FINANSMINISTERIET

CONVERGENCE PROGRAMME FOR DENMARK

Updated programme for the period 2005-2010

November 2005

Convergence Programme for Denmark
Updated programme for the period 2005-2010
November 2005

Enquiries regarding the publication can, furthermore, be addressed to:
Ministry of Finance
4th Division
Christiansborg Slotsplads 1
1218 København K
Denmark
Telephone: +45 33 92 33 33

Electronic Version:
ISBN: 87-7856-2

Table of contents

1. Convergence Programme for Denmark 2005

1.1 Introduction

The Danish economy is developing positively with fairly strong output growth, falling unemployment, rising employment, moderate inflation and surpluses on the fiscal and external balances. Both general government debt and foreign debt are being reduced.

In the latest economic forecast (published in August), economic growth is projected to average some 2¼ per cent in 2004-2006 after subdued growth of ¾ per cent annually during the period 2001-2003[1]. Initially, the recovery was driven primarily by strong private consumption growth, which has been supported by, in particular, the lowering of income taxes in 2004, low interest rates and rising house prices.

Economic growth appears to become gradually more balanced in 2005 and 2006 as business investment and exports are expected to gather pace, while private consumption growth is expected to ease. Fiscal policy in both 2005 and 2006 is set to be broadly neutral in terms of economic activity, after a notable stimulus in 2004 stemming not least from the tax reductions.

Unemployment has declined by more than 30,000 persons since the end of 2003 and is expected to decline by an additional 10,000 persons by end-2006. The unemployment rate (national definition) is thus reduced from almost 6 per cent of the labour force in 2003 to just above 5 per cent in 2006. Meanwhile, employment is expected to increase by some 35,000 persons (1.3 per cent) from 2003 to 2006 – of which some 30,000 persons in the private sector. Overall, these trends point to increasing labour market pressures.

Based on the positive cyclical outlook and other factors, the general government surplus is expected to reach 2.5 percent of GDP in 2005 and 1.9 per cent of GDP in 2006 using national account principles, where ATP is classified as part of the private sector.[2] In part, the projected surpluses represent a temporary strengthening of the fiscal balance. Hence, the increase in oil prices is projected to generatel relatively high revenue from North Sea oil and gas activities. Moreover, in 2005 the tax on pension funds' returns is projected to yield above-normal revenues due to large capital gains on stocks and bonds. The average structural surplus, which excludes these and other transitory factors, is projected at roughly 1 per cent of GDP in 2005 and 2006, which is consistent with medium-term objectives, *cf. chapter 2 and 4*.

---

[1] The national accounts data shown in Convergence Programme 2005 are based on the revised national accounts methodology and data published by Statistics Denmark in June and July 2005. Variables in real terms are based on 2000-prices.

[2] As part of the Excessive Deficit Procedure Denmark presently reports the general budget balance (net lending) including ATP (the labour market supplementary pension fund). Based on the EDP-definition (incl. ATP), the general government surplus is estimated at 3.6 per cent of GDP in 2005 and 3.1 per cent of GDP in 2006.

The favourable economic outlook provides a sound basis for focusing on long-term objectives and challenges. In spring 2006 concrete proposals on improved education, research and development, innovation and entrepreneurship will be put forward. The efforts will be based primarily on the work of the Globalization Council established by the government in 2005 and the ongoing discussions with the social partners on a strengthening of lifelong learning. Furthermore, in light of the upcoming report of the government-appointed Welfare Commission and the following debate on the commission's recommendations, the government will put forward proposals in the welfare area in the first part of 2006.

The 2005 Convergence Programme (CP05) sets out the broad fiscal and structural policy objectives towards 2010[3]. Compared with CP04, the medium-term requirements for fiscal policy and employment growth have been reassessed in light of, in particular, the proposed fiscal bill for 2006, the latest agreement on improved labour market integration of immigrants and a revised population projection etc. Overall, the projection implies that the targets and assumptions for taxation, public services and employment towards 2010 are consistent with fiscal sustainability under neutral economic policy assumptions after 2010, *cf. chapter 5*.

The convergence programme is based on the latest short-term economic forecast for 2005 and 2006, *cf. Economic Survey, August 2005*, which incorporates the proposed fiscal bill for 2006 and the agreements reached in June 2005 on the local governments' finances for 2006.[4] A new assessment of the short-term outlook, which incorporates the politically agreed fiscal bill for 2006, is scheduled for publication in the beginning of December. The growth prospects for 2005 and 2006 together are expected to be slightly higher than in the August figures, *cf. chapter 3*. Meanwhile, the forecast horizon will be extended to 2007.

The Convergence Programme for 2005 should be seen together with *Denmark's national reform programme, October 2005*, which outlines the Danish government's strategy on structural reform.

[3] The convergence programme is prepared in accordance with the Stability and Growth Pact (Council Regulation (EU) No. 1466/97 as amended by Council Regulation No. 1055/2005) and the new Code of Conduct adopted by ECOFIN on October 11, 2005. According to the regulations, euro-area member states are required to prepare stability programmes, whereas the other countries are required to prepare convergence programmes. The Council issues an opinion on each national programme based on a recommendations from the Commission and after a discussion in the Economic and Financial Committee (EFC). The convergence programme and the Council's opinion are transmitted to the Danish parliament.

[4] An English summary is available on www.fm.dk.

2. Policy framework and 2010 objectives

2.1 Medium-term strategy

Fiscal policy is designed on the basis of the fiscal objectives and requirements laid out in the 2010-plan, *cf. chapter 3*. The key objective in the 2010-projection is a sustainable fiscal policy, implying a marked reduction in public debt (as a share of GDP) by 2010. The fiscal targets provide a sound basis before the ageing of the population sets in.

Fiscal sustainability requires, in particular, moderate growth in real public consumption of ½ per cent annually in the period 2006-2010 and a durable increase in employment, sufficient to strengthen the general government balance by some 0.8-0.9 per cent of GDP. This requires an increase in structural employment of some 50,000 persons (or almost 2 per cent) by 2010.

In spring 2006 the government will put forward a new multi-annual economic programme. According to the government platform *New Objectives*, February 2005 (only available in Danish) the plan will be elaborated in light of the analyses of the Welfare Commission.[1] The recommendations of the Globalization Council established by the government and the work with social partners on lifelong learning and education for everyone active in the labour market will also be part of the considerations leading up to the new multi-annual plan.

The new economic plan will extend at least to 2015 and contain targets for, inter alia, employment, public debt and taxation. The government platform also states that labour income taxes will be lowered further, provided the fiscal room for manoeuvre is achieved.

2.2 Objectives of economic policy

Overall, economic policies aim at ensuring high and stable employment, sustainable public finances and good framework conditions for growth. Central objectives for individual policy areas include:

- *Monetary and exchange rate policies*: Continued stable exchange rate and inflation developments by virtue of the stable krone exchange rate vis-à-vis the euro.
- *Fiscal policy*: The operational target is to ensure structural general government surpluses of between ½ and 1½ per cent of GDP on average through 2010[2].

[1] The Welfare Commission was established in autumn 2003. The Commission is made up of experts and private sector representatives. The primary task of the Welfare Commission is to provide analyses of the challenges associated with prospective demographic changes, which may also form the basis of wide-ranging public debate. Based on the analyses, the Commission is charged with proposing possible reform initiatives. The Welfare Commission is due to report at the latest by the end of 2005.

[2] The target applies to the fiscal balance on a national accounts basis. As a result of the methodological revisions to the national accounts published by Statistics Denmark in June/July 2005, the surplus – and hence the target for the

The multi-annual target provides room to let automatic stabilizers play fully over the cycle. The surpluses will entail a marked reduction in the net debt of central and local governments (as a share of GDP) by 2010.

- *Tax policies*: Tax freeze and lower taxes on labour income. Taxes on labour income were reduced as of 2004 by virtue of, notably, the Spring Package. Provided the fiscal room for manoeuvre is achieved, the government intends to lower taxes on labour income further.
- *Expenditure policies*: Moderate growth in overall public expenditure. For 2006-2010, the scope set aside for real public consumption growth amounts to 0.5 per cent per year. Resources are allocated primarily to strengthening of research, education and innovation and also health care and social services (the elderly and families with children). In addition, public services should be improved through fewer and larger municipalities and regions (the former counties), expanded "free choice" between service providers and other initiatives increasing efficiency in the public sector.
- *Structural and labour market policies*: New initiatives are required to lastingly strengthen employment by 50,000 persons by 2010. That corresponds to an improvement of the general government balance by 0.8-0.9 per cent of GDP. Efforts are focused notably on strengthening labour market participation among immigrants and their descendants, reducing the average age at which young people complete their education, raising participation among elderly workers, and generally securing a better-functioning labour market. Productivity growth should be strengthened through increased competition, reduced administrative burdens, raising the level of education and securing more results from research and development.

Denmark continues to fulfil the convergence criteria for stable exchange rates, inflation, interest rates and public finances and debt, *cf. table 2.1*.

Table 2.1.
Convergence criteria in 2004

	Consumer price inflation (HICP)	Government bond yields (10 year)	General government budget balance (EDP-form)	General government debt (EMU-debt)
	Per cent	Per cent	Per cent of GDP	
Denmark	0.9	4.3	2.3	43.2[1)]
EU25	2.1	4.7	-2.6	63.4[1)]
Euro area	2.1	4.0	-2.7	70.8
Convergence criteria	2.2	6.1	-3.0	60.0

1) Based on Denmark's EDP-report from end-August 2005.
Source: EU Commission, Statistics Denmark and Finance Ministry calculations.

surplus – is now calculated excluding ATP. For this purely technical reason, the target range was stated as 1½-2½ per cent of GDP in CP2004 against now ½-1½ per cent of GDP.

In table 2.1 the general government surplus of 2.3 per cent of GDP in 2004 is reported in accordance with the EDP-definition of the fiscal balance (Excessive Deficit Procedure). In particular, it includes the surplus in the Labour Market Supplementary Pension Fund, ATP.[3]

2.3 Monetary and exchange rate policies

Monetary policy is aimed at maintaining a stable exchange rate of the Danish krone against the euro. The framework for the fixed exchange rate policy is the ERMII agreement, which stipulates a narrow fluctuation band against the euro of ±2¼ per cent around the central parity. For a number of years, the exchange rate has been close to the central parity, *cf. figure 2.1a*. Since the introduction of the euro in January 1999 the largest (absolute) difference from the central parity has been around ½ per cent.

Figure 2.1a
Krone exchange rate vis-à-vis euro

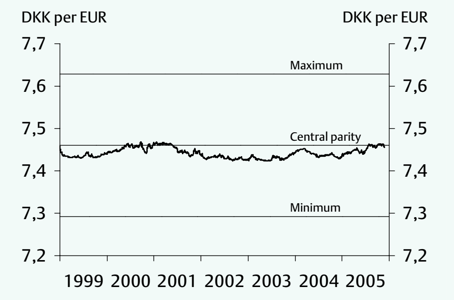
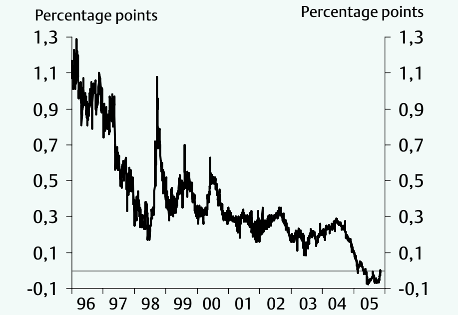


Figure 2.1b
10-year yield differential vis-à-vis Germany



Source: Denmark's Nationalbank.

A wide majority in the Danish parliament supports the fixed exchange rate policy, and the government regards the commitment and the credibility of the fixed exchange rate policy as paramount. The focus of fiscal policy on stability and sustainability supports the fixed exchange rate policy.

The commitment to a fixed exchange rate policy has ensured low and stable inflation for a number of years. With a fixed exchange rate vis-à-vis the euro the low level of inflation in the euro-area serves as an anchor for Danish inflation and inflation expectations. Since the early 1990's Danish inflation has broadly been in line with the ECB's definition of price stability.

[3] The general government budget surplus is larger on an EDP-basis than on the national accounts basis. The forecast made in August was based on a public surplus amounting to 1.1 per cent of GDP in 2004 using national account principles against 2.3 per cent of GDP on the EDP-basis. The primary cause of the difference of 1.2 per cent of GDP is that the surplus of the ATP-fund of about 1.0 per cent of GDP is included in the EDP-balance. The treatment of swap-related interest flows etc. also pulls in the direction of higher surpluses on the EDP-basis corresponding to 0.2 per cent of GDP. Gross debt (EDP definition) is consolidated for ATP holdings of government bonds implying a deduction of about 1¼ per cent of GDP.

The Danish Nationalbank's lending rate tends to follow ECB's minimum bid rate with a premium that ensures that the exchange rate is stable. The premium has typically fluctuated in a range of 15-50 basis points since 1999. Historically, the interest differential has also been visible in longer-term interest rates, *cf. figure 2.1b*, showing the interest rate differential between Denmark and Germany with respect to 10-year central government bonds. Normally the interest rate differential is positive which should be seen in conjunction with Denmark not having adopted the euro.

In parts of 2005, the long-term interest rate differential has been negative (but small). This is partly related to relatively favourable developments in Denmark with solid general government budget surpluses and declining public debt.

Furthermore, the interest rate differential tends to be smaller when the interest rate level is low. Among other things, this may be because the demand for long DKK-bonds from pension and life insurance companies increases when interest rates decline, since these companies may need to make higher provisions to cover future pension obligations when yields decline. The interest rate differential is expected to increase in conjunction with an increase in the overall interest rate level. More favourable cyclical developments in the euro area and especially Germany, with higher growth and improved public finances, could also pull up the interest rate differential.

2.4 Fiscal policy

Fiscal policy and the required increase in employment implies a sustainable development in public finances given the long-term assumptions on interest rates, indexation of income transfers, average working hours etc.[4] The operational target for fiscal policy is to maintain structural general government surpluses of ½-1½ per cent of GDP on average through 2010. The operational target is specified as an interval to reflect the uncertainty in determining long-term fiscal policy challenges.

The target for average structural surpluses through 2010 allows room for letting the automatic stabilizers play, thus helping to dampen cyclical fluctuations. The target requires prudent fiscal policies when cyclical conditions are favourable and unemployment low, and ensures fiscal room for manoeuvre in case of severe downturns with evident imbalances.

