Chapter 1

Denmark: the crisis and beyond

The Danish economy has been hit by the global economic crisis and is going through a deep and protracted recession. Fortunately, strong policy frameworks mean that Denmark is well placed to steer through the worst downturn in forty years. The fiscal position is comparatively strong and sizeable fiscal stimulus is already working its way through, supplementing strong automatic stabilisers. Labour market policies, including a strong focus on activation of the unemployed, should help employment recover quickly as the economy starts to grow again. However, the depth of the recession is likely to have medium-term consequences for the Danish economy via higher structural unemployment, reduced capital accumulation and possibly lower innovative activity. This chapter first briefly situates Denmark's longer-run economic performance. It then reviews developments in financial markets and their implications for the real economy. Next, it turns to the likely consequences of the recession on medium-term growth and points to the financial, fiscal and labour market policies required to overcome the recession and minimise its adverse long-term consequences.

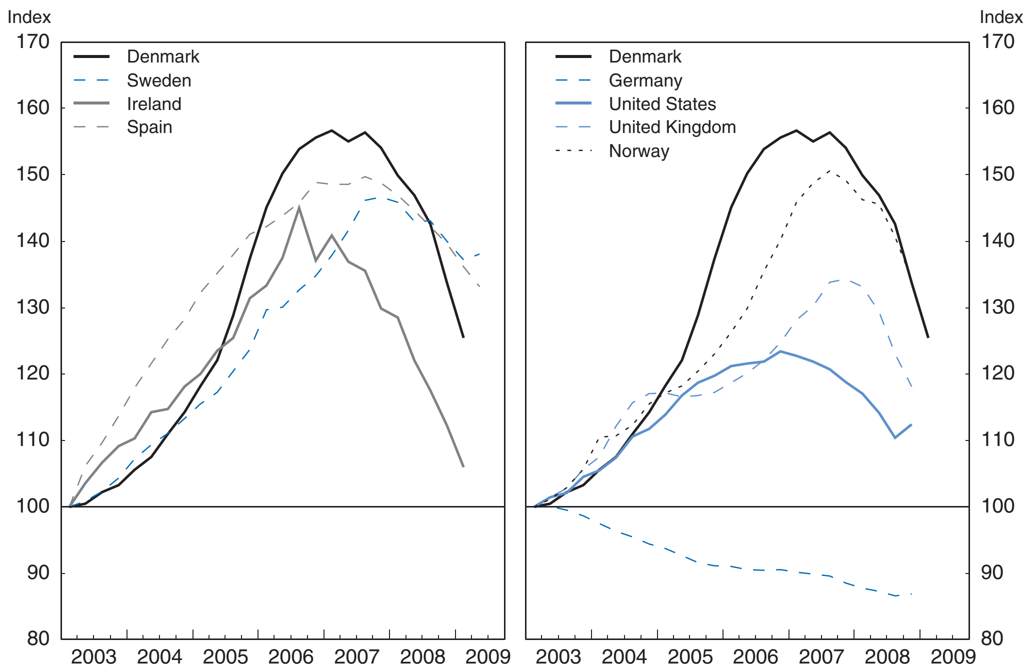
Denmark is currently going through its worst recession since the 1960s. The economy started to slow in 2007, in a context of labour shortages, tighter monetary conditions and rising energy prices, In 2008, it was hit hard by the global financial and economic crisis. At the same time, it has been witnessing the unwinding of a major housing price boom. Its strong policy frameworks, however, should help Denmark face these challenges.

From a long-term perspective, the Danish economy has been doing fairly well, with high income per capita, a relatively even income distribution, high labour market participation, a flexible workforce and a strong social safety net ("flexicurity"). A gradualist, consensus and stability-oriented approach to reform has contributed to Denmark's prosperity. A strong fiscal framework has been developed to help steer public finances as the population ages. Partly to ensure fiscal sustainability, much effort has been directed to raising labour supply and reducing structural unemployment. However, productivity growth, which is key for long-term living standards has trended down, despite favourable policy settings.

From a shorter-term perspective, Denmark faces difficulties, even if the global crisis is proving less painful than in many other OECD countries. GDP growth was strong between 2004 and 2007, partly driven by a major property boom (Figure 1.1). Unemployment

Figure 1.1. **Real house prices in selected OECD countries**

2003Q1=100



Source: OECD, *Economic Outlook 85 Database* and various national sources, see Table A.1 in Girouard, N., M. Kennedy, P. van den Noord and C. André (2006), "Recent house price developments: the role of fundamentals", OECD Economics Department Working Papers, No. 475.

