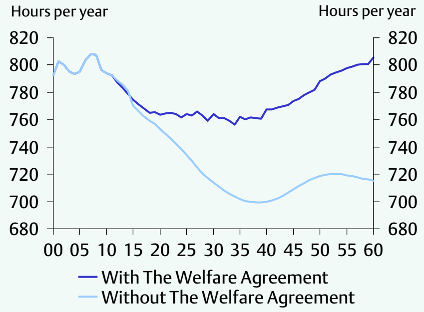


Figure 5.4b
Achieved working hours per capita with and without The Welfare Agreement



Source: Own calculations.

CP09 is based on the latest population projection from DREAM *(Danmarks fremtidige befolkning, august 2009)*. Compared to the population projection underlying CP08, the population projection is by and large unchanged in terms of the projected increase in longevity. The expected increase in longevity in the current projection is broadly in line with the projections of e.g. Statistics Denmark and also with the population scenario applied in the European Commission's evaluation of long-term sustainability (*The Long-term Sustainability of Public Finances in the European Union, European Commission, 2009*).

The Welfare Agreement addresses the long run fiscal challenges stemming from longer longevity, which in the absence of the reforms would almost automatically lead to more years in retirement, and that increased longevity also increases public spending on health and long-term care. The increased longevity, however, still contributes to deteriorate public balances due to increased public expenditure on health and long-term care towards 2025, *cf. CP07*.

Around four fifths of the deterioration in public finances that would otherwise be associated with increasing life expectancy from today's level is estimated to be offset by the agreed indexation of the age thresholds in the pension system as longevity increases and health improves, *cf. CP07*. On top comes the effect of the 2 year increase in the VERP and pension age limits that is phased in during 2019-2022 and 2024-2027, respectively. This 2 year increase is independent of any increases in longevity from today's level, and can be seen in the light of the increase in lifetime expectancy for 60-year olds which has occurred since around 1995.

Appendix 1. Policy response to the global economic crisis

Overview of Danish initiatives

Fiscal policy

- **The Fiscal Bill for 2009**, adopted in December 2008, entails an expansionary economic policy, including increased public consumption expenditures and tax reductions following the agreements on Lower tax on earned income from 2007.

- The agreement on a **green transport policy** from January 2009 includes initiating and front-loading public investments and other traffic related initiatives for a total 5 billion DKK in 2009 and 2010.

- The agreement on **extended credit periods** for firms, implying interest savings for firms and a central government interest loss of 2 billion DKK in 2009.

- **Tax reform**, included in the **Spring Package 2.0** of March 2009, which is fully financed and helps to increase labour supply etc. and strengthens the ability to finance public expenditures in the longer run. The tax reform takes effect as of 2010, tax reductions applying initially, while the financing elements are gradually phased in.

- A possibility to withdraw **SP-savings** from 1st of June 2009 till 1st of May 2010. Strengthens demand and improves the government budget in the short run.

- A **home repair and renovation scheme** of 1½ billion DKK, including a focus on energy-saving modifications.

- 2 billion DKK increase in **local government investments** in 2009 on top of local government budgets. This implies that total local government investments amount to 17½ billion DKK in 2009 (measured in 2009-prices).

- **Agreements on the local government economy** in 2010, from June 2009, implies that the government and Local Government Denmark (KL) agreed on a further increases in investments concerning day care, primary schools, elderly and other local government areas, including roads. Financing is provided for investments that amount to 20 billion DKK in 2010 (measured in 2010-prices). No upper limit for investments has been defined for 2010.

- **The Fiscal Bill for 2010**, passed in December 2009, implies in extension of the fiscal bill for 2009 a considerable easing of fiscal policy. A range of growth promoting initiatives is included such as investments amounting to 5 billion DKK in 2010-2013. Furthermore, A-tax and labour market contribution credit periods remain extended and the substantial increase in local government investments is supported by new debt financing options amounting to 3 billion DKK. The effect on economic activity of the fiscal bill for 2010 is estimated to 0.8 per cent of GDP. In addition, it is made possible to withdraw tax exempt self pension funds amounting to 4½ billion DKK, which is estimated to stimulate the economic activity by a further 0.1 per cent of GDP in 2010.

- The estimated **aggregate effect** of the release of SP-savings, the self pension funds, and the expansionary fiscal policy in 2009 and 2010 contributes to a rise in GDP of 2¾ per cent, and an isolated effect on the employment of around 50,000 persons compared to a neutral policy scenario. Public investments are planned to increase by 30 per cent in total in 2009 and 2010.

Overview of Danish initiatives (continued)

Monetary policy: fixed exchange rate policy etc.

- **Monetary policy interest rates.** The monetary policy interest rate in Denmark (the central bank lending rate) has been reduced to 1.05 per cent and has never been lower. This supports the real estate market and reduces financing costs in financial institutions. When financial turmoil peaked, the interest rate spread to the euro area increased to1.75 per cent, but the interest rate spread has since been brought down to 0.05 per cent – similar to the spread before the crisis.

- **Foreign currency reserves** have increased significantly, contributing to support the fixed exchange rate policy.

- **30-year loans**. The central government issued 30-year government bonds for about 90 billion DKK in the autumn. The 30-year bonds serve as an instrument for risk-management in the pension sector. The foreign currency reserve has been strengthened to the extent that the hedging instruments have affected the foreign-exchange position of the pension sector.

- **The Social Pension Fund's** regulations were changed in November 2008, such that a larger share of funds can be invested in other securities than government bonds, including mortgage bonds. In December 2009 the Fund expected to purchase short term mortgage bonds for approx. 44 billion DKK to cover the central government interest rate risk regarding the financing of social housing.

Danish initiatives towards financial markets

Guarantees and capital injections etc.

- **Bank Rescue Package**. Agreement on Financial Stability (October 2008) includes a government guarantee for simple creditors in banks (deposits and loans to other banks etc.) until 30. September 2010 and establish a "winding-up company", referred to as the Financial Stability Company, to handle distressed financial institutions, so that depositors and other simple creditors do not suffer losses. Financial institutions in The Danish Contingency Association pay a guarantee commission of 15 billion DKK in total in 2009 and 2010 and covers losses up to 10 billion DKK. Any losses above 10 billion DKK are covered first by the guarantee commission paid by financial institutions, after that by the Danish Contingency Association up to 10 billion DKK. Losses above 35 billion DKK are covered by the central government. Subsequently a 3-year interim arrangement for the government guarantee has been made (the Credit Package), ensuring a gradual phasing out of the guaranties. At the same time the arrangement is extended to mortgage institutions' supplementing securities on covered bonds.

- **Credit Package**. The agreement from January implies (in addition to the above mentioned) that the central government offers financial and mortgage institutions capital injections with the purpose of counteracting any further tightening of credit conditions possibly causing a credit crunch. The capital in question is interest carrying hybrid core capital that must be paid back. Under certain conditions financial institutions are allowed to convert the capital injection to equity. The interest rate on central government capital injections will be determined individually in each financial and mortgage institution based on criteria reflecting the risks on the loan.

- **Pension agreement**. In October 2008 an agreement was made with the aim of ensuring that insurance and pension companies would not be needlessly forced to sell out of shares and Danish mortgage bonds. A large sell-off of long term mortgage bonds could have caused further declines in share prices due to low market liquidity with serious consequences for the pension fund's financial positions. Technically, the agreement involved changes to the method applied in the assessment of pension companies' liabilities.

Overview of Danish initiatives (continued)

Liquidity

- **Central Bank liquidity support.** The Central bank has eased financial institutions access to liquidity facilities in the Central Bank since the summer 2008, e.g. by opening the opportunity to raise loans on new, special lending bonds on a weekly basis. Access to loans based on excess legislative solvency and certain securities has also been opened. In collaboration with the ECB and The US Federal Reserve the Danish Central Bank has established a mutual currency agreement (swap agreement) to increase euro and dollar liquidity in the markets. The Central Bank balance has been increased considerably.

- **Increased liquidity in firms.** In February credit periods were extended for VAT, income tax and labour market contributions paid in by firms. In total payments of approx. 65 billion DKK were deferred. In May it was decided to extend credit periods for the rest of the year by introducing a slow transition to normal credit periods, such that deferred payments are paid off in the autumn, with continued extension for income tax etc. agreed in Fiscal Bill 2010.

- **Export loans.** 20 billion DKK has been provided for export lending facilities in the context of the Export Credit Fund, and giving the Export Credit Fund the option to reinsure export contracts with shorter time to maturity. Furthermore, with The Business Package, the Export Credit Fund can guarantee Danish firms operational and processing credits for a total of up to 2 billion DKK.

- **Other initiatives affecting liquidity.** Access to SP-savings (and tax reductions) increases liquidity in households. SP-savings amount to around 50 billion DKK. The remaining SP-funds will be paid-out in 2010.

- **Business Package.** To improve financing options for small and medium- sized firms The Growth Fund's scheme for "growth cautioning" has been increased by 1.5 billion DKK. Furthermore the government has through the Growth Fund provided 0.5 billion DKK for a "funds of funds", hence, a fund that can invest in private venture funds. The common collective export arrangement has also been given 54 million DKK more in 2009 and 2010, and 50 million DKK has been allocated to increase the co-operation between the public and the private sector to develop new market-based solutions for the provision of (publicly-funded) welfare services.

Danish assistance to the most exposed economies

- **Loans to Iceland.** In order to contribute to the economic recovery in Iceland, Denmark, Sweden, Norway and Finland have committed to provide a total of 2.5 billion USD in form of medium term loans as supplements to loans from the IMF. The loans from the Nordic countries are conditional on that Iceland specifies a medium term fiscal consolidation plan. Denmark's contribution is estimated at 3.7 billion DKK.

- **Loans to Latvia.** Latvia has in co-operation with the IMF established a programme for economic stabilization. Following the IMF programme, Denmark, Sweden, Norway and Finland has committed to provide 2.55 billion USD (approx. 1.9 billion euro) in form of medium term loans. Denmark's share corresponds to 3 billion DKK.

- **Increase in IMF's resources.** On 17. March 2009 EU's head of (states and) governments reached an agreement that EU-countries should contribute to the increase in IMF resources by a total of 125 billion EUR, corresponding to 930 billion DKK. In the short run 75 billion euro will be supplied to the IMF through bilateral lending agreements with the member states. Denmark's lending commitment of the 125 billion euro, which ultimately is expected to be provided through the New Arrangement to Borrow (NAB), constitutes approx. 24 billion, of which 14½ billion DKK has already been supplied through a lending agreement between The Central Bank and the IMF.

Overview of Danish initiatives (continued)

- **Loans to the IMF's PRGT-fond for low income countries.** Denmark has committed to supply 200 million SDR in loan resources, corresponding to approx. 1.7 billion DKK, to finance IMF's special low interest loans for low income countries with balance of payments problems. Low income countries are hard hit by the economic crisis and the demand for low interest loans from IMF has increased substantially. The Danish loan, given through the Central Bank, is guaranteed by the Danish government.

Financial regulation and supervision

- **Regulation of the financial sector**. Work is in progress to strengthen both the regulations and the supervision of financial markets at national, European and global level. The Danish government is involved in the work to shape the concrete initiatives before their adoption and in November 2008 the Danish government published a "Danish view on openness and responsibility in EU capital markets". Capital bases in financial institutions must be strengthened and in addition to the European work on accounting rules and capital requirements in credit institutions, supplementary national solutions also need to be considered.