Compared to CP04 a technical adjustment of the targeted general government budget surpluses from 1½-2½ per cent of GDP to ½-1½ per cent of GDP has been undertaken. The new target range is a consequence of Statistics Denmark's revision of the national accounts, where the ATP-fund is no longer classified as part of the

[4] The long-term projections are based on a "policy scenario" through 2010, where specific requirements concerning expenditure and employment policies etc. are included, and a "policy neutral scenario" after 2010. The neutral scenario after 2010 is based on mechanical principles implying that expenditures and revenues as a share of GDP are primarily affected by demographic changes, declining oil reserves in the North Sea and increasing taxable (net) pension payouts, *cf. chapter 5*.

public sector. ATP has been moved to the private (financial) sector. The changed classification of ATP causes a technical reduction of the general government budget balance of almost 1 per cent of GDP. The revision of public finances does not affect fiscal sustainability and fiscal policy requirements, since ATP's assets have always been reserved for future ATP pension benefits.

This technical adjustment of both public finances and the operational target was mentioned in the Convergence Programme for 2004. When assessing long-term fiscal sustainability, ATP has always been treated as a private pension fund.

The surplus on the structural fiscal balance is estimated at almost 1 per cent of GDP in 2005 and 2006, when corrected for the suspension of contributions to the Special Pension scheme, *cf. table 2.2*.[5] This is within the aforementioned target range implying that fiscal policy is in line with the medium-term objectives.

The suspension of (tax deductible) SP-contributions improves the general government budget balance by about 0.3 per cent of GDP in the period 2004-2007, ceteris paribus. On the other hand, the suspension implies that future taxable SP benefits will be lower, which in the long-term reduces the budget balance. The suspension of SP-contributions mainly brings taxation forward in time and does not imply an increase in taxation. The suspension of SP-contributions does not materially affect fiscal sustainability.

Table 2.2.
Public finances, 2004-2006

	2004	2005	2006
Per cent of GDP			
Actual budget balance (EDP-definition[1])	2.3	3.6	3.1
Actual budget balance (national account principles)[2]	1.1	2.5	1.9
Structural budget balance[3]	0.4[4]	1.0[4]	0.8[4]

1) Including ATP.
2) Excluding ATP.
3) The calculations of the structural budget balance are based on public finances according to national account principles. The structural budget balance based on the EDP-definition of net lending is not calculated.
4) Corrected for the suspension of the contribution to the Special Pension scheme.
Source: Statistics Denmark and Finance Ministry calculations.

The reformed Stability and Growth Pact maintains the basic objective requiring a medium-term budget balance of "close to balance or in surplus". As a new feature, the reformed pact also contains differentiated objectives, so that the structural

[5] As a part of the Whitsun package the Special Pension scheme (SP) was introduced taking effect as of January 1999. SP replaced the Temporary Pension scheme, which was introduced in January 1998. For employees the contribution amounts to 1 per cent of their gross salary, while certain social transfer recipients also pay a contribution corresponding to 1 per cent of income. As a part of the Spring Package SP-contributions were suspended in the years 2004 and 2005. Subsequently the suspension has been extended to cover the years 2006 and 2007.

budget balance should exhibit a deficit of no more than 1 per cent of GDP for countries with low public debt and high potential growth, and be closer to balance or in surplus for countries with high public debt and low potential growth.

In addition, the pact contains a triple aim of securing sufficient safety margins with respect to the 3 per cent deficit limit for the actual budget deficit, rapid progress towards fiscal sustainability, and budgetary room for manoeuvre.

According to the sufficient safety margin requirement, Denmark should as a minimum have a structural budget position which is in balance or a deficit of no more than ½ per cent of GDP. The operational target to ensure structural general government surpluses between ½-1½ per cent of GDP through 2010 implies that Denmark fulfils the requirements of the pact.

The Danish medium-term objectives are more ambitious than the pact's minimum requirements, because the 2010-plan takes into account that the present demographic situation is favourable with a relatively high share of individuals in the working ages. The intended public surpluses contribute to secure that a significant upward pressure on taxation does not arise, when the number of elderly is increasing in the coming decades, and the number of people in working ages is falling.

When assessing the overall amount of public saving, the general government surplus to 2010 should also be seen together with the build-up of an implicit government asset in shape of so-called deferred tax revenues in the pension sector, *cf. box 2.1*.

Box 2.1

Public finances and deferred taxes concerning pension contributions

In Denmark pension contributions are tax deductible. Income taxation takes place when pension payouts are made. This implies a (technical) worsening of public finances, because presently pension contributions are larger than pension payouts. For the period 2004-2010 the reduction of the general government budget balance amounts to some 1.3 per cent of GDP on average. As a counterpart, a government asset is built up in the pension sector in the shape of deferred tax payments, which will strengthen the budget balance in the future when net pension benefits gradually increase.

Thus, in reality "public saving" corresponds to around 3.1 per cent of GDP on average through 2010, when the accumulation of deferred taxes is added to the general government surplus, *cf. table a.* It may be noted that private pension wealth (incl. ATP) amounts to approximately 125 per cent of GDP in 2004.

Table a

Public finances and deferred taxes

Per cent of GDP	Avg. 2004-2010
General government budget surplus	1.8
Deferred taxes on (net) pension contributions	1.3
Total public saving	3.1

Source: Finance Ministry calculations.

2.5 Tax policy

The tax freeze introduced in November 2001 is the cornerstone of *tax policy*. The tax freeze implies that direct or indirect tax rates can not be raised, whether expressed as a percentage or as an amount in Danish kroner. In addition, a cap is imposed on the nominal property value tax. Due to the nominal caps on excise duties and the property value tax the tax freeze implies a gradual reduction of the tax burden.

The tax freeze has ended the historical tendency towards higher taxes especially at the local government level (i.e. counties and municipalities/regions).

The tax freeze does not guarantee that the tax burden will be falling every year. Thus the tax burden is expected to increase from almost 48 per cent of GDP in 2003 to around 49¼ per cent of GDP in 2005. The higher tax burden is caused by higher growth in the tax bases for a number of direct and indirect taxes than in GDP. In particular, this is the case for the tax on pension funds' returns and corporate taxes (especially the tax on hydrocarbon-producing companies). The tax base for the motor vehicle registration tax has also been growing rather fast due to strong growth in car sales. The same holds for the VAT due to relatively high growth in overall private consumption.

Taxes on earned income were reduced by around 10 billion DKK in 2004 (corresponding to 0.7 per cent of GDP). The tax reduction is evenly divided between an earned income tax credit (EITC) and a higher income threshold for the 6 per cent middle-bracket income tax. The tax reduction increases both incentives to take a job and to work more hours for some of those already having a job. All in all, the tax reduction is estimated to increase effective labour supply equivalent to around 10,000 full-time employees.

In addition, a number of specific and targeted tax reductions have been implemented. E.g. excise duties on spirits and cigarettes were lowered to reduce the impact on cross-border trade caused by the abolition of the so-called 24-hour rule.

2.6 Expenditure policy

Expenditure policies are aimed at moderate growth in overall public expenditure. Public consumption is presumed to increase by ½ per cent per year in the period 2006-2010, while real growth in tax-financed public investment amounts to 1 per cent per year.

The annual growth in real public consumption corresponds to roughly 2 bill. DKK per year (or about 0.1 per cent of GDP). This accumulates to a total of some 30 bill. DKK for the period 2006-2010 (with public consumption lifted by 2 bill. DKK in 2006, 4 bill. DKK in 2007 and so on to 10 bill. DKK in 2010, relative to the 2005-level). With the proposed fiscal bill for 2006, 24 bill. DKK of the accumulated total has been reserved for the following areas:

- Research, education, innovation and entrepreneurship (10 bill. DKK in 2006-2010) – initiatives to follow up on the work of the Globalization Council.
- Improved conditions for families with children – reduced parental co-payment and better quality in day-care institutions (8 bill. DKK in 2006-2010).
- Hospitals and elderly (5 bill. DKK in 2006-2010).
- Nature and the environment (1 bill. DKK in 2006-2009).

In addition to the real growth in public consumption, ongoing efficiency gains in the public sector may yield an additional contribution to better public services.[6] The advance prioritisation of public consumption growth (above) intensifies the requirements with respect to efficiency gains and expenditure control at the local government level. As part of the agreement on local governments' finances for 2006, it was decided to establish a system which ensures a higher degree of compliance with respect to the agreed economic framework and budgets.

A comprehensive reform of the local government structure and division of tasks between the different levels of government has been finalised. The reform takes effect from January 2007. It implies a gathering of tasks and makes scope for efficiency

[6] The demographic "pull" on public services, which is calculated on the basis of population changes and the distribution of public expenditures with respect to age, sex and origin, is estimated at approximately 0,0 per cent per year in the period 2004-2010. That is less than estimated in CP04, where the demographic "pull" was calculated at 0.1 per cent on average per annum. The revision reflects a new population projection.

gains and economies of scale in significantly fewer municipalities and the creation of five regions replacing the existing counties.

In addition, initiatives have been launched to further the digitalisation of public administration; making greater use of public-private partnerships; and preparing privatisation of public companies. Free choice between public and private service providers as regards elderly care and free choice between e.g. day care and primary school providers across municipality boundaries etc. has been implemented

The main initiatives contributing to ongoing improvements of the public sector are described in greater detail in the *Danish Reform Programme,* October 2005.

2.7 Structural and labour market policies

Structural and labour market policies focus on the objective to strengthen structural employment by 50,000 persons towards 2010, which constitutes a central requirement in the medium-term projection. The objective implies an increase in employment of almost 2 per cent and an improvement of the general government balance by 0.8-0.9 per cent of GDP.

The employment rate in Denmark is among the highest in EU and at the same time somewhat above the common EU objective of 70 per cent of the labour force laid down in the Lisbon strategy. To fulfil the ambitious medium-term employment requirements, efforts have to be concentrated in several areas. In the government platform *New Objectives,* February 2005, the following areas are emphasized:

- More immigrants into work.
- Lower age when finishing education.
- Less absence due to illness.
- More elderly in the labour market.
- Better functioning of the labour market.

An agreement has been reached concerning labour market integration of immigrants, which aims to strengthen the education level for immigrants and their descendants, and increase incentives to find a job. By virtue of the agreement "*A new chance for everyone",* May 2005 (only available in Danish), activation efforts will be increased and the economic incentive to work as opposed to receiving social assistance will be improved. Among other things, an employment requirement is introduced for recipients of social assistance. In total the initiatives in the integration plan may increase the number of full-time employed or in education by approximately 10,000 persons through 2010.[7]

The government will present a plan of action with initiatives that contributes to getting young people quicker through the educational system. The goal is to reduce the

[7] Of which 6,000 persons are included in "Assumed contribution from already-implemented reforms" in *table 3.4*.

average age when finishing education by one year. Towards 2010 this may contribute to an increase in employment by up to 5,000 persons.

Over the summer of 2005, a number of analyses of employment-related policies have been published. Against this background, possible adjustments are being discussed with some of the political parties represented in parliament. This service check of employment policies will focus, among other things, on tightening availability requirements and certain rules in the area of unemployment benefits which hamper flexibility and hence employment. The objective is that the service check should contribute to raise employment by up to 5.000 persons by 2010.

In addition to the Welfare Commission, a Globalisation Council has been established to advise the government in making proposals to strengthen education, research and development, innovation and entrepreneurship. Towards 2010 – within the medium-term expenditure framework – 10 billion DKK (in accumulated terms) is allocated to improve education, research, innovation and entrepreneurship. Furthermore, work is being done to intensify efforts on lifelong learning.

The main initiatives concerning employment growth are explained in greater detail in the *Danish Reform Programme,* October 2005.

3. Short-term outlook and prospects to 2010

3.1 International economy and financial variables[1]

The global economy is expanding quite strongly. Global GDP growth is expected to be around 4 per cent in 2005 and 2006 after record high growth of 5.2 per cent in 2004. Global growth is held up by the United States and China, in particular, and for these countries, growth prospects are slightly stronger than in last year's convergence programme. In the euro area, activity remains rather weak with growth estimated at just below 1½ per cent in 2005 and 2 per cent in 2006.

Overall, the growth in the international economy is expected to be above potential growth in 2005-06. As of 2007 foreign GDP-growth is assumed to be in line with potential growth, which – using Danish export market weights – is estimated to be around 2¼ per cent.

World trade growth in volumes typically exceeds the growth in GDP due to, in particular, growing international division of labour. This tendency is maintained in the projections. Hence, export market growth (as well as Danish import growth) exceeds the growth in GDP, *cf. table 3.1*.

Table 3.1
Assumptions about the international economy

	2004	2005	2006	2007	2008	2009-10
Annual growth, per cent						
Real GDP[1)]	3.0	2.5	2.6	2.3	2.2	2.2
Real market growth[1)]	7.5	6.1	6.5	4.6	4.4	4.4
Per cent, end-year level						
Germany, 10-year bond yield	4.1	3.5	3.8	4.0	4.2	4.5

1) Trade-weighted. Market growth is for manufactured products.
Source: European Commission spring forecasts 2005, OECD and own calculations.

Strong international growth and a series of disruptions on the supply side have contributed to currently high oil prices. Oil prices are considerably higher than marginal production costs, and a combination of expanding capacity and adoption of energy-saving technologies are assumed to pull oil prices down over time. The average oil price is assumed to be 53½ $ per barrel in 2005 and 58½ $ per barrel in 2006. Sub-

[1] The Convergence programme 2005 is based on the latest published short-term outlook, *cf. Economic Survey, August 2005*. The assumptions on the international economy are based on the European Commission's spring forecasts adjusted for subsequent information on, e.g., oil prices, interest rates and exchange rates. The external assumptions (cf. Annex table A.8) are broadly in line with the Commission's autumn forecast.

sequently, the oil price is technically assumed to fall just below 40 $ per barrel in 2007 and in subsequent years (measured in 2007-price level)[2].

Even though oil prices have risen strongly since early 2004, oil prices measured in real terms and relative to wages remain considerably below the level during the oil crisis in the early 1980s, and the energy-intensity of production and consumption has declined markedly since that period. These factors have reduced the impact on activity and employment of oil price fluctuations.

While the Fed funds rate in the United States has been gradually raised since the summer of 2004, the ECB has kept its refinancing rate unchanged at a historically low level of 2 per cent in light of, inter alia, relatively dampened inflation and moderate capacity pressures in the euro area. Denmark's Nationalbank has followed the interest policies of the ECB, which should be seen in light of the stable exchange rate policy.

The decline in interest rates since 2002 is estimated to stimulate economic growth by about 1 percentage point in each of the years 2004-2006. In recent years, the expansion of the Danish economy has exceeded that of the euro area, and the monetary stance of the ECB appears relatively easy for Danish conditions.

The expected increase in monetary policy interest rates in the euro area is now anticipated to take place in the first half of 2006. In CP05 the short-term interest rate is assumed to gradually increase from around 2 per cent in 2005 to just below 4½ percent in the longer term, while the nominal effective bond yield is assumed to rise from 3½ per cent in 2005 to 5½ per cent in 2010 and 6½ per cent in the long term.