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had fallen well below the structural level, resulting in significant labour shortages and policy efforts to raise labour supply in the short run. Capacity constraints, higher interest rates, eroding confidence along with a weakening stock market and the unwinding of the property boom led to a slowdown in the economy already during 2007 and GDP shrank in 2008, especially following the intensification of the financial crisis in the latter part of the year. GDP continued to contract in the first part of 2009 and the projected recovery next year is a gradual one.

The severity of the current recession may have adverse implications for growth over the coming years. It could push up structural unemployment for several years, making it more difficult to achieve the employment goals underpinning the Government's fiscal policy targets. Furthermore, higher risk premia and lower appetite for risk than before the crisis may imply less capital-deepening and hence hold back productivity growth. This calls for pushing ahead with labour market reforms and for a renewed focus on productivity, via structural policies and additional emphasis on education.

After situating the Danish economic performance in an international context, this chapter reviews developments in the Danish financial sector and their consequences for the macroeconomic outlook. It then considers the potential medium-term repercussions of the current recession. Finally, it assesses the financial, fiscal and labour market policies needed to overcome the recession and minimise its longer-term deleterious consequences.

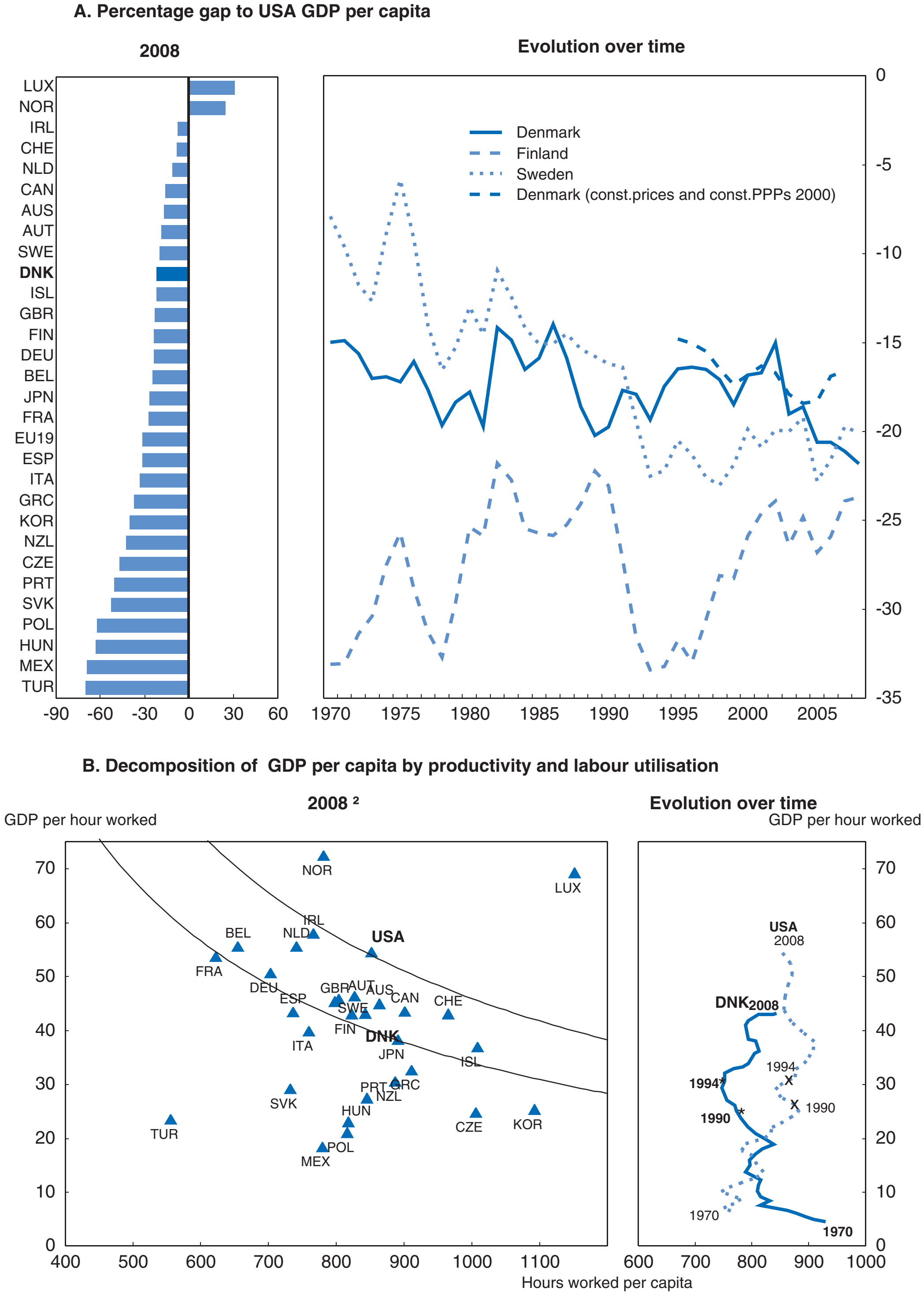
The Danish economy in international context