- **Issuing of solvency requirements.** Denmark has introduced rules according to which individual solvency requirements in financial and mortgage institutions have to be made public.

- **Increased supervision.** With Bank Package I and the Credit Package supervision of financial and mortgage institutions has been strengthened. In the future, the Financial Supervision Authority (FSA) must check the solvency requirements in all credit institutions except for the smallest ones. Moreover, work on a more efficient supervision by improved instruments and stronger scope for intervention is in progress. This applies to e.g. the FSA's opportunity to publish risk information to financial and mortgage institutions. The supervision will in the future focus more on whether or not the financial and mortgage institutions are operating in a sustainable manner. Work is in progress at a European level to establish a common European authority to supervise the financial markets and provide advice on system risks for the financial sector.

Appendix 2. Alternative scenarios and sensitivity analysis

A2.1 Cyclical risks

There is a high degree of uncertainty about economic developments going forward, both as regards the short-term cyclical outlook and more fundamentally if the downturn following the financial crisis will lead to a permanent reduction in potential GDP and possibly employment compared to the expectations in previous convergence programmes.

The extent of the medium term consolidation task may be influenced by the macroeconomic conditions as illustrated in two alternative scenarios, cf. also chapter 1:

1) A *positive* scenario assuming a quick return to normal cyclical conditions in the world economy in the course of 2010-2013, notably driven by easy monetary and fiscal policy and a rather rapid normalisation of credit conditions and aggregate demand.

2) A *negative* scenario where the emerging recovery tapers off for a period, and where growth potential and employment is permanently weakened in the wake of the financial crisis.

In the *positive* scenario, finances are strengthened in the short term by the stronger growth in private consumption and GDP, as well as high revenues from the North Sea and taxes on accrued pension returns. The actual public budget balance is improved quickly and will be positive in 2014-2015. The EMU-debt will be reduced as a percentage of GDP from 2012 to 2015 by about 6 percentage points.

In the positive scenario, the deficit on public finances will already be reduced to below 3 per cent of GDP by 2012, and the scenario will thereby imply that a decision can be made in 2013 that Denmark no longer has an excessive deficit under the EDP-procedure – one year earlier than in the CP09-projection. The positive scenario includes measures to adhere to the expected recommendation of effective consolidation initiatives in 2011-2013.

In the *negative* scenario where cyclical conditions remain unfavourable for a prolonged period and employment is permanently lower than projected – e.g. if labour market structures are weakened or structural unemployment turns out to be higher than estimated – the challenge of ensuring sustainable public finances is magnified considerably. The actual deficit in 2015 is increased by around 1.6 per cent of GDP and the EMU-debt is almost 8 per cent of GDP higher than in the main scenario.

This scenario illustrates that the level of structural employment is central to whether the challenges in the wake of the crisis have increased more than estimated in the convergence programme. Hence, it is a key condition for the convergence programme that structures in the labour market are not weakened.

Table A2.1
Alternative scenarios: Positive and negative scenario

	2010	2011	2012	2013	2014	2015
CP09-projection						
Real GDP-growth	1.3	1.6	2.0	2.3	2.6	2.6
Unemployment, per cent of work force	5.3	5.3	4.9	4.3	3.9	3.6
Public budget balance, per cent of GDP	-5.5	-4.2	-3.2	-1.9	-0.8	0.0
EMU-debt, per cent of GDP	41.8	46.2	48.3	48.1	46.1	45.0
Positive scenario						
Real GDP-growth	1.8	1.9	2.2	2.0	2.0	2.2
Unemployment, per cent of work force	5.1	4.9	4.2	3.6	3.6	3.6
Public budget balance, per cent of GDP	-5.1	-3.5	-2.1	-0.4	0.5	1.1
EMU-debt, per cent of GDP	41.3	44.9	45.8	44.3	41.1	39.2
Negative scenario						
Real GDP-growth	0.6	0.9	1.2	2.2	2.8	2.4
Unemployment, per cent of work force	5.7	6.2	6.4	6.0	5.7	5.3
Public budget balance, per cent of GDP	-5.8	-5.0	-4.5	-3.5	-2.4	-1.6
EMU-debt, per cent of GDP	42.5	48.0	51.8	53.2	52.2	52.6

Source: Own calculations based on ADAM.

In the negative scenario, the deficit on public finances does not return to below 3 per cent before 2014, and the scenario therefore implies that a decision cannot be made until 2015 that Denmark once again fulfils the convergence criteria for participation in the euro and the rules for sound public finances in the Stability and Growth Pact. The negative scenario also assumes that the recommendation for effective consolidation initiatives from 2011-2013 is met, even though the growth projection is weaker than assumed in the CP09-projection.

A2.2 Sensitivity towards changes in foreign growth, interest rates etc.

External assumptions

The projection underlying CP09 is largely based upon the last published macroeconomic forecast in *Economic Survey*, December 2009. The two main deviations from the December-survey are that growth in public consumption in 2011 is 0 per cent rather than 1 per cent and the contribution to growth from inventories is also changed from 0.1 to 0.3 percentage points. Assumptions regarding the international economy are based on the autumn forecast of OECD. Assumptions on foreign growth (cf. annex table 8) are relatively close to the autumn forecast of the Commission and the common external assumptions, which the member countries (particularly euro and ERM II countries) should as a baseline case base their stability and convergence programmes upon.

The autumn forecast of the Commission and the common external assumptions in CP09 differ from the ones used in CP09 in particular within the following areas, *cf. also table A2.2a*.

- GDP-growth with countries buying Danish exports is a bit lower, such that export market growth for industrial goods is 0.3, 0.7 and 1.3 percentage points lower in 2009, 2010 and 2011, respectively, than in the December forecast.
- The price of crude oil is assumed to be at 61.3, 76.5 and 80.5 USD per barrel in 2009, 2010 and 2011, respectively, whereas it was estimated at 61.9, 80.3 and 84.5 USD per barrel in the December forecast,
- Short term yields are respectively 0.2 and 0.5 percentage points higher in 2010 and 2011 than in the December forecast. The long term yields are 0.1, 0.2 and 0.1 percentage points lower in 2009, 2010 and 2011, respectively, compared to the December forecast.

Table A2.2a
External assumptions

	2009		2010		2011	
	Economic Survey, December	EU autumn forecast	Economic Survey, December	EU autumn forecast	Economic Survey, December	EU autumn forecast
Export market growth[1)]	-10.9	-11.2	3.6	2.9	6.1	4.8
Crude oil price, USD per barrel	61.9	61.3	80.3	76.5	84.5	80.5
Short term yields, percent[2)]	1.3	1.3	1.3	1.5	2.0	2.5
Long term yields, percent[2)]	3.3	3.2	3.7	3.5	3.9	3.8

1) Export market growth for industrial goods, real growth in per cent.
2) Apart from a change in short and long term European yields that the table refers to, the levels for the corresponding Danish yields are adjusted such that the spread for the Euro Area is unchanged compared to the assumed in *Economic Survey*, December 2009. Furthermore, the average Danish bond yield is recalculated with weights equal to those of the December forecast, but with the revised yields.

A model simulation incorporating the common external assumptions indicate that the GDP-growth in comparison to the December forecast will be reduced from 1.3 to 1.2 per cent in 2010 and from 1.6 to 1.3 per cent in 2011, *cf. table A2.2b*[1].

[1] In 2009, GDP-growth is largely unchanged and the marginal reduction from -4.3 to -4.4 is due to rounding.

In 2010, the lower GDP-growth is primarily due to lower export market growth and higher short term yields, the negative effects of which more than outweigh the marginal positive effect from lower oil prices. In 2011, the negative contributions from lower export market growth and higher short term yields are somewhat higher.

Unemployment as a percentage of the work force is somewhat higher in all three years as a result of the estimated lower activity level. The public budget balance for 2009 and 2010 is unchanged, but is weakened in 2011 compared to the December forecast.

All in all, the differences in external assumptions only give rise to minor changes in GDP-growth, public finances etc.

Table A2.2b

Alternative scenarios: Foreign growth and interest rate assumptions

	2009	2010	2011	2012
CP09-projection				
Real GDP-growth	-4.3	1.3	1.6	2.0
Unemployment, per cent of work force	3.4	5.3	5.3	4.9
Public budget balance, per cent of GDP	-3.0	-5.5	-4.2	-3.0
EMU-debt, per cent of GDP	38.5	41.8	46.2	48.1
External assumptions of EU				
Real GDP-growth	-4.4	1.2	1.3	-
Unemployment, per cent of work force	3.5	5.4	5.5	-
Public budget balance, per cent of GDP	-3.0	-5.5	-4.4	-
EMU-debt, per cent of GDP	38.5	41.9	46.7	-
Higher yields (domestic and foreign)				
Real GDP-growth	-	0.9	0.6	1.4
Unemployment, per cent of work force	-	5.5	6.0	6.0
Public budget balance, per cent of GDP	-	-6.4	-5.3	-4.2
EMU-debt, per cent of GDP	-	42.7	48.2	51.3

Source: Own calculations based on ADAM.

Interest rate sensitivity of public finances

The outlook for interest rates is also uncertain. For instance, it is uncertain whether and when the large public deficits both domestically and abroad will affect interest rates. A higher public deficit will probably affect interest rates differently in a situation where public finances are sound compared to a situation where many countries exhibit very large deficits at the same time, cf. box 1.5 in chapter 1.

The interest rate sensitivity of public finance is illustrated in table A2.2b with a scenario in which foreign and domestic yields are permanently 1 percentage point higher along the entire yield curve compared to the CP09-projection.

Domestic activity is weakened and the public budget balance is reduced by 0.9 per cent of GDP in 2010 and by 1.1 and 1.2 per cent of GDP in 2011 and 2012, respectively. Hence, the interest rate sensitivity of public finances is relatively significant.

The main reason for the weakening of the public budget balance in 2010 and 2011 is the reduction of revenues from taxes on accrued pension returns as a result of rising yields between 2009 and 2010[2]. This is the result of higher yields leading to significant losses on bond holdings of taxable pension funds, whereby the tax base for the tax on accrued pension returns is reduced markedly. In the forecast from December, revenues from the tax on accrued pension returns are estimated at 0.7 per cent of GDP in 2010 which could be reduced to nothing if yields rise 1 percentage point. In 2011, revenues from the tax on accrued pension returns are estimated 0.2 per cent of GDP lower, as the yield increase will imply that negative taxes will be brought forward into 2011.

Furthermore, the yield increase reduces economic activity both domestically and abroad and unemployment is increased. This deteriorates the public budget balance via automatic stabilisers.

The direct effect of the higher yields on public net interest payments is relatively mild in 2010-2012. That should be seen in light of a relatively moderate public debt, the fact that higher yields will only gradually affect the outstanding bond debt and finally that the public sector also has yield *income*.

A2.3 Effect on public finances from a change in potential GDP

In CP09, the level of potential GDP is estimated to be around 2 per cent lower than in CP08 as a result of the global crisis. The downwards adjustment of the estimated potential growth by around 1 percentage point per year in 2009 and 2010 reflects a reduction in labour productivity (production per employed person), which follows a fall in the intensity of capital per employed and low growth in total factor productivity. The estimate of structural unemployment has only been adjusted slightly upwards since CP08 (by around 0.1 percentage points based on the estimate in *Economic Survey*, December 2009).