Since early 1999, the yield spread between German and Danish 10-year government bonds has averaged 0.3 percentage points. Recently, the very low international interest rates and the Danish fiscal surplus have contributed to a low – and in early 2005 negative – yield spread. A positive spread is assumed to re-emerge in line with the assumed general increase in interest rates.

3.2 Short-term outlook for the Danish economy

Based on the August *Economic Survey,* the outlook includes decent growth in activity and employment, declining unemployment and sizeable surpluses on both the public finances and the external balance in 2005 and 2006[3]. GDP- growth has been estimated at 2.4 per cent in both 2005 and 2006, *cf. table 3.2*. Hence, growth is expected

---

[2] The assumption about oil prices in the longer term is in line with the oil price assumption of the International Energy Agency (IEA's), *cf. World Energy Outlook 2005 - Middle East and North Africa Insights, November 2005.*

[3] The August *Economic Survey* was the first short-term projection to be based on the revised national accounts methodology and data of Statistics Denmark. In June/July 2005, Statistics Denmark published revised national accounts for 1990-2004. The new national accounts are briefly outlined in *appendix 1*. As a result of the revisions, national accounts data were only available on an annual basis when the August projection was finalized. Quarterly data on the new national accounts basis were not available at the time of the August survey.

to be somewhat higher in Denmark than in the EU15, where growth is projected at 1.5 per cent in 2005 and 2.0 per cent in 2006.

Table 3.2
Key figures

	ESA	2004	2005	2006	2007	2008	2009-10
Per cent							
GDP-growth (fixed prices) 1)	B1g	2.0	2.4	2.4	1.1	1.6	2.1
GDP-deflator		2.2	2.2	2.0	2.0	2.4	2.2
Growth components, real growth in per cent							
Private consumption	P3	3.9	3.6	2.5	1.4	1.2	1.7
Public consumption	P3	2.0	0.3	0.5	0.5	0.5	0.5
Fixed gross investment	P51	3.1	3.8	5.0	2.1	1.8	1.7
Changes in stocks 2)	P52/3	0.1	0.0	0.0	0.0	0.0	0.0
Exports	P6	3.3	3.9	4.6	1.8	3.8	5.4
Imports	P7	6.5	4.8	4.9	2.3	3.1	4.3
Contributions to GDP-growth, percentage points							
Final domestic demand		3.0	2.6	2.4	1.2	1.1	1.3
Changes in stocks	P52/3	0.1	0.0	0.0	0.0	0.0	0.0
Net exports	B11	-1.2	-0.2	0.1	-0.2	0.5	0.8
Labour market indicators, per cent per year							
Employment		0.1	0.6	0.6	-0.3	0.1	0.6
Unemployment rate (per cent)		6.1	5.5	5.1	5.3	5.2	4.8
Do, EU definition (per cent)		5.4	4.8	4.4	4.6	4.5	4.1
Hourly productivity growth 3)		2.9	1.9	2.4	2.0	2.0	2.0
Productivity (GDP per employee)		1.3	1.5	1.7	1.6	1.6	1.5

1) The relatively low GDP-growth rates in 2007 and 2008 reflect a technical closing of the positive output-gab in 2006, which takes place gradually from 2006 to 2008.
2) Contribution to GDP-growth.
Source: Statistics Denmark and own calculations.

Since the August survey, Statistics Denmark has published quarterly national accounts data up to and including the second quarter of 2005. New information has become available for a range of other business cycle indicators. In broad terms, the more recent information does not deviate significantly from the latest projections. GDP-growth in 2005 could be somewhat higher than expected. Meanwhile, employment growth appears higher and unemployment has declined by more than projected. These developments also point to a higher fiscal surplus in 2005 than estimated in August.

The next Economic Survey – which will incorporate the most recent information – will be published in the beginning of December 2005 and will extend to 2007.

Registered unemployment peaked in December 2003 and by September 2005 it had fallen by more than 30,000 persons. In 2006, unemployment is projected to decline to 147,000 persons or 5.1 per cent of the labour force (national definition). Unemployment is low both in a historical perspective and in an international comparison. When participants in active labour market schemes under the public employment services are included, unemployment was lower in September 2005 than during the historically low level at the turn of the year 2001/02.

Unemployment is expected to be below the estimated structural level and the output gap is estimated to be positive and increasing in 2005. This implies a heightened risk of bottlenecks and scarcity-induced wage increases through 2007. As a technical assumption for the medium-term, the output gap is assumed to be gradually closed in 2007-08.

3.3 Assumptions on employment and productivity through 2010

For the period 2005-10, GDP-growth is assumed to average just below 2 per cent per year, *cf. table 3.3*. Slightly lower growth than in the period 1994-04 reflects, in particular, that the strong decline in unemployment from 1994 to 2002 cannot be replicated, and that a certain reduction in average working hours is incorporated through 2010 due to a changed age profile of the working force. Average working hours have been roughly constant since the early 1990s.

Table 3.3

Contributions to production potential and real GDP

	1994-04	2005-10
Annual growth, per cent		
Growth in production potential	2.1	1.9
Of which:		
- Hourly productivity	1.5	1.7
- Structural unemployment	0.5	0.2
- Labour force	0.0	0.1
- Average working hours	0.0	-0.1
Growth in GDP	2.2	1.9

Source: ADAM databank and Finance Ministry calculations.

The projection implies an increase in the labour force of some 19,000 persons from 2004 to 2010 and a decline in unemployment of some 41,000 persons. Hence, employment increases by 61,000 persons. More than 47,000 extra jobs are assumed to be in the private sector and some 13,000 in the public sector, *cf. table 3.4*.

Table 3.4
Contributions to the increase in employment

	Change 2004-10
1,000 persons	
1. Demographic factors[1)]	-27
2. Assumed contribution from already-implemented reforms	20
3. Baseline scenario (1+2)	-7
4. Requirement: structural initiatives to raise employment	50
5. Cyclical contribution	18
6. 2010-scenario (3+4+5)	61

Note: The demographically-induced decline in employment is smaller than in CP2004 – primarily because increased educational attainment and longer average residence for immigrants has been included in the demographic factors. Due to rounding, the total may deviate from the sum of contributions.
1) Assumes unchanged aggregate unemployment rate and unchanged participation rates broken down by gender, age and origin from 2004 to 2010. The calculation incorporates higher participation rates for more-educated groups and changes to the average residence period for immigrants. Higher educational attainment and longer residence periods tend to raise employment by some 16,000 persons by 2010.
Source: Finance Ministry calculations.

Unemployment in 2004 is estimated to have a cyclical component (of about 15,000 persons), while the labour force in 2004 is slightly below its estimated structural level (by about 3,000 persons). Hence, part of the projected increase in employment (18,000 persons) is expected to flow from the presumed normalization of the cycle. The remaining required employment increase of 43,000 persons is of a structural nature.

The 2010-scenario forming the basis of CP05 assumes further initiatives sufficient to raise structural employment by some 50,000 persons (almost 2 per cent)*, cf. table 3.4*. In the projection, these contributions are technically assumed to emerge from an increase in the labour force of about 26,000 persons, notably through increased employment among immigrants and a faster flow of young people through the education system, and a reduction in structural unemployment of about 24,000 persons. Hence, structural unemployment is assumed to decline from roughly 5½ per cent in 2004 to just above 4½ per cent in 2010.

Thus in the absence of new initiatives structural employment would, according to the projections, decline by an estimated 7,000 persons from 2004 to 2010.

Finally, as illustrated in table 3.4, demographic developments are projected to reduce potential employment by 27,000 persons through 2010. This drop in employment is some 20,000 higher than in the baseline scenario, reflecting an estimated contribution from reforms, which have already been implemented.

These implemented initiatives include the earlier reforms of the voluntary early retirement scheme and of the disability scheme, the abolition of the pre-early retirement scheme for long-term unemployed elderly, the reform of labour market policies

More people in work, the reduction of taxes on labour income and the latest agreement to raise employment among immigrants *A new chance for everyone*.

Hourly productivity in the private sector (excluding agriculture, energy extraction and maritime services) is assumed to grow by, on average, some 2 per cent per year in the period 2005-10. For the private sector as a whole, hourly productivity is assumed to grow by about 2¼ per cent annually. Since the national accounts do not incorporate productivity improvements in the public sector, which employs some 30 per cent of all employees, economy-wide productivity growth is assumed to be about 1¾ per-cent per year, *cf. table 3.3*.

Average annual working hours have been roughly unchanged since the early 1990s (after a considerable decline in previous decades). The rising share of elderly and very young in the labour force implies a reduction in average working hours of ½ per cent from 2004 to 2010, since these groups on average work fewer hours than employees in the middle age groups.

3.4 Wages and prices

Labour market pressures are expected to contribute to an upward drift in wage increases from 3.2 per cent in 2005 to 3.7 per cent in 2006. Hence, prospective wage increases in 2006 remain somewhat higher than in the euro area, and the excess wage increase relative to trading partners is expected to widen slightly in 2006. Since 2000, wage increases have been about 1 per cent higher than in the euro area, which partly reflects higher productivity growth.

With consumer prices projected to rise by 1.7 per cent in 2005 and 2.1 per cent in 2006, real wages are expected to grow by around 1½ per cent in both 2005 and 2006.

The scenario through 2010 entails annual wage increases of about 3¾ per cent per year and consumer price inflation of around 1¾ per cent. Real wages increase by about 2 per cent per year, *cf. table 3.5*, which largely corresponds with the assumed productivity growth in the private sector urban occupations. As a result of the nominal principle of the tax freeze, consumer prices rise slightly less than the net price index (i.e., consumer prices excluding indirect taxes).

Table 3.5
Price indices and deflators

	2004	2005	2006	2007	2008	2009-10
Annual growth, per cent						
GDP-deflator	2.2	2.2	2.0	2.0	2.4	2.2
Private consumption deflator	1.5	1.7	2.1	1.4	1.9	1.8
Consumer price index	1.2	1.7	2.1	1.3	1.9	1.8
Do. EU-harmoniseret HICP	0.9	1.6	2.0	1.3	1.9	1.8
Net price index	1.4	1.9	2.3	1.4	2.0	2.0
Hourly wages, private sector	2.8	3.2	3.7	3.8	3.8	3.8
Wage costs pr. employee	3.1	3.0	3.6	3.8	3.7	3.7
The euro area						
HICP	2.1	1.9	1.5	-	-	-
Compensation pr. employee	2.1	2.2	2.4	-	-	-

Source: Statistics Denmark and own calculations

3.5 Current account and foreign debt

The projection points to continued high financial savings in both the public and private sectors. The external surplus may be in the range of 1-2½ per cent of GDP from 2004 to 2010. The surplus contributes to a reduction in foreign debt, which may (subject to often quite substantial changes in valuations of external assets and liabilities) turn to net foreign assets around 2010, *cf. table 3.6*.

Table 3.6
Current account and net foreign assets

	2004	2005	2006	2007	2008	2009-10
Per cent of GDP						
Private financial savings	1.4	-0.1	0.5	-0.8	-0.4	0.8
Public financial savings	1.1	2.5	1.9	2.0	1.5	1.6
Current account	2.5	2.4	2.4	1.2	1.2	2.5
Net foreign assets	-10.9	-8.5	-5.8	-4.3	-3.0	0.6

Source: Statistics Denmark and own calculations.

4. Outlook for general government finances

4.1 Overview of public finances

Based on the August economic outlook and the underlying assumptions concerning economic policies, the general government budget surplus is estimated at around 39 billion DKK or 2.5 pct. of GDP in 2005, *cf. table 4.1*. In 2004, the surplus was 1.1 pct. of GDP. The net lending figures are based on national accounts principles, where ATP is placed in the private sector.[1]

The key reasons for the larger expected public surplus in 2005 compared to 2004 are primarily declining unemployment, lower interest rates, high growth in private consumption and increasing oil prices.

Table 4.1
Public finances and debt

	ESA	2004	2005	2006	2007	2008	2010
Per cent of GDP							
Revenues	ESA	55.3	55.1	53.5	53.0	52.2	51.6
- of which taxes		49.1	49.3	47.9	47.8	47.0	46.4
Expenditures	ESA	54.1	52.5	51.6	51.0	50.7	49.8
Public balance (national accounts)	B9	1.1[1)]	2.5	1.9	2.0	1.5	1.7
- of which central and local governments		1.1[1)]	2.5	1.9	2.0	1.5	1.7
Public balance (EDP-basis excl. ATP)[2)]	B9 EDP	1.3	2.7	2.1	2.2[3)]	1.7[3)]	1.9[3)]
Public balance (EDP-basis incl. ATP)[2)]	B9 EDP	2.3	3.6	3.1	-	-	-
Public gross debt (EU-definition)		42.3[4)]	35.6	31.7	28.9	26.5	21.5
Public net debt		14.5	11.4	8.9	6.7	4.9	1.3
Net debt in central and local governments		14.6	11.4	9.0	6.8	5.0	1.3

Note: GDP includes FISIM (Financial Intermediation Services Indirectly Measured).
1) In November the general government budget surplus was revised to 1.7 per cent of GDP.
2) Up to and including the second EDP-reporting in 2006 public finances for Denmark will be incl. ATP. Thereafter, i.e. from the first EDP-reporting in 2007 public finances will be excl. ATP.
3) In line with the years 2004-2006 it is assumed that the public surplus on an EDP-basis (excluding ATP) is 0.2 per cent of GDP higher than the surplus on a national account basis (which also excludes ATP). The difference covers the treatment of swap-related interest flows and government revenues from the sale of UMTS-licenses.
4) Based on the EMU-debt figure in *Economic Survey, August 2005*. Differs somewhat compared to the EDP-report from end-August, cf. table 2.1, where the EMU-debt in DKK is a little higher (6¾ bill. DKK.), and GDP is excl. FISIM.
Source: Statistics Denmark and own calculations.

In spite of continued favourable cyclical conditions, the public surplus is expected to subside to approximately 31 billion DKK or 1.9 pct. of GDP in 2006. In light of the assumed increase in interest rates and thereby declining bond prices, this is primarily

[1] Unless otherwise mentioned, the public finance data below are based on the national account principles. The code of conduct tables on an EDP-basis are shown in the annex.

due to an expected decrease in revenues from the tax on pension fund yields of 0.8 per cent of GDP.

The relatively large general government budget surpluses in 2005 and 2006 partly reflect a temporary strengthening of public finances. Revenues from North Sea activities are expected to be relatively large due to high oil prices.[2] Furthermore, revenue from the tax on pension fund yields is expected to be extraordinarily high in 2005 due to capital gains on stock and bond holdings.

The starting point for the August economic outlook was a general government budget surplus – based on national account principles – of 16.2 billion DKK or 1.1 per cent of GDP in 2004. In November, Statistics Denmark published revised figures for public finances for the period 2001-2004. According to the latest figures the surplus is revised upwards to 24.8 billion DKK corresponding to 1.7 per cent of GDP in 2004.

