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2002 UPDATE

OF THE CONVERGENCE PROGRAMME OF DENMARK

(2002-2010)

AN ASSESSMENT

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SUMMARY AND CONCLUSIONS

The 2002 updated Danish convergence programme covers the period 2002 to 2010. The programme is rich in information especially with regard to the amount of data provided for the analysis of medium and long-term challenges of the Danish public finances and it broadly complies with the Code of Conduct[1]. However, the programme is rather scarce on information regarding the budget for 2003. Two weeks after having submitted the updated programme the Danish authorities presented a supplementary note containing a revised short-term forecast (until the year 2004) and a short-term sensitivity analysis. However, the set of information contained in this supplementary note is not detailed enough to allow a comprehensive public finance assessment. Moreover the link between the new short term forecasts with the medium term projections of the programme – and therefore with the long-term analysis - is no longer straightforward as was the case in the initial scenario. The economic policies as reflected in the planned measures in the convergence programme update comply with the 2002 Broad Economic Policy Guidelines.

The public finance strategy presented is largely unchanged from previous years and continues to have a strong focus on ensuring sustainable public finances in both the medium and long-term. The foundation for the strategy continues to be both the maintenance of general government surpluses of the order of 1½-2½% of GDP on average towards 2010 and the tax freeze, which is also intended to help ensure expenditure control. In order to obtain the targets stipulated in the medium-term projection it is acknowledged in the programme that further labour market reforms are needed.

In general the Danish economy is in good shape and Denmark has continued to fulfil the convergence criteria on inflation, interest rate, exchange rate[2] and public finances. The economy has largely developed in 2002 as foreseen in the last update. The slowdown of economic growth in 2001 was estimated to result in GDP growth of 1.1%. The latest figure is 1.4%. For 2002 a small increase in GDP growth to 1.5% is expected which is in line with what was foreseen in the 2001 update. In 2003 and 2004 GDP growth is estimated at 1.8% and 2.1% in the supplementary note, driven solely by domestic demand. The growth profile and composition of the forecast are close to the Commission's forecast, but the overall GDP growth rates are slightly higher in the Commission's forecast at 2.1% and 2.4% in 2003 and 2004. This can largely be explained by the fact that the labour market situation has recently deteriorated as unemployment has begun to rise. This development is reflected in the supplementary note, but not in the Autumn Commission's forecast. From 2005 GDP growth is expected to average 1.8% as a technical projection.

Inflation is showing more resilience than expected which, compared to last year's update, has led to an upward revision of the inflation forecast by more than ½

[1] Revised Opinion of the Economic and Financial Committee on the content and format of stability and convergence programmes, endorsed by the ECOFIN Council on 10.7.2001.

[2] In 2002 the reference value for the convergence criteria on inflation was 2.9% and Danish inflation stood at 2.4%. For the interest rate criteria the reference value was 6.9% compared to a figure for Denmark of 5.1%. With regard to the exchange rate Denmark has continued its membership of ERMII and the Danish *krone* has remained stable and well within the narrow bands.

percentage point to 2.4% this year. This increase is mostly due to domestic factors as continued high wage increases in the service sector feed into prices. The programme foresees wage growth to decelerate in 2003 and 2004, primarily due to the expected rise in unemployment which, in turn, is expected to gradually bring CPI inflation to levels below 2% from 2004 onwards. The Commission view is also for a deceleration of inflation but towards slightly higher levels.

Public finances in Denmark continue to remain healthy, showing surpluses in the general government balance since 1997. Central government and social security sector are currently in surplus and local authorities are under the obligation to balance their revenue and expenditure. The outcome for 2001 at 2.8% of GDP was better than expected, but this was, for a large part, due to a delayed implementation of a technical change to a pension scheme. For 2002 to 2004 the supplementary note presents revised lower surpluses of 1.6, 1.9 and 2.4% of GDP, which are broadly in line with the Commission's estimates. For the rest of the period (2005-2010) the programme projects surpluses around 2% of GDP. The debt is expected to decrease from 44% of GDP in 2002 to 26% of GDP in 2010.

Both the Commission's and programme calculations of cyclically adjusted balances show continued surpluses in each year over the period and confirm that the public finances should remain sound. The underlying balance is expected to be in surplus - around 2% of GDP - over the programme period, and Denmark will therefore continue to fulfil comfortably the requirements of the Stability and Growth Pact.

Compared to last year's update, the tax freeze has now been implemented for all levels of government, as recommended in the Broad Economic Policy Guidelines. The results of this implementation tentatively suggest that the tax freeze might also act as a mechanism of discipline in expenditure control, even though it is too early yet to make a full evaluation. Historically, expenditure control in Danish public finances has had a rather mixed record. It has so far proven difficult for the authorities to limit real growth rates of public consumption to their 1% target; and indeed from 2006 onwards the target becomes even stricter, at ½-¾%. Although it may appear that the tax freeze acted as a mechanism for discipline in expenditure control in 2002 as well as on the budget for 2003, the tighter target from 2006 may still prove to be quite a challenge.

The achievement of the medium term public finance targets hinges to a large extent on the realisation of some ambitious labour market goals which include increasing the labour force participation rates beyond their already high level. The achievement of these goals implies a need for further labour market reforms as labour market constraints continue to be the main challenge for the Danish economy. Compared to the previous update, a quantification has been made of the consequences for public finances if the reforms are not implemented. This is a welcome innovation and it shows that the shortfall on the surplus, risks being of the order of 1% of GDP. Given the possible severity of such a short-fall on the sustainability of public finances, it is strange that the programme does not contain much information on the content of such reforms nor on a possible timetable of their implementation.

Recently there has been a weakening in the Danish labour market. Unemployment has begun to rise and employment is falling. These developments do not necessarily pose a threat to reaching the targets for labour market developments towards 2010, but such risks may emerge if the downturn is prolonged, in which case the projected level of budget surpluses might be at risk.

A reduction of taxes on labour income is announced in the programme (if the fiscal leeway can be found) but a final decision on a tax reform will not be taken until Spring 2003. However, the reduction of taxes on labour income is planned to be of the order of ¼-½% of GDP which can only be considered as a small magnitude. If this reform is also intended to help alleviate the labour market constraints, the perceived effect can only be limited.

This year's update again presents substantial calculations on long-term sustainability of public finances and compared to last year's update, the calculations are augmented with sensitivity calculations. The attention given to public finance sustainability is welcome. The issue of long-term sustainability naturally hinges on the realisation of the medium-term targets, but should the medium term projection materialise, the calculations show that public finances in Denmark seem in a very good position to handle the impact of the ageing population, as large net assets are projected for both the government and pension funds. However, the implication of the calculations is a continued high tax burden compared with other industrialised countries.

1. INTRODUCTION

The updated Danish convergence programme was submitted to the European Commission on 29 November 2002. Additional information on the short-term forecast and sensitivity analysis was submitted on 13 December in a supplementary note. The update has been sent to the Danish Parliament for information. The present update, covering the period up to 2010, is the fourth update of the convergence programme submitted in December 1998.

The strategy presented in the programme is, by and large, the same strategy as presented last year, which predominantly gives focus to medium-term issues and long-term sustainability of public finances as public finances in the short-term are viewed to be in a very good condition. The main elements of the strategy are to keep high surpluses on public finances in order to reduce the debt as a preparation for the impact of ageing on public finances and to continue the tax freeze, which is also intended to act as a mechanism of discipline to help curb the tendency for rising tax rates and expenditures.

