
The Danish Economy 2010-12

INTRODUCTION AND SUMMARY

This article reviews Danmarks Nationalbank's forecast for the Danish economy in the years 2010-12. The forecast has been produced using the macroeconomic model MONA¹ and is based on available economic statistics, including Statistics Denmark's quarterly national accounts for the 4th quarter of 2009².

The Danish economy – like the economies of most other western countries – is picking up again after the severe downturn in 2008 and the 1st half of 2009. The downturn, which was strongest in the 2nd half of 2008, was primarily a consequence of negative impulses from the international economy and problems in the financial system. In addition, correction of the high capacity pressures and the heated housing market was already underway when the crisis set in. The gross domestic product, GDP, fell by 5.1 per cent in 2009, cf. Table 1. This is a large decline in an international perspective.

According to the most recent quarterly national accounts, the moderate output growth observed in the 3rd quarter of 2009 continued in the 4th quarter. This means that the Danish economic recession has come to an end. Growth in the 4th quarter was primarily driven by higher private consumption and less pronounced inventory reductions than in the preceding quarters. Fixed capital formation and exports as well as imports declined. The housing market remains fragile, but small price increases and slightly increasing turnover indicate a stabilisation at the current low level of interest rates following the clear weakening since 2007. The first indicators for 2010 in the form of confidence indicators for the households and the corporate sector point to further moderate growth with the construction sector as the negative exception. This reflects the strong cyclicity of the construction sector, but also an adjustment process, since construction accounted for a relatively large proportion of the economic resources towards the end of the most recent upswing.

Economic growth is expected to continue from a moderate level in 2010 to just over trend growth in 2011 and 2012. This is by and large in

¹ The model is described in MONA – a quarterly model of the Danish economy, Danmarks Nationalbank, 2003.

² The calculations are based on data covering the period up to and including 11 March 2010.

KEY ECONOMIC VARIABLES

Table 1

Real growth on previous year, per cent	2009	2010	2011	2012
GDP	-5.1	1.3	1.7	1.9
Private consumption	-4.6	1.7	2.8	3.3
Public consumption	2.2	1.3	0.8	0.8
Residential investments	-16.8	-8.5	0.6	1.8
Public investments	7.4	18.9	-10.6	-7.8
Business investments	-12.0	-8.2	3.9	3.8
Inventory investments ¹	-1.9	0.7	0.7	0.1
Exports	-10.7	-1.5	2.9	3.0
Industrial exports	-16.4	-0.8	4.9	5.0
Imports	-13.2	-2.4	5.1	4.0
Consumer prices, per cent year-on-year	1.1	2.0	1.5	1.5
Unemployment, 1,000 persons	98	152	168	154
Balance of payments, per cent of GDP	4.0	3.1	2.2	1.8
Government balance, per cent of GDP	-2.8	-5.7	-4.9	-4.4
Hourly wages, per cent year-on-year	2.9	2.3	2.5	2.7

¹ Contribution to GDP growth.

line with expectations for the euro area, cf. Chart 1, but weaker than for the US economy. At the same time, estimated GDP growth means that the large negative output gap that occurred after the decline in 2008 and 2009 will gradually be reduced up to 2012. It is still expected to be negative by that time, however. Due to considerable spare capacity in the corporate sector, unemployment will continue to rise over the next

GDP GROWTH IN DENMARK, THE EURO AREA AND THE USA

Chart 1



Note: Estimates after the broken line.

Source: Statistics Denmark, Reuters EcoWin, IMF, *World Economic Outlook*, Update, January 2010, and own forecast.

year or so despite increasing output growth. This makes up for the weak productivity development in recent years, which, together with higher wage increases than abroad, contributed to a significant weakening of competitiveness.

The current collective bargaining is thus taking place in a climate of weak export markets and competitive pressures. Indeed, preliminary negotiations point to weaker wage increases than in recent years, but it is not clear whether this will result in lower wage inflation than abroad, as warranted by competition. The rate of wage increase in 2010-12 will be significantly lower than in recent years, but with consumer price inflation below 2 per cent year-on-year, real wages are expected to rise in each of these years.

Public finances have weakened substantially as a result of the recession, from a surplus of more than 3 per cent of GDP in 2008 to a deficit of 2.8 per cent in 2009 and just over 5.5 per cent in 2010. The deterioration is mainly caused by the automatic effects on both the revenue and expenditure sides, but also by considerable fiscal easing and public investments. In view of the prospects of dampened growth and continued deterioration of the labour market, the government deficit is expected to remain large, and the public sector's debt is rising sharply.