With the revision, public expenditures have been revised downwards by more than 3 billion DKK. Interest expenditures are revised down by some 1¼ billion DKK, public consumption expenditures by almost ½ billion DKK, while various other current expenditures – e.g. subsidies – have been revised downwards by a total of around 1½ billion DKK. At the same time, public revenues have been revised upwards by some 5½ billion DKK. Tax revenues are revised up by 1 billion DKK in total, as revenues from the pension yield tax and corporation tax are approximately 1¾ billion DKK and ½ billion DKK higher, respectively, while income taxes and VAT are revised down by, in total, 1¼ billion DKK. Various other current and capital revenues are revised upwards by some 4½ billion DKK.

As part of the Stability and Growth Pact, Denmark reports its general government debt ("EMU debt") and budget balance to the European Commission under the Excessive Deficit Procedure, EDP.

The public balance on the EDP-basis differs in some aspects from the balance according to the national accounts. As mentioned earlier, this is primarily because the public balance on the EDP-basis for the moment still includes the surplus of the ATP fund of some ¾-1 per cent of GDP[3]. It also includes net interest income from

[2] Rising oil prices have a positive direct effect on public finances in Denmark, in contrast with most other EU countries. Rising oil prices imply higher public revenues from the taxation of oil and gas activities in the North Sea (namely corporate tax and hydro carbon tax). Higher oil prices also improve the current account, Denmark being a net exporter of oil. In 2004, Denmark's net exports of energy amounted to around ¾ per cent of GDP. With some uncertainty, it is estimated that a permanent increase in oil prices of 10 $ per barrel improves long-term fiscal sustainability by less than 0.1 per cent of GDP (given the assumed gradual depletion of reserves).

[3] The ATP-fund's surplus can vary somewhat from year to year. This is due to the fact, that the ATP-fund's pension yield tax payments to the central government can fluctuate rather much from year to year depending on the developments in financial markets.

central government interest rate and currency swaps, and a different treatment of central government revenues from the sale of UMTS-licenses.[4]

Thus, the general government surplus on the EDP-basis is higher than on the national accounts basis. In the August *Economic Survey,* the public surplus amounted to 1.1 per cent of GDP in 2004 based on national accounts and 2.3 per cent on EDP-basis. The surplus in the ATP-fund of 1.0 per cent of GDP in 2004 is the primary cause, while the treatment of swap-related flows etc. explains the remaining 0.2 per cent of GDP. In a similar fashion, the public surplus for 2005 is estimated at 3.6 pct. of GDP on the EDP-basis against 2.5 pct. of GDP on the national accounts basis.

Since CP04, Statistics Denmark has revised the national accounts methodology and data covering for the moment the period 1990-2004, *cf. appendix 1*. The reclassification of the ATP-fund from the public sector to the private (financial) sector is the most essential revision affecting public finances, *cf. box 4.1*.

Statistics Denmark's revision of the national accounts does not affect the EMU debt measured in DKK. Up to and including the second EDP reporting in 2006, the EMU debt will include a deduction for ATP holdings of government bonds.[5]

EMU debt is expected to be reduced from around 42¼ per cent of GDP in 2004 to 31¾ per cent of GDP in 2006. The assumed medium-term public surpluses contribute to reducing EMU debt to some 21½ per cent of GDP by 2010 in line with the objectives through 2010.

---

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

[5] On average this deduction annually amounts to approximately 1¼ per cent of GDP.

Box 4.1

Statistics Denmark's revision of public finances

In the beginning of June 2005 Statistics Denmark published revised figures for public finances covering the period 1990-2004, as a part of the method and data revision of the national accounts.

A major change concerns the national accounts' classification of the ATP-fund. The ATP-fund has been reclassified from the public sector to the private (financial) sector. The reclassification of ATP is based on a Eurostat decision from March 2004, cf. e.g. Eurostat News Release 30/2004. According to this decision, publicly administered funded pension schemes with defined contributions, where future pension payouts depend on each individual's contributions and the yield of invested funds (and with no government guarantee), should not be classified as part of the general government in the national accounts.

The changed classification of ATP implies a technical reduction of the general government budget balance. Primarily, the ATP-fund's interest income is no longer part of public revenue. Tax revenues are also affected. The contributions to ATP are no longer classified as tax payments, while revenue from the tax on pension fund returns increases, because ATP's payment of pension yield tax is now included in tax revenues. All in all, the measured tax burden is reduced by ¼-½ per cent of GDP. Furthermore, the changed classification of ATP implies that public expenditures are reduced, mainly because ATP's pension benefits are no longer included in social transfers. In total, the removal of ATP implies a technical reduction of the general government budget balance of approximately ¾-1 per cent of GDP.

In addition, Statistic Denmark's revision includes a change in the periodization of corporate tax revenues. Earlier, the revenues in a given year (t) were based on the companies' tax payment for the preceding year (t-1) excluding that year's (t-1) compulsory on-account tax payments and including the present year's (t) compulsory on-account tax payments. The revised method is based on the companies' income in the present year, which corresponds to the method used with respect to personal income taxes.

Furthermore, the revision contains various budget-neutral reclassifications. This applies e.g. for the revised treatment of the payment for financial intermediation services obtained via the interest differential – the so-called FISIM (Financial Intermediation Services Indirectly Measured). The revised method implies a higher level for public consumption, as the FISIM expenditure is now included in public sector's purchase of goods and services. However the (net) interest payments are reduced correspondingly, as the public sector's interest payments no longer includes the FISIM expenditure.

4.2 Fiscal policy

The estimated surplus on the structural balance amounts to just over ½ per cent of GDP in 2004.[6] The estimated structural surplus increases to above 1 per cent of GDP in both 2005 and 2006, *cf. table 4.2*. Corrected for the effects of the suspension of SP-contributions – now covering the period 2004-2007 – the estimated structural budget surplus is just below ½ per cent GDP in 2004 and nearly 1 per cent of GDP in 2005 and 2006.

The increase in the structural budget surplus from 2004 to 2005 is primarily due to an underlying decline in net interest payments and a shift in aggregate demand towards higher private consumption (for a given unemployment gap and output gap),

[6] The calculation of the structural budget balance follows the method of the Danish Ministry of Finance and the starting point is the actual budget balance based on national account principles, where ATP is part of the private sector.

which is subject to indirect taxes.[7] The planned fiscal policy also contributes to the increase in the structural budget surplus.

The structural surplus increases to around 1.6 per cent of GDP in the period 2007-2010. This mainly reflects declining net interest payments on public debt, the assumed improvement in employment and dampened growth in public consumption, while the nominal principle of the tax freeze pulls in the opposite direction.

Table 4.2
Structural budget balance

	2004	2005	2006	2007	2008	2010
Per cent of GDP						
1. Actual balance	1.1	2.5	1.9	2.0	1.5	1.7
2. Cyclical adjustment	-0.5	0.0	0.7	0.3	0.0	0.0
3. Special items	1.0	1.3	0.2	0.0	0.0	0.0
4. Structural budget balance (1-2-3)	0.6	1.2	1.1	1.7	1.6	1.7
5. Structural budget balance corrected for the suspension of SP contributions	0.4[1)]	1.0[1)]	0.8[1)]	1.4[1)]	1.6[1)]	1.7[1)]
Memo items						
Potential GDP growth, per cent	1.7	1.4	2.0	1.9	1.9	2.1
Real GDP growth, per cent	2.0	2.4	2.4	1.1	1.6	2.1
Output gap	-0.6	0.5	0.9	0.2[2)]	0.0[2)]	0.0
Employment gap	-0.6	-0.0	0.9	0.4[2)]	0.0[2)]	0.0

Note: The special items primarily cover the tax on pension fund investment yields; corporate tax; revenues form the oil and gas activities in the North Sea and net interest expenditures. The adjustment for special items reflects the aim that the calculation of the structural budget balance should correct the public finances for temporary factors over and above cyclical effects.
Source: Statistics Denmark and own calculations.
1) The contributions to the Special Pension scheme are suspended for the period 2004-2007. The correction made amounts to almost 0.3 per cent of GDP and contributes to a higher degree of comparability over time.
2) Technically it is assumed, that the positive output gap in 2006 is closed gradually through 2008.

The operational target for fiscal policy is structural budget surpluses in the interval ½-1½ per cent of GDP, *cf. chapter 2*. It is the structural budget balance corrected for the suspension of SP-contributions which should be compared to the target range. In 2005 and 2006 the estimated structural surpluses corrected for the suspension of SP-contributions lie within the target range.

For the period 2004-2006 the estimated structural budget surpluses are lower than the actual surpluses. In 2004 this reflects above-trend revenues from corporate taxes

[7] The cyclical element in public finances is estimated via the so-called budget elasticity and the employment gap. The budget elasticity is estimated by means of the macro economic model ADAM developed by Statistics Denmark. An economic upturn driven by private consumption implies that the actual budget impact may be larger than the estimated elasticity, because private consumption to a larger degree is subject to duties and VAT than the other components of aggregate demand. This implies that the calculated cyclical adjustment may somewhat underestimate the cyclical effect on public finances. The counterpart is a tendency to overestimate the improvement of the structural budget balance in periods characterised by strong consumption growth (and vice versa in periods with relative weak development in private consumption).

and the tax on pension fund returns, cf. the contribution from "special items" of 1.0 per cent of GDP in table 4.2. On the other hand, the cyclical position – characterised by negative output and employment gap – is estimated to have weakened public finances by some 0.5 per cent of GDP in 2004.

In 2005, above-trend revenues from oil and gas activities in the North Sea together with (other) corporate taxes and the tax on pension fund returns contribute to raise the actual budget surplus above the estimated structural surplus. In 2006 it is primarily the cyclical position and North Sea revenues which temporarily improve public finances.

Fiscal plans for 2006, including the central government budget proposal from August and the agreements from June on the economy of municipalities and counties, are estimated to have a roughly neutral impact on activity, *cf. table 4.3*. Fiscal policy in 2005 – measured by the so-called first-year fiscal effect – is also estimated to be approximately neutral. For both years this should be seen in the context of the assumed moderate growth in total public expenditures, cluding public consumption and social transfers.

Table 4.3
Policy impact on economic activity

	2002	2003	2004	2005	2006
Per cent					
GDP-growth	0.5	0.8	2.0	2.4	2.4
First-year fiscal effect	0.3	-0.3	0.9	-0.1	-0.1
Percentage points					
Multi-annual effects:					
- multi-annual fiscal effect	0.3	-0.2	0.8	0.1	-0.1
- impact on savings[1)]	-0.2	0.0	0.1	0.1	0.0
- investment initiatives etc.[2)]	0.1	0.3	0.1	-0.1	-0.2
- implemented interest rate changes[3)]	0.2	0.7	1.2	0.9	1.0

1) The impact on savings in 2002 reflects a reduction of the tax deductibility of interest expenditures, as part of the Whitsun package from 1998. In 2004-2006 the impact on savings cover the suspension of the SP-contribution.
2) Excl. the impacts on activity of public subsidies in the housing market, as these are included in the fiscal policy contribution to economic activity.
3) Based on the partial effect on GDP growth of interest rate changes between 2002 and the beginning of August 2005. Thereafter, the interest rate is assumed unchanged.
Source: Statistics Denmark and own calculations.

Fiscal policy changes since 2002 – measured by the multi-annual fiscal effect[8] – have had a more or less neutral impact on GDP growth in 2005 and 2006, *cf. table 4.3*. Fiscal policy, however, contributes to a higher level of activity compared to a situation with a neutral fiscal policy stance in each year since 2002. This is primarily due

[8] The multi-annual fiscal effects take into account the lagged effects of fiscal policy in a given year on economic activity in the following years. Here, the multi-annual fiscal effect takes fiscal policy since 2002 into account.

to the marked fiscal policy expansion in 2004 – corresponding to a fiscal effect of almost 1 per cent of GDP – namely through the tax reductions on labour income and the other initiatives in the Spring Package.

The decline in interest rates over recent years contributes to both higher GDP level and GDP growth in 2005 and 2006. Thus, the combined fiscal and monetary stance is clearly expansionary in both years. Separately, the observed rise in oil prices pulls in the direction of lower growth.

The fiscal policy stance in 2006 should be seen in light of the low interest rate level, strong increases in real estate prices and the risk of increased scarcity of labour in line with declining unemployment.

On November 7, the government entered into a political agreement on the fiscal bill for, *cf. box 4.2*.

Box 4.2

Agreement on the fiscal bill for 2006 – key themes

The agreement on the fiscal bill contained improvements on various key areas:

- Rise in certain early pension benefits amounting to some ½ bill. DKK annually.
- Improved elderly care etc. corresponding to above ½ bill. DKK annually.
- Improved day care for children of almost ½ bill. DKK over 2006-2009.
- For the period 2006-2008 an additional ½ bill. DKK is allocated to research and development.
- New education initiatives for above ¼ bill. DKK annually.
- Strengthened business sector conditions for above ½ bill. DKK annually, including notably a gradual abolition of the airport passenger duty over the next two years.

The key fiscal numbers in the agreement are in line with the government's budget proposal for 2006 put forward in August. Specifically:

- The fiscal effect is unchanged at -0.1 per cent of GDP in 2006. In other words the impact on economic activity of fiscal policies is approximately neutral.
- Real growth in public consumption is unchanged at 0.5 per cent in 2006.
- The central government CIL-balance (current, investment and lending account) is weakened by less than ¼ bill. DKK in 2006.
- The total public surplus (net lending) is reduced by around ¼ bill. DKK in 2006.

The impact of discretionary one-off measures on the central government CIL-balance and total public finances (net lending) is outlined in *box 4.3*. While the one-off improvements of the CIL-balance are of some magnitude, the impact on total public finances (net lending) is very modest.

Box 4.3

Overview of one-off measures in 2005 and 2006

In 2005, the total impact on the central government CIL-balance of discretionary one-off measures is estimated at nearly 5 bill. DKK. The most important one-off revenues are a transfer from the state-owned Hypotekbank of 2.2 bill. DKK, revenues of 1.1 bill. DKK from the sale of government stock holdings in the gas transportation company Gastra A/S and a founder outstanding asset in Copenhagen's Harbour (Københavns Havn) of 0.7 bill. DKK. Furthermore, there are one-off revenues namely from the sale of the State Car Inspection Services (Statens Bilinspektion) of 0.5 bill. DKK and an extraordinary dividend from Danish State Railways (DSB) of 0.4 bill. DKK.

With respect to public finances (net lending) one-off improvements amount to around ½ bill. DKK in 2005.

In 2006 the total impact on the central government CIL-balance of discretionary one-off measures is estimated at approximately 2.7 bill. DKK. Of this amount, 2.2 bill. DKK concerns reallocation of central government assets partly as a capital payment in the High-Technology Development Fund and partly financing increased pay-outs from Denmark's Basic Research Fund (Danmarks Grundforskningsfond).