One crucial assumption underlying the public finance projections is the labour market developments. Age-specific labour force participation rates are set to increase towards 2010, and given the already high participation rates in Denmark the assumed increase might prove to be a challenge. It is acknowledged in the programme that the participation rate increases require further labour market reforms. Regarding other reforms, last years commitment to lowering taxes on labour income from 2004, if the fiscal leeway can be found, is also maintained in the present update.

The 2002 update is broadly in compliance with the Code of Conduct. However, the programme is rather scarce on information regarding the budget for 2003, but has a stronger focus on medium-term issues and long-term sustainability of public finances.

2. IMPLEMENTATION OF THE PREVIOUS UPDATE

The macroeconomic projection for 2001 presented in last year's update of the convergence programme turned out to be realistic. A real GDP growth rate of 1.1% was foreseen and the outcome is 1.4%[3] and inflation was at 2.4% compared to a forecast of 2.3%. In 2002, economic growth is expected to be 1.5%, largely in line with the previous update.

The surplus on public finances in 2001 turned out to be 2.8% of GDP instead of the forecasted 1.9% of GDP, a difference of 0.9 percentage point. The difference is, however, mainly due to a technical item, as the change of the public pension scheme "the special pension contribution" into a private scheme was delayed for one year from 2001 till 2002. The delay was not known by the time of submission of the last convergence programme. This accounts for 0.6 percentage points of the difference. The remaining difference is mainly due to higher than expected revenues. For 2002 a lower surplus of 1.6% of GDP is expected in the supplementary note. Compared to the surplus in 2001 around ¾ percentage point of the fall is explained by technical or methodological changes.

Despite the larger than expected surplus on the public finances, the debt was reduced by 1.2 percentage points less in 2001 than anticipated in the previous update (to 44.7% of GDP compared to 43.5% of GDP). The difference is mainly due to changes in the amount of government bonds held by the social security funds. In 2002 the debt is expected to be reduced to 43.9% of GDP.

Table 1. Comparison with previous update

% of GDP	**2001**	**2002**	**2003**	**2004**	**2005**	**2010**
GDP growth						
2001 update	1.1	1.4	2.4	1.9	1.9	
2002 update	1.0	1.5	2.2	1.8	1.7	1.8
(supplementary note)		*(1.5)*	*(1.8)*	*(2.1)*		
Price Inflation (CPI)						
2001 update	2.3	1.6	1.9	1.6	1.6	
2002 update	2.4	2.3	1.8	1.6	1.6	1.7
(supplementary note)		*(2.4)*	*(2.0)*	*(1.8)*		
Actual budget balance						
2001 update	1.9	1.9	2.1	2.1	2.1	
2002 update	2.8	2.1	2.2	2.5	2.4	2.2
(supplementary note)		*(1.6)*	*(1.9)*	*(2.4)*		
Gross debt levels						
2001 update	43.5	42.9	40.1	37.6	35.1	
2002 update	44.7	43.9	42.1	39.2	36.7	26.0
(supplementary note)		NA	NA	NA		

[3] The GDP figure for 2001 was revised upwards by Statistics Denmark from 1.0% to 1.4% after the submission of the supplementary note.

3. MACROECONOMIC ASSESSMENT

After the submission of the convergence programme on November 29 the national authorities published a new short-term forecast on December 5. A note giving an overview of this new short-term forecast was sent to the Commission on December 13 as additional information.

The note does, however, not contain enough detailed information to allow the full macroeconomic and public finance assessment nor is it straightforward to link the new forecast to the medium-term scenario in the programme on a sufficiently detailed level. In this assessment the forecast in the supplementary note has been used where possible, but in cases where the information is too limited, data from the programme has been used. It is clearly marked in the tables which data are used and where data are not comparable. In Annex 1 tables from the supplementary note comparing the forecast in the programme and the supplementary note are presented.

3.1. External economic assumptions

The external assumptions underlying the macroeconomic projection in the supplementary note are based mostly on the Commission's Autumn forecast, but also include own calculations. The recovery of the global economy is expected to gather momentum later in 2003. The export market growth for Denmark is lower in 2002 than in the Commission's forecast, but somewhat higher in 2003 and 2004. Overall, however, the external assumptions seem plausible.

3.2. Macroeconomic developments[4]

For 2002 the macroeconomic forecast in the programme is largely unchanged compared to last year's update, except for a large unexplained upward revision of the inflation forecast by 0.8 percentage point to 2.4%. GDP growth is estimated to be 1.5%, mainly driven by private consumption as investment growth is expected to remain rather weak, and net exports are set to have a negative impact on GDP growth. The assumed GDP growth rate is slightly lower than in the Commission's Autumn forecast but has a quite similar composition of growth. Domestic demand is the only factor contributing to growth in both forecasts. Recently, the situation on the Danish labour market has deteriorated. Unemployment is rising and employment is falling. This development is reflected in the revised forecast in the supplementary note but not in the Commission's Autumn forecast.

For 2003 and 2004 GDP growth rates are estimated at 1.8% and 2.1%. Growth is entirely driven by final domestic demand where private consumption continues to grow by around 2¼% and investment growth is gradually picking up. Net exports have a small negative contribution to GDP growth in both years. Growth towards 2010 is a technical projection from 2005 and is lingering around 1.8%. It is also mainly driven by domestic demand. Unemployment continues to rise in 2003 but starts falling again in 2004. Inflation is expected to come down gradually from the current level of 2½% to

[4] Forecast for 2002-2004 is taken from the revised short-term forecast in the supplementary note. The projection for 2005-2010 is taken from the programme.

remain around 1.7% from 2005-2010. The growth profile and composition are close to the Commission's Autumn forecast, but the overall GDP growth rates are slightly lower in the supplementary note.

Table 2 – Forecasts compared 2002-2010

% change on previous year	2002		2003		2004		2005	2010
	COM*	CP 2002**	COM*	CP 2002**	COM*	CP 2002**	CP 2002**	CP 2002**
Real GDP growth	1.7	1.5	2.1	1.8	2.4	2.1	1.7	1.8
Contribution to change in GDP								
Domestic demand	1.9	1.6	2.2	1.8	2.5	2.2	1.9	1.9
Stocks	-0.1	-0.1	0.1	0.0	0.0	0.0	0.0	0.0
External balance of trade	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.2	0.0
CPI	2.4	2.4	2.1	2.0	2.0	1.8	1.6	1.7
Employment	0.1	-0.2	0.3	0.1	0.3	0.5	0.3	0.3

* Commission's Autumn 2002 Forecasts
** Danish Convergence Program update and supplementary note (November/December 2002)
Note: Bold black line marks where data are not comparable.

3.2.1 Potential growth and output gaps[5]

Calculations of potential growth rates and output gaps show that there are only minor differences between the results yielded by the Commission's production function approach when applied to the Autumn forecast and to the figures in the supplementary note. In both cases the forecast GDP growth rates are close to potential and the output gap continues to be around zero in every year, indicating that the Danish economy is operating close to potential and will remain so. This underlines the need for structural reforms on the labour market to raise the level of productive potential– not only as a means within the strategy of debt reducing but also in order to ensure that risks of overheating do not emerge.