The forecast presented is an expression of the economic scenario that is believed to be the most probable. The estimate is subject to some uncertainty. To illustrate this, Box 1 considers two alternative scenarios in which key assumptions have been changed.

The revisions of the forecast compared with the September 2009 forecast are described below, followed by a more detailed review of the forecast, including its underlying assumptions.

REVISIONS IN RELATION TO THE PREVIOUS FORECAST

Output is expected to increase by 1.3 per cent in 2010, which is slightly more than forecast in September 2009, cf. Table 2. The upward adjustment is mainly based on higher export market growth and a lower level

REVISIONS IN RELATION TO THE PREVIOUS FORECAST Table 2

	Actual	This forecast				Previous forecast		
	2009	2010	2011	2012	2009	2010	2011	
GDP, per cent year-on-year	-5.1	1.3	1.7	1.9	-3.2	0.9	1.7	
Unemployment, 1,000 persons ..	98	152	168	154	103	163	178	
Balance of payments, kr. billion	66.3	52.8	39.3	32.3	22.4	10.9	15.9	
HICP, per cent year-on-year	1.1	2.0	1.5	1.5	1.1	1.4	1.5	

Note: The previous forecast was published in September 2009.

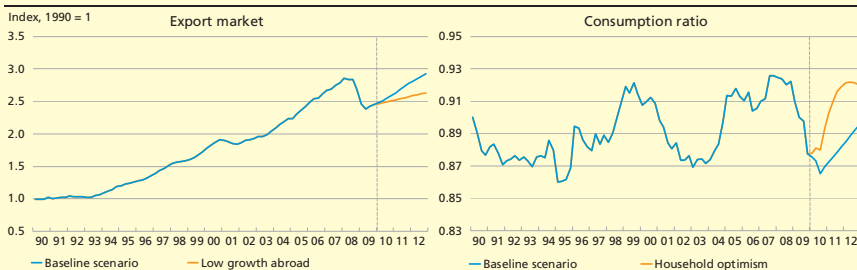
Massive economic-policy expansion has contributed to the recovery of the global economy. The underlying strength of the upswing is subject to uncertainty, however, and the expected growth abroad may turn out to be weak. One element of uncertainty is linked to the need to consolidate balance sheets in the private sector. In this context, weakened confidence in the public finances may dampen consumption and investments. Furthermore, growing concerns that, in the absence of specific consolidation plans, the budget deficits will be financed through higher inflation may lead to higher interest rates. Conversely, lower growth will contribute to postponing the normalisation of monetary-policy interest rates, which will have a dampening effect on the slightly longer-term rates. Scenario 1 considers the impact of weak international development through lower export market growth, while, in view of the above, interest and exchange rates are maintained at unchanged levels. More specifically, export market growth of 0.6 per cent per quarter as from the 1st quarter of 2010 is considered, corresponding to the average export market growth during the slowdown in 2001-03, cf. the yellow curve in Chart 2 (left).

Private consumption has fallen more in Denmark than in other countries in recent years, and the consumption ratio has dropped to a very low level. Consumption has also experienced a sharper decline than warranted by the development in income and wealth. Combined with the stabilisation of economic activity and reduced uncertainty this will enable a quick return of confidence and conversion of the increase in disposable incomes into consumption and residential investments. A second alternative scenario therefore considers the consequences of an increased propensity to consume and higher residential investments. The consumption ratio will increase throughout 2010 and 2011 to a more normal level, cf. Chart 2 (right), pushing up residential investments to reflect the usual link to real cash prices more rapidly.

The weaker export market development in scenario 1 means that the expected export growth is largely eliminated – in 2012, exports in volume terms will be at more or less the same level as in the 4th quarter of 2009. This will dampen domestic output, and GDP growth will be reduced to around 1 per cent in each of the years from 2010 to 2012, cf. Table 3. The clearly weaker development in production will lead to further job losses in the private sector, and unemployment will rise to almost 200,000 persons in 2012 against 154,000 in the baseline projection. As a consequence, wage inflation, and, towards the end of the forecast period, also price inflation will be lower than in the baseline scenario. Finally, the current-account surplus will be reduced as a result of weaker exports.