The lower potential GDP could initially be a consequence of lower corporate investments and that a non-trivial share of capital (machinery, buildings etc.) has been lost or reduced in connection with bankruptcies or sectoral adjustments during the crisis. At the same time it is likely that risk premia in a few years' horizon will be higher and the access to credit less easy than in the years leading up to the financial crisis. As monetary policy is normalised, this could imply that the financing costs of companies will be higher than before the crisis. On top of this, large public budget

[2] The reduction of revenues from the tax on accrued pension returns over the short term reflects a postponement of tax revenues. A higher yield level will increase revenues in the long term since higher yields result in higher returns on pension assets. Measured as net present value, a higher yield level will increase revenues from taxes on accrued pension returns.

deficits could put upward pressure on yields and hence on financing costs for companies.

This means that the capital intensity per employee could in the medium term be lower than otherwise. This results in a lower productivity and thus real income. Furthermore, according to IMF and others, experience from previous financial crises indicates a significant permanent reduction in the level of potential GDP[3].

The downwards adjustment of potential GDP is roughly in line with the estimations of other institutions. Hence, EU, OECD, IMF and national authorities in most countries have also adjusted their estimates of potential GDP downwards, in most cases by around 2 per cent or more[4]. Calculations made by the European Commission indicate that potential GDP could be 3 per cent lower than in absence of the global crisis, while positive and negative scenarios show falls of ½ and 4½ per cent, respectively. Accordingly, the OECD estimates that the crisis has reduced average potential output by 3½ per cent for the OECD-countries. In Denmark's case, the European Commission has reduced the estimate of potential output by around 4 per cent in 2010 since the autumn 2008 forecast, while the OECD in the same period has reduced potential output by close to 1 per cent.

Hence, particularly in the current situation, there is uncertainty surrounding the estimate of potential GDP. In order to highlight the effect on public finances of the change in potential GDP calculations below show the effect of two alternative scenarios where potential GDP is unchanged relative to CP08 (high growth scenario) or reduced by 4 per cent of GDP in 2015 (low growth scenario).

The scenarios illustrate the effects on the sustainability indicator and the share of public consumption in GDP if the planned real growth in public consumption is not adjusted to possible changes in structural GDP. Unchanged real growth in public consumption means as a starting point that public purchases of goods and services from the private sector are not adjusted with changes in potential GDP. Hence, the share of public purchases relative to GDP decreases (increases) by around 0.2 percent in the high (low) growth scenario, both in 2015 and in the long term. Thus, in total the share of public consumption to GDP decreases (increases) by around 0.2 per cent of GDP in the high (low) growth scenario. Furthermore, it is assumed that private sector wages adjust in line with the development in productivity, such that the wage share in the private sector is unchanged. Public sector wages are assumed to grow in line with private sector wages and hence, the public sector wage bill is unchanged as a percentage of GDP in the two scenarios[5].

---

[3] *World Economic Outlook October 2009: Sustaining the Recovery, IMF.*

[4] *OECD Economic outlook No. 84 and 86, OECD, European Economic Forecast, autumn 2008 and 2009, European Commission.*

[5] The high growth scenario is based on productivity in the private sector being 2½ per cent higher than in the main scenario, which increases total productivity in the economy, and thereby real GDP, by 2 per cent. Private wages (and thus public wages) are increased by 2½ per cent in line with productivity in the private sector. All in all, the share of public wages to GDP is unchanged, because nominal GDP also grows by around 2½ per cent as a result of an in-

Table A2.3
Changes in public finances at unchanged productivity compared to CP09

Per cent of GDP	2015	Permanent (Effect on Sust. Ind.)
2 per cent higher productivity and potential GDP than in CP09-projecction		
Public consumption	-0.2	-0.2
- purchase of goods	-0.2	-0.2
- wages	0.0	0.0
Other		0.05
Total balance/sustainability effect (unchanged oil and asset prices etc.)	0.2[1)]	0.15
2 per cent lower productivity and potential GDP than in CP09-projecction		
Public consumption	0.2	0.2
- purchase of goods	0.2	0.2
- wages	0.0	0.0
Other		-0.05
Total balance/sustainability effect (unchanged oil and asset prices etc.)	-0.2[1)]	-0.15

1) Effect on primary budget balance in 2015.
Source: Own calculations based on ADAM.

In total, the fiscal sustainability (sustainability indicator) is improved (worsened) by 0.15 per cent in the high (low) growth scenario. The effect on the sustainability indicator is a bit smaller than the partial effect from the public purchase of goods. That is due to a number of revenues (North Sea revenues, taxes on pensions, property value taxes etc.) being assumed unchanged in nominal terms in the scenarios. If the effects on potential GDP are also assumed to affect oil and asset prices etc., the sustainability effect could amount to 0.2 per cent of GDP.

In *Fiscal Survey 2004 (FR04)*, calculations have been made showing how changes in productivity growth affect public finances. The calculations in *FR04* show that higher productivity growth is roughly neutral for fiscal sustainability, a result that differs from this appendix. The difference is due to the assumption of whether the changed productivity growth affects real growth in public consumption (through the purchase of goods from the private sector). In *FR04*, it is assumed that the change occurs after the planning horizon. Thus, it is technically assumed that real growth in public consumption is changed with the change in productivity growth, such that public consumption is unchanged as a share of GDP. In this appendix, productivity growth is changed within the planning horizon (i.e. towards 2015), where real growth

crease of 2 per cent in real GDP and ½ per cent price increase based on higher public wages. Furthermore, it is assumed that transfer incomes are adjusted in line with private wages. The low growth scenario is calculated the same way, just the opposite direction. The long-term productivity growth is assumed unchanged compared to CP08.

in public consumption in the absence of new decisions is not affected by changes in productivity. Hence, public consumption as a share of GDP falls at higher productivity growth, which gives an improvement of fiscal sustainability, and vice versa at lower productivity growth.

A2.4 Scenario with high oil price – long term effects

The International Energy Agency (IEA) has in the latest *World Energy Outlook* from November 2009 worked out two scenarios. In a reference scenario, IEA sketches a scenario that describes how energy markets are expected to develop if current policies do not change. An alternative scenario presents an IEA assessment of the energy markets in a situation where the long term concentration of green house gasses in the atmosphere does not exceed 450 ppmv. CO_2 equivalents – a target that is connected to a rise in global temperature of around 2 degrees. In the alternative scenario, global demand for oil is lower, which results in a lower oil price compared to the reference scenario.

In the central CP09-projection, the alternative scenario is used, partly because of an expectation that energy and climate policy will change globally as a result of the challenges connected to climate change. Furthermore, for the sake of prudence, the alternative scenario that uses a lower oil price than the reference scenario is employed.

In this projection it is assumed that the oil price rises gradually from 80 USD per barrel in 2010 to 92 USD per barrel in 2015 (2010 price level), *cf. figure A2.1a*. Towards 2030, the price is assumed to reach 100 USD per barrel. The projection is above the actual spot price of around 70-75 USD per barrel based on the alternative scenario of IEA.

In the reference scenario of IEA, the estimate for the oil price towards 2015 is identical to the alternative scenario, while the oil price afterwards is higher, such that the estimate for 2030 is 127 USD per barrel (2010 price level).

Figure A2.1a

Oil price, CP09 and scenario with high oil price

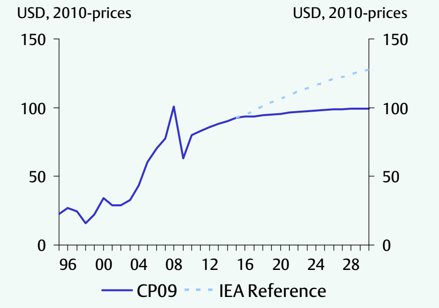
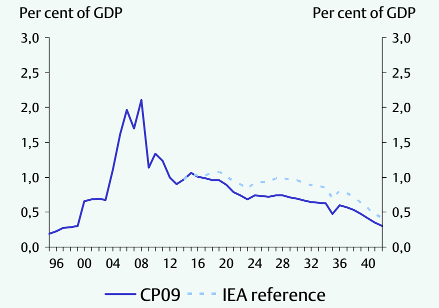


Figure A2.1b

North Sea revenues, CP09 and scenario with high oil price



Source: IEA2009, Ministry of Taxation and own calculations.

If the reference scenario of IEA is used in the CP09-projection, revenues from the North Sea are increased from 2015 and onwards, *cf. figure A2.1b*. Changes in the production forecast resulting from a higher oil prices are not included. Also, the effect that increased investments could lead to large depreciation write-offs resulting in lower tax revenues, is not included.

The sustainability indicator is strengthened through higher North Sea revenues by around 0.1 per cent of GDP, and thereby constitutes just under 0.3 per cent of GDP, *cf. table A2.4*. The structural budget balance in 2015 is unchanged, as the oil price is only changed after 2015.

Table A2.4
CP09-projection and scenario with higher oil price as in the reference scenario of IEA

	CP09	CP09 incl. ref. scenario of IEA
Per cent of GDP		
Fiscal sustainability indicator	0.2	0.3
Structural budget balance in 2015	0.0	0.0

Source: Own calculations.

In the projection it has not been taken into account that higher oil prices will increase incentives for efficient use of energy and thereby reduce revenues from energy duties. Likewise, the lower costs in connection to the fulfilment of reduction targets for CO_2-emissions in non-quota constrained sectors have not been accounted for.

Appendix 3. Comparison with Convergence Programme 2008

A3.1 Changes to GDP-growth and public finances since CP08

In CP09 real GDP growth is -1 per cent in 2008 and -4¼ per cent in 2009, whereas CP08 assumed approximately zero growth over these 2 years, *cf. table A3.1*. The estimated output gap is thus considerably weaker in 2009 than expected in CP08. Cyclical conditions assumed to gradually recover up to 2015, but potential GDP is revised downwards. In total, GDP growth in 2011-2015 is expected to be moderately higher compared to CP08.

Table A3.1
Comparison with CP08

	2008	2009	2010	2011	2012	2013	2015
GDP growth (per cent)							
CP08	0.2	-0.2	0.7	1.9	1.7	1.6	1.6
CP09	-0.9	-4.3	1.3	1.6	2.0	2.3	2.6
Change	-1.0	-4.1	0.6	-0.3	0.3	0.7	0.9
Output gap (per cent of GDP)							
CP08	1.9	0.6	-0.7	-0.4	0.0	0.0	0.0
CP09	1.1	-2.4	-3.0	-2.8	-2.1	-1.4	0.0
Change	-0.8	-3.0	-2.3	-2.4	-2.1	-1.4	0.0
Public balance (per cent of GDP)							
CP08	3.0	0.0	-1.2	0.3	0.1	0.1	-0.1
CP09	3.4[1)]	-3.0	-5.5	-4.2	-3.2	-1.9	0.0
Change	0.5	-3.0	-4.2	-4.5	-3.3	-2.0	0.1
Gross public debt (per cent of GDP)							
CP08	30.3	27.9	26.3	25.4	24.6	23.8	22.6
CP09	33.4	38.5	41.8	46.2	48.3	48.1	45.0
Change	3.1	10.6	15.5	20.8	23.6	24.3	22.4
Net public debt (per cent of GDP)							
CP08	-6.9	-6.7	-5.3	-5.6	-5.9	-6.2	-6.4
CP09	-6.5	-3.8	1.8	6.0	8.4	9.4	8.5
Change	0.4	2.9	7.1	11.6	14.3	15.6	14.9

1) The most recent EDP-reporting from Statistics Denmark in October, based on *Economic Survey*, August 2009, also showed a surplus of about 3.4 per cent (based on the EDP-definition).

Source: Own calculations.