The Danish authorities' own calculations of output gaps uses a method that differs from the Commission's[6]. The resulting output gap is ½ percentage point higher than in the Commission's calculations (for actual figures see table 4 in annex 2) indicating a tighter economy. The difference between the authorities' calculations and those of the Commission results mainly from differences in initial level of output gap whereas the profile of changes to the output gap over the forecast horizon is very similar. This indicates that the assessment of potential growth rates over the forecast horizon is not very different between the Commission and the Danish authorities. The analysis of the underlying budgetary position is made in section 5 below.

[5] Commission calculations are based on the revised figures in the supplementary note. Calculations from the Danish authorities are from the convergence programme as no new figures where supplied in the supplementary note.

[6] A note in the convergence programme stipulates that: "The calculation of the output gap deviates from the Commission's calculations. The output gap primarily depends on the difference between actual and structural unemployment and is estimated in a system, which also determine the structural level of unemployment, using the Kalman filter. No ad hoc adjustments have been made regarding the smoothness of the estimated level of structural unemployment."

Table 3 – Potential growth and output gaps

	2002 updated convergence programme Danish authorities calculations			2002 updated convergence programme/supplementary note Commission calculations[1]			Commission's autumn 2002 forecast Commission calculations		
	GDP growth	Potential growth	Output gap	GDP growth	PF Potential growth	Output gap	GDP growth	PF Potential growth	Output gap
2002	1.5	1.6	0.6	1.5	1.9	0.0	1.7	2.1	-0.1
2003	2.2	2.1	0.7	1.8	1.9	0.0	2.1	2.1	-0.1
2004	1.8	2.0	0.6	2.1	1.9	0.2	2.4	2.2	0.1
2005	1.7	2.0	0.3	1.7	1.9	-0.1	-	2.1	-
2010	1.8	1.9	0.0	1.8	1.8	-0.2	-	-	-

Note: Bold black line marks where data are not comparable.
[1] Based on programme and supplementary note assumptions.

4. MONETARY POLICY

4.1 Inflation developments

The target for inflation developments is to ensure a low and stable inflation rate of just below 2%. The main element in achieving this goal is the continued commitment to keeping the exchange rate fixed within the narrow bands of the ERMII.

In 2001 the convergence criteria on inflation was met by a broad margin as the Danish HICP increase was 2.1% and the reference value for the criteria was 3.1%. In 2002 inflation has gone up in Denmark and for the year as a whole inflation was 2.4% compared to a reference value of 2.9%. The rise is mostly due to domestic factors as continued high wage increases in the service sector feed into prices. In recent months the Danish inflation rate has been above that of the euro area, but only marginally, and currently there is no risk of Denmark breaching the convergence criteria on inflation. Compared to a scenario with unchanged real excise duties, the tax freeze will, other things being equal, lower the inflation rate by ¼ percentage point a year. Furthermore, a lowering of excise duties on strong alcohol, tobacco and soft drinks will be implemented by October 1, 2003. The estimated effect of this reduction on inflation is 0.2 percentage point, with the majority of the effect in 2004. Moreover, in 2003 and 2004 the programme foresees wages growth to decelerate, primarily due to the expected rise in unemployment which, in turn, is expected to gradually bring CPI inflation to levels below 2% from 2004 onwards. The Commission view is also for a deceleration of inflation but towards slightly higher levels.

4.2 Exchange rate developments

Denmark participates in ERMII with a narrow fluctuation band of ± 2.25% around the central parity. The exchange rate of the *krone* has been stable vis-à-vis the euro over recent years in line with its favourable convergence position. In fact, as pointed out in the programme, the deviations from central parity have been much smaller than the fluctuation bands allow for. The short term interest rate differential to the euro area has at the same time been low and it has even narrowed further over the last year to some 20 basis points. These developments reflect the credibility of the fixed exchange rate policy, which remains a central element in Danish economic policy.

4.3 Interest rate developments

For 2001 the average long-term interest rate in Denmark was 5.1%, thereby remaining well below the reference value for the convergence criteria. Also in 2002 Danish long-term bond yields continued to comply with the convergence criteria. The updated convergence programme assumes that long-term benchmark interest rates in the euro area will gradually increase from 5.0% in 2002 to some 5.5% towards 2006. The yield spread to Germany is estimated to widen from some 25 basis points on average during 2002 to about 50 basis points by 2006. As was the case in last year's updated programme, this assumption indicates a widening of the spread compared to the situation during the last two years, when the spread on average remained below 30 basis points in spite of some periods of marked turbulence in global financial markets.

5. BUDGETARY TARGETS AND MEDIUM-TERM PATH OF PUBLIC FINANCES

5.1. Programme overview

The programme presents a medium term strategy all the way towards 2010. From 2002-2005 one scenario is presented, and two from 2006-2010. The two scenarios overall have the same profiles on the surplus of public finances and the debt, but they differ in the prioritisation given either to higher public consumption or lower taxes on labour income. However, the differences between the two scenarios are minor.

The programme continues the strategy of previous years with a strong focus on maintaining high surpluses on public finances - at the magnitude of 1½-2½% of GDP on average towards 2010 - in order to reduce the debt as a preparation for the impact of ageing on public finances. The debt is estimated to have fallen to 26% of GDP by 2010.

Another central element in the public finance strategy is the tax freeze which was introduced when the government took office last year. The tax freeze means that no direct or indirect tax may increase, irrespective of whether it is expressed and legislated in percentage- or *krone* value terms. Furthermore, a ceiling is put on nominal property value tax. Apart from preventing tax increases, the tax freeze is also intended as a mechanism of discipline to help achieving the objective of modest growth in public consumption, as it implies a stricter prioritisation of expenditures.

The commitment to restraining real public consumption growth to 1% a year on average towards 2005 is maintained. After 2005 the target becomes even stricter at growth rates of ½ -¾% a year on average towards 2010, depending on the scenario.

With regards to changes to taxes, the programme contains a declaration of intent to lower taxes on labour income from 2004 by ¼-½% of GDP, depending on the scenario, if the fiscal leeway can be found. A decision on the actual tax reform will not be made before spring 2003.

5.2. Public finances in 2002 and 2003[7]

The estimated surplus in public finances for 2002 stands at 1.6% of GDP (EDP-definition) in the supplementary note compared to the Commission's forecast of 2.0% of GDP. The difference is mainly due to the worsened labour market outlook in the forecast by the authorities. The two figures are however not entirely comparable as method changes has been implemented by Statistics Denmark to the public finance statistics after finalisation of the Autumn forecast[8]. These changes are estimated to account for 0.15 percentage point of the difference. Quarterly national accounts figures up till the third quarter of 2002 show a surplus of 1.9% of GDP. This figure is, in method, only comparable to the Commission's forecast of 2.0% of GDP.

The surplus in 2003 presented in the supplementary note stands at 1.9% of GDP[9] compared to the Commission's Autumn forecast of 2.0% of GDP. The main target variable, the real growth rate of public consumption, is in the programme expected to be 0.7%, thereby making an average of 1% real growth with the estimated growth rate of 1.3% in 2002, as originally targeted. This development is in line with the Broad Economic Policy Guidelines. Compared to 2002, both revenue and expenditure to GDP ratios fall. With regards to the actual budget for 2003 the programme is quite limited on information.