ASSUMPTIONS OF ALTERNATIVE SCENARIOS

Chart 2



CONTINUED

Box 1

In addition to accelerating the return of the consumption ratio and residential investments to more normal levels in scenario 2, the households' growing optimism causes GDP growth of around 2.5 per cent this year and next year and 1.3 per cent in 2012. Employment rises with the surging output rates, and unemployment is close to its structural level towards the end of the forecast period. At the same time imports increase, reducing the current-account surplus to around kr. 10 billion in 2012. The lower unemployment rate gradually leads to higher wage inflation than in the baseline scenario, while price inflation is modest over the forecast horizon.

ALTERNATIVE SCENARIOS

Table 3

	Baseline scenario	1: Low growth abroad	2: Household optimism
<i>2010</i>			
GDP, per cent year-on-year	1.3	1.1	2.5
Unemployment, 1,000 persons	152	155	142
Balance of payments, kr. billion ...	53	50	37
HICP, per cent year-on-year	2.0	2.0	2.0
<i>2011</i>			
GDP, per cent year-on-year	1.7	0.9	2.3
Unemployment, 1,000 persons	168	184	141
Balance of payments, kr. billion ...	39	30	10
HICP, per cent year-on-year	1.5	1.5	1.6
<i>2012</i>			
GDP, per cent year-on-year	1.9	0.9	1.3
Unemployment, 1,000 persons	154	196	127
Balance of payments, kr. billion ...	32	16	10
HICP, per cent year-on-year	1.5	1.4	1.7

of interest rates in this forecast. Stronger output development leads to a lower estimate for unemployment in the coming years.

The weak development in demand, including inventory investments in particular, has led to an unexpectedly strong decline in imports. According to the balance-of-payments statistics, net investment income from abroad rose from just over kr. 30 billion in 2008 to just over kr. 50 billion in 2009. This significant rise was not predicted in the forecast from September 2009, in which net investment income for 2009 was estimated at kr. 31 billion. Overall, this means that the current-account surplus has been adjusted substantially upwards compared with the previous forecast.

The higher consumer price inflation in 2010 in this forecast reflects rising oil prices and a stronger-than-expected effect from increases in indirect taxes on energy, tobacco and unhealthy food.

ASSUMPTIONS IN THE PROJECTION

This projection is based on a number of assumptions concerning the international economy, financial conditions and fiscal policy.

The international economy

The global economic recession is over, and the major economies are showing positive growth rates again. The turnaround is somewhat stronger than anticipated in the September forecast, and the assessment of Danish export market growth has therefore been adjusted upwards. The market for Danish exports is thus expected to grow by 4.3 per cent in 2010 and slightly more in the next two years, cf. Table 4.

Despite the slightly brighter global economic prospects, global price pressures have declined further since the autumn. As a result, import prices for the countries to which Denmark exports and export prices for the countries from which Denmark imports are a little lower than in the previous forecast. Foreign wage increases are also expected to remain low over the projection period on account of the weak international economy.

Interest rates, exchange rates and oil prices

In the forecast, the development in short-term and long-term interest rates is based on the expectations of future developments that can be derived from the yield curves in the financial markets. The short-term

OVERVIEW OF FORECAST ASSUMPTIONS	Table 4			
	2009	2010	2011	2012
International economy:				
Export market growth, per cent year-on year	-13.3	4.3	6.6	6.0
Export market price ¹ , per cent year-on-year	0.0	-1.3	1.4	1.8
Foreign price ² , per cent year-on-year	-0.1	-1.4	1.4	1.9
Foreign hourly wages, per cent year-on-year	1.6	1.3	1.5	1.9
Financial conditions, etc.:				
3-month money-market interest rate, per cent p.a.	1.7	0.9	1.6	2.0
Average bond yield, per cent p.a.	3.8	3.4	4.1	4.8
Effective krone rate, 1980 = 100	107.8	105.7	105.5	105.5
Dollar exchange rate, DKK per USD	5.4	5.4	5.5	5.5
Oil price, Brent, USD per barrel	62.6	80.2	84.7	86.5
Fiscal policy:				
Public consumption, per cent year-on-year	2.2	1.3	0.8	0.8
Public investment, per cent year-on-year	7.4	18.9	-10.6	-7.8
Public-sector employment, 1,000 persons	827	830	833	835

¹ Weighted import price for all countries to which Denmark exports.