The general government budget surplus – using the EDP-definition – was 3.4 per cent of GDP in 2008, while a surplus of 3 per cent of GDP was estimated in CP08. The strengthening of public finances in 2008 reflects higher than expected revenues from income taxes and pension yield taxation.

The fiscal deficit in 2009 of about 3 per cent of GDP is significantly greater than in CP08, where a balance around zero was expected. The weakening reflects, among other things, the steeper economic downturn. The projected public balance in 2010-2012, is also significantly lower than in CP08. It can, among other things be attributed to the cyclical situation and the very expansionary fiscal policy in 2009 and 2010, which has weakened the starting point, as well as higher interest payments, cf. chapter 4. The larger negative output gap (up to and including 2014) contributes to lowering the general government balance in CP09 compared to the CP08.

Overall, the projection in CP09 implies an increase in the EMU debt (in per cent of GDP) until 2012, after which it is slightly reduced towards 2015. In CP09 the EMU debt rises by about 15 per cent of GDP over the period 2008-2012, while the debt ratio in CP08 fell by about 6 per cent of GDP in the same period. In total the EMU debt in CP09 with the included consolidation and reform requirements makes up about 45 per cent of GDP in 2015.

This primarily reflects the significant deficits up to 2015, but also that gross debt rose by almost 7 per cent of GDP from 2007 to 2008, although there was a surplus on the government balance of 3.4 per cent of GDP in 2008. The increase in EMU debt from 2007 to 2008 should be seen in light of the opening of a 30-year government bond to improve the Danish pension sector options for hedging in the Danish currency in November 2008. The increased issuance of government bonds affects the EMU debt upwards as the government liabilities hereby increases. The corresponding increase of assets on the government's account does not affect the EMU debt directly, as the assets are not included or consolidated (except for government bonds held by government subsectors).

The net public debt in 2008 of around -7 per cent of GDP is in CP09 increased by almost 16 per cent of GDP up to 2013, after which it is slightly reduced towards 2015, in particular due to high GDP growth in 2014-2015 and the consolidation of public finances. The net public asset position projected in CP08 is thus replaced by an increase in net public debt over the same period in CP09.

Compared to the CP08 projection the CP09 includes new information in a number of areas. The new assumptions in CP09 include an updated economic forecast, an updated population projection, and inclusion of the tax reform in *Spring Package 2.0* as well as other initiatives. The impact on the sustainability indicator of the revised assumptions etc. is described in section 1.6.

Box A3.1

Weakened public finances in the absence of consolidation – projection incl. reform requirements

The weakening of public finances since CP08 is in *Summary* and *Chapter 1* reviewed for the projections without non-implemented initiatives, i.e. the CP09-projection without new initiatives is compared with CP08 excl. reform requirements. This box displays the weakening from CP08 (including reform requirements) to CP09 (including tax reform and the remaining reform requirements) in the scenario where the consolidation on the expenditure side is not included. This comparison therefore shows, among other things, how much the government consumption expenditure increases in 2015, if real growth in public consumption towards 2015 is identical to CP08 and with the same reform requirements as in CP08 (but where a portion of the non-implemented reform requirements in CP08 are met through the tax reform in the *Spring Package 2.0*).

Public consumption in 2015 is about 1 per cent of GDP above the benchmark in the 2015 Plan and about ½ per cent of GDP higher than in CP08

- In CP08, the government consumption share of GDP in 2015 was about 0.6 per cent of GDP higher than the benchmark in the 2015 Plan of 26½ per cent of GDP, *cf. table a*. At unchanged real growth towards 2015, public consumption's share of GDP would increase further by about 0.4 per cent of GDP compared to CP08. This reflects increased consumption expenditure of about 0.5 per cent of GDP, while the increase in indirect taxes under the tax reform technically reduces the share by about 0.1 per cent of GDP, as indirect taxes are included in GDP.

- Of the increase in consumption expenditure of approx. 0.5 per cent of GDP about 0.3 percentage points reflects increased consumption spending in 2009 (cf. chapter 1), while 0.2 percentage points reflects an estimated reduction in GDP (structural) due to the financial crisis, cf. annex 2.

The fiscal sustainability indicator deteriorates by about 0.8 per cent of GDP

- The increased debt, which is being build up during the years of weak cyclical conditions after the financial crisis, increases interest payments. In the absence of consolidation, net public debt in 2015 is expected to be almost 19 per cent of GDP higher than in CP08. This increase in net debt in 2015 (where the cycle is assumed normalised) weakens ceteris paribus the sustainability indicator by just above 0.3 per cent of GDP.

- Increased public consumption expenditure relative to GDP in 2015 means in isolation that the sustainability indicator is weakened by 0.5 per cent of GDP compared to CP08 (excluding the technical denominator effect arising from the higher indirect tax contributions to GDP caused by the tax reform).

Table a

Weakening of the sustainability indicator and status for the benchmark for public consumption in 2015 with the same assumptions on real growth and reforms as in CP08

Per cent of GDP	CP08[1)]	CP09[2)]	Difference
Sustainability indicator	-0.1	-0.9	-0.8
- interest burden on increased debt from 2015			-0.3
- higher public consumption expenditures			-0.3
- contribution from lower structural GDP			-0.2
Public consumption in 2015	27.1	27.5	0.4
- higher public consumption expenditures			0.3
- contribution from lower structural GDP			0.2
- contribution of indirect taxes under the tax reform (higher GDP)			-0.1

1) Including employment and working hours requirement up to 2015 (corresponding to 0.7 per cent of GDP, cf. CP08).
2) Excl. consolidation, incl. tax reform (which implements 0.3 per cent GDP of the reform requirement) and unimplemented reform requirements (equivalent to 0.4 per cent of GDP).

Appendix 4. Implemented labour market reforms

A4.1 Overview of employment related initiatives

In the last decade, the focus of Danish labour market policies has, among other things, been on harmonization and further intensification of the active labour market policies, enhanced incentives to work and later retirement.

It is estimated with considerable uncertainty that structural employment overall has increased by approx. 150,000 people from 2000 to 2009, corresponding to approx. 5½ per cent. Structural unemployment has been reduced by approx. 50,000 people during the same period. These improvements are, among other things, the results of improved structures in the labour market.

Active labour market initiatives

Two broad trends can be identified in Danish active labour market policies. These are progressive harmonization of the activation efforts across the different target groups, as well as earlier and more intensive active measures.

For the insured unemployed, the maximum duration before activation has to take place has been brought gradually forward so that everyone over 30 years has the 'right and duty' to be activated within 9 months, and all unemployed under 30 years are entitled to and obliged to accept the first offer of activation after 3 months of unemployment. In addition, all benefit claimants are subject to an intensive activation effort after 2½ years of unemployment for the remainder of the benefit period.

Activation policies for the uninsured unemployed have also been intensified. Social security and start assistance ("starthjælp") recipients over 30 years with other problems than unemployment now undergo repeated activation after 9 months of uninterrupted unemployment. In addition, municipal incentives to activate social security recipients have been improved by modifying the state-municipal reimbursement system.

In addition to bringing forward and intensifying the activation measures, more focus has been put on contact initiatives before the first actual activation offer. With the introduction of case management plans ("kontaktforløb"), mandatory CV interviews and tighter availability rules, the authorities maintain early and regular contact with the unemployed with an aim to shorten the unemployment period as much as possible.

Furthermore, there has been an increased focus on reducing sickness absence, including making offers to absentees to allow them to be active during recovery.

Strengthened incentives to work

In parallel with the gradual shifting-forward and intensification of activation measures, financial incentives have been improved for welfare recipients to find employment and thereby become self-supporting.

Previously, many social security recipients could lose income if they chose to work instead of receiving benefits. Against this background, a lower introductory cash rate has been introduced for people who have not lived in Denmark for at least 7 out of the last 8 years.

At the same time, a cap on social security ("kontanthjælpsloftet") has been introduced. The cap kicks in after 6 months and sets an upper limit on how much an individual can receive in total benefits, including housing assistance and special benefits.

To ensure work availability for both spouses when both receive social security, an annual minimum work requirement has been introduced and subsequently increased from 300 to 450 hours in total for both spouses.

To encourage full time work, the rules applying to supplementary unemployment insurance benefits have been tightened. The number of weeks during which the individual may receive supplementary benefits have been harmonized and limited to 30 weeks within a reference period of 104 weeks (2 years) for all.

Finally, a tax credit of up to 100,000 DKK has been introduced for 64-year-olds who have worked full time since they were 60 years. It has been made more attractive for age pensioners to continue working through the introduction of an additional income deduction of 30,000 DKK and by reducing the employment requirements for deferred pension ("opsat pension") from 1500 to 1000 hours per year.

Increasing the retirement age

A number of measures have been implemented to increase labour supply by encouraging later withdrawal from the labour market.

The age limit for the Voluntary Early Retirement Pension ("efterløn"), VERP scheme and age pension will increase gradually by 2 years from 2019. From 2025 onwards, the age limits for the two retirement schemes will be indexed to the development in life expectancy for 60-year-olds. The part-time pension scheme ("delpension") will be phased out gradually.

Qualification for the VERP has been tightened by increasing the contribution period from 25 to 30 years. In addition, the VERP earned income test has been eased for people with relatively low incomes.

In the unemployment insurance area, the extended benefit period for 55-59-year-old recipients will be phased out so that, by 2012, uniform rules will apply to all recipients of unemployment benefits. At the same time, senior jobs are offered to over 55 year olds who lose their benefit entitlement as a result of the reduced benefit period.

Finally, disability pensioners on the 'old scheme' ("førtidspension – gammel ordning") who are able to work will receive full assurance that they will not risk losing their pension entitlements by working.

Most recently, the employment policies have been streamlined with the creation of a one-tier municipal employment system. Initiatives for the young unemployed have been strengthened by the *More young people in education and jobs* bill ("Flere unge i uddannelse og job"), which is targeted toward combating long-term unemployment.

A4.2 Overview of labour market reforms

Start Assistance ("Starthjælp") (2002)

- Introduction of a lower social security rate for persons who have not lived in Denmark for at least 7 out of the last 8 years.

Bringing More People into Employment ("Flere i Arbejde") (2003)

- A cap on the amount of social security benefits after 6 months.
- Reduced social security for married recipients after 6 months.
- Social security allowance for married recipients with dependents.
- Increased employment allowance for married social security recipients.
- Social security for under-25-year-olds is reduced to the same level as study grants.
- Right to re-calculation of the unemployment benefit rate for university graduates and other study leavers.
- Simplification of availability rules, sanctions and compliance control vis-à-vis availability decisions by the unemployment insurance funds etc.
- Implementation of customized case management plans for unemployment benefit claimants, social security recipients and rehabilitation clients. Adjustment of the minimum requirements for activation offers.
- New common and simplified toolkit for municipalities and job centres consisting of three activation tools that replace existing ones. The tools are: counselling and skills upgrading, work place training and wage subsidies.
- Opportunities for municipalities as well as jobcentres to provide assistance towards meeting the cost of equipment and mentoring.
- 'Secondary providers' will be allowed to provide job mediation and placement services and conduct interviews etc.
- The distinction between appropriate and reasonable work is abolished.

- Jobseekers will be required to apply for jobs after referral from the job centres, the unemployment insurance office or an appointed ‘secondary provider’.
- As part of the availability requirements, jobseekers must have an approved CV within 1 month of enrolment at the jobcentre.
- Jobseekers are required to actively seek employment while activated unless the jobcentre has waived this requirement.
- A person receiving supplementary unemployment benefits and having part time employment with a termination notice, must be able to be released from this employment with one day's notice if being offered a job with longer working hours.
- A jobseeker will lose entitlements to unemployment benefits if the jobseeker fails to put a CV in the ‘Job and CV bank’ 1 month after enrolment at the job centre.