In 2003 the tax freeze has been implemented for all levels of government. This development is welcome and also in line with the Broad Economic Policy Guidelines. The implementation was ensured by the June agreements with the associations of local governments and counties on the budgets for 2003, including the block grant from the central government. This agreement implied that local governments and counties would respect the tax freeze or they could be penalised. The adaptation of budgets in local governments and counties in October revealed at least one breach of the tax freeze in the counties, after which the government announced that the extra revenue from this tax increase will be neutralised by taking the extra revenue from the counties and using them for lowering state taxes.

[7] Based on data from the supplementary note.

[8] The technical revisions include two elements, as explained in the supplementary note. "Firstly, Statistics Denmark now also publish public finance according to the EDP-definition by adjusting for swaps. The public sector net expenditures are to be calculated excluding net interest settlements due to swap-arrangements. This implies an upward revision of central government net interest expenditures, which is fully offset by an upward revision of central government net assets. The second revision implies that imposed taxes, which in fact are never paid by the private households and firms are to be written off. This is now treated as a capital transfer to the private sector. The counterpart is that the general government cease to accumulate gross assets of no value. The technical revisions increase the central and local government expenditure burden and reduce the measured general government surplus by approximately 0.25 per cent of GDP from 1999 onwards. The technical deterioration of public finances is completely (and also technically) offset by revisions of government net assets which contributes to a technical lowering of the future net interest burden of the central and local government net debt. This means that the technical revisions do not impact the sustainability of public finances."

[9] EDP-definition. National Accounts surplus is estimated at 1.7% of GDP.

5.3 Targets and adjustment in 2004 and beyond[10]

In 2004 the surplus in the programme is estimated at 2.4% of GDP[11]. The increase in the surplus compared to 2003 stems mainly from an increasing tax burden. The increase is due to a projected normalisation of the revenues from taxes paid by pension companies. The revenues from this tax are very volatile and linked to stock market developments. Due to the prolonged downturn in the stock market this tax has not generated revenues in 2001 and 2002 and it is also estimated that the revenues in 2003 will be close to zero[12]. Beyond 2004 the surplus declines towards 2.2% of GDP and remains there from 2006-2010.

The resulting developments in revenue and expenditure ratios from the strategy presented in the programme are falls in both ratios between 2002 and 2005, but slightly less so than in the previous update. Looking to 2010 the ratios continue to fall marginally, but for expenditure ratios mainly as a result of reduced interest rate expenditures.

Table 4 – Composition of the adjustment in public finances

In % of GDP	2001	2002	2003	2004	2005	2010
Total revenues[1)]	56.1	55.1	54.3	54.5	54.2	53.2
Tax burden[1)]	49.0	48.2	47.7	48.0	47.6	46.8
Total expenditure	53.2	52.9	52.1	52.0	51.8	51.0
Primary expenditure	49.1	49.3	48.8	48.8	48.7	48.6
Interest rates	4.1	3.6	3.3	3.3	3.1	2.4
Government budget balance[1)]	2.8[2)]	2.1	2.2	2.5	2.4	2.2
Government debt	44.7	43.9	42.1	39.2	36.7	26.0

Note: Figures in the table are all from the programme and therefore not comparable with the surpluses listed in the text.
[1)] Reduced by ½ per cent of GDP from 2002 as a result of a change in pension scheme.
[2)] The figure as presented in the programme. According to Eurostat definitions the surplus is 3.0% of GDP, the difference being due to different treatment of UMTS proceeds.

With regard to the division into sub-sectors, local authorities are under obligation to balance their revenues and expenditures, while both central government and social security sector are expected to generate surpluses in every year towards 2010. The surplus is expected to stabilise around 1½% of GDP in central government and around ¾% of GDP in the social security sector.

[10] For overall budget balances the analysis is based on data from the supplementary note. Detailed public finance data and debt figures are from programme as the supplementary note did not contain this information.
[11] EDP-definition. National Accounts surplus is estimated at 2.2% of GDP.
[12] The taxation of pension fund yields was changed in 2000. The tax rate on yields on equities was increased and the tax rate on yields on bonds was reduced to ensure the same tax rate on yields from the two types of assets. As equities prices are far more volatile than bonds' prices, the volatility of the revenues from this tax has increased markedly. The estimation is that the revenues can fluctuate by slightly more than 1 per cent of GDP on average, leading to increased volatility of the surplus on public finances of the same amount. By historical standards this is a large increase in the volatility of the total general government finances, as the fluctuation on average since 1990 has been less than 1% of GDP. This tax might therefore markedly increase fluctuations in the general government budget balance, and changes are very difficult to predict.

5.4 Assessment of the assumptions underlying the medium term projection

The strategy hinges on the realisation of some ambitious labour market goals. Employment is set to increase by 85000 persons from 2000 to 2010. The majority of this increase, 65000 persons, is expected to stem from increasing the labour force and 20000 persons is expected to be due to lower unemployment. Between 2000 and 2010 demographic changes are estimated to reduce the labour force by 53000 persons resulting in the underlying need for increasing the labour force in order to fulfil the target being 118000 persons.

It is acknowledged in the programme that this cannot be reached without further labour market reforms. Already implemented reforms where the full effect is not yet visible should increase the labour force by 77000 persons, but an additional increase in the labour force of 41000 persons and an additional reduction of unemployment by 15000 persons are needed in order to achieve the targets (see table 5). These have to come from additional labour market reforms.

Table 5 – Estimated implemented and non-implemented employment requirement, from 2000 to 2010

1000 persons	
Demographic contribution	-53
Implemented increase in participation rates	77
Lower unemployment	5
Implemented increase in employment	29
Non-implemented increase in participation rates	41
Non-implemented reduction in unemployment	15
Non-implemented increase in employment	56
Total increase in employment	85

However, the needed reforms are not specified in detail in the programme as it is only stated that possible contributions may come from better integration of immigrants in the labour market, a faster flow through the education system and efforts to improve labour market attachment for senior workers. The projections depend crucially on the realisation of these labour market targets, and given the already high participation rates in Denmark, increasing these is something of a challenge.

The programme is very rich in information and analysis of how the public finance situation could look if the targets on the labour market are not achieved and substantial calculations and analyses are presented. The calculations presented in table 6 show that the labour market reforms already implemented should result in a fiscal leeway of 0.7% of GDP. Most of this fiscal leeway is used to implement the tax freeze (0.6% of GDP) implying that, if the planned increases in real public consumption and the lower taxes on earned income are to be realised, an additional fiscal leeway of 1% of GDP has to be created by the targeted increase in employment towards 2010 as a result of additional labour market reforms. In other words, if the targeted employment increase is not reached, the surplus is estimated to be 1% of GDP lower in 2010 compared to the current projection.

Table 6. Contribution to fiscal sustainability

	Scenario 1	Scenario 2
	Per cent of GDP	
Sustainability indicator, demographic scenario[1)]	-0.1	-0.1
Fiscal leeway due to implemented employment requirements	0.7	0.7
Tax freeze[2)]	-0.6	-0.6
Real growth in public service standards	-0.7	-0.5
Sustainability indicator, implemented scenario	-0.7	-0.5
Fiscal leeway due to non-implemented employment requirements	1.0	1.0
Lower tax on earned income	-0.2	-0.4
Sustainability indicator	0.1	0.1

Note: Scenario 1 is the scenario with the higher growth rate of public consumption and the lower tax reductions.
1) Assuming unchanged participation rates, unemployment rate, and real public service standards from 2003 to 2010.
2) The tax freeze in itself lowers tax receipts by ¾% of GDP at the 2002 level towards 2010. Converted to a fixed annual amount (net present value) in 2003, the tax freeze implies a permanent net revenue loss of 0.6% of GDP compared with a scenario where excise taxes, etc., are price-indexed.