Denmark's position in the top third of OECD countries in terms of GDP per capita is based on a relatively long period of combining open markets, incentives for economic participation and a strong social safety net. However, the income gap to the leading countries has widened since the mid-1990s. Labour utilisation has increased substantially, through a higher employment rate and, to a lesser extent, higher average hours worked. However, this has been more than offset by a slowdown in labour productivity growth. GDP per hour worked grew on average by 2.4% per year between 1981 and 1992, but slowed to 1.6% per year between 1993 and 2005. Hence, the income gap is now mainly due to the gap in labour productivity (Figure 1.2). Chapter 2 examines in detail the possible reasons for the labour productivity slowdown.

At the same time, Denmark has recorded a modest trend increase in its terms of trade, which has boosted the international purchasing power of domestic income and so held up GDP per capita measured at current prices and purchasing power parities. This contrasts with some of Denmark's Nordic neighbours, particularly Sweden, where high ICT production intensity has led to declining terms of trade, muting the purchasing power gains stemming from strong productivity growth.

A key element of the Danish model is the focus on equity – both intra and inter-generationally. Income inequality measured by the Gini coefficient, after taking into account taxes and transfers, is the lowest in the OECD. The Gini coefficient before taxes and transfers is the fifth-lowest in the OECD, likely reflecting a relatively narrow earnings distribution and high labour force participation. The inter-generational earnings elasticity, which measures the degree to which people's income is influenced by the income of their parents, is also the lowest of OECD countries for which data is available. The extent to which the likelihood of a young person achieving a certain level of education is influenced by their parents' education level is also low. Putting these together, in Denmark there is a

Figure 1.2. **GDP per capita and decomposition**[1]



1. GDP is measured at current prices purchasing power parities. Productivity is GDP per hour worked. Labour utilisation is hours worked per capita.
2. The lines running through Denmark and the United States show the different combinations of GDP per hour worked and hours worked per capita that produce the same level of GDP per capita.

Source: OECD, *Productivity Database* and OECD Secretariat estimates.

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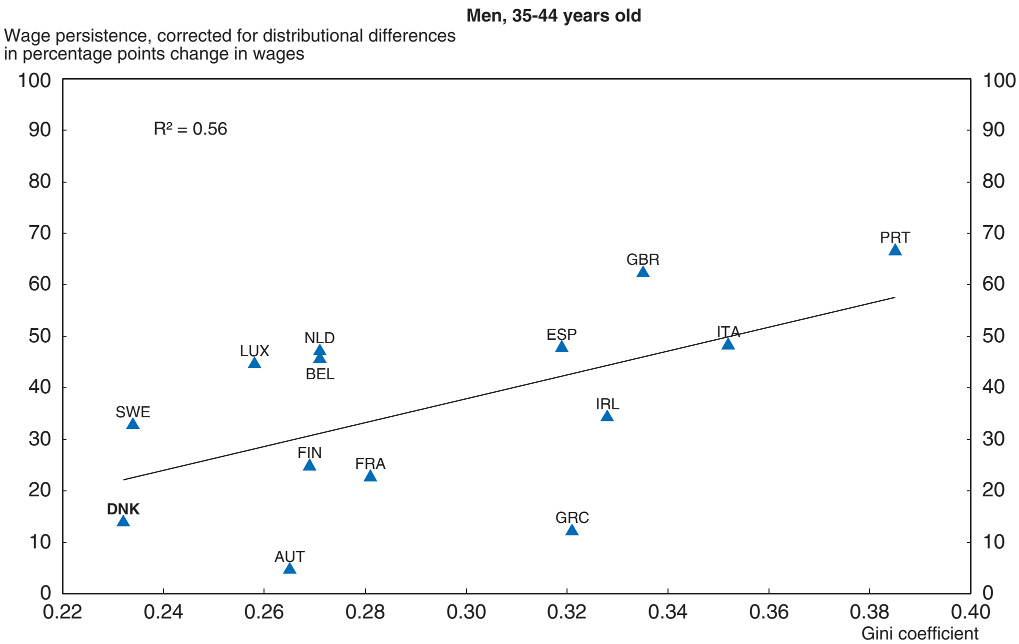
relatively low association between the wages children will earn as adults and their parents' education level, referred to as intergenerational wage persistence in Figure 1.3. Low intergenerational wage persistence is also correlated with low society-wide income inequality (Figure 1.3). Recent OECD research points to the important role of educational access and attainment in achieving a high degree of inter-generational social mobility (Causa and Johansson, 2009). Chapter 3 discusses in detail the role of the education system in developing the stock of human capital, which will be important for raising productivity growth in the years ahead.