In broad terms, the discretionary one-off improvements have no impact on the total public balance (net lending) in 2006.

Table a

Discretionary one-off revenues in 2005 and 2006

Bill. DKK.	CIL-balance	Publ. balance
Sale of Gastra A/S	1.1	
Purchase and sale of buildings and land etc. (net)	0.1	0.1
Extraordinary dividends from DSB	0.4	0.4
Extraordinary dividends from Post Danmark	0.2	0.2
Repeal of current expenditures and revenues due to sale of SBI (net)	-0.1	-0.1
BaneDanmark – compensation wrt. tax case	-0.1	
Capital payments wrt. Bornholmstrafikken A/S	-0.2	
Transfers from Hypotekbanken	2.2	
Founder outstanding asset in Københavns Havn	0.7	
Sale of government stocks in Bella Center A/S	0.1	
Sale of Statens Bilinspektion	0.5	
2005 total	**4.9**	**0.6**
Reallocation of central government assets etc.	2.2	
Disbursements from IØ and IFU	0.3	
Transfers from Hypotekbanken	0.1	
Sale of buildings and land	0.1	0.1
2006 total[1)]	**2.7**	**0.1**

Note: Positive (negative) numbers reflect improvement (reduction) in the balance.
1) Based on the Economic Survey, August 2005, and the 2006 budget agreement.

4.3 Revenues

Total public revenues are projected to decline from 55.3 per cent of GDP in 2004 to 53.5 per cent of GDP in 2006 and to around 51½ per cent of GDP by 2010. The declining share of public revenues in GDP from 2004 to 2010 primarily owes to a reduction in the tax burden by more than 2½ per cent of GDP, *cf. table 4.4*.

Table 4.4
Composition of general government finances

	ESA	2004	2005	2006	2007	2008	2010
Per cent of GDP							
Budget balance (national accounts)	B9	1.1[1]	2.5	1.9	2.0	1.5	1.7
Expenditures		54.1	52.5	51.6	51.0	50.7	49.8
- Primary expenditures		51.0	49.7	49.2	49.3	49.1	48.3
- Public consumption	P3	26.6	26.1	25.8	25.9	25.8	25.4
- Public investment		1.8	1.8	1.7	1.7	1.7	1.7
- Social transfers	D62	17.2	16.9	16.7	16.7	16.5	16.2
- Subsidies	D3	2.4	2.3	2.3	2.3	2.3	2.3
- Other primary expenditures		3.0	2.7	2.7	2.7	2.7	2.7
- Interest payments		3.2	2.8	2.4	1.7	1.6	1.5
Revenues		55.3	55.1	53.5	53.0	52.2	51.6
- Taxes (tax burden)		49.1	49.3	47.9	47.8	47.0	46.4
- Personal taxes etc.[2]		21.3	21.2	21.1	21.3	20.7	20.4
- of which property value tax		0.7	0.7	0.7	0.7	0.7	0.7
- Labour market contribution tax		4.4	4.4	4.4	4.4	4.4	4.4
- Tax on pension fund returns		1.4	1.3	0.4	0.8	0.9	1.0
- Corporate taxation		3.2	3.6	3.3	2.8	2.8	2.7
- VAT		9.8	9.9	9.9	9.9	9.8	9.6
- Land tax etc.		1.2	1.1	1.1	1.2	1.2	1.2
- Excise duties etc.		6.7	6.7	6.5	6.3	6.2	6.0
- Social contributions		1.2	1.1	1.1	1.1	1.1	1.1
- Interest income	D41	1.5	1.4	1.3	1.1	1.2	1.2
- Other revenues		4.6	4.4	4.3	4.0	4.0	3.9

1) In November, the total public balance was revised to 1.7 per cent of GDP in 2004 by Statistics Denmark.
2) Personal taxes etc. cover withholding taxes (including property value tax), motor vehicle tax according to weight paid by households, inheritance tax and other personal taxes.
Source: Statistics Denmark and own calculations.

The declining tax burden should be seen in light of a normalisation of corporate tax revenue primarily due to an assumed decline in oil prices from high levels. A normalisation of revenues from the tax on pension fund returns also pull down the measured tax burden. Furthermore, the nominal principle of the tax freeze contributes to an underlying reduction of the tax burden. The tax freeze reduces the tax burden by around ½ per cent of GDP by 2010, relative to neutral scenario in which excise duties etc. stated in krone amounts had been actively raised in line with prices.

4.4 Expenditures

The share of public expenditures in GDP declines from 54.1 per cent of GDP in 2004 to 51.6 per cent of GDP in 2006. More than two thirds of this decline owes to primary expenditures, while a little less than one third reflects lower interest payments due to the projected debt reduction and lower interest rates in recent years. Public consumption relative to GDP declines by almost 0.9 percentage points from 2004 to 2006. Assuming real growth of 0.3 per cent in 2005 and 0.5 per cent in 2006, public consumption is expected to grow a little slower than nominal GDP.

Social transfer expenditures decline by 0.5 per cent point of GDP from 2004 to 2006. The decline mainly reflects an expected reduction in unemployment and a moderate indexation factor for social transfers in 2005 and 2006.

CP04 assumed real public consumption growth of 0.3 per cent in 2004 based on the fiscal bill and local government budgets for 2004. The latest annual data from Statistics Denmark, based on accounts data for the state, counties and municipalities, point to real consumption growth of 2.0 pct. in 2004, however. Conversely, real growth in 2003 was revised down to 0.3 per cent against 1.0 pct. in CP04, *cf. table 4.5*.

Table 4.5
Public consumption

	2002	2003	2004	2005	2006	Avg. 2002-04	Avg. 2002-06
Per cent							
Real growth in publ. consumption (CP04)	2.1	1.0	0.3	0.5	0.5	1.2	0.9
Real growth in publ. consumption (CP05)	2.2	0.3	2.0	0.3	0.5	1.5	1.1
Nominal growth in publ. consumption (CP04)	4.4	3.7	3.3	2.8	3.6	3.8	3.6
Nominal growth in publ. consumption (CP05)	4.6	3.1	4.9	2.5	3.3	4.2	3.7

Source: Statistics Denmark and own calculations.

Hence, with respect to the years 2002-2004, which are covered by accounting data, a certain additional spending has arisen compared to CP04. In CP04, real growth was assumed to average 1.2 per cent annually, compared to 1.5 per cent in CP05.[9] Nominal consumption growth has also been somewhat higher than assumed in CP04.

The overall consumption growth from 2002 to 2004 is explained by the growth in counties and municipalities, primarily in the educational, social and health care areas (hospitals and medicine). Central government consumption has declined from 2002 to 2004 in real terms.

[9] Linked with the annual fiscal bills for the years 2002-2004 real growth rates in public consumption of 1.3 per cent in 2002, 0.7 per cent in 2003 and 0.7 per cent in 2004 respectively had been assumed. On average this corresponds to a real growth rate of 0.9 per cent annually.

In light of the higher real growth in 2004, a more dampened consumption growth of 0.3 per cent in 2005 is assumed. This requires that public consumption expenditures correspond to the budgets. Based on the proposed fiscal bill, and assuming that the central government's agreement with local government parties is respected, a real growth in public consumption of 0.5 pct. in 2006 is estimated. That is in line with the objective for real growth in public consumption through 2010.

Quarterly national account figures covering the second quarter of 2005, published by Statistics Denmark on October 11, 2005, point in the direction of higher consumption growth in 2005. However the quarterly national account figures for public consumption are associated with uncertainty. This applies not least with respect to consumption in counties and municipalities. The growth in public consumption is pulled up by net purchases of goods and services, in the data, while public employment appears to have been falling compared to the first half of 2004.

New estimates for public consumption growth in 2005 and 2006 will appear in the coming *Economic Survey, December 2005* (English summary will be available). In particular, the new estimates will be based on the latest information concerning expenditure developments in 2005 and the agreement on the fiscal bill for 2006.

The projected share of expenditures in GDP declines by around 1¾ percentage points from 2006 to 2010, *cf. table 4.4*. The most important reason is declining interest expenditures due to the reduction of public debt. The assumed growth in employment implies fewer people receiving social transfers and higher GDP. This also contributes to the decline in the expenditure burden trough 2010. Furthermore, the assumed dampened real growth of ½ per cent annually implies that the public consumption expenditures grow somewhat slower than nominal GDP.

4.5 Net lending by sub-sectors

The central government is projected to run surpluses in the entire period to 2010, while local governments' finances are assumed to be in balance in the projection period, *cf. table 4.6*. Thus, the central government balance (net lending) exhibits an annual surplus of some 1¾ per cent of GDP on average for the period 2004-2010.

Table 4.6
Public finances by sub-sectors

	ESA	2004	2005	2006	2007	2008	2010
Per cent of GDP							
General government budget balance	S13	1.1[1)]	2.5	1.9	2.0	1.5	1.7
Of which:							
Central government	S1311	1.8	2.5	1.9	2.0	1.5	1.7
Local governments	S1313	-0.7	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

Note: It is technically assumed that net lending is balanced with respect to the local government sector as a whole for the period 2005-2010.
1) In November the general government budget surplus was revised to 1.7 per cent of GDP by Statistics Denmark. The central government surplus amounts to 2.0 per cent of GDP, while the local governments' deficit on national accounts basis was revised down to 0.4 per cent of GDP. For social funds, net lending still amounts to 0.0 per cent of GDP in 2004.
Source: Statistics Denmark and own calculations.

The finances of local governments must in principle balance on a cash basis. The annual agreements on local government finances ensure full financing of the agreed expenditure growth. This is done within the tax freeze, which applies for municipalities as a whole, and counties as a whole, respectively. The municipalities and counties have limited possibilities to finance expenditures through debt. Drawing down cash balances or selling assets may, however, be used to a certain degree to finance potential additional expenditures.

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 2004 (published in November 2005) implied a deficit on national accounts basis (net lending) in local governments of 5.3 billion DKK or 0.4 per cent of GDP.

Because of the changed classification of ATP in the national accounts it is solely the unemployment funds and the employees' wage guarantee fund that constitute the *social funds*. Net lending in social funds was 0.0 per cent of GDP in 2004. Through 2010 it is assumed that social funds budget balance will be unchanged.

4.6 General government debt

The expected government surpluses contribute to a decline in the general government consolidated gross debt (EMU-debt) from 42¼ per cent of GDP in 2004 to 31¾ per cent of GDP in 2006. The projection implies a further reduction of the EMU-debt to around 21½ per cent of GDP in 2010, *cf. table 4.7*. In total, EMU-debt is assumed to be reduced by more than 20 per cent of GDP from 2004 to 2010. The decline in the EMU-debt is in line with the assumptions in the former government's original 2010-plan, *cf. En holdbar fremtid – Danmark 2010, January 2001* (not available in English).

Table 4.7
General government gross debt (EMU-debt)

	2004	2005	2006	2007	2008	2010	2004-10
Per cent of GDP							
EMU-debt (end-year level)	42.3[1)]	35.6	31.7	28.9	26.5	21.5	21.5
Change in debt ratio	-2.2	-6.8	-3.9	-2.8	-2.5	-5.0	-20.8
Contributions to change in debt ratio:							
- Primary budget balance	-2.5	-3.7	-2.8	-2.4	-1.8	-3.7	-14.3
- Interest payments (net)	1.5	1.2	0.9	0.4	0.3	0.4	3.1
- Nominal GDP growth	-1.8	-1.7	-1.4	-1.0	-1.1	-2.0	-7.0
- Financial conditions etc.[2)]	0.6	-2.6	-0.5	0.1	0.1	0.3	-2.6

1) Based on the EMU-debt figure in *Economic Survey, August 2005*. Differs somewhat from the EDP-report of end-August, cf. table 2.1, where the EMU-debt in DKK is a little higher (6¾ bill. DKK), and GDP is excl. FISIM.
2) Financial conditions etc. reflect e.g. ATP's and The Social Pension Fund's (Den Sociale Pensionsfond) stock of government bonds, which are deducted in the EMU-debt. To this the effect on the EMU-debt from revenues due to reallocation of government assets (privatization etc.), payment changes on the tax area, issue price losses, relending to state guaranteed entities etc. should be added.
Source: ADAM's databank and own calculations.

The projected surpluses on the primary balance of the central and local governments contribute more than 14 per cent of GDP to the total reduction of the EMU-debt ratio from 2004 to 2010, while central and local governments' net interest expenditures pull up EMU debt by 3 per cent of GDP during the same period.

Next, the projected growth in nominal GDP implies a reduction in the EMU-debt ratio of some 7 percentage points.

Finally, financial transactions etc. – which includes bond emission losses, relending to state guaranteed entities, revenues from reallocations of state assets and ATP's holding of government bonds – reduces EMU-debt by around 2½ per cent of GDP from 2004 to 2010.

Public sector financial assets are not included in the EMU-debt measure. Statistics Denmark's national accounts-based general government net debt includes all public financial assets and liabilities in state, counties, municipalities and social funds. Thus, for instance state assets due to relending to state-guaranteed entities and share holdings are included.[10]

In 2000, public net debt amounted to almost 25 per cent of GDP. According to the projection, public net debt is reduced to little over 1 per cent of GDP in 2010, *cf. table 4.8*.

[10] Public net debt is based on market values (as opposed to EMU-debt). Changes in net debt reflect the public finances (net lending), but are also affected by prices on financial assets and liabilities. Compared to CP04 public net debt figures have been revised, because ATP is no longer included in social funds. According to Statistics Denmark's revision of national accounts, only the unemployment funds and the employees' wage guarantee fund are included in social funds. Furthermore, Statistics Denmark has made a data revision of public debt.

Table 4.8
Different public debt concepts and trends, end-year

	2000	2004	2006	2010
Per cent of GDP				
EMU-debt	49.6	42.3[1)]	31.7	21.5
Public net debt[2)]	24.5	14.5	8.9	1.3
Net debt of central government and local governments[3)]	25.6	14.6	9.0	1.3

1) Based on the EMU-debt figure in *Economic Survey, August 2005*. Differs somewhat compared to the EDP-report from end-August, cf. table 2.1, where the EMU-debt in DKK is a little higher (6¾ bill. DKK), and GDP is excl. FISIM.
2) Technically projected in light of the general government budget balance.
3) Technically projected in light of the budget balance of central government and local governments.
Source: Statistics Denmark and own calculations.

In assessing fiscal sustainability, what matters is the net debt in central government and local governments (i.e. excluding net wealth in social funds). Prior to Statistics Denmark's revision of the national accounts, total public debt was significantly lower than the net debt of central government and local governments, because ATP's considerable net wealth was included as an asset.