These estimates are naturally only indicative as these calculations are subject to substantial uncertainty. But given the importance attached to the labour market developments and the acknowledged need for further labour market reforms, it is strange that the programme provides almost no information on the intended content of the labour market reforms nor does it contain information on a possible timetable for the reforms. Especially as reforms are not planned for 2003 and in order for a reform to have the needed effect before 2010, they should be planned in a not so distant future, as structural reforms normally take some time before producing the required impact.

The announced reduction in taxes on earned income from 2004 – if the fiscal leeway can be found – is at the order of ½-¾% of GDP towards 2010. This is not a large amount and given the high tax burden in Denmark and the need for structural reforms to increase the labour supply, it could be considered whether a larger reduction would contribute positively to reaching the listed targets.

It has so far been difficult for the authorities to limit real growth rates of public consumption to the 1% target and from 2006 the target becomes even stricter. Even though it seems that the tax freeze might have been acting as a mechanism of discipline for expenditure control in 2002 and on the budget for 2003, it might still prove to be quite a challenge to restrict growth rates even further and it should therefore be considered whether it will be possible to achieve this stricter target within the existing framework of budget control.

5.5 Cyclically-adjusted balances[13]

Table 7 shows the cyclically-adjusted balance calculated on the basis of different methods and different short-term forecasts. Regardless of the method or forecast the

[13] Commission calculations are based on the figures in the supplementary note. Calculations from the Danish authorities are from the convergence programme as no new figures where supplied in the supplementary note. However, in the supplementary note it is stated that “The assessment of fiscal sustainability and the structural general government balance has not been changed.”

cyclically-adjusted balance shows high surpluses over the period covered by the analysis.

Table 7 – Cyclically-adjusted public finances

	2002 updated convergence programme Danish authorities calculations		2002 updated convergence programme/supplementary note Commission calculations[1)]		Commission's autumn 2002 forecast Commission calculations[1)]	
	Actual balance	Cyclically-adjusted balance	Actual balance	Cyclically-adjusted balance	Actual balance	Cyclically-adjusted balance
2002	2.1	2.1	1.6	1.6	2.0	2.1
2003	2.2	2.2	1.9	1.9	2.0	2.1
2004	2.5	2.2	2.4	2.2	2.5	2.5
2005	2.4	2.2	2.4	2.5	-	-
2010	2.2	2.2	2.2		-	-

[1)] Production function approach.
Note: Bold black line marks where data are not comparable.

In the middle section of table 7 are reported the cyclically-adjusted balances calculated by the Commission services using potential output growth based on the production function approach and using the economic assumptions and unadjusted fiscal projection of the programme and supplementary note. A picture of increasing cyclically-adjusted surpluses emerge. These increases probably exaggerate the rise in the surpluses as the cyclically-adjusted figures in 2002, and less so in 2003, are artificially depressed by some transitory elements which reduce the surplus in these years. These transitory elements are assumed to largely disappear from 2004 onwards[14], resulting in cyclically adjusted balances around 2% of GDP every year. These transitory elements are excluded from the cyclically-adjusted balance as calculated by national authorities in the programme which show a more constant cyclically-adjusted balance throughout these years. On the other hand, when looking at the figures from the Commission's Autumn forecast – right hand section of the table - it should be remembered that the method changes applied by Statistics Denmark to the public finance statistics are not incorporated, which would lead to a slight downward adjustment of the figures.

5.6 Sensitivity analysis

The sensitivity analysis presented in the supplementary note of December 13 shows changes to the macroeconomic forecast and public finances with respect to changes in the international growth assumptions and interest rates.

A lowering of the world growth by 1.0 percentage point in 2003 and 0.5 percentage point in 2004 with accommodating interest rates cuts of 0.3 percentage point and 0.15 percentage point respectively would result in GDP growth in Denmark being 0.2 percentage point lower in the first year, but 0.1 percentage point higher in the second year. Public finances would be left largely unaffected. If the world slowdown is prolonged resulting in lower growth from 2003-2006, the public finances would be

[14] As mentioned in footnote 11, the revenues from the pension fund yield tax is extraordinary low in the years 2001 to 2003 due to the prolonged fall in the stock market prices.

more adversely affected. General government finances will be weakened by 1¼% of GDP[15].

The sensitivity of the forecast with respect to changes in the interest rates are calculated on the basis of a parallel increase in international and Danish interest rates of 1 percentage point. The resulting weakening of public finances would be 1% of GDP over four to five years.

Analysis made by the Commission services broadly supports the 'risk' scenarios included in the 2002 update. In particular, a worsened growth outlook in the years to 2004 (of 0.5 percentage points lower GDP growth using the 2002 update as a baseline) would not lead to the public finances going into deficit.

Overall the analysis shows that the Danish economy seems well equipped to handle changes in the macroeconomic projections without breaching the Stability and Growth pact requirements of being close to balance or in surplus.

5.7 Debt ratio[16]

In 2001 gross debt stood at 44.7% of GDP. With the strategy of maintaining high surpluses the debt level is estimated to be reduced to 36.7% of GDP by 2005 and 26% of GDP by 2010. In the light of the high surpluses, the assumed debt reduction is somewhat cautious as the stock-flow adjustment is estimated to, ceteris paribus, increase the debt every year. The reasoning behind the estimated stock-flow adjustment is not mentioned in the programme. The Commission's estimates (until 2004) also show a continuous debt reduction.

Table 8 – Gross debt, previous and current update

% of GDP	2002	2003	2004	2005	2010
2001 update	42.9	40.1	37.6	35.1	
2002 update	43.9	42.1	39.2	36.7	26.0
Commission Autumn forecast	44.0	42.4	39.8		

6. THE SUSTAINABILITY OF PUBLIC FINANCES

The 2002 updated convergence programme contains a very detailed section on the sustainability of public finances, complete with national budgetary projections for public expenditures and revenues up to 2050. They show that age-related expenditures are projected to increase by just over 5 percentage points of GDP between 2005 and 2050: revenues are also projected to increase by some 2 percentage points of GDP over the same period. For details see Annex 3.

[15] Compared to last year's update the sensitivity of general government finances with respect to a cyclical increase in GDP – or a widening of the output gap by 1 percentage point has been lowered from 0.8 to 0.6-0.7 making public finances less sensitive to the cycle and thereby reducing the automatic stabilisers. This reduction is not commented on.

[16] The analysis is based on data from the programme as no new debt data was presented in the supplementary note. The debt figures are therefore not comparable with the surpluses listed in paragraph 5.2 and 5.3.

It is first necessary to consider whether current budget polices and the medium-term target can ensure that the SGP will continue to be respected in the future in light of the budgetary implications of ageing populations. The Commission agrees with the conclusion of the programme that public finances in Denmark are in a good position to meet the budgetary consequences of ageing populations.