Figure 1.3. **Correlation between inequality and inter-generational wage persistence**[1]



1. Persistence in wages measures the percentage increase in wages of an offspring having a father with tertiary education relative to an offspring having a father with below upper-secondary education. A larger number implies stronger persistence in wages or a higher degree of immobility across generations. Inequality is measured by the Gini coefficient of disposable. household income adjusted for household size.

Source: Causa and Johansson (2009).

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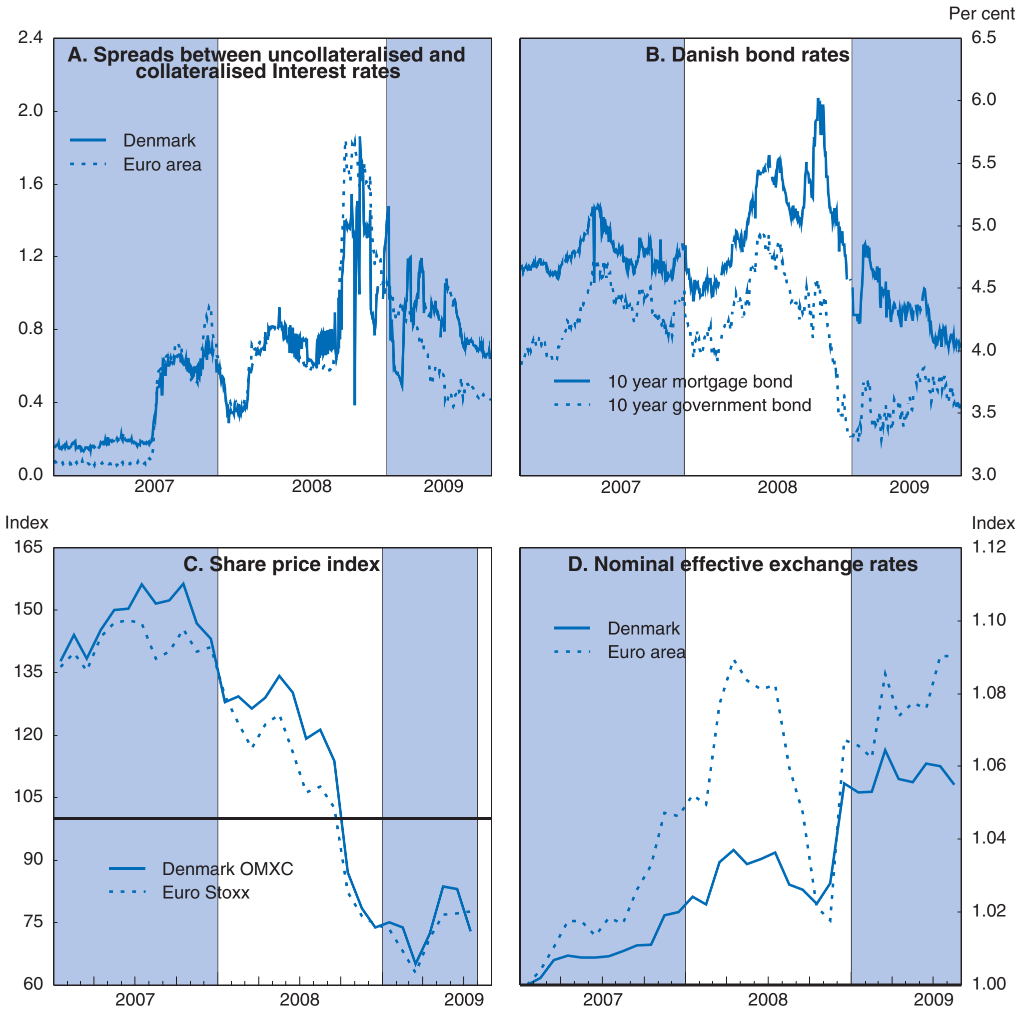
The financial crisis and the macroeconomic outlook

As late as the second half of 2008, concerns about overheating remained prominent in Denmark, given the extremely low rate of unemployment and the acceleration in wages. In fact, economic growth had already slowed down very significantly since early 2007 and the financial sector had been showing strains since early 2008. Financial conditions deteriorated progressively during 2008 and the intensification of the global financial crisis in September 2008 was echoed in Denmark. Moreover, to a greater degree than in a number of other OECD countries, the financial crisis coincided with the unwinding of a major property boom.