After Statistics Denmark's revision of the national accounts, which classifies ATP in the private sector and no longer in the public sector, net wealth in the social funds (i.e. the unemployment funds and the employees' wage guarantee fund) only amounts to around 1 bill. DKK, less than 0.1 per cent of GDP for the years 2004-2006. Thus, there is only a marginal difference between the national account figures for total public net debt and net debt of central government and local governments *cf. table 4.8*.

Contrary to public net debt, the EMU-debt measures gross debt and does not take into account financial assets in the state and local governments. Net debt is the most suitable debt measure when assessing the sustainability of public finances.[11]

[11] The definitions concerning public net debt correspond to those concerning net lending in the national accounts.

5. Long-term projections and fiscal sustainability

5.1 Long-term pressures on public finances

A key challenge in the coming years is to maintain fiscal sustainability. In this light, it is presumed that:

- New initiatives contribute to a structural increase in employment of around 50,000 persons through 2010, which should improve public finances by 0.8-0.9 per cent of GDP.
- Moderate growth in public expenditures – real growth in public consumption of ½ per cent per annum in the period 2006-2010.

The long-term projections are based on a "policy scenario" through 2010 and a so-called "policy-neutral scenario" thereafter. For the years after 2010 the projections are based on the following principles:

- Nominal public consumption expenditures increase in line with wage growth and the estimated demographic "pull" on public services.
- Social transfers (per recipient) are assumed to increase in line with private (and public) sector wages.
- For each population group broken down by age, gender and country of origin, labour participation rates and the rate of take-up of various social income transfers are assumed to remain constant. Furthermore, the total unemployment rate is assumed constant.
- Public investment, subsidies and net foreign transfers stay constant relative to GDP.
- Tax rates remain unchanged and excise duties etc. are indexed to prices.

These computational principles imply a deterioration in the structural primary balance of the central and local governments (i.e., the actual balance purged of cyclical and transitory factors and excluding net interest payments) by 4 per cent of GDP by 2070, *cf. figure 5.1a.* Changes in the primary balance as a share of GDP are determined mainly by demographic changes, higher tax revenue from private pension schemes, and lower revenues from North Sea activities as oil and gas reserves are depleted.

The deterioration in the primary balance through 2070 is dampened by some 1.2 per cent of GDP due to the assumed expenditure restraint and the assumed increase in structural employment towards 2010.

Overall, the deterioration in the primary budget balance of central and local governments after 2010 mirrors the development in the demographic dependency ratio, *cf. figure 5.1b.*

Figure 5.1a

Change in revenues and expenditures and deterioration of structural primary balance

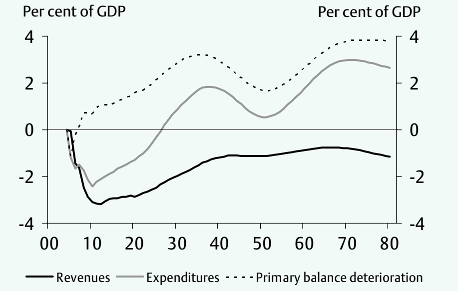
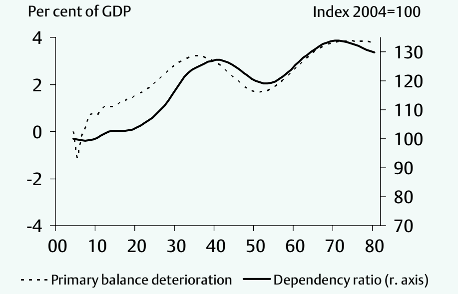


Figure 5.1b

Deterioration of structural primary balance and the demographic dependency ratio



Source: Finance Ministry calculations.

5.2 Fiscal sustainability and the required public surplus

The key objective in the 2010-projection is to secure fiscal sustainability given the technical assumptions with respect to e.g. the interest rate and an ongoing increase in life expectancy etc. This means that fiscal policies – including the level of taxation – can be sustained after 2010 without engendering an untenable rise in the net debt of central and local governments.

The operational target is to maintain structural budget surpluses of ½-1½ per cent of GDP (excluding ATP) on average through 2010 and thereby reduce public debt further.

Given the objectives on expenditure restraint and new initiatives to raise employment the structural budget surplus amounts to 1.2 per cent of GDP on average from 2004 to 2010. Hence, the projected surplus is within the target interval consistent with sustainability of economic policies.

Altogether the updated cyclical and fiscal policy basis implies that the sustainability indicator is 0.0 per cent of GDP. That is in line with CP04.

The focus on fiscal sustainability provides a test that fiscal policies are consistent over time, so that – given the underlying assumptions – no major adjustment needs arise after 2010. The concrete computational principles after 2010 do not represent fiscal targets. No political decisions have been made with respect to priorities after 2010.

The projections are updated regularly on the basis of incoming information and economic policy decisions. Possible new decisions – with implications post-2010 – can be included in the evaluation of the overall fiscal policy requirements. For instance, decisions providing a higher revenue base after 2010 (relative to the current projection) would imply that the required budget surplus and employment growth over the relatively near term would be smaller.

Table 5.1 illustrates how the planned fiscal policies through 2010 – under the assumptions made – fulfil the requirement of fiscal sustainability. Essentially, the breakdown shows that the primary surplus of central and local governments in 2004 can be viewed as the necessary buffer or savings required to finance the interest burden on public debt and future net obligations stemming from population ageing and other factors (in the absence of future policy changes).

Table 5.1

Fiscal sustainability in 2004

	Per cent of GDP
1. Central and local governments primary budget balance	1.8
2. Interest burden on the public net debt	-0.5
3. Demographic rise in net expenditures etc.	-2.3
4. Tax freeze[1)]	-0.5
5. Contribution from implemented reforms	0.3
6. Expenditure control[2)]	0.3
7. Contribution form new structural initiatives	0.9
8. Sustainability indicator in the 2010-scenario (1+2+3+4+5+6+7)	**0.0**

1) Relative to a scenario with price indexation of excise duties etc.
2) Relative to a scenario in which public consumption per user as of 2005 is indexed to the overall wage increases.
Source: Own calculations.

In 2004, the structural primary surplus of the central and local governments is estimated at 1.8 per cent of GDP, *cf. table 5.1* (row 1). This surplus – which excludes cyclical effects on public finances – may be seen as the current surplus needed to finance net interest expenditures and rising future net obligations for the public sector. In the medium-term projection, the surplus in each year is sufficiently large to finance the long-term expenditure pressure (i.e., without later adjustments to employment or assumed policies).

The net debt of central and local governments carries an interest burden of about 0.5 per cent of GDP (row 2). The burden consists of the part of interest expenditures not eroded by nominal GDP growth. The interest burden has to be financed to prevent public debt from rising as a share of GDP.

The future net obligations of the public sector, mainly due to ageing and an assumed decline in revenues from North Sea oil and gas activities, can be converted into a fixed annual amount (annuity) of 2.3 per cent of GDP in 2004 (row 3).

In addition, the tax freeze through 2010 reduces public tax revenues by 0.5 per cent of GDP relative to a scenario with price indexation of excise duties etc. (row 4).

The rise in participation and decline in structural unemployment, which is estimated to take place also in the absence of new labour market initiatives, contributes some 0.3 per cent of GDP to fiscal sustainability (row 5). This contribution includes e.g. positive structural effects stemming from lower taxes on earned income, the action plan "*More people in work*" (only available in Danish) and the latest agreement in the area of integration "*A new chance for everyone*" (only available in Danish), which together are estimated to raise effective employment by approximately 20,000 persons from 2004 and onwards.

Under the assumed wage and price trends, public consumption's share of GDP will be reduced by 1.2 per cent of GDP from 2004 to 2010. Relative to a scenario in which nominal public consumption per user follows wages, expenditure control strengthens public finance sustainability 0.3 per cent of GDP (row 6).

The medium-term scenario assumes a further increase in structural employment of around 50,000 persons in addition to already implemented initiatives. In the absence of this increase in employment, a fiscal adjustment of almost 1 per cent of GDP would be required according to the calculation (row 7) – or initiatives that via higher employment provide a similar strengthening of public finances after 2010.

Overall, the medium-term projection fulfils the requirement of fiscal sustainability (row 8). The primary budget balance for central and local governments corrected for future net obligations – the so-called sustainability indicator – hence amounts to 0.0 per cent of GDP in 2004 (and all subsequent years). The sustainability indicator denotes the permanent hypothetical fiscal adjustment which, under the assumptions made, would be necessary for fiscal policy to be maintained without subsequent changes in tax rates, expenditure standards etc.

Appendix 1: Revised national accounts methods and data

A1.1 Revised national accounts

In mid-July 2005 Statistics Denmark published annual data for a method- and data-revised national accounts according to the guidelines in the ENA-regulation. So far the revision covers the period from 1990 and onwards. Already in June 2005 Statistics Denmark published revised data for public finances based on the principles in the new national accounts. Important changes are:

- Changed treatment of Financial Intermediation Services Indirectly Measured (FISIM), which increases the level of private and public consumption and therefore GDP. The related impact on real growth rates is modest.
- Increase in the value of both exports and imports of services by 25-30 per cent. Net exports of services are not affected by the revision.
- Reclassification of the ATP-fund from the public sector to the private sector. This implies a technical reduction of the fiscal balance by 10-15 bill. DKK each year, which corresponds to ¾-1 per cent of GDP. In addition, there are other revisions with respect to public finances, e.g. changed periodization of corporate taxes. The impact on public finances of the revision is described in more detail in *chapter 4*.

In Convergence Programme 2005, real growth rates are based on constant 2000-prices unless otherwise mentioned, while the former national accounts were stated in constant 1995-prices. The "official" real growth rates for GDP components are now calculated on the basis of chain indices, i.e. on the basis of previous year's prices rather than at constant prices, *cf. box A1.1*. *Table A1.1* shows a comparison of real GDP growth rates in the former and the new national accounts.

Table A1.1

Real growth in GDP according to new and former national accounts respectively

	1990-2000 (avg.)	2001	2002	2003	2004	Estimate 2005	2006
Per cent							
New national accounts:							
Chain indices[1)]	2.6	0.7	0.5	0.6	2.1	2.4	2.2
2000-prices	2.3	0.7	0.5	0.8	2.0	2.4	2.4
Former national accounts:							
1995-prices	2.3	1.3	0.5	0.7	2.4	-	-

Note: Data for the period 2001-2004 are provisional.
1) Cf. box A1.1.
Source: Statistics Denmark and own calculations.

Box A1.1

Chain indices

In the *new* national accounts "official" real growth rates for the GDP components are based on chain indices. This implies that price weights are shifted each year, and the real growth rate for e.g. private consumption in each year is calculated based on the previous year's private consumption prices.

In the *former* national accounts the official real growth rates were calculated using prices in a so-called base year. Statistics Denmark still calculates real growth rates based on traditional constant price data. The base year has been shifted from 1995 to 2000.

For 2004 there are only minor differences between the real growth rates based on chain indices and constant 2000-prices. The differences amount to 0.2 percentage points or less. There are larger differences between the former figures based on constant 1995-prices and the new data stated in constant 2000-prices. In addition to the shift in base year, these differences may stem from revised methods and data in the new national accounts and also new information concerning 2004.

The transition to chain indices is in accordance with international guidelines and aims to give a truer picture of the annual growth rates.

Table a

Real growth rates according to new and former national accounts

	2004			2005		2006	
	Former NA	New NA		Estimates			
	95	00	Chain	00	Chain	00	Chain
Per cent							
GDP	2.4	2.0	2.1	2.4	2.4	2.4	2.2
Private consumption	4.3	3.9	3.8	3.6	3.5	2.5	2.4
Public consumption	0.7	2.0	2.0	0.3	0.3	0.5	0.5
Gross fixed capital formation	4.7	3.1	3.3	3.8	4.2	5.1	4.1
Exports	4.0	3.3	3.2	3.9	3.9	4.6	4.6
Imports	7.4	6.5	6.5	4.8	4.8	4.9	5.0
Gross value-added	1.9	1.3	1.5	2.1	2.3	2.3	2.2

Note: "95" refers to 1995-prices, "00" refers to 2000-prices, and "chain" refers to chain indices.
Source: Statistics Denmark and own calculations.

Appendix 2: Sensitivity analysis

A2.1 Short-term cyclical risks

CP05 assumes healthy growth in 2005 and 2006, which contributes to falling unemployment. The presumed dampening of growth in 2007 and 2008 implies a gradual closing of the positive output gap.[1] In the baseline scenario inflation is assumed to be low and stable.

In light of, notably, high oil prices and the uncertainty surrounding the robustness of international growth prospects (especially in the EU), economic activity in Denmark could be lower than anticipated. Such a scenario would diminish the decline in unemployment – reducing labour market pressures – and simultaneously imply a slower reduction of public debt.

A perhaps more likely scenario is that growth could turn out stronger – e.g. due to more buoyant private consumption – which could heighten the risk of capacity pressures and higher inflation. The latest information indicates that GDP and employment may increase more in 2005 than anticipated in *Economic Survey, August 2005*.

In a *low growth scenario* slower external growth is assumed to dampen growth in Denmark in 2006 and 2007 so that real GDP is 1 per cent lower in 2007 than in the baseline scenario. The weakening is assumed to be temporary, and activity gradually builds up in the years after 2008.

Weaker economic activity leads to higher unemployment than in the baseline scenario and a deterioration in public finances of around ¾ -1 per cent of GDP in 2007 and 2008. However, the general government budget balance still shows a surplus in 2007 and 2008, *cf. table A2.1*. It is assumed that fiscal policy is not changed in a discretionary manner, but the automatic stabilizers act fully.

A significant margin remains between the fiscal balance in the low growth scenario, which implies a surplus of about ½ per cent of GDP in 2008, and the 3 per cent deficit limit of the convergence criteria. Furthermore, debt reduction continues in the low-growth scenario, even at a reduced pace, and the debt ratio is approximately half of the reference value of 60 per cent of GDP. For the moment, a conflict with the reformed Stability and Growth Pact seems not very likely.

In a *high-growth scenario*, higher activity will raise the already positive output gap to above 1 per cent of GDP in the years 2006-2008. Unemployment declines, which leads to reduced outlays for unemployment benefits. At the same time, higher employment leads to higher tax revenues. The public surplus is strengthened and debt

[1] As a technical assumption in the transition to medium-term years, the output gap is closed by 2008.

reduction is reinforced. On the other hand the fall in unemployment to below 5 per cent of the labour force indicates inflationary pressure due to lack of capacity.