² Weighted export price for all countries from which Denmark imports.

interest rate has been declining since the autumn of 2008, and in March the 3-month money-market rate was approximately 0.8 per cent p.a. Looking ahead, the market expects the short-term interest rate to rise to just over 2 per cent p.a. in 2012. Long-term interest rates have also been declining since the autumn of 2008. At the beginning of March the average bond yield was 3.1 per cent p.a., and the forecast assumes a rise to almost 5 per cent p.a. in 2012.

Compared with the September forecast, the nominal effective exchange rate of the krone has fallen by 3 per cent. This trend reflects a weakening of the euro – and thus the krone – vis-à-vis a number of currencies, including the dollar and the Swedish krona. Most recently, it has strengthened vis-à-vis the pound sterling, however. In a longer-term perspective, the krone remains strong. In the projection, the dollar rate and the effective krone rate are assumed to be unchanged from the level at the beginning of March 2010.

The price of oil fell substantially from a level of around 135 dollars per barrel in mid-2008 to just over 40 dollars in early 2009. Since then it has almost doubled to nearly 80 dollars per barrel at the time of the forecast. In the projection, oil prices are assumed to mirror futures prices and rise a little from the current level.

Fiscal assumptions

The fiscal assumptions in the forecast reflect the fiscal-policy stance as presented in Spring Package 2.0, agreed local government budgets for 2010, the 2010 Finance Act and Denmark's Convergence Programme 2009. Growth in real public consumption is expected to be 1.3 per cent in 2010 and 0.8 per cent in both 2011 and 2012. Growth in public investments is expected to be significant in 2010, due to factors such as the decision to bring forward fixed local-government investments and the political agreement on transport investments. Public-sector investments will fall back in 2011-12 and approach the pre-2009 level. Growth in public consumption is higher than planned in Denmark's Convergence Programme, reflecting the normal tendency to exceed the target.

FORECAST FOR THE DANISH ECONOMY 2010-12

Output and employment

Output grew by a total of 0.5 per cent in the 3rd and 4th quarters following the strong downturn in 2008 and in the 1st half of 2009. For 2009 as a whole, GDP fell by 5.1 per cent. In the forecast period, output is expected to gradually increase to just over trend growth in 2011 and

2012. Due to the moderate growth rate, output will not reach its pre-crisis level until the end of 2012. In the forecast, the substantial negative output gap that arose in 2008 and 2009 thus narrows, but it will remain negative even in 2012. There will be idle production resources for some time to come.

Employment continues to fall, even though output has increased. For 2009 as a whole, employment is estimated to have been reduced by approximately 100,000 persons, and about half of the strong increase in employment that occurred during the most recent upswing has been lost. The drop in employment exceeded the increase in unemployment of 47,000, reducing the labour force by around 50,000 persons. The forecast operates with a fall in employment up to the 2nd half of 2011, while the labour force declines slightly from its present level, cf. Table 5.

In January 2010, seasonally adjusted unemployment was 4.2 per cent of the labour force, equivalent to 118,000 persons. This is a significant increase since the summer of 2008 when unemployment bottomed out at a level of around 45,000 persons or 1.6 per cent of the labour force. In the forecast, unemployment increases at a diminishing rate up to the beginning of 2011, to a level of around 170,000 persons. The unemployment turnaround is not expected until the summer of 2011.

Following a period of exceptionally weak development since 2006, productivity is estimated to have grown in the 2nd half of 2009. Weakening of productivity in connection with an economic turnaround is not uncommon, but it is unusual that the decline is so severe and that it lasts three years. In the forecast, productivity increases substantially in 2010 in response to the strong decline in the previous period, cf. Table 6. The massive spare capacity in the economy supports productivity development since it will be possible to expand production in the next few years without increasing employment correspondingly.

Wages and prices

Wage inflation in the private labour market declined throughout 2009. In the forecast, the moderate wage increases continue as unemployment grows further. For 2010 as a whole, hourly wages in industry are expect-

THE LABOUR MARKET				Table 5
1,000 persons, annual averages	2009	2010	2011	2012
Total employment	2,808	2,734	2,709	2,713
Of which private sector	1,981	1,904	1,876	1,878
Unemployment	98	152	168	154
Labour force	2,907	2,886	2,877	2,867

WAGES, ETC. IN NON-AGRICULTURAL SECTORS				Table 6
Per cent, year-on-year	2009	2010	2011	2012
Hourly wages	2.9	2.3	2.5	2.7
Hourly wage costs	2.8	2.0	2.4	2.7
Hourly productivity	-1.6	6.3	3.9	2.3
Wage share, per cent of gross value added ...	72.9	71.3	69.6	68.7

ed to rise by 2.3 per cent, cf. Table 6, while the rates of increase will be slightly higher in 2011 and 2012.