Financial stress

Danish financial markets have been as badly affected by the global financial crisis as those in the euro area. Spreads between collateralised and uncollateralised three-month money market rates rose as much as in the euro area, and have since come down less than might have been expected (Figure 1.4). Financial institutions that normally funded their activities by borrowing for two-to-three months have found it difficult to obtain financing for longer than a week. Cross-border money market transactions dropped, as Danish banks found it more difficult to fund themselves offshore (Ejerskov, 2009). As in many countries, the decline in money market transactions has largely been taken up by increased transactions with the central bank. Mortgage bond yields have not risen as much as in many other countries, mainly because the mortgage bond market is structurally very different from those in most other countries (Box 1.1). The spread between mortgage and government bond rates has only risen to about the same extent as it did in the early 1990s,

Figure 1.4. **Interest rate spreads, equity prices and nominal effective exchange rates**



Source: Danmarks Nationalbank, Datastream, and *OECD Analytical Database*.

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Box 1.1. **The Danish mortgage bond market**

The Danish mortgage bond market has received some international attention in the light of the US subprime crisis.* Not once in its over-200-year history has there been a default by a Danish mortgage bank. Traditionally, mortgage credit institutions (MCIs) were the only financial institutions allowed to grant loans against mortgage on real property by issuing mortgage bonds (RDOs). MCIs are allowed to originate and service mortgage loans, funded through the issuance of mortgage bonds. They are not allowed to fund their activities with deposits or issue guarantees, although they can develop banking and insurance activities through subsidiaries. New legislation in 2007 created a two-tiered bond market where RDOs would exist alongside the new covered mortgage-credit bonds – *særligt dækkede realkreditobligationer* or SDROs – which fulfil the old and new rules and new covered bonds – *særligt dækkede obligationer* or SDOs – which can be issued by both the mortgage banks and commercial banks. Almost 50% of the outstanding mortgage bonds are owned by Danish credit institutions, around 27% are held by insurance companies and pension funds, and around 13% are held abroad.

Fixed-rate callable annuity loans with a maturity of up to 30 years are the dominant mortgage loan type, but adjustable-rate loans are now very widespread. The latter also have a maturity of up to 30 years, with an interest rate that is reset periodically (often yearly). They are financed with bonds of maturities of one to 11 years, with the interest rate on the loan linked to the market rate on the refinancing. Interest-only loans (up to 10 years) were introduced in 2003 and loans with interest rate guarantees in 2004. The share of loans with an interest rate fixation period of less than one year has grown substantially in recent years. In order to comply with the "balance" principle, the vast majority of mortgage loans are funded by the issuance of mortgage bonds of equal size and identical cash flow and maturity characteristics. The proceeds from the sale of the bonds are passed on to the borrower and interest and principle payments are passed on directly to the investor holding the mortgage bonds. Hence, borrowers' financing conditions are directly linked to the capital markets. Mortgage institutions are paid for their services by the borrower.

Maximum loan-to-value (LTV) ratios apply at the time the loan is issued, varying with the type of property. For owner-occupied homes, rental properties, co-operative homes and housing projects, mortgage loans can represent up to 80% of the value of the property. Maximum LTV ratios are 70% for agricultural properties, 60% for commercial real estate (with a possibility to go up to 70 % if additional collateral is posted) and 40% for unbuilt sites (mortgage loans are frequently used by small and medium sized enterprises in the corporate sector). MCIs are required by law to base the mortgage on the market value of the property and take into account the risk of changes in market or structural conditions.

The prevailing market practice is that the borrower has the right to pre-pay or buy back his loan at any given time, at par or at the prevailing market price. Callable loans may be pre-paid at par before maturity. Adjustable-rate loans can only be redeemed at par at the time of adjustment. In a high-interest-rate environment, buying back the loan (below par) and refinancing into another loan closer to par allows for capital gains in return for accepting larger coupon payments. When interest rates are falling, mortgagees have an incentive to buy back the loan at face value (less than market value) and take on a lower interest rate.