The ’Spring Package’ (”Forårspakken”) (2004)

- Funds for upgrading low-skilled jobseekers that are ready for a job and have a minimum of 1 year of unemployment.
- Extension of the possibility of the 1-year offer of counselling and skills upgrading in the first unemployment period.
- Skills upgrading for people with reading, spelling and numeracy impairments.
- Training of low-skilled in strategic employment areas.
- Relaxation of the entry admission requirements for social and health workers (“SOSU-assistenter”).

Employment Strategy for Disabled Persons (2004)

- Better employment counselling.
- Knowledge acquisition about employers’ needs and wants.
- Research into persons with a physical disability.
- Improvements to sheltered employment in the municipalities.
- Sheltered employment – toward real employment.
- Publication of labour market conditions and opportunities for disabled persons
- Voluntary access ability labelling for companies.
- More personal assistance in the jobs and education area.
- Personal assistance for people with physical disabilities.
- Anti discrimination policy on grounds of disability.
- Certificates for disabled persons.
- Job search and information portal for persons with reduced functionality.

Increased Efforts to Combat Social Fraud etc. (2005)

- Immediate activation where workplace inspections leave doubt about a person's availability for work.

Strengthened Sickness Absence Initiatives (2005)

- A new visitation and follow-up strategy aimed at providing the closest follow-up for the most vulnerable sick as part of ensuring job retention.
- Improved coordination of the follow-up efforts between the municipality and, among others, the work place, the general practitioner, the unemployment insurance office and the hospital.
- Increased involvement of other stake holders to make use of the knowledge and efforts that they can contribute.
- Improved medical certificates to the workplaces to promote a faster – possibly partial – return to work.

Changed Rules on Self-inflicted Unemployment (2005)

- Clarification of the rules so that absence from meetings and activities convened by the jobcentre or the unemployment office will result in loss of benefit entitlements.

'A New Chance for All' ("En ny chance til alle") (2005)

- A requirement of 300 hours of paid work annually for married couples on social security.
- Obligation for under-25-year-olds to accept an education offer if seeking income support.
- Strengthened sickness follow-up for social security and start assistance recipients.
- Amended state-municipal social security reimbursement rules in order to reward municipal activation efforts.
- *A new chance for all* – a special initiative towards social security and start assistance recipients who have been passive for a year or more (the initiative ran from the 1st of July 2006 to the 30th of June 2008).
- Repeated activation after 12 months of social security and for start assistance recipients over 30 years with problems other than unemployment after an uninterrupted unemployment spell of 12 months.

Agreement on Adjustments to the 'Flexjob' Scheme (2006)

- Increased contact with local authorities, including a personal interview, at least, each time a person approved for a flexjob has been unemployed for 3 months.

- Flex-job approved recipients of unemployment assistance (“ledighedsydelse”) are entitled to 6 weeks of self-selected training within the first 12 months of unemployment.
- Recipients of unemployment assistance are entitled to use a ‘secondary provider’ after 6 months of unemployment and obligated to use a ‘secondary provider’ after 1 year of unemployment.
- Persons employed in a flexjob are entitled to a mentor.
- Introduction of a flexjob certificate.
- The municipality will forgo state reimbursement of unemployment assistance when it has failed to find a flexjob to a person with flexjob visitation after the person has received unemployment assistance for 18 out of 24 months.

The Welfare Agreement (2006)
General labour market policies
- Systematic availability assessments and job follow-ups.
- Simplification of interview types.
- All CV interviews for insured unemployed are conducted by the unemployment insurance office.
- Insured unemployed and job ready social security and start assistance recipients must, as a minimum, log on to Jobnet every week.
- When an employer submits a vacant job (of more than 5 days duration), the job-centre selects 1-2 registered unemployed for interview. On the employer’s request, a larger number of interviewees will be selected.
- Activation measures are brought forward. Unemployed over 30 years must receive the first offer of activation within 9 months of unemployment and then continue with repeated activation. After 2 years, the need for continuation of early activation is assessed on the basis of an evaluation of the experience so far as well as the economic situation and the level of unemployment.
- Insured unemployed with more than 2½ years of unemployment are subject to ‘right and duty’ activation – full-time if possible – during the remaining benefit period.
- The benefit period for the insured 60-64-year-olds is extended from 2½ years to 4 years (within 6 years).
- The extended benefit period for 55-59-year-old unemployment benefit recipients is phased out by 2012; the length of the benefit period is 4 years for all insured.
- The existing restriction on education activation – that it must not exceed 50 per cent of all activation – is abolished.
- The special access to a 1-year offer of counselling and skills upgrading in the first period of unemployment is extended for a 2-year period.

- Public employers are required to make jobs available under a public wage subsidy quota.

Integration of migrants

- A new special programme for wage subsidized jobs in private companies for persons who have received social security, introductory assistance ("introduktionsydelse") or start assistance 90 per cent of the time during the last 3 years.
- Possibility of partnerships between businesses and municipalities and/or the state about recruitment of unemployed with weak employment chances, including immigrants and their descendants.
- Renewal of the 2002 quadripartite agreement between the municipalities and the social partners on strengthened integration.
- 300 million DKK to recruitment of more private sector oriented job consultants in the 15 municipalities that have the largest numbers of unemployed migrant/descendant recipients of social security, introductory assistance and start assistance.
- Requirement that unemployed persons' right to activation is fulfilled.
- Offers of activation for unemployed self-supported persons.
- Repeated activation after 6 months for all unemployed, including people with problems other than unemployment.

Retirement policies

- The age limit for the Voluntary Early Retirement Pension, VERP ("efterløn"), flex assistance ("fleksydelse") and age pension will increase gradually by 2 years from 2019.
- From 2025 onwards, the age limits for the VERP and the age pension will be regulated by the development in life expectancy for 60-year-olds.
- The part-time pension scheme (”delpension”) will be gradually phased out.
- The contribution period for VERP qualification is increased from 25 to 30 years.
- The VERP earned income test is eased for people with relatively low incomes.
- The extended benefit period for 55-59-year old unemployment benefit recipients will be phased out.
- Introduction of a senior job programme for unemployed 55-59 year olds who have lost benefit entitlement as a result of the phasing-out of the extended benefit period for this age group.
- A new special wage subsidy for over 55 year olds who are recruited by a private company after having received unemployment benefits, social security, introductory assistance or start assistance for 12 consecutive months.
- Focus on creating an attractive and flexible environment to promote senior staff retention and focus on disseminating the use of existing senior policy tools.

- The Health and Safety Authority ("Arbejdstilsynet") will carry out intensified surveillance within all industries or areas where work related wear-out problems warrant a targeted work safety effort.
- A new prevention fund that, among other things, will provide economic support for activities to prevent and reduce work related wear-out. The fund will be allocated 3 billion DKK.
- The age limit in the antidiscrimination law on agreements about age related cessation of employment relationships is increased from the current 65 years to 70 years.

Immigration

- A new 'green card' programme to allow qualified foreigners to obtain an extended job search visa for up to 6 months to seek employment in Denmark.
- Extension of the 'job card' programme, which grants residency permits to foreigners with a job offer on normal pay and employment conditions and with an annual remuneration of a minimum of 450,000 DKK and/or in areas with labour shortages.

The Local Government Reform – the Ministry of Employment's Area (2007)

- Organizing the employment policies:
  a) Four employment regions.
  b) Jobcentres – a state and a local counterpart that cooperate, and the establishment of pilot municipal jobcentres with all-arching responsibilities.
  c) Four state run operative regions.
- The Employment Minister announces employment policy objectives for specified implementation areas.
- The social partners to influence the employment policies for all target groups.
- Creation of an employment appeal board as a new complaints agency.

The Job Plan Agreement (2008)

- Adjustment and harmonization of the rules regarding supplementary unemployment insurance benefits so that, in the future, insured part-timers can receive supplementary benefits for up to 30 weeks within a 104 week reference period.
- Disability pensioners on the 'old scheme' ("førtidspension – gammel ordning") who are able to work will receive full assurance that they will not risk losing their pension entitlements by working.
- It is made more attractive for age pensioners to continue working through the introduction of an additional income test offset of 30,000 DKK and by reducing the employment requirements for deferred pension ("opsat pension") from 1500 to 1000 hours per year.

- A tax credit of up to 100,000 DKK has been introduced for 64-year-olds who have worked full time since they were 60 years old.
- Increased international recruitment efforts including marketing of Denmark as a place to work, relaxation of the residency requirements for qualified foreigners, and better service for businesses and job seekers.
- The adult apprentice scheme ("voksenlærlingeordningen") is further expanded by 1,000 additional persons in 2008 and 500 additional persons in 2009.

Agreement on the Adult Apprentice Scheme (2008)

- Subsidies to adult apprentices are given legal right status. At the same time, subsidies under the scheme are targeted toward adult apprentices who have either an outdated education or no professional training.

Agreement on the Handling of the EU Legislation on Free Movement following the European Court's Ruling in the Metock Case (2008)

- Changing the '300 hour' rule to a '450 hour' rule and clarification of target group.

Sick Leave Action Plan (2008)

- No later than four weeks within the sick leave period, employers are obliged to conduct an interview with the sick employee about how and when the employee can return to work.
- After eight weeks of sick leave, the jobcentres must assess the possibility of a gradual return.
- The jobcentres will have the opportunity to provide offers of activation for all persons on sick leave.
- The state-municipal reimbursement system is rearranged to give jobcentres incentives to provide activation offers for persons on sick leave.
- A new medical certificate for employers to promote job retention of persons on sick leave.

Agreement on the 2009 Budget (2008)

- The 'employer period' in the sickness allowance legislation is extended from 15 to 21 calendar days (3 weeks) with a view to encourage individual employers to do more to prevent short-term sickness absence.
- The period with employer paid unemployment benefits (G-days) is extended to three days in order to reduce short-term unemployment.

Debureaucratization (2009)

- Simplification of the rules on activation of young unemployed.

- Simplification of the sanctions rules for recipients of social security, introductory assistance and start assistance.
- Simplification of the procedures in the jobcentres' client reception.
- Increased targeting of the activation measures.

A One-Tier Municipal Employment System (2009)

- Transfer of the state jobcentre functions to the municipality.
- The Mayor as Chairman of the local employment council.
- Expansion of the employment regions' responsibilities:
  a) Establish an advisory function.
  b) Employment regions to be involved in the development of employment plans and performance audit.
  c) Employment regions are allowed to perform other tasks.
- Involvement of other stakeholders in efforts to promote employment through state procurement framework.
- Harmonization of wage subsidy quotas.
- The Labour Market Appeal Authority ("Arbejdsmarkedets Ankenævn") is to be merged with the Appeal Board's Employment Committee ("Ankestyrelsens Beskæftigelsesudvalg").
- Municipal co-financing of expenditure on unemployment benefits and the costs of activating insured unemployed (1st of January 2010).
- Activation benefits are abolished by the 1st of January 2010 where after activated insured are entitled to unemployment benefits.
- The rules about fortnightly payment of unemployment benefits by the unemployment insurance funds are repealed.
- The rules on the counselling obligation of the governance authorities ("forvaltningsmyndighedernes") and unemployment insurance funds guidance obligation are harmonized.
- The municipal oversight of employment availability of the unemployed is strengthened.