Despite receding, wage inflation in Denmark is still on the high side compared with Denmark's trading partners, whose wage increases have also declined due to the global downturn. This development continues in the projection.

Hourly wage costs are projected to mirror the development in wages in the absence of significant changes in other labour costs. The expected productivity growth leads to falling unit labour costs after significant increases in the previous period. This trend results in a declining wage share, but in a longer-term perspective a wage share of almost 70 per cent, which is expected for 2012, is still relatively high.

In February 2010 consumer price inflation was 1.8 per cent measured as annual HICP inflation. The pronounced rise in inflation since the turn of the year is primarily attributable to indirect tax increases under Spring Package 2.0, but also to rising energy prices, reflecting the development in commodity prices. The indirect tax increases and the energy prices are expected to push up inflation throughout 2010, so that consumer prices will rise by 2.0 per cent compared with 2009, cf. Table 7. Inflation will

CONSUMER PRICES						Table 7					
Per cent, year-on-year	Weight ¹	2009	2010	2011	2012	2009/10					
						Q4	Q1	Q2	Feb.	Mar.	Apr.
HICP		1.1	2.0	1.5	1.5	0.9	1.8	2.1	1.8	1.8	2.2
Index of net retail prices	100.0	2.1	1.9	1.6	1.5	2.0	1.9	2.1	1.7	1.7	2.2
Exogenous:											
Energy	7.1	-6.4	17.8	11.3	6.3	0.9	12.6	17.9	10.5	13.5	17.1
Food	13.1	0.6	-1.5	0.0	0.3	-1.7	-2.5	-1.6	-2.3	-2.4	-1.7
Adm. prices ...	4.2	4.8	2.6	1.8	2.4	4.9	3.6	3.0	4.7	1.8	3.2
Rent	23.6	4.5	2.3	1.8	1.5	4.6	3.2	2.4	2.5	2.6	2.4
Excl. exogenous	52.0	2.4	0.4	0.2	0.7	1.7	0.9	0.6	0.9	0.6	0.9
Imports	15.6	-3.5	-1.5	0.8	2.5	-5.1	-2.7	-1.8	-2.6	-2.2	-2.0
IMI	36.4	5.1	1.1	0.0	0.0	4.9	2.3	1.6	2.4	1.8	2.0

Note: The most recent actual data cover February 2010.

¹ Weight in the index of net retail prices, per cent.

then subside, primarily because only modest indirect tax increases are expected in 2011.

Domestic market-determined inflation, IMI, was high in 2009, largely because business enterprises have only allowed the falling import prices to be reflected in consumer prices with a certain lag. IMI has fallen back in step with the stabilisation of import prices. The high IMI also reflects the significant rise in unit labour costs as a result of the weak productivity development. Looking ahead, a continued fall in IMI is expected since the weak wage development and dampened demand have resulted in spare capacity. The weak capacity pressures also contribute to keeping food prices down.

Domestic demand

Private consumption grew by around 0.5 per cent in both the 3rd and 4th quarters of 2009 after substantial drops in the preceding four quarters. Consumption growth is expected to continue in 2010 in the light of significant increases in disposable incomes. At the same time, household wealth has stabilised and consumer confidence has improved. Expectations of higher unemployment will curb consumption growth in 2010, however, and the consumption ratio will not increase until 2011 and 2012, cf. Table 8.

There are indications that the housing market is slowly picking up, and the prices of single-family and terraced houses rose by 0.4 per cent in the 4th quarter of 2009. Turnover increased, but from a very low level, and the number of houses for sale remains high. In view of this and the low level of interest rates, the modest improvements in the housing market are expected to continue in the coming years.

Residential investments declined substantially in 2009. In the coming quarters they are expected to decline further given the ample supply of houses for sale, but subsequently residential construction will gradually increase in step with the slightly higher real cash prices in the projection.