Box 1.1. **The Danish mortgage bond market** *(cont.)*

MCIs are exposed to the risk that the borrower defaults and the risk that the value of the property will not match the outstanding amount of the loan (credit risk). That is, while they act as a conduit between the borrower and the lender, they effectively guarantee the lender's asset. There is usually considerable scope for the mortgage lender to adjust payment schedules to avoid default. However, when default occurs, a bank or MCI can request that a debtor's property be sold by order of the courts. The property is then sold at a public auction. In case the highest bid does not cover the value of the debt, the bank can assert a claim of the remaining debt against the debtor. This payment system discourages borrowers from defaulting on their loans, as they remain liable for the payment of their loan if they default. It typically takes no more than six months between a borrower's default on a loan and the forced sale.

The model offers a number of benefits. On top of strict LTV and market valuation requirements, the fact that the credit risk remains with the MCI creates incentives for the lenders to ensure that the quality of the underlying credit is good. The balance principle substantially limits funding mismatches, such as financing long-term mortgage loans with short-term debt instruments. Almost direct pass-through of market conditions keeps transaction costs low for consumers. Callability of the loans means that there is likely to be demand from mortgagees to buy mortgage bonds when prices fall, reducing the risk of negative equity by refinancing into a loan closer to the property value. This might also have added liquidity to the mortgage bond market when it sold off due to the international market reaction against mortgage bonds. Borrowers are discouraged from defaulting since they remain personally liable for any outstanding debt also after the property is sold.

However, a number of recent changes and trends may have increased the risks associated with the framework. The trend towards deferred-amortisation loans increases the credit risk faced by the MCIs, since mortgagees have less scope to adjust their repayment schedules if their financial position worsens. New loan types, and the associated changes in bond issuance, may lead to reduced liquidity in each bond line, affecting investors' appetites for mortgage bonds. The more different types of loans available the less liquid particular bonds could become, making managing prepayment risk more complex. Also, with the new SDOs and SDROs, if the value of the collateral underlying the mortgage falls and the LTV ratio rises above the statutory limit, additional collateral must be added to the cover pool. This raises demands on MCIs to find new funding at a time when the broader economy is weak and it might be more difficult to raise funds.

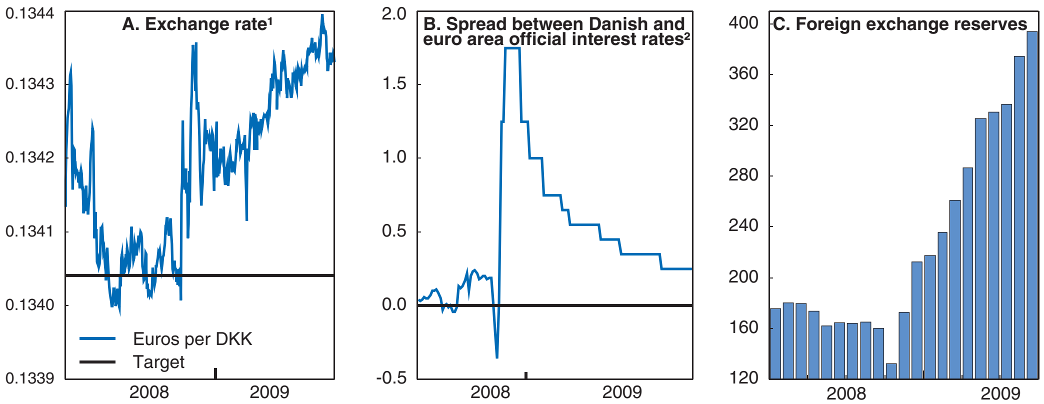
* For example, see George Soros' article in the *Wall Street Journal* of 10 October 2008.

Source: IMF (2007a); Hay (2008).

when there was a sustained but less sharp fall in house prices. The bond auctions in late 2008 to refinance adjustable rate mortgage loans saw better-than-expected issuance, and while the yields were up they were not as high as had been feared. Equity prices have plummeted since the beginning of 2007, almost exactly mirroring euro area developments. Meanwhile, with the exchange rate fixed to the euro, the nominal effective exchange rate has appreciated by about 6% since early 2007.