Four Initiatives to Assist Persons at Risk of Unemployment (2009)

- More flexible rules for the planning of temporary job sharing ("arbejdsfordeling").
- Extended access to the 'notification pool' ("varslingspuljen").
- Establishment of a national notification contingency plan ("varslingsplan").
- Strengthened monitoring of labour market trends.

Agreement on More Young People in Education and Jobs (2009)

- Activation for 15-17-year-olds – young people aged 15-17 years who are not in education or jobs may now be activated by the job centre, including on-the-job training, counselling and skills upgrading, and mentoring support.

- Immediate activation for 18-19-year-olds – personal, early and activity based action for 18-19-year old social security and unemployment benefit recipients.
- A new chance for young people – special subsidies to jobcentres that make an extra effort to get more young people under 30 years, with more than 12 months on continuous public support, in company oriented activation (wage subsidies or on-the-job training).
- Improving opportunities for participation in job rotation and skills upgrading for young unemployed people through ordinary employment etc.
- Establishment of a National Youth Unit to support the jobcentres organizing the youth action plan ("ungeindsatsen").

Appendix 5. Energy and climate objectives and public finances

A5.1 Introduction

Denmark has set out ambitious goals for energy and climate policies. In this vein, one long-term objective is to make Denmark fully independent of fossil fuels such as oil, coal and gas. As one step in that direction, it has been decided in the February 2008 Agreement on Danish Energy Policy that:

- Towards 2020 gross energy consumption[1] is to decrease by 4 per cent in total compared to 2006. Towards 2011 the objective is that gross energy consumption should decrease by 2 per cent compared to 2006.
- It is the objective that 20 per cent of gross energy consumption should stem from renewable energy in 2011.

The so-called "Copenhagen Accord" was presented during the COP15 in Copenhagen in December 2009 and was taken notice of by most of the participating countries. The "Copenhagen Accord" contains, among other things, recognition of the goal to limit the rise in temperature to 2 degrees centigrade. It sets the stage for developed countries to undertake specific reduction goals for the emission of greenhouse gasses towards 2020, while developing countries as well undertake an appropriate contribution. The "Copenhagen Accord" also contains an agreement on the transfer of funds from developed countries to developing countries as aid to climate adjustment and reduction of CO2 emissions.

In the follow-up of the COP15, the countries were requested to report their specific reduction goals to the UN by 31 January 2010 at the latest. EU has on behalf of its member countries reported the previously agreed objective to reduce by 20 per cent in 2020, and that the EU is willing to increase the target to 30 per cent if other industrialised countries undertake similar reduction targets, and that developing countries undertake appropriate goals. An EU reduction target of 20 percent suggests a Danish reduction target for the emission of CO2 in non-ETS sectors of 20 per cent compared with 2005. Furthermore, it suggests that 30 per cent of final energy consumption in Denmark to be composed of renewable energy.

The projections in CP09 incorporate fiscal effects due to the fulfilment of both national and international objectives in the area. Costs of making Denmark independent of fossil fuels in the long run are not taken into account. The public finances are primarily affected by the energy and climate policy through lower revenue from energy taxes. The tax revenue decreases because lower energy consumption and a larger share of renewable energy will lead to smaller revenue from electricity taxes and taxes on fossil fuels. The calculations in CP09 only relate to estimates of the effects on

[1] Gross energy consumption equals actual energy consumption (incl. conversion and transmission losses) adjusted for foreign trade in electricity.

public finances – i.e. the calculations do not concern estimates of the overall economic effects from the energy and climate effort. In addition, it is incorporated in the projections in CP09 that the Danish funding to the developing countries is financed within the total framework of aid to developing countries.

A5.2 Forecast of energy consumption and energy intensities

The projected development is based on the latest forecast from the Danish Energy Agency from April 2009. In this forecast which contains measures of the Agreement on Danish Energy Policies from 2008 and *Spring Package 2.0* from 2009 it is estimated that gross energy consumption decreases by about 1 per cent in 2011 compared to 2006 while it decreases by about 2 per cent towards 2020. This leads the Danish Energy Agency to conclude that "*The target in 2011 is thus relatively close to become fulfilled while there is need of further initiatives to fulfil the target in 2020*". The Danish Energy Agency mentions that forecasts of energy consumption in the long run are associated with considerable uncertainty and rest on a number of technical assumptions. The uncertainties relate among other things to the assumptions about technological development, economic growth and energy prices which may develop differently than assumed.

The Danish Energy Agency's forecast rests among other things on assumptions about oil prices etc. at the time the projections were made as well as macroeconomic assumptions from CP08 from December 2008. On the basis of updated information the CP09 incorporates model based estimates in relation to the forecast of the Danish Energy Agency in order to take the effect on energy consumption from changed assumptions into account. The applied oil price reflects the latest forecast from the International Energy Agency (IEA) from November 2009 in the scenario that incorporates a global climate agreement.

The updated assumptions imply that gross energy consumption is estimated to be lower compared to the Danish Energy Agency's forecast, especially in the short run, among other things as a result of a lower level of economic activity. As a consequence, no further measures have been assumed in the forecast in relation to the target regarding the gross energy consumption.

The target of 20 per cent of *gross* energy consumption to be composed of renewable energy in 2011 is fulfilled in the Danish Energy Agency's forecast while the share of *final* energy to be composed of renewable energy is estimated to account for 28 per cent in 2020 and is thereby broadly in line with the EU objective that suggests that 30 per cent of *final* energy consumption should be composed of renewable energy.

A5.3 Effects on public finances

In the forecast energy consumption decreases while real annual GDP growth averages 1¾ per cent per year towards 2030. At the same time energy taxes are indexed so that they increase by an annual 1.8 per cent from 2008, *cf. the Agreement on lower tax on work* from September 2007. Overall, the energy tax revenue as a percentage of

GDP is decreasing in years to come, *cf. figure A5.1a*. The increase in the share of renewable energy contributes to this development as renewable energy is taxed to a lesser extent than other types of energy. However, higher energy taxes from *Spring Package 2.0* results in increasing revenues towards 2011 from energy taxes. Lower economic activity during those years results in lower energy consumption, and the energy tax revenue as a share of GDP is therefore almost unaffected.

Besides the revenue loss due to a lower level of energy consumption and a greater share of renewable energy the CP09 incorporates rough estimates for the tax exemption of electric cars towards 2012. The revenue loss is estimated at approximately 2 billion DKK in 2012. Revenue losses after 2012 have not been taken into account as it is technically assumed that potential revenue consequences regarding electric cars after 2012 are fully financed through other means.

In the forecast of the Danish Energy Agency it also appears that Denmark with the latest political agreements is well on track to fulfil the EU target to reduce the emission of CO_2 in non-ETS sectors by 20 per cent in 2020 compared with 2005 but not fully. Therefore, costs of further measures are included which can contribute to achieve the objectives proposed by the EU Commission. It is technically assumed that the objective is achieved by buying credits from foreign climate projects. The additional annual expenditures are estimated at 100 million DKK in the period 2013-2020 whereupon the costs increase to approximately 450 million DKK.

Assumptions regarding the measures are technically included. It has not been politically decided which measures will be employed.

The additional cost of 450 million DKK is based on a continuation of the climate policy effort beyond 2020 since concrete methods to fulfil the stricter long run objectives and visions have not been established. It is not possible to evaluate the effect on public finances until it is decided how to fulfil the objectives.

Figure A5.1a
Revenue from energy taxes

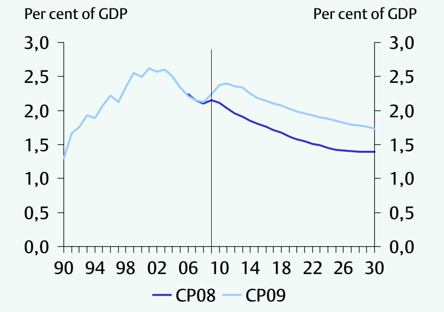
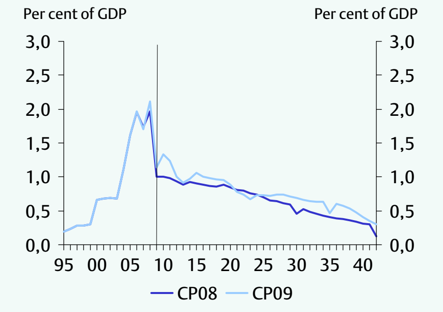


Figure A5.1b
North Sea revenue



Source: ADAM and own calculations based on the April 2009 projection from the Danish Energy Agency.

Besides, the Agreement on Danish Energy also includes increased subsidies to biomass in power stations, windmills on land as well as establishment of new offshore windmill parks. It is assumed in CP09 that these expenses can be funded within the PSO-tariff (public service obligations) which is paid by the electricity consumers. Under this assumption the increased subsidies do not affect public finances directly.

Compared with the CP08 the revenue from energy taxes is approximately 0.4 per cent of GDP higher in 2010 in CP09 while the permanent revenue contribution to the fiscal sustainability indicator is approximately ¼ per cent of GDP higher. This is primarily due to the increase in energy taxes in *Spring Package 2.0*.

The total costs of the energy and climate policy agreements and objectives were estimated in CP08 to approximately 5 billion DKK or approximately 0.3 per cent of GDP. The latest forecast by the Danish Energy Agency from April 2009 does not contain a projection of the energy consumption excluding the 2008 *Energy Agreement*. The basis for estimating the total costs due to the energy and climate policy agreements and objectives is therefore unchanged.

A5.4 North Sea revenue

In the years 2005-2008 the North Sea revenue contributed a historically high 1½-2 per cent of GDP to the public balance. Going forward the revenue is projected to gradually decrease from approximately 1 per cent of GDP in 2009-2011 to below ½ per cent of GDP by 2040, *cf. figure A5.1b*. The loss of revenue is due to lower North Sea production in line with the assumed depletion of the oil and gas reserves.

The North Sea revenue is estimated to be a little larger than in CP08, *cf. table A5.1*. Incorporating the latest projection from the IEA, *cf. above*, gives larger revenue compared to CP08, *cf. figure A5.2a*, while a lower production projection pulls in the opposite direction, *cf. figure A5.2b*. In total, the sustainability indicator is estimated to be improved by approximately 0.05 per cent of GDP. In 2015 the balance improves by 0.15 per cent of GDP compared to CP08.

Table A5.1
North Sea revenue, contributions to the fulfilment of the fiscal targets

Per cent of GDP	CP09	CP08	Difference
Contribution to the sustainability indicator	0.40	0.35	0.05
Contribution to the 2015 public balance	1.05	0.90	0.15

Source: Own calculations based on ADAM.

Figure A5.2a

Oil price assumptions

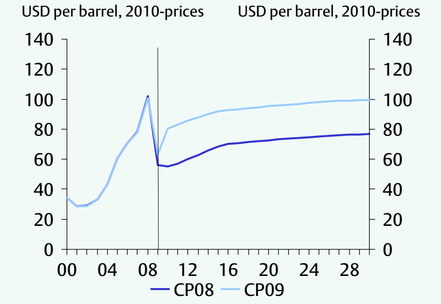
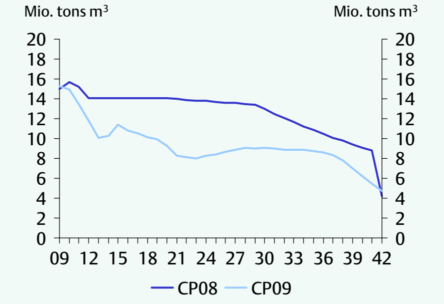


Figure A5.2b

Production projection, oil



Note: Figure A5.2a shows the year-average of the oil price.
Source: Reuters EcoWin, IEA, Danish Energy Agency, Ministry of Taxation and own calculations.