A second issue is whether the budgetary strategy outlined in the programme is compatible with improving the sustainability of public finances. The programme presents a comprehensive strategy to prepare for the budgetary costs of ageing populations: in addition to debt reductions, reference is made to measures to achieve high employment rates and to contain the growth in public transfers due to an ageing population. Account is also taken of other developments that could affect public finances over the long run, such as a decline in North Sea revenues.

Finally, it is necessary to consider the type and scale of the budgetary challenges that will emerge in coming years to ensure sustainable public finances. A long term challenge may stem from the fact that the projected sustainability of public finances is based on an assumption of a high tax ratio of some 50% of GDP in coming decades, although a reduction in the tax ratio is targeted in the run up to 2010. It is up to each Member State to determine its tax ratio in accordance with its needs and preferences. However, the projected tax ratio is high relative to other industrialised countries and the desirability of maintaining such high tax ratios over the very long run could be called into question by the increasing mobility of production factors (and consequently tax bases) in the light of globalisation.

On the basis of current policies, the sustainability indicators project that the Danish government will accumulate large net assets by 2050, and the programme also notes that pension fund assets are projected to grow from 100% of GDP in 2001 to some 200% of GDP by the end of the projection period. Such a favourable outcome would indeed ensure the sustainability of public finances, and could indeed involve a transfer of resources from the current to future generations. This raises an interesting policy question in terms of the choice between further reducing the tax ratio in the medium-run or sustaining budget surpluses from which future generations would benefit.

7. STRUCTURAL MEASURES AND OTHER REFORMS WITH LIKELY BUDGETARY IMPACT

The programme states that with the launching of the "Growth on purpose" strategy this year, the government has launched structural policy measures to improve productivity performance. The growth strategy consists of "…specific measures and strategy and objectives in a number of areas of considerable importance to productivity growth. The intention is to follow up and adjust the strategy on an ongoing basis to make sure that it contributes to increased productivity". However, compared to last year's update, the productivity projections are kept largely unchanged, and the technical assumption of hourly productivity growth rates in the business sector of 2.0% from the end of the short-term forecast to the end of the programme period is also kept unchanged this year.

On the labour market the action plan "more people in work" has been introduced. According to the programme this plan consists of initiatives to make the active labour market policy simpler and more efficient with greater focus on activation directly qualifying a person for a job. It is estimated that this reform will increase employment by 10000 persons of which 5000 are estimated to come from increases in the labour force.

8. Overall assessment of compliance with the SGP

The analysis above shows that given the convergence programme, Denmark is expected to continue to fulfil over the programme period the Stability and Growth Pact requirement of a budget position close to balance or in surplus.

The public finances are expected to show a surplus of 1½%-2½% of GDP on average every year towards 2010. The Commission services estimate that the underlying balance will be in surplus every year to 2005 and calculations provided in the programme indicate a continuation of the surpluses till 2010. Furthermore, the sensitivity analysis supports that public finances in case of a set-back will still be able to be close to balance or in surplus.

The debt ratio which is already well below 60% of GDP is expected to continue to decline and reach 36.7% of GDP by 2005 and 26.0% of GDP by 2010.

Sustainability issues have a strong prominence in the programme. The Danish public finances are assessed to be sustainable on the basis of the strategy of running surpluses of 1½%-2½% of GDP every year towards 2010. The projected levels of surplus, however, depend on some ambitious labour market goals with increasing age-specific labour force participation rates from their already high level.

ANNEX 1 Tables comparing short-term forecast presented in the 2002 updated convergence programme and supplementary note

Table 1. Comparison between the present and the previous forecast

	2001	2002		2003		2004
		CP2002	Note	CP2002	Note	Note
	Percentage change					
GDP growth USA	0.3	2.3	2.3	3.0	2.3	2.8
GDP growth EU	1.5	1.1	1.0	2.6	2.0	2.6
Denmark:						
GDP growth	1.0	1.5	1.5	2.2	1.8	2.1
Private consumption	0.8	2.3	2.4	2.3	2.2	2.4
	Percentage change					
Consumer prices,	2.4	2.3	2.4	1.8	2.0	1.8
Hourly earnings, private sector	4.2	4.1	4.1	4.0	3.9	3.7
	1,000 persons					
Unemployment	145	144	146	142	155	150
	Per cent of labour force					
Unemployment	5.1	5.0	5.1	4.9	5.4	5.2
	Per cent of GDP					
General government balance	2.8	2.1	1.5	2.2	1.7	2.2
Do EU-definition	3.0	1.9	1.5	2.0	1.7	2.2
Do EDP-definition	3.0	2.0	1.6	2.1	1.9	2.4

Source: Statistics Denmark, EU-Commission, and own calculations.

Table 2. Comparison between the present and the previous forecast

	2002		2003		2004
	CP2002	Note	CP2002	Note	Note
	Percentage changes				
Private consumption	2.3	2.4	2.3	2.2	2.4
Total government demand	1.4	1.3	0.8	0.6	1.1
Of which government consumption	1.3	1.3	0.7	0.7	1.1
Of which government investment	2.0	2.0	2.0	0.0	2.0
Residential construction	-2.0	-4.0	1.5	1.0	2.0
Fixed business investment	0.2	1.5	3.4	2.7	3.8
Domestic demand excl. stocks	1.5	1.4	2.1	1.8	2.4
Changes in stock building [1)]	-0.2	-0.1	0.0	0.0	0.0
Total domestic demand	1.2	1.6	2.2	1.9	2.3
Exports of goods and services	4.3	2.8	5.1	3.8	5.8
Of which manufactures	4.3	3.5	6.0	4.5	5.5
Total demand	2.2	2.0	3.0	2.5	3.5
Imports of goods and services	3.9	3.2	5.1	4.3	6.8
Of which goods [2)]	4.2	5.0	5.5	4.9	6.8
Gross domestic product	1.5	1.5	2.2	1.8	2.1
GDP at factor costs	1.3	1.2	2.4	1.9	2.1
Of which in non-agricultural sector	1.2	1.4	2.8	2.2	2.5
	Changes in thousand persons				
Labour force	4.2	-5.9	10.8	12.3	7.8
Employment	5.7	-6.3	12.8	2.8	12.8
Of which in the private sector	-0.3	-12.3	9.8	-0.2	8.8
Of which in the public sector	6.0	6.0	3.0	3.0	4.0
Unemployment	-1.5	0.4	-2.0	9.5	-5.0

1) Contribution to the GDP-growth rate.
2) Excluding production of oil and gas and maritime.

Table 3. Comparison between the present and the previous forecast

	2002		2003		2004
	CP2002	Note	CP2002	Note	Note
	Percentage changes from previous year				
Merchandise export prices	-0.8	-1.1	1.2	0.6	1.0
Merchandise import prices	0.1	-0.6	0.7	0.6	0.7
Merchandise terms of trade	-0.8	-0.5	0.5	0.0	0.4
Real estate prices for one-family houses	2.5	2.5	2.5	2.0	1.5
Consumer price index	2.3	2.4	1.8	2.0	1.8
Hourly earnings	4.2	4.1	4.1	3.9	3.7
Real disposable income, private sector	1.9	2.9	2.7	2.2	1.7
Productivity in non-agricultural sector	1.4	2.2	2.3	2.3	2.1
	Per cent				
Savings ratio in the private sector	28.8	29.4	29.1	29.3	28.8
10-year government bond	5.3	5.1	5.5	4.9	5.3
30-yeat government bond	6.5	6.4	6.6	6.2	6.6
Current account	31.5	28,0	35.0	29,0	30,0
Government net lending	29.8	21,4	32.1	24,6	33,5
Unemployment (thousands)	144	146	142	155	150
	Per cent				
GDP growth in OECD countries	1.5	1,5	2,9	2,5	3,0
International market growth	1,4	0,4	7,8	6,5	8,4
Dollar exchange rate	7,9	7,9	7,6	7,6	7,6
Price of oil (USD per barrel)	24	25	25	26	25
Price of oil (DKK per barrel)	189,6	197,5	190,3	197,9	190,3

Source: Statistics Denmark and own calculations.