Interest rates are now very low by historical standards but due to foreign exchange market tensions and the currency peg to the euro, the overall interest rate environment has not eased as much in Denmark as in many other countries. In recent years, the Danish rates for weekly monetary policy transactions had been set 25 basis points above the minimum refinancing rate of the European Central Bank (ECB). However, in Spring 2008, the ECB's variable rate transactions were resulting in actual rates up to 30 basis points above the minimum, leading to a lower or sometimes negative spread between Danish and euro area weekly policy rates. Consequently, the Danish central bank unilaterally raised its weekly interest rates on 16 May 2008. In late September 2008, the actual rates on ECB weekly tenders rose far above the minimum bid rate, leading to a negative spread to Danish rates and outflow of capital from Denmark, putting pressure on the exchange rate. The Danish central bank intervened in the foreign exchange market and, on 7 October, announced that it would raise its weekly rates by 40 basis points to 4.5%. On 8 October, the ECB lowered its official interest rates and switched from fixed-quantity to fixed-interest-rate tenders for weekly refinancing operations. In this particular case, the interest rate cut was not shadowed by the Danish central bank. On 24 October, the central bank announced a further increase of 50 basis points in its weekly rates. Since then interest rate spreads between Danish official rates and ECB rates have been reduced gradually, back towards the early 2008 levels, and Danmarks Nationalbank's net foreign exchange reserves have soared (Figure 1.5).

Figure 1.5. **Developments in the fixed exchange rate regime**



1. An increase in the series in Panel A represents an appreciation of the Danish Kroner against the euro.
2. Panel B shows the spread between Danmarks Nationalbank's lending rate and the ECB's main refinancing operations rate.

Source: Danmarks Nationalbank and OECD *Main Economic Indicators database.*

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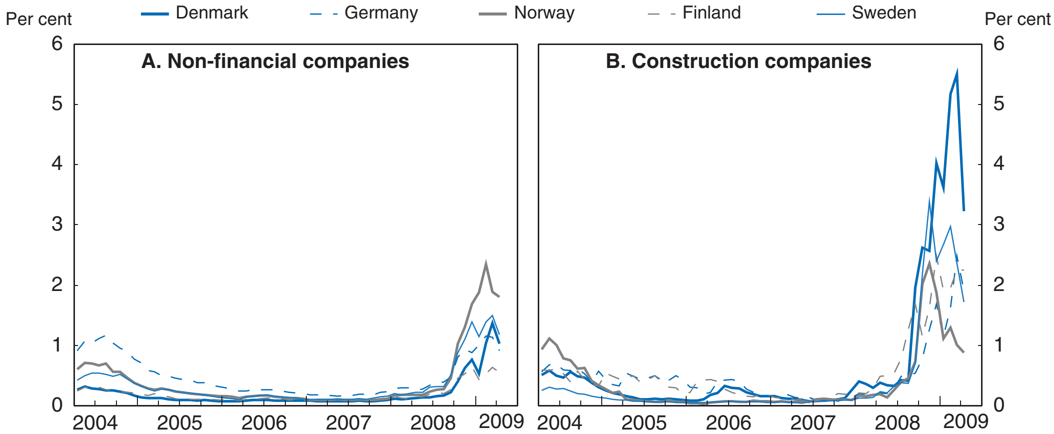
Creditworthiness of Danish financial institutions

The combination of the economic recession and financial turmoil has pushed up impaired loans and loan losses in financial institutions. Danish company failures have risen markedly, with IT, trades and building industries most at risk (Danmarks Nationalbank, 2009b). In August 2009, the number of businesses declared bankrupt was two and a half times the long-term average even though it was declining (this figure is not adjusted, however, for the significant rise in the number of firms in recent years). Expected default rates for listed companies soared in late 2008, particularly in construction, but have receded somewhat since (Figure 1.6). Forced sales of real property have risen, but remain well below their early 1990s levels. However, forced sales could increase further as unemployment increases. There is a strong tendency for mortgages with high LTV ratios to

Figure 1.6. **Expected default rates of listed companies**[1]



1. The series shown are expected default frequencies calculated by Moody's KMV by compiling information about firms' equity, leverage, industry, volatility, financial statement data and historical defaults.

Source: Moody's KMV and Sveriges Riksbank.

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be financed with adjustable-rate loans, often on a deferred amortisation basis, and these households may have less scope to adjust to changes in their financial circumstances than in the past, possibly increasing the risk of unemployment leading to mortgage default. However, for other less constrained households, access to adjustable rate loans on a deferred amortisation basis may improve the ability to overcome unemployment spells. A recently-launched survey covering bank and MCI lending to companies and households indicates that loan losses increased in the three quarters to mid-2009, with the exception of losses relating to MCI loans to households. Further increases in loan losses are expected in the third quarter (Danmarks Nationalbank, 2009d).