Annex tables according to the EU's "Code of Conduct"

Table 1.a

Macroeconomic prospects

	ESA	2008	2008	2009	2010	2011	2012	2013	2014	2015
		Bn. DKK	**Rate of change, per cent**							
Real GDP		1,435.5[1)]	-0.9	-4.3	1.3	1.6	2.0	2.3	2.6	2.6
Nominal GDP		1,737.5	2.7	-3.9	3.3	3.3	4.4	4.7	5.2	5.1
Components of real GDP										
Private consumption		727.8[1)]	-0.2	-4.7	2.4	2.4	2.7	2.7	2.9	2.8
Government consumption		372.5[1)]	1.6	1.6	1.0	0.0	0.0	0.0	0.8	0.7
Gross fixed capital formation		315.7[1)]	-4.7	-10.9	-2.4	0.7	4.5	5.1	5.5	5.5
Changes in inventories[2)]		11.0[1)]	0.3	-1.4	0.6	0.3	0.2	0.2	0.1	0.1
Exports of goods and services		811.1[1)]	2.4	-8.8	2.8	3.7	4.7	4.6	4.8	5.2
Imports of goods and services		812.4[1)]	3.3	-11.5	3.7	4.1	5.8	5.3	5.5	5.9
Contributions to real GDP growth			**Percentage points**							
Final domestic demand			-0.8	-4.2	1.0	1.3	2.2	2.3	2.7	2.7
Changes in inventories[2)]			0.3	-1.4	0.6	0.3	0.2	0.2	0.1	0.1
External balance of goods and services			-0.4	1.2	-0.3	-0.1	-0.3	-0.2	-0.2	-0.2

1) Based on chained 2000-prices. Growth rates are also based on chain indices.
2) Contribution of changes in stocks to GDP growth.
Source: Statistics Denmark and own calculations.

Table 1.b

Price developments

ESA	2008	2008	2009	2010	2011	2012	2013	2014	2015
	Level	Rate of change, per cent							
GDP-deflator	121,0	3.6	0.5	2.0	1.7	2.3	2.4	2.5	2.5
Private consumption deflator	116,2	3.2	1.4	2.0	1.6	2.0	1.9	1.8	1.9
Consumer price index	118,1	3.4	1.4	2.0	1.7	2.0	2.0	1.9	1.9
HICP	107,3	3.6	0.8	2.1	1.5	2.3	2.1	1.9	1.9
Net price index	119,7	3.7	2.1	1.4	1.5	1.6	1.3	2.0	2.0
Public consumption deflator	124,5	4.0	3.8	2.7	1.5	2.3	2.5	2.6	2.7
Investment deflator	116,8	1.3	-1.7	-0.3	1.6	1.9	2.3	2.9	2.5
Export price deflator	117,8	5.3	-6.5	2.2	1.9	1.9	2.3	2.3	2.3
Import price deflator	111,9	4.1	-5.1	1.8	1.6	1.5	1.8	1.8	1.8

Note: For all price indices 2000=100.
Source: Statistics Denmark and own calculations.

Table 1.c

Labour market developments

ESA	2008	2008	2009	2010	2011	2012	2013	2014	2015
	Level	Rate of change, per cent							
Employment, 1,000 persons	2,901.7	1.2	-2.5	-2.5	-0.1	0.3	0.4	0.4	0.4
Employment, hours worked (million hours)	4,554.3	1.1	-3.4	-2.3	0.2	0.2	0.4	0.6	0.7
Unemployment rate (per cent)[1], harmonized EU-definition	3.4	3.4	6.0	6.9	6.9	6.2	5.5	4.8	4.1
Labour productivity, persons (1,000 DKK)[2]	494.7	-2.1	-1.9	3.9	1.7	1.7	1.9	2.1	2.1
Labour productivity, hours worked (DKK)[3]	315.2	-2.0	-0.9	3.8	1.4	1.8	1.9	1.9	1.9
Compensation of employees (billion. DKK)[4]	984.5	5.6	0.8	0.7	2.4	3.0	3.3	3.7	3.9
Compensation per employee[5]	361.0	4.3	3.2	3.1	2.5	2.5	2.9	3.3	3.5

1) The number corresponds to the EU-harmonized unemployment in per cent of the labour force. The data is based on Statistics Denmark's Labour Force Survey (AKU).The structural unemployment is 3.6 per cent in 2015 based on the national unemployment definition. In the last years the uncertainty wit respect to the relation between the national and the harmonized unemployment definition has increased.
2) Calculated as real GDP per person employed, where GDP is based on chained 2000-prices.
3) Calculated as real GDP per hour worked, where GDP is based on chained 2000-prices.
4) Based on current prices, i.e. growth rates are in nominal terms.
5) Calculated as compensation per employed wage earner.
Source: Statistics Denmark and own calculations.

Table 1.d

Sectoral balances

	ESA	2008	2009	2010	2011	2012	2013	2014	2015
Per cent of GDP									
Net lending/borrowing vis-à-vis the rest of the world		2.2	2.9	2.4	2.4	2.6	2.9	3.2	3.5
Of which:									
- Balance on goods and services		2.7	3.1	2.9	3.0	2.8	2.8	2.7	2.6
- Balance of primary incomes and transfers		-0.5	-0.2	-0.5	-0.6	-0.2	0.1	0.4	0.8
- Capital account		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net lending of the private sector		2.2	2.9	2.4	2.4	2.6	2.9	3.2	3.5
Net lending of general government[1)]		3.4	-3.0	-5.5	-4.2	-3.2	-1.9	-0.8	0.0
Statistical discrepancy		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1) Public balance (net lending) is based on national accounts.
Source: Statistics Denmark and own calculations.

Table 2

General government budgetary prospects (EDP-basis)

	ESA	2008	2008	2009	2010	2011	2012	2013	2014	2015
		Bn. DKK	Per cent of GDP							
Net lending (EDP B.9) by sub-sector										
General government (EDP-form)		59.1	3.4	-2.9	-5.3	-4.1	-3.1	-1.8	-0.8	0.0
Central government		66.5	3.8	-2.9	-5.3	-4.0	-3.1	-1.8	-0.8	0.0
Local government		-7.1	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Social security funds		-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
General government (S13)										
Total revenue[1)]		943.4	54.3	53.3	52.4	52.4	51.8	51.8	51.9	52.0
Total expenditure[2)]		884.3	50.9	56.3	57.7	56.5	54.9	53.6	52.8	52.0
Net lending		59.1	3.4	-2.9	-5.3	-4.1	-3.1	-1.8	-0.8	0.0
Interest expenditure		25.2	1.5	1.6	1.6	1.7	1.9	2.1	2.1	2.1
Primary balance[3)]		84.3	4.8	-1.3	-3.7	-2.3	-1.2	0.3	1.3	2.1
One-off effects[4)]			0.0	-1.4	-1.7	-1.1	-0.9	-0.8	-0.3	0.0
Selected components of revenue										
Total taxes[5)]		822.8	47.4	46.5	45.7	45.9	45.5	45.5	45.7	45.7
Taxes on production and imports		301.7	17.4	16.9	17.1	17.2	17.2	17.4	17.5	17.6
Current taxes on income, wealth, etc.		516.3	29.7	29.4	28.4	28.5	28.1	27.9	28.0	28.0
Capital taxes		4.8	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Social contributions[6)]		16.8	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9
Property income[7)]		41.7	2.4	2.1	2.0	1.8	1.7	1.6	1.7	1.7
Other (residual)[8)]		62.0	3.6	3.8	3.7	3.7	3.7	3.7	3.7	3.6
Total revenue[2)]		943.4	54.3	53.3	52.4	52.4	51.8	51.8	51.9	52.0
p.m: Tax burden[9)]		839.6	48.3	47.5	46.7	46.9	46.4	46.4	46.6	46.6

Table 2 (continued)

General government budgetary prospects (EDP-basis)

	ESA	2008	2008	2009	2010	2011	2012	2013	2014	2015
		Bn. DKK	Per cent of GDP							
Selected components of expenditure										
Compensation of employees and intermediate Consumption		458.8	26.4	29.1	29.2	28.6	27.9	27.3	26.9	26.6
-compensation of employees		299.2	17.2	19.1	19.2	18.8	18.4	18.1	17.9	17.6
-intermediate consumption		159.6	9.2	10.0	10.0	9.8	9.5	9.2	9.1	8.9
Total social transfers		289.0	16.6	18.5	19.4	19.3	19.1	18.7	18.4	18.1
- Social transfers in kind[8)]		25.8	1.5	1.6	1.6	1.6	1.8	1.8	1.8	1.8
- Other than in kind		263.2	15.1	16.9	17.7	17.7	17.3	16.9	16.6	16.3
Interest expenditure		25.2	1.5	1.6	1.6	1.7	1.9	2.1	2.1	2.1
Subsidies		36.9	2.1	2.7	2.6	2.5	2.5	2.5	2.4	2.4
Gross fixed capital formation		33.3	1.8	2.2	2.5	2.1	2.0	1.9	1.9	1.8
Other (residual)[8)]		41.1	2.5	2.2	2.5	2.2	1.5	1.1	1.1	1.0
Total expenditure[2)]		884.3	50.9	56.3	57.7	56.5	54.9	53.6	52.8	52.0
p.m: public consumption		463.8	26.7	29.3	29.4	28.9	28.3	27.7	27.3	26.8

Note: Public balance figures are on EDP-basis.
1) Excl. central government revenues from sale of UMTS-licenses.
2) Adjusted for swap-related flows and spending on infrastructure investments.
3) Defined as the EDP-definition the net lending plus EDP-definition of the interest expenditures.
4) Based on the calculation of the structural budget balance and includes temporary variations in revenues from pension yield taxation. North Sea activities, net interest, corporate taxes and other special items. The structural budget balance is not calculated on EDP-basis. The calculations of the structural budget balance are based on public finances according to national account principles. cf. also table 4.2.
5) Defined as the sum of taxes on production and imports, current taxes on income, wealth, etc., and capital taxes. Does not include compulsory social contributions, which are traditionally included in the tax burden.
6) Does not include voluntary and imputed social contributions, since these are not included in the tax burden.
7) Incl. interest income and dividends and land rent etc.
8) Statistic Denmark does not publish figures for all the subgroups (P.11+P.12+P.131+D.39+D.7+D.9 (other than D.91). D.6311. D.63121. D.63131. D.29+D.4 (other than D.41)+D.5+D.7+D.9+P.52+P.53+K.2+D.8), and no estimates are available for these individual components in the projections.
9) Defined as the sum of taxes on production and imports (incl. those collected by the EU), current taxes on income, wealth etc., and capital taxes and compulsory social contributions.
Source: Statistics Denmark and own calculations.

Table 3

General government expenditure by function

	COFOG	2007	2008
		Per cent of GDP	
General public services	1	6.8	6.9
Defence	2	1.7	1.6
Public order and safety	3	1.0	1.0
Economic affairs	4	2.7	2.7
Environmental protection	5	0.5	0.5
Housing and community amenities	6	0.5	0.5
Health	7	7.3	7.6
Recreation. culture and religion	8	1.5	1.6
Education	9	6.5	6.8
Social protection	10	21.4	21.7
Total expenditure[1)]	TE	49.9	50.9

Note: Short-term and longer-term projections do not include general government expenditures by function. The focus of both short-term and longer-term projections is public expenditures by type of transaction.
1) Adjusted for swap-related flows and net spending on infrastructure, i.e. comparable to expenditures in table 2.
Source: Statistics Denmark and own calculations.