Table A2.1
Alternative scenarios: low and high growth

	2006	2007	2008
Baseline			
GDP growth, per cent	2.4	1.1	1.6
Output gap, per cent of GDP	0.9	0.2	0.0
Unemployment rate, per cent	5.1	5.3	5.2
Public balance[1)], per cent of GDP	1.9	2.0	1.5
Gross debt, per cent of GDP	31.7	28.9	26.5
Low growth (lower external growth)			
GDP growth, per cent	1.9	0.6	1.7
Output gap, per cent of GDP	0.4	-0.8	-0.9
Unemployment rate, per cent	5.4	6.0	6.0
Public balance[1)], per cent of GDP	1.6	1.3	0.6
Gross debt, per cent of GDP	32.3	30.5	29.1
High growth (higher private consumption)			
GDP growth, per cent	2.9	1.6	1.8
Output gap, per cent of GDP	1.4	1.2	1.2
Unemployment rate, per cent	4.9	4.8	4.4
Public balance[1)], per cent of GDP	2.2	2.8	2.6
Gross debt, per cent of GDP	31.1	27.2	23.4

1) Based on national account principles, i.e. excl.. ATP.
Source: Own calculations based on the ADAM-model.

The short-term *interest rate sensitivity* of public finances is illustrated in *table A2.2*. A permanent rise in foreign and domestic interest rates of 1 percentage point along the entire yield curve is estimated to worsen the public balance by approximately 0.5 per cent of GDP in 2006, 1.3 per cent of BNP in 2007 and 1.1 per cent of GDP in 2008. Thus, the interest rate sensitivity of the public balance is rather pronounced.

The worsening of the public balance in 2006 and 2007 is especially caused by the increasing interest rate from 2005 to 2006, which will reduce revenues from the tax on pension fund returns. The rising interest rate implies capital losses on the bond holdings of taxable pension funds. This reduces the tax base for the pension yield tax considerably. In the August *Economic Survey* revenues from the pension yield tax amounted to 0.4 per cent of GDP in 2006. If the interest rate level increases by 1 percentage point these revenues can be expected to drop to zero. In fact, the tax base would be negative in 2006, but the pension funds can carry forward their losses (and negative tax liability) to the subsequent years.[2] In 2007, the revenues from the

[2] It is assessed that the normal pension yield tax revenue presently amounts to about 1 per cent of GDP. The primary reason for lower than normal pension yield tax revenues in 2006 is that a certain rise in interest rates from 2005

pension yield tax is estimated to be reduced by 0.6 per cent of GDP (compared to the baseline scenario). This is mainly due to the carry-forward of negative tax liabilities mentioned above.

Furthermore, the rise in interest rates dampens domestic and foreign activity. This weakens the public balance through the automatic stabilizers.

Table A2.2

Estimated impact of a permanent 1 percentage point interest rate increase at home and abroad

	2006	2007	2008
Real GDP level, per cent	-0.3	-1.1	-1.4
Public balance[1)], per cent of GDP	-0.5	-1.3	-1.1
Primary balance[2)], per cent of GDP	-0.4	-1.1	-0.8
Public EMU-debt, per cent of GDP	0.7	2.3	3.5
Public net debt, per cent of GDP	0.6	1.9	3.0

Source: Own calculations on the basis of ADAM and OECD standard multipliers.
1) Based on national account principles, i.e. excl. ATP.
2) Defined as public balance plus net interest payments.

The direct impact of the rising interest rate on public net interest payments is relatively modest in the years 2006-2008. In particular, this is because public debt is moderate and because the public sector also has interest receipts.

It should be noted that a higher interest rate level in the long term may strengthen public finances, especially due to higher return on private pension savings. Thus the value of deferred taxes on future pension payouts increases. The long-term sensitivity of public finances with respect to changes in life expectancy, interest rates etc. was illustrated in *Convergence Programme 2004* (appendix 1.2).

to 2006 is already assumed in *Economic Survey, August 2005*, which also contains a more detailed description of the sensitivity of the pension yield tax to interest rate and share price developments.

Appendix 3: Comparison with the 2004 update[1]

A3.1 Changes to GDP-growth and public finances since CP04

According to still preliminary national account data, real GDP growth in 2004 turned out almost as expected in CP04, *see table A3.1*. Private consumption contributed more to growth than estimated in CP04. Reflecting strong car purchases, the resulting larger content of indirect taxable consumption in total demand contributed to a higher public surplus in 2004 than estimated in CP04. Higher public revenues primarily from the tax on pension fund yields and to some extent corporate taxes also contributed to a higher public surplus in 2004 than in CP04.

Table A3.1
Comparison with CP04

	ESA	2004	2005	2006	2007	2008	2010
GDP growth (per cent)	B1*g						
CP04		2.2	2.5	1.3	1.9	1.8	1.8
CP05		2.0	2.4	2.4	1.1	1.6	2.1
Change		-0.2	-0.1	1.1	-0.8	-0.2	0.3
Public balance[1)] (per cent of GDP)	EDP B.9						
CP04		0.6	1.5	1.0	1.1	1.2	1.3
CP05		1.3	2.7	2.1	2.2	1.7	1.9
Change		0.7	1.2	1.1	1.1	0.5	0.6
Public debt (per cent of GDP)							
CP04		42.3	39.4	37.4	35.3	33.1	28.8
CP05		42.3	35.6	31.7	28.9	26.5	21.5
Change		0.0	3.8	5.7	6.4	6.6	7.3

1) Compiled in accordance with the Excessive Deficit Procedure and excluding ATP.
Source: Own calculations.

In line with CP04 the expected GDP growth in 2005 is on the order of 2½ per cent. In light of the higher surplus in 2004 and other factors, the public balance is also expected to show a higher surplus in 2005 than assumed in CP04. Higher oil prices imply higher projected public revenues from the North Sea oil and gas activities.

In CP04, GDP growth in 2006 was assumed to be modest because the estimated positive output gap for 2005 was technically assumed to be closed. In CP05 a somewhat higher growth is expected in 2006 on the basis of the August short-term forecast. That is one reason behind a higher public surplus in 2006 than assumed in

[1] Statistics Denmark has revised method and data in the national account – including public finances. This entails, that the figures in the 2004 and 2005 Convergence Programme are not fully comparable.

CP04. In addition, higher oil prices, in particular, contribute to higher public revenues than assumed in CP04.

The public balance generally shows higher surpluses in the projection years (2007-2010) compared to CP04. The reflects e.g. some carry-forward of the higher level of public surpluses in the years 2004-2006 and the assumption of a higher oil price up to 2010.

Compared to CP04, gross debt is unchanged in 2004 (measured in percent of GDP and including deduction of, in particular, ATP's stock of government bonds). As a result mainly of the higher projected surpluses, a considerably stronger reduction in public debt is achieved up to 2010. In CP04, the public gross debt (EU definition) was expected to decline to about 28¾ percent of GDP by 2010, whereas in the CP05-projection it is projected to fall to about 21½ percent of GDP by 2010.

A3.2 Changes to medium-term assumptions up to 2010

Compared with CP04, the assumptions behind the CP05-projection include notably a new economic forecast and new population projection, *see box A3.1*.

Box A3.1

Revised assumptions compared to CP04

- New national accounts data and short-term forecasts up to 2006, August 2005.
- Revised population projection, cf. DREAM, November 2004.
- Revised labour force data, cf. Statistics Denmark.
- Revised data for the age-profile of individual public consumption and transfers
- The long-term fiscal requirements have been recalculated.

Employment is assumed to increase by 61,000 persons from 2004 to 2010, which is 14,000 more than in CP04[2]*, see table A3.2*. The stronger increase is attributable primarily to a higher expected impact of the assumed normalization of cyclical conditions, a contribution from a longer average residence period of immigrants (included in CP05) and the government's integration package "*A new chance for everyone"*.

The contribution in table A3.2 from demographics is revised up by 19,000 persons by 2010 compared with CP04. This mainly reflects that the estimated contribution from higher educational attainment technically has been moved from the category "assumed contribution from already-implemented reforms" to "demographic factors" because the calculation incorporates unchanged education efforts. Seen in isolation the demographic factor is increased by some 11,000 persons, while the contribution from already-implemented reforms is reduced equivalently.

[2] The base year is changed from 2003 to 2004. The figures for CP04 can therefore not be found in Convergence Programme 2004, November 2004.

Furthermore, as a new feature the calculation in CP05 incorporates a contribution to employment from increased average residence period for immigrants. The employment rate of immigrants is generally increasing proportionally with the residence period in the country. Therefore, the average employment rate of immigrants – even with an unchanged integration effort – should increase in step with an expected longer average residence period for immigrants in Denmark. Seen in isolation this factor strengthens the demographic contribution by some 5,000 persons from 2004 to 2010. Finally, the incorporation of a new population projection has increased the demographic contribution by about 3,000 persons.

The contribution from already-implemented reforms is reduced by 11,000 persons compared to CP04. This reflects the previously-mentioned technical reduction of 11,000 persons due to the different treatment of the contribution from higher educational attainment. In addition, CP05 incorporates a contribution of about 6,000 persons from the recent agreement to raise employment among immigrants *A new chance for everyone*. This contribution is, however, offset by a lower estimated contribution from other initiatives, especially due to a higher underlying inflow into disability pension than expected in CP04.

Moreover, the contribution from the assumed normalization of cyclical conditions up to 2010 is about 14,000 persons larger than in CP04. In CP04, actual employment was estimated to be 4,000 persons below the structural level in 2004, while the gap in the same year in CP05 is assessed to be 18,000 persons.

Finally, the requirement for new structural initiatives that permanently raise employment, is reduced by some 8,000 persons compared to CP04, which reflect the recent agreement on the integration of immigrants in the labour market and the incorporation of the contribution from a longer average residence period.

Table A3.2
Contributions to the increase in employment

Change 2004-2010, 1,000 persons	CP04	CP04 (CP05 method)	CP05
1. Demographic factors	-46	-35	-27
- of which contribution from increased educational attainment	-	11	11
- of which contribution from longer residence periods	-	-	5
2. Assumed contribution from already-implemented reforms	31	20	20
- of which contribution from increased educational attainment	11	-	-
- of which contribution from the integration agreement	-	-	6
- of which other contributions, among these disability pension	20	20	14
3. Structural employment absent new initiatives (1+2)	**-15**	**-15**	**-7**
4. Cyclical contribution	4	4	18
5. No-policy scenario (3+4)	**-11**	**-11**	**11**
6. Required new structural initiatives	58	58	50
7. 2010-plan (5+6)	**47**	**47**	**61**

Note: The base year is changed from 2003 to 2004. The figures for CP04 can therefore not be found in Convergence Programme 2004, November 2004.
Source: Own calculations.

The sustainability indicator

The incorporation of a new forecast based on (preliminary) national accounts data has, seen in isolation, resulted in an underlying structural improvement of public finances of about 0.2 per cent of GDP in 2004. Statistics Denmark has made a downward adjustment of the public net debt by almost DKK 100 billion (6½ per cent of GDP) in 2004, which pulls in the same direction. Seen in isolation this has improved the sustainability of public finances by almost 0.2 per cent of GDP, *see table A3.3*.

Table A3.3
Revisions to the fiscal sustainability indicator in the 2010-scenario

Per cent of GDP	2004
1. Convergence Programme 2004	**0.0**
2. Total revision of the sustainability indicator (2.1+2.2)	0.0
2.1 Revision of the primary budget balance in 2004	0.2
2.2 Revision of the interest burden on net debt in 2004	0.2
2.3 Revision of future net obligations	-0.4
Of which contribution from revisions of:	
- Population projection	-0.2
- Age-related expenditures	-0.1
- Rest	-0.1
3. Convergence Programme 2005 (1+2)	**0.0**

Source: ADAM databank and own calculations.

The estimated future public net obligations have been revised upwards compared to CP04, e.g. as a consequence of a new population projection, by 0.4 per cent of GDP. Taken together, the revisions entail a calculated sustainability indicator of 0.0 per cent of GDP as in last year's Convergence Programme, see table A3.3.

DREAM's 2004 population projection[3], which is used for the projections of the Ministry of Finance, imply a larger increase in life expectancy – especially for women with almost no change for men – than in the 2003 projection used in CP04. Hence, average life expectancy rises to 86 years for women in 2080 compared to 82 years in the previous projection. Average life expectancy for men is still assumed to be 80 years in 2080. The essential change in the projection is that the historical mortality data, which is used for the projection, goes back to 1903 instead of 1980. This has an effect because the increase in women's life expectancy was unusually low during the 1980's and 1990's. Furthermore, a new method is used (the so-called Lee-Carter method) in the projection of life expectancy. The impact of this change on fiscal sustainability depends strongly on the assumed interest rate-growth differential, on which the assumption is unchanged at about 2½ per cent in the long run.

Individual public consumption expenditures and transfers (broken down by age, gender and origin) have been updated. Seen in isolation, this has resulted in a minor increase in the demographic "pull" on public consumption and some transfers. The development of public consumption up to 2010, however, is determined by the target of a real public consumption growth of ½ per cent per year.

Other revisions covers e.g. the incorporation of the new short-term forecast for the years 2005 and 2006, new data on working time and a new method to take into account the improvement in health associated with rising life expectancy. In total, these other revisions reduce the calculated sustainability indicator by 0.1 percent of GDP.

[3] DREAM (Danish Rational Economic Agents Model) is an applied general equilibrium model, developed and maintained by an independent DREAM group.

Annex: Tables

Table 1a
Macroeconomic prospects

	ESA	2004	2004	2005	2006	2007	2008	2010
		Bill. DKK	Rate of change, per cent					
Real GDP	B1g	1345.4[1]	2.0	2.4	2.4	1.1	1.6	2.1
Nominal GDP	B1g	1460.4	4.2	4.7	4.5	3.1	4.0	4.3
Components of real GDP								
Private consumption	P.3	655.7[1]	3.9	3.6	2.5	1.4	1.2	1.9
Government consumption	P.3	347.3[1]	2.0	0.3	0.5	0.5	0.5	0.5
Gross fixed capital formation	P.51	273.9[1]	3.1	3.8	5.0	2.1	1.8	1.8
Changes in inventories[1]	P.52 +P.53	4.2[1]	0.1	0.0	0.0	0.0	0.0	0.0
Exports of goods and services	P.6	666.9[1]	3.3	3.9	4.6	1.8	3.8	5.2
Imports of goods and services	P.7	602.5[1]	6.5	4.8	4.9	2.3	3.1	4.3
Contributions to real GDP growth			**Percentage points**					
Final domestic demand		-	3.0	2.6	2.4	1.2	1.1	1.4
Changes in inventories[2]	P.52 +P.53	-	0.1	0.0	0.0	0.0	0.0	0.0
External balance of goods and services	B.11	-	-1.2	-0.2	0.1	-0.2	0.5	0.7

1) Based on constant 2000-prices. Growth rates are also in 2000-prices, i.e. not based on chain indices.
2) Contribution of stock changes to GDP growth.
Source: Statistics Denmark and own calculations.