Bank earnings declined already in the second half of 2008, due primarily to capital losses and loan write-downs, and smaller financial institutions (groups 2 and 3 in Table 1.1) experienced sharper falls in profits and greater increases in impaired loans. Profits have actually deteriorated more than is evident in Table 1.1, since a new opportunity to reclassify financial assets to avoid an impact on profits from unrealised value adjustments may have inflated the 2008 profit results (Danmarks Nationalbank, 2009b).

Between the start of 2008 and mid-2009, 18 institutions have been wound up or taken over (Annex 1.A1). Many of them had higher-than-average lending growth, substantial exposures to property markets and large exposures more generally (Danmarks Nationalbank, 2009a). In addition, small-and-medium-sized banks have been particularly affected by stress in the money market: in the fourth quarter of 2008, they were paying up to 3-4% more for funds than the average large bank, way up from the premium of less than 1.5% in late 2006 (Ejerskov, 2009).

On average, banks had lent their equity capital almost nine times at the end of 2007, compared to a historical average of about seven times.[1] A return to the long-term average would require either a 24% fall in lending or a 30% increase in equity capital (Danmarks Nationalbank, 2009a).

Stress tests conducted in Spring 2009 by the central bank indicate that in the absence of government capital injections the banking system would be quite vulnerable (Danmarks Nationalbank, 2009b). They compare three scenarios (Table 1.2): the baseline involves a

Table 1.1. **Key financial ratios for Danish banks**

	2005	2006	2007	2008	First half of 2009
Group 1					
Solvency ratio	13.2	13.7	11.7	14.3	16.6
Tier 1 ratio	9.5	10.3	8.4	10.6	12.9
Return on equity after tax	17.4	17.8	15.2	1.9	0.9
Lending/equity ratio	919.2	926.0	1 064.0	1 167.0	10.5
Impairment ratio	–0.1	–0.1	0	0.6	0.8
Group 2					
Solvency ratio	11.5	11.5	11.6	11.3	12.1
Tier 1 ratio	9.9	9.4	8.9	9.2	9.7
Return on equity after tax	16.3	19.1	14	–8.8	–14.1
Lending/equity ratio	741.4	801.6	854.4	1 009.7	0.6
Impairment ratio	0.1	–0.1	–0.1	1.6	2.2
Group 3					
Solvency ratio	14.2	13.9	14.4	15.4	18.4
Tier 1 ratio	13.7	13.1	12.2	12.5	15.1
Return on equity after tax	13.3	14.9	11.3	–1.9	–10.0
Lending/equity ratio	423.3	472.7	509.3	558.1	4.4
Impairment ratio	0.1	–0.1	0.1	1.2	1.7

Notes: Group 1 includes the five largest banks, group 2 the next nine and group 3 includes 30 of the smallest financial institutions. The solvency ratio is core plus supplementary capital (total capital base less statutory deductions) as a percentage of risk-weighted assets. The statutory minimum is 8%. The tier 1 ratio is core capital (share capital plus hybrid core capital) as a percentage of risk-weighted assets. The impairment ratio is total impairment losses as a percentage of loans, guarantees and impairment losses. The increase in solvency and tier 1 ratios in 2008 primarily reflects a reduction in risk-weighted assets due to changed calculation methods under the Basel II framework.
Source: Danmarks Nationalbank (2009b).

shallower recession than the one projected in the June 2009 *OECD Economic Outlook* (see Table 1.3 further down); a "Danish shock" scenario assumes a slightly deeper recession than projected by the OECD; and a "long, deep recession scenario" features a much deeper one. The calculations do not take into account the impact of the government's capital injection programme, discussed in detail below. In the "Danish shock" scenario, the loan-loss ratio is similar to that during the Nordic banking crisis of the early 1990s while it is

Table 1.2. **Danmarks Nationalbank's stress tests**

	2009	2010	2011
Baseline scenario			
GDP	–2.4	0.5	1.5
Unemployment rate	4.5	6.5	6.3
Average bond yield	4.1	4.6	5.3
Loan-loss ratio	1.4	1.5	1.2
Danish shock			
GDP	–4.0	–1.9	0.0
Unemployment rate	5.6	8.9	9.6
Average bond yield	4.1	4.6	5.3
Loan-loss ratio	1.9	2.5	2.3
Long, deep recession			
GDP	–4.5	–2.9	–0.6
Unemployment rate	6.1	10.2	11.8
Average bond yield	3.9	3.2	2.8
Loan-loss ratio	2.6	3.1	2.8

Source: Danmarks Nationalbank (2009b).

about 0.5 percentage points higher in the "long, deep recession" scenario. In the baseline scenario, all the banks maintain capital in excess of the statutory solvency requirements. In the