ANNEX 2
Summary tables derived from the 2002 updated convergence programme

Table 1. Growth and associated factors

		2001	2002	2003	2004	2005	2010
GDP *growth* at *constant* market prices (7+8+9)		1.0	1.5	2.2	1.8	1.7	1.8
GDP *level* at *current* market prices		1,344	1,388	1,450	1,509	1,568	1,904
GDP deflator		2.8	1.7	2.3	2.1	2.2	2.1
HICP change		2.3	2.2	1.7	1.5	1.5	1.6
Employment growth		0.5	0.2	0.5	0.3	0.3	0.3
Labour productivity growth		0.4	1.3	1.7	1.5	1.4	1.5
Sources of growth: percentage changes at constant prices							
1. Private consumption expenditure		0.8	2.3	2.3	2.2	2.3	2.5
2. Government consumption expenditure		1.2	1.3	0.7	1.0	1.0	0.7
3. Gross fixed capital formation		-0,2	0.0	2.9	2.4	2.2	2.3
4. Changes in inventories and net acquisition of valuables as a % of GDP		0.4	-0.2	0.0	0.0	0.0	0.0
5. Exports of goods and services		3.7	4.3	5.1	4.0	3.5	3.5
6. Imports of goods and services		4.3	3.9	5.1	4.5	4.2	4.0
Contribution to GDP growth							
7. Final domestic demand (1+2+3)		1.0	1.2	2.0	1.9	1.9	1.9
8. Change in inventories and net acquisition of valuables (=4)		0.4	-0.2	0.0	0.0	0.0	0.0
9. External balance of goods and services (5-6)		-0.1	0.3	0.2	0.0	-0.2	0.0
Basic assumptions							
Short-term interest rate (annual average)		4.6	3.7	3.9	4.5	4.8	4.9
Long-term interest rate (annual average)		5.1	5.3	5.5	5.8	6.0	6.1
USD/€ exchange rate (annual average)		0.90	0.94	0.98	0.97	0.97	0.97
(for non-euro countries) exchange rate vis-à-vis the € (annual average)		7.46	7.43	7.46	7.46	7.46	7.46
World excluding EU,GDP growth		2.4	3.0	3.9	4.2	3.5	3.5
EU-15 GDP growth		1.6	1.0	2.1	2.1	2.1	2.1
Growth of relevant foreign markets		-0.3	1.4	7.8	5.2	4.4	4.4
World import volumes, excluding EU		-1.7	3.2	6.8	7.4	6.6	5.0
Oil prices		24.8	24.0	25.0	25.3	25.5	26.8

Table 2. General government budgetary developments

% of GDP		2001	2002	2003	2004	2005	2010
Net lending by sub-sectors							
1. General government		2.8	2.1	2.2	2.5	2.4	2.2
2. Central government		1.3	1.1	1.2	1.7	1.6	1.4
3. State government							
4. Local government		-0.1	0.0	0.0	0.0	0.0	0.0
5. Social security funds		1.6	1.0	1.0	0.8	0.8	0.8
General government							
6. Total receipts		56.1	55.1	54.3	54.5	54.2	53.2
7. Total expenditures		53.2	52.9	52.1	52.0	51.8	51.0
8. Budget balance		2.8	2.1	2.2	2.5	2.4	2.2
9. Net interest payments		1.5	1.3	1.1	1.0	0.9	0.2
10. Primary balance		4.4	3.5	3.3	3.6	3.3	2.4
Components of revenues							
11. Taxes		46.8	46.6	46.1	46.4	46.0	45.2
12. Social contributions		2.2	1.6	1.6	1.6	1.6	1.6
13. Interest income		2.5	2.3	2.2	2.2	2.2	2.2
14. Other		4.5	4.6	4.4	4.3	4.4	4.2
15. Total receipts		56.1	55.1	54.3	54.5	54.2	53.2
Components of expenditures							
16. Collective consumption		25.5	25.6	25.4	25.5	25.6	25.4
17. Social transfers		17.7	17.7	17.5	17.6	17.6	17.5
18. Social transfers other than in kind		17.0	17.0	16.9	16.7	16.5	16.6
19. Interest payments		4.1	3.6	3.3	3.3	3.1	2.4
20. Subsidies		2.0	2.0	1.9	1.9	1.9	1.9
21. Gross fixed capital formation		1.7	1.8	1.8	1.8	1.8	1.8
22. Other		2.9	2.9	2.8	2.8	2.9	2.9
23. Total expenditures		53.2	52.9	52.1	52.0	51.8	51.0

Table 3. General government debt developments

% of GDP		2001	2002	2003	2004	2005	2010
Gross debt level		44.7	43.9	42.1	39.2	36.7	26.0
Change in gross debt		-2.0	-0.8	-1.8	-2.9	-2.5	-10.6
Contributions to change in gross debt							
Primary balance		-3,6	-3,3	-3,2	-3,6	-3,4	-14,0
Interest payments		2,5	2,2	1,9	1,9	1,8	7,1
Nominal GDP growth		-1,7	-1,4	-1,9	-1,6	-1,5	-6,2
Other factors influencing the debt ratio [1]		0,8	1,7	1,3	0,5	0,5	2,4
Of which: Privatisation receipts		0.0	0.0	0.0	0.0	0.0	0.0
p.m. implicit interest rate on debt		7.6	6.9	6.4	6.4	6.5	6.2

[1] Stock-flow adjustment

Table 4. Cyclical developments

% of GDP		2001	2002	2003	2004	2005	2010
1. GDP growth at constant prices		1.0	1.5	2.2	1.8	1.7	1.8
2. Actual balance		2.8	2.1	2.2	2.5	2.4	2.2
3. Interest payments		-1.5	-1.3	-1.1	-1.0	-0.9	-0.2
4. Potential GDP growth		1.2	1.6	2.1	2.0	2.0	1.9
5. Output gap		0.7	0.6	0.7	0.6	0.3	0.0
6. Cyclical budgetary component		0.1	0.0	0.0	0.3	0.2	0.0
-of which cyclical contributions		0.4	0.3	0.4	0.3	0.2	0.0
-contributions from special items		-0.3	-0.3	-0.4	0.0	0.0	0.0
7. Cyclically-adjusted balance (2-6)		2.7	2.1	2.2	2.2	2.2	2.2
8. Cyclically-adjusted primary balance (7-3)		4.0	3.4	3.3	3.2	3.1	2.4