Business investments in machinery, transport equipment and software fell sharply in 2009, and non-residential construction also declined sub-

INCOME, WEALTH AND CONSUMPTION	Table 8			
	2009	2010	2011	2012
Cash prices, per cent year-on-year	-14.1	0.6	1.8	1.8
Real disposable income, private sector, per cent year-on-year	0.4	2.6	1.4	1.8
Consumption ratio, per cent of private sector disposable income	87.8	87.0	88.2	89.5
Net lending, private sector, kr. billion	112.6	150.1	125.1	112.8

stantially. With the business enterprises' considerable spare capacity and weak prospects for output development, investments are expected to decline further in the 1st half of 2010. Business investments will then gradually pick up, but the investment ratio will remain at the current low level. In the projection, the considerable inventory reductions seen in 2009 will cease as demand begins to pick up.

Total domestic demand, excluding inventories, fell by 0.1 per cent in the 4th quarter of 2009. Rising private consumption and increased public demand will boost domestic demand this year, while lower private investments will have the opposite effect. Private investments are also expected to grow in 2011 and 2012, thereby increasing growth in demand despite the reduction of public investments from the high level during the downturn.

Foreign trade and the balance of payments

Danish exports stabilised in the 2nd half of 2009 as global economic activity and world trade slowly picked up. However, due to the substantial drop in exports from the autumn of 2008 to the middle of 2009, exports fell by 10.7 per cent overall from 2008 to 2009. The global economic turnaround is most pronounced in the emerging and developing economies, while the upswing is more fragile in most of the countries to which Denmark exports. Consequently, the projection does not show an increase in exports until later in 2010, as growth in the global economy becomes more broad-based, cf. Table 9.

In 2009, exports of goods, including industrial exports in particular, declined. Industrial exports in volume terms have fallen by more than 20 per cent since the 2nd quarter of 2008 due to the weaker development in foreign demand and deteriorating competitiveness. Industrial exports are projected to pick up again, but the loss of market shares is expected to continue. Oil and gas production in the North Sea has decreased in recent years, and fuel exports are projected to decline.

EXPORTS AND IMPORTS				Table 9
Per cent, year-on-year	2009	2010	2011	2012
Real exports	-10.7	-1.5	2.9	3.0
Real imports	-13.2	-2.4	5.1	4.0
Export prices	-8.1	2.4	1.6	1.0
Import prices	-7.9	3.6	1.3	1.0
Terms of trade	-0.2	-1.1	0.2	0.1
Import ratio, non-energy goods, standard calculation, 2000 = 100	104.4	101.5	106.3	109.1

Exports of services in real terms declined significantly in early 2009. The decline should be viewed against the considerable slowdown in world trade since the autumn of 2008. However, the value of services exports declined even further, reflecting in particular the drop in freight rates as a result of the sharp decline in world trade and excess capacity in the global merchant fleet. The forecast operates with a slight increase in services exports as world trade picks up. The modest increase should be seen in the light of the prospects of further growth in the global merchant fleet in the coming years.

Imports in volume terms fell in the autumn of 2008 as a consequence of reduced domestic capacity pressures and weakening of exports, which have a large import content. The decline continued in 2009, but at a slower rate towards the end of the year. Overall, imports fell by 13.2 per cent in 2009.

Since mid-2008, imports have declined more than demand, causing the import ratio to fall considerably again in 2009. Like exports, imports are not expected to increase until sometime during 2010, reflecting expectations of growing exports and the slow increase in domestic demand. Imports are estimated to increase relatively more than demand, causing the import ratio to rise over the entire projection period. One underlying factor is that the substantial inventory reductions seen in recent years are not expected to continue in the forecast.

According to the available national accounts, export prices fell a little more than import prices in 2009, implying a slight deterioration of the terms of trade. In the projection, further weakening of the terms of trade is expected in 2010, followed by stabilisation in the subsequent years.

The current-account surplus totalled just over kr. 65 billion in 2009, which is almost kr. 30 billion more than in 2008. The improvement reflects a higher net surplus on trade in goods and investment income, while the net profit on trade in services, including sea freight, has declined. The projection operates with a reduction of the current-account surplus as the Danish economy improves and the surplus on trade in goods gradually declines, cf. Table 10. At the same time net investment income falls back from the very high level in 2009.

BALANCE OF PAYMENTS				Table 10
Kr. billion	2009	2010	2011	2012
Trade in goods	27.1	27.4	12.0	4.4
Trade in services	30.1	28.4	31.9	33.4
Interest, transfers, etc.	9.1	-2.9	-4.6	-5.4
Current account, total	66.3	52.8	39.3	32.3