Table 1b
Price developments

	ESA	2004	2004	2005	2006	2007	2008	2010
		Level	Rate of change, per cent					
GDP-deflator		108.5	2.2	2.2	2.0	2.0	2.4	2.1
Private consumption deflator		108.3	1.5	1.7	2.1	1.4	1.9	1.8
Consumer price index		108.3	1.2	1.7	2.1	1.3	1.9	1.8
HICP		107.8	0.9	1.6	2.0	1.3	1.9	1.8
Net price index		108.9	1.4	1.9	2.3	1.4	2.0	2.0
Public consumption deflator		111.9	2.9	2.3	2.7	3.1	3.1	3.1
Investment deflator		103.6	1.7	3.5	1.4	2.8	2.3	2.0
Export price deflator		100.1	1.6	3.7	3.2	0.2	1.8	1.7
Import price deflator		98.6	1.3	3.9	3.4	0.3	1.6	1.6

Note: For all price indices 2000=100.
Source: Statistics Denmark and own calculations.

Table 1c
Labour market developments

	ESA	2004	2004	2005	2006	2007	2008	2010
		Level	Rate of change, per cent					
Employment, 1,000 persons		2706.7	0.1	0.6	0.6	-0.3	0.1	0.6
Employment, hours worked (mill. hours)		4232.2	-0.9	0.5	0.5	-0.4	0.0	0.5
Unemployment rate (per cent)[1)]		5.4	5.4	4.8	4.4	4.6	4.5	4.0
Labour productivity, persons (1,000 DKK)[2)]		497.1	1.9	1.8	1.8	1.4	1.4	1.5
Labour productivity, hours worked (DKK)[3)]		317.9	2.9	1.9	1.9	1.5	1.5	1.6
Compensation of employees (bill. DKK)[4)]	D.1	786.9	3.4	3.6	4.2	3.5	3.9	4.3

1) Harmonised definition, Eurostat, levels.
2) Calculated as real GDP per person employed, where GDP is based on constant 2000-prices.
3) Calculated as real GDP per hour worked, where GDP is based on constant 2000-prices.
4) Based on current prices, i.e. growth rates are in nominal terms.
Source: Statistics Denmark and own calculations.

Table 1d
Sectoral balances

	ESA	2004	2005	2006	2007	2008	2010
		Per cent of GDP					
Net lending/borrowing vis-à-vis the rest of the world	B.9	2.5	2.4	2.4	1.2	1.2	2.9
Of which:							
- Balance on goods and services		5.0	4.7	4.6	4.3	4.8	6.0
- Balance of primary incomes and transfers		-2.6	-2.3	-2.2	-3.1	-3.6	-3.2
- Capital account	B.9	0.0	0.0	0.0	0.0	0.0	0.0
Net lending of the private sector	B.9	1.4	-0.1	0.5	-0.8	-0.4	1.2
Net lending of general government[1)]	B.9	1.1	2.5	1.9	2.0	1.5	1.7
Statistical discrepancy		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

	ESA	2004	2004	2005	2006	2007	2008	2010
		Bill. DKK			Per cent of GDP			
Net lending (EDP B.9) by sub-sector								
General government[1)]	S13	19.0	1.3	2.7	2.1	2.2	1.7	1.9
Central government	S1311	28.9	2.0	2.7	2.1	2.2	1.7	1.9
Local government	S1313	-10.4	-0.7	0.0	0.0	0.0	0.0	0.0
Social security funds	S1314	0.5	0.0	0.0	0.0	0.0	0.0	0.0
General government (S13)								
Total revenue[2)]	TR	806.7	55.2	55.0	53.5	53.0	52.2	51.5
Total expenditure[3)]	TE	787.6	53.9	52.3	51.3	50.8	50.5	49.6
Net lending[1)]	EDP B9	19.0	1.3	2.7	2.1	2.2	1.7	1.9
Interest expenditure	EDP D41	35.1	2.4	2.0	1.6	0.9	0.8	0.8
Pm: FISIM		0.1	0.0	0.0	0.0	0.0	0.0	0.0
Primary balance[4)]		54.1	3.7	4.8	3.7	3.1	2.6	2.7
Selected components of revenue								
Total taxes[5)]		700.2	47.9	48.1	46.8	46.8	46.0	45.4
Taxes on production and imports	D.2	258.3	17.7	17.7	17.6	17.4	17.2	16.8
Current taxes on income, wealth, etc.	D.5	438.5	30.0	30.2	29.0	29.1	28.5	28.4
Capital taxes	D.91	3.3	0.2	0.2	0.2	0.2	0.2	0.2
Social contributions[6)]	D.61	17.1	1.2	1.1	1.1	1.1	1.1	1.1
Property income[7)]	D.4	27.5	1.9	2.0	1.9	1.5	1.5	1.5
Other (residual)		61.9	4.2	3.8	3.7	3.7	3.6	3.6
Total revenue[2)]	TR	806.7	55.2	55.0	53.5	53.0	52.2	51.5
p.m: Tax burden[8)]		717.2	49.1	49.2	47.9	47.8	47.0	46.4
Selected components of expenditure								
Collective consumption[9)]	P32	120.7	8.3	8.1	8.0	8.0	7.9	7.8
Individual consumption (excl. social transfers in kind)[9)]		247.5	16.9	16.6	16.5	16.6	16.5	16.3
Total social transfers	D62+ D63	272.5	18.7	18.2	18.0	18.0	17.8	17.5
- Social transfers in kind[9)]	P31	20.6	1.4	1.4	1.3	1.3	1.3	1.3
- Other than in kind	D62	251.9	17.2	16.9	16.7	16.7	16.5	16.2
Interest expenditure[9)]	EDP D41	35.1	2.4	2.0	1.6	0.9	0.8	0.8
Subsidies	D3	34.4	2.4	2.3	2.3	2.3	2.3	2.3
Gross fixed capital formation	P51	27.5	1.9	1.7	1.7	1.7	1.7	1.7
Other (residual)		50.0	3.4	3.3	3.3	3.3	3.3	3.3
Total expenditure[3)]	TE	787.6	53.9	52.3	51.3	50.8	50.5	49.6
Pm: compensation of employees	D1	260.9	17.9	17.6	17.4	17.6	17.6	17.5

Note: Public balance figures are on EDP-basis excl. ATP. GDP is incl. FISIM, cf. the revised national accounts. In the latest EDP-reporting GDP is excl. FISIM. This implies that minor differences in rounded figures can occur.
1) Up to and including the second EDP-reporting in 2006 public finances for Denmark will be incl. ATP. The public balance on EDP-basis incl. ATP is for the moment estimated at 2.3 per cent of GDP in 2004, 3.6 per cent of GDP in 2005 and 3.1 per cent of GDP in 2006.
2) Excl. central government revenues from sale of UMTS-licenses.
3) Adjusted for swap-related flows.
4) Defined as EDP B.9 plus EDP D.41 incl. FISIM.
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) 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.
9) The sum of collective and individual consumption equals total public consumption. Both short-term and longer-term projections focus on total public consumption. Social transfers in kind are a part of individual public consumption.
Source: Statistics Denmark and own calculations.

Table 3

General government expenditure by function

	COFOG	2003	2004
		Per cent of GDP	
General public services	1	7.5	7.1
Defence	2	1.6	1.6
Public order and safety	3	1.0	1.0
Economic affairs	4	3.6	3.7
Environmental protection	5	0.6	0.5
Housing and community amenities	6	0.8	0.8
Health	7	6.9	7.2
Recreation, culture and religion	8	1.6	1.8
Education	9	8.0	8.1
Social protection	10	22.3	22.2
Total expenditure	TE	53.9	53.9

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 [den realøkonomiske fordeling] of public expenditures.
1) Adjusted for swap-related flows, i.e. comparable to expenditures in table 3.
Source: Statistics Denmark and own calculations.

Table 4
General government debt developments

	2004	2005	2006	2007	2008	2010
			Per cent of GDP			
Gross debt	42.3	35.6	31.7	28.9	26.5	21.5
Change in gross debt ratio[1)]	-2.2	-6.8	-3.9	-2.8	-2.5	-5.0
Change in gross debt[2)]	-0.4	-4.9	-2.3	-1.8	-1.3	-2.9
Contributions to changes in gross debt						
Primary balance[3)]	-3.7	-4.8	-3.7	-3.1	-2.6	-5.3
Interest expenditure (incl. FISIM)[4)]	2.4	2.0	1.6	0.9	0.8	1.6
Stock-flow adjustment	0.9	-2.1	-0.2	0.4	0.5	0.8
p.m. implicit interest rate on debt[5)]	5.3	4.8	4.4	2.8	2.8	3.3
Other relevant variables						
Public net debt	14.5	11.4	9.0	6.7	4.9	1.3
Net debt in central and local governments	14.6	11.4	9.1	6.8	5.0	1.3

1) Change in gross debt ratio is defined as $D_t/GDP_t - D_{t-1}/GDP_{t-1}$, where D is public debt measured in nominal terms (DKK).
2) Change in gross debt is defined as $D_t/GDP_t - D_{t-1}/GDP_t$, where D is public debt measured in nominal terms (DKK).
3) As defined in table 2.
4) As defined in table 2.
5) Proxied by interest expenditures (incl. FISIM) divided by the debt level of the previous year.
Source: Statistics Denmark and own calculations.

Table 5

Cyclical developments

	ESA	2004	2005	2006	2007	2008	2010
				Per cent			
Real GDP growth		2.0	2.4	2.4	1.1	1.6	2.1
				Per cent of GDP			
General government balance	EDP B9	1.3	2.7	2.1	2.2	1.7	1.9
Interest expenditure	EDP D41	2.4	2.0	1.6	0.9	0.8	0.8
				Per cent			
Potential GDP growth		1.7	1.4	2.0	1.9	1.9	2.1
Of which, contribution from:				Percentage points			
- Labour		0.2	0.0	-0.2	0.1	0.4	0.4
- Of which labour force		0.2	-0.1	-0.2	0.1	0.2	0.2
- Capital		0.7	0.7	0.7	0.7	0.7	0.7
- Total factor productivity		0.9	0.7	1.5	1.1	0.9	1.0
				Per cent of GDP			
Output gap		-0.6	0.5	0.9	0.2	0.0	0.0
Structural budget balance[1)]		0.6	1.2	1.1	1.7	1.6	1.7
Primary structural balance[1)]		2.1	2.5	2.1	2.4	1.8	1.9

1) 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	2004	2005	2006	2007	2008	2010
				Rate of change, per cent			
Real GDP growth							
- Previous update		2.2	2.5	1.3	1.9	1.8	1.8
- Current update		2.0	2.4	2.4	1.1	1.6	2.1
- Difference		-0.2	0.0	1.1	-0.8	-0.3	0.3
				Per cent of GDP			
Actual budget balance[1)]	EDP B.9						
- Previous update		0.6	1.5	1.0	1.1	1.2	1.3
- Current update		1.3	2.7	2.1	2.2	1.7	1.9
- Difference		0.7	1.2	1.1	1.1	0.5	0.6
Gross debt level							
- Previous update		42.3	39.4	37.4	35.3	33.1	28.8
- Current update		42.3	35.6	31.7	28.9	26.5	21.5
- Difference		0.0	3.8	5.7	6.4	6.6	7.3

1) Excl. ATP.

Source: Statistics Denmark and own calculations.

Table 7
Long-term sustainability of public finances

	2000	2005	2010	2020	2030	2050	2060	2070
				Per cent of GDP				
Total expenditure	53.0	52.5	49.8	49.7	51.0	49.8	49.8	50.5
Of which:								
- Age-related expenditure	33.6	34.9	33.9	34.9	36.7	36.2	37.2	38.3
- Pension expenditure	8.9	9.4	9.8	10.7	11.3	10.2	10.7	11.1
- Social security pension	8.9	9.4	9.8	10.7	11.3	10.2	10.7	11.1
- Old-age and early pensions	6.9	7.4	7.8	8.7	9.3	8.2	8.7	9.1
- Other pensions	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
- Occupational pensions	-	-	-	-	-	-	-	-
- Health care	6.1	6.4	6.4	6.9	7.4	7.5	7.6	7.7
- Long-term care	1.7	1.8	1.8	2.0	2.4	2.9	3.0	3.0
- Education expenditure	5.5	5.9	5.9	5.5	5.3	5.5	5.6	5.9
- Other age-related expenditures	11.4	11.3	9.9	9.9	10.2	10.1	10.5	10.6
- Interest expenditure	4.3	2.8	1.5	0.2	-0.7	-1.7	-3.0	-3.6
Total Revenue	55.3	55.0	51.6	51.4	52.1	52.6	52.8	52.9
Of which:								
- Property income[1]	1.9	1.6	1.4	1.0	0.7	0.3	0.2	0.1
- Revenue from pension payouts net	-0.7	-1.0	-1.3	-0.8	0.1	1.8	2.0	1.9
Pension reserve fund assets	115.9	131.5	148.4	195.5	241.9	274.6	279.8	282.2
Of which:								
-Public pension fund assets[2]	1.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Assumptions				Per cent				
Labour productivity growth	3.5	1.5	1.6	1.8	1.7	1.8	1.7	1.8
Real GDP growth	3.3	2.4	2.1	1.6	1.2	1.7	1.4	1.7
Participation rate males (aged 20-64)	84.8	85.1	85.2	85.1	84.6	85.1	84.2	84.6
Participation rate females (aged 20-64)	75.6	75.9	76.7	76.6	75.5	76.5	75.2	75.8
Total participation rate (aged 20-64)	80.3	80.5	81.0	80.9	80.1	80.8	79.7	80.2
Unemployment rate	5.2	5.5	4.7	4.7	4.7	4.7	4.7	4.7
Structural unemployment	6.3	5.5	4.7	4.7	4.7	4.7	4.7	4.7
Population aged 65+, 1,000 persons	791.1	809.8	880.9	1038.3	1147.8	1135.9	1135.4	1188.9

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 (20 per cent of GDP) in 2005 due to the changed classification of the ATP fund due to the revision of national accounts.
Source: Statistics Denmark and own calculations.

Table 8

Basic assumptions

	2004	2005	2006	2007	2008	2010
Short-term interest rate (annual average)	2.2	2.2	2.4	2.7	3.0	3.5
Long-term interest rate (annual average)	4.3	3.5	3.9	4.2	4.5	5.1
Exchange rate USD/EUR (annual average)	124.3	124.4	120.8	120.8	120.8	120.8
Nominal effective exchange rate (1980=100)	102.2	101.5	101.0	101.0	101.0	101.0
World excluding EU, GDP growth	5.7	4.8	4.6	-	-	-
EU GDP growth	2.4	2.0	2.3	-	-	-
Growth of relevant foreign markets	7.5	6.1	6.5	4.6	4.4	4.4
World import volumes, excluding EU	12.8	9.1	7.7	-	-	-
Oil prices, (Brent, USD/barrel)	38.2	53.5	58.5	39.3	39.9	41.4

Source: ADAM databank, European Commission Spring forecasts, April 2005 and own calculations.