Table 5. Divergence from previous update

% of GDP		2001	2002	2003	2004	2005	2010
GDP growth							
previous update [1]		1.1	1.4	2.4	1.9	1.9	1.8
latest update [2]		1.0	1.5	2.2	1.8	1.7	1.8
Difference		-0.1	0.1	-0.2	-0.1	-0.2	0.0
Price Inflation (CPI)							
previous update [1]		2.3	1.6	1.9	1.6	1.6	1.7
latest update [2]		2.4	2.3	1.8	1.6	1.6	1.7
Difference		0.0	0.7	-0.1	0.0	0.0	0.0
Actual budget balance							
previous update [1]		1.9	1.9	2.1	2.1	2.1	2.1
latest update [2]		2.8	2.1	2.2	2.5	2.4	2.2
Difference		0.9	0.3	0.1	0.5	0.2	0.1
Gross debt levels							
previous update [1]		43.5	42.9	40.1	37.6	35.1	24.4
latest update [2]		44.7	43.9	42.1	39.2	36.7	26.0
Difference		1.2	1.1	2.0	1.6	1.6	1.6
Tax burden							
previous update [1]		48.0	47.9	47.6	47.4	47.1	46.3
latest update [2]		49.0	48.2	47.7	48.0	47.6	46.8
Difference		1.0	0.4	0.1	0.6	0.5	0.5

[1] CP, January 2002
[2] CP, November 2002

Table 6. Long-term sustainability of public finances [1]

% of GDP	2002	2005	2010	2020	2030	2040	2070
Total expenditure	48.8	0.0	0.1	1.5	4.2	5.3	5.7
Old age pensions	4.3	0.4	0.9	1.8	2.7	2.9	2.8
Health care (including care for the elderly)	7.5	-0.1	-0.2	0.3	1.3	1.8	1.7
Interest payments							
Total revenues	54.3	-0.2	-0.7	0.0	1.2	1.9	2.1
Of which: from pensions contributions	-	-0.1	0.2	0.9	1.6	2.3	2.6
National pension fund assets [2]	113	119	137	170	196	206	213
Assumptions [3]							
Nominal GDP per person employed	4.2	3.9	3.9	3.9	3.9	3.9	3.9
Nominal GDP	3.9	4.0	4.0	3.6	3.4	3.8	3.8
Participation rate males (aged 20-64)	85.8	86.0	86.0	85.5	84.6	84.8	84.0
Participation rates females (aged 20-64)	75.6	75.7	76.0	75.1	73.6	74.1	73.2
Total participation rates (aged 20-64)	80.7	80.9	81.0	80.3	79.1	79.5	78.6
Unemployment rate	4.9	4.9	4.5	4.5	4.5	4.5	4.5

[1] Level for 2002, and per cent changes compared to 2002 thereafter
[2] Total Pension asset including private and supplementary pension funds. (per cent of GDP)
[3] per cent

Annex 3: The quantitative assessment of the sustainability of public finances
This is the second assessment of the sustainability of Denmark's public finances as part of the Stability and Growth Pact. The quantitative indicators are similar to those used last year, but have been adjusted in line with the recommendations of the Ageing Working Group to the EPC.[17]

The Danish convergence programme contains national budgetary projections for public expenditures and revenues up to 2070, The data inputs and assumptions used to make the projections (e.g. demographic developments, labour force assumptions, etc…) differ from those used by the EPC. Moreover, the Danish projections also include certain expenditure items where projections were not made by the EPC, and also cover tax revenues. Notwithstanding the different approaches, the projected changes in age-related spending is of a similar magnitude in both exercises.

In assessing the sustainability of public finances under the SGP, the Commission has to draw a balance between using national projection which may be more comprehensive and up to date, and the need to ensure comparability across countries. The table below presents the budgetary data used by the Commission in running the sustainability indicators, and several points are worth noting.

- as they are more comprehensive and up to date, the Commission did use the budgetary projections provided by the Danish authorities for age-related public expenditures, including those age-related expenditure items not yet projected by the EPC. However, the Commission did not take on board the projected changes in non-age related public consumption items (e.g. administration, defence, legal systems etc). To ensure comparability with the assessments of other Member States, spending on non-age related primary spending as a share of GDP was held constant at the level indicated for 2010, i.e. the last year of the convergence programme.

- in the absence of analysis of the EPC on the impact of ageing populations on tax revenues, the Commission did not use the projections for revenues included in the Danish programme. Instead, the Commission assumed that the tax ratio remains constant as a share of GDP at the level indicated in the programme for 2010. The Commission, however, acknowledges that some of the projected increase in tax revenues stems for the deferred taxes on funded pension systems. These stem from the fact that no taxes are paid on contributions to certain funded pension schemes: taxes are deferred until pension income is drawn. By failing to take these deferred taxes into account, the sustainability indicators run by the Commission present a less favourable picture of the sustainability of public finances compared with those of the Danish authorities

Quantitative indicators of the sustainability of public finances

[17] 'How the sustainability of public finances was assessed using the 2001 updates of stability and convergence programmes: recommendations for improvements in future years', Note from the AWG to the EPC, EPC/ECFIN/396-02 of 23 July 2002.

Main assumptions - baseline scenario (as % GDP)	2010	2020	2030	2040	2050	change 2000-50
Total age-related spending	22,4	24,4	26,4	26,6	26,6	4,2
Pensions	5,2	6,1	7,0	7,2	7,2	2,0
Health care	7,3	7,8	8,8	9,3	9,3	2,0
Other age related expenditures	9,9	10,5	10,6	10,1	10,1	0,2
*Total non age-related spending**	26,6					
*Total revenues**	53,6					

* constant during the projection period

Results (as % GDP)	2010	2020	2030	2040	2050	change 2000-50
Programme scenario						
Debt	26,0	-4,9	-23,5	-36,2	-50,8	-76,8
Net borrowing	2,2	2,7	1,8	2,3	3,1	0,9
2002 situation scenario						
Debt	9,5	-39,0	-79,2	-121,0	-171,5	-180,9
Net borrowing	4,4	5,5	5,8	7,9	10,6	6,3

Tax gaps	T1*	T2**	T3***
Programme scenario	-0,9	-1,3	0,1
2002 situation scenario	-2,7	-3,1	-2,0

* it expresses the constant difference between projected revenues and the revenues required to reach in 2050 the same debt to GDP ratio
close to balance position holds for the whole projection period. P.m. debt to GDP at the end of the period: 7.5

** it expresses the constant difference between projected revenues and the revenues required to reach in 2050 a debt to GDP ratio equals

***It indicates the change in tax revenues as a share of GDP that guarantees the respect of the interteporal budget constraint of the goverr
i.e., that equates the actualized flow of revenues and expenses over an infinite horizon.

Source: 2002 Update of Danish Stability programme, Commission calculations

The table below presents the gross debt and budget balance development according to two different scenarios, a “programme scenario” and a “2002 situation scenario”. The ”programme scenario” is calculated on the following basis:

- the projections for age-related expenditures come from the stability programme;
- government revenues are held constant at the ratio projected for 2010;
- the starting point for gross debt and the primary surplus are the 2010 levels reported in the programme.

The “2002 situation scenario” is based on the budgetary data for 2002 in the programme. It is assumed that no budgetary adjustment occurs during the time frame of the convergence programme: in other words the primary balance remains unchanged at its 2002 level until 2006. This allows one to gauge the impact on the sustainability of public finances of the proposed change in the underlying budget position during the programme.

Public finances appear to be sustainable under both scenarios in that public debt disappears and the government sector accumulates net assets. A negative tax gap, indicates that there is potential scope to cut taxes or raise expenditures without jeopardising the sustainability of public finances.