Table 4

General government debt developments

	ESA	2008	2009	2010	2011	2012	2013	2014	2015
Per cent of GDP									
Gross debt		33.4	38.5	41.8	46.2	48.3	48.1	46.1	45.0
Change in gross debt ratio[1)]		6.6	5.1	3.3	4.4	2.0	-0.2	-2.0	-1.0
Change in gross debt[2)]		7.3	3.8	4.5	5.7	4.0	2.0	0.3	1.2
Contributions to changes in gross debt									
Primary balance[3)]		4.8	-1.3	-3.7	-2.3	-1.2	0.3	1.3	2.1
Interest expenditure[4)]		1.5	1.6	1.6	1.7	1.9	2.1	2.1	2.1
Stock-flow adjustment[5)]		1.0	3.4	6.7	6.3	3.3	-0.3	-3.1	-3.0
p.m. implicit interest rate on debt[6)]		5.4	4.9	4.1	4.2	4.1	4.3	4.4	4.6
Other relevant variables									
Central government account in Danmarks Nationalbank		13.3	9.0	8.7	8.4	-	-	-	-
Public net debt[7)]		-6.5	-3.8	1.8	6.0	8.4	9.4	9.4	8.5
Net debt in central and local governments[7)]		-6.5	-3.8	1.8	5.9	8.4	9.4	9.3	8.5

1) Change in gross debt ratio is defined as Dt/GDPt – Dt-1/GDPt-1, where D is public debt measured in nominal terms (DKK).
2) Change in gross debt is defined as Dt/GDPt – Dt-1/GDPt. where D is public debt measured in nominal terms (DKK).
3) As defined in table 2.
4) As defined in table 2.
5) At present information is not available to split stock-flow adjustment into subgroups.
6) Proxied by interest expenditures divided by the debt level of the previous year.
7) In the specification of public net debt and net debt in central and local governments the central government liquid assets in Danmarks Nationalbank as well as other assets are subtracted.

Source: Statistics Denmark and own calculations.

Table 5

Cyclical developments

	ESA	2008	2009	2010	2011	2012	2013	2014	2015
					Per cent				
Real GDP growth		-0.9	-4.3	1.3	1.6	2.0	2.3	2.6	2.6
					Per cent of GDP				
General government balance		3.4	-3.0	-5.5	-4.2	-3.2	-1.9	-0.8	0.0
Interest expenditure[1]		1.5	1.6	1.6	1.7	1.9	2.1	2.1	2.1
One-off effects[2]		0.0	-1.4	-1.7	-1.1	-0.9	-0.8	-0.3	0.0
					Per cent				
Potential GDP growth		1.3	0.5[3]	0.5[3]	1.4	1.3	1.6	1.8	1.8
Of which. contribution from:		**Percentage points**							
- Labour		0.7	-0.1[3]	-0.1[3]	-0.2	-0.3	-0.3	0.0	0.0
- Of which labour force		0.3	-0.2[3]	-0.2[3]	-0.3	-0.4	-0.3	0.0	0.0
- Capital		0.9	0.7[3]	0.7[3]	0.4	0.7	0.7	0.7	0.8
- Total factor productivity		-0.3	-0.1[3]	-0.1[3]	1.2	0.9	1.1	1.1	1.0
					Per cent of GDP				
Output gap		1.1	-2.4	-3.0	-2.8	-2.1	-1.4	-0.7	0.0
Cyclical component[4]		1.5	-1.0	-2.1	-2.0	-1.5	-0.9	-0.5	0.0
Structural budget balance[5]		1.9	-0.6	-1.7	-1.0	-0.7	-0.2	-0.1	0.0
Primary structural balance		2.5	0.0	-1.1	-0.4	0.0	0.7	0.7	0.8

1) As defined in table 2.
2) Based on the calculation of the structural budget balance and includes temporary variations in revenues from pension yield taxation. North Sea activities, net interest, corporate taxes and other special items.
3) Average for 2009 and 2010.
4) The calculation of the cyclical component is based on the output gap.
5) The structural budget balance is not calculated on EDP-basis. The calculations of structural budget balance are based on public finances according to national account principles, cf. also table 4.2. The primary structural budget balance is based on an actual primary balance defined via net interest expenditures and not gross interest expenditures.

Source: Statistics Denmark and own calculations.

Table 6

Divergence from previous update

	ESA	2008	2009	2010	2011	2012	2013	2014	2015
					Rate of change, per cent				
Real GDP growth	B1*g								
- Previous update		0.2	-0.2	0.7	1.9	1.7	1.6	1.6	1.6
- Current update		-0.9	-4.3	1.3	1.6	2.0	2.3	2.6	2.6
- Difference		-1.0	-4.1	0.6	-0.3	0.3	0.7	0.9	0.9
					Per cent of GVA				
Output gab									
- Previous update		1.9	0.6	-0.7	-0.4	0.0	0.0	0.0	0.0
- Current update		1.1	-2.4	-3.0	-2.8	-2.1	-1.4	-0.7	0.0
- Difference		-0.8	-3.0	-2.3	-2.4	-2.1	-1.4	-0.7	0.0
					Per cent of GDP				
Actual budget balance[1]	EDP B.9								
- Previous update		3.0	0.0	-1.2	0.3	0.1	0.1	0.0	-0.1
- Current update		3.4	-3.0	-5.5	-4.2	-3.2	-1.9	-0.8	0.0
- Difference		0.5	-3.0	-4.2	-4.5	-3.3	-2.0	-0.9	0.1
Gross debt level									
- Previous update		30.3	27.9	26.3	25.4	24.6	23.8	23.2	22.6
- Current update		33.4	38.5	41.8	46.2	48.3	48.1	46.1	45.0
- Difference		3.1	10.6	15.5	20.8	23.6	24.3	22.9	22.4

1) Statistics Denmark's latest EDP-reporting in October (based on Economic Survey. August 2008), showed a surplus of 4.9 per cent of GDP on EDP-basis.

Source: Own calculations.

Table 7

Long-term sustainability of public finances

	2000	2005	2010	2020	2030	2050	2060	2070
					Per cent of GDP			
Total expenditure	53.1	51.9	57.9	52.3	53.5	53.4	52.2	51.6
Of which:								
- Age-related expenditure	27.2	28.3	31.7	30.1	30.5	29.1	28.0	27.8
- Pension expenditure	9.4	9.4	10.4	10.1	9.9	8.4	7.8	7.7
- Social security pension	9.4	9.4	10.4	10.1	9.9	8.4	7.8	7.7
- Old-age and early pensions	7.0	7.3	8.1	8.2	7.8	6.3	5.5	5.4
- Other pensions	2.4	2.2	2.2	1.9	2.1	2.1	2.2	2.3
- Occupational pensions								
- Health care	6.1	6.4	7.2	7.0	7.4	7.6	7.5	7.4
- Long-term care	1.2	1.2	1.3	1.3	1.6	1.9	1.8	1.8
- Education expenditure	6.2	6.6	7.5	6.8	6.6	6.5	6.3	6.3
- Other age-related expenditures	4.3	4.7	5.4	4.9	4.9	4.7	4.7	4.6
- Interest expenditure	4.3	2.6	2.1	2.6	3.0	4.6	4.7	4.2
Total Revenue	55.3	56.9	52.4	51.3	50.8	50.6	50.5	50.8
Of which:								
- Property income[1)]	1.9	1.5	1.6	1.8	1.7	1.7	1.7	1.7
- Revenue from pension payouts net	-0.5	-0.8	-0.5	-0.3	-0.5	0.2	0.3	0.6
Pension reserve fund assets	115.9	138.9	148.7	156.5	178.2	207.3	213.6	216.1
Of which:								
-Public pension fund assets[2)]	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Assumptions								
Labour productivity growth	3.7	0.4	4.0	1.3	1.4	1.7	1.6	1.6
Real GDP growth[3)]	3.5	2.4	1.3	1.4	2.4	2.6	2.5	2.5
Participation rate males (aged 20-64)	84.1	84.8	84.9	85.9	88.6	89.4	89.4	89.4
Participation rate females (aged 20-64)	75.3	76.1	75.6	77.3	80.3	82.0	81.9	82.1
Total participation rate (aged 20-64)	79.8	80.5	80.3	81.6	84.5	85.7	85.7	85.8
Unemployment rate	4.8	4.9	5.3	3.6	3.6	3.6	3.6	3.6
Structural unemployment	5.7	4.8	3.7	3.6	3.6	3.6	3.6	3.6
Population aged 65+, 1,000 persons	791.1	817.8	917.8	1,142.2	1,322.9	1,407.5	1,427.7	1,513.7

Note: Figures are based on national account principles. i.e. not on EDP-basis.
1) Includes public revenues from interest income and dividends.
2) Public funds assets is adjusted downward by almost DKK 300 billion in 2005 due to the changed classification of the ATP fund due to the revision of national accounts.
3) In some years after 2025 GDP growth is effected by the regulation of early- and old age person ages in line with longevity.
Source: Statistics Denmark and own calculations.

Table 8

Basic assumptions

	2008	2009	2010	2011	2012	2013	2014	2015
Short-term interest rate (annual average)	4.8	2.5	1.8	2.6	2.8	3.0	3.3	3.5
Long-term interest rate (annual average)	4.3	3.6	3.9	4.0	4.3	4.5	4.8	5.0
Exchange rate USD/EUR (annual average)	146.2	139.1	148.2	148.2	148.2	141.8	136.0	130.6
Nominal effective exchange rate (1980=100)	105.9	107.8	108.5	108.5	108.5	108.5	108.5	108.5
World excluding EU. GDP growth	2.6	-1.1	4.0	4.2	4.8	5.0	5.0	5.0
EU GDP growth	0.8	-4.1	0.9	1.8	2.2	2.4	2.5	2.5
Growth of relevant foreign markets	2.0	-10.9	3.6	6.1	6.6	6.6	6.6	6.6
World import volumes. excluding EU	4.3	-12.6	5.0	6.0	7.5	7.5	7.5	7.5
Oil prices. (Brent. USD/barrel)	97.2	61.9	80.3	84.5	88.7	93.0	97.2	101.4

Source: ADAM, OECD Economic Outlook 86 and own calculations.

DENMARK'S CONVERGENCE PROGRAMME 2009
February 2010:12

This publication can be ordered
or collected at:
Rosendahls – Schultz Distribution
Herstedvang 10
2620 Albertslund
Denmark
Telephone +45 43 22 73 00
E-mail Distribution@rosendahls-schultzgrafisk.dk
www.rosendahls-schultzgrafisk.dk

Enquiries regarding the publication can,
furthermore, be addressed to:
Ministry af Finance
Macroeconomic Policy Center
Christiansborg Slotsplads 1
1218 København K
Denmark
Telephone +45 33 92 33 33
E-mail fm@fm.dk
www.fm.dk

ISBN printed version
978-87-92480-51-4

ISBN electronic version
978-87-92480-52-1

Design	BGRAPHIC
Print	Rosendahls – Schultz Grafisk
Price	Free of charge
No. of copies	200

The publication can be downloaded at
www.fm.dk

NORDIC ECOLABEL
PRINTED MATTER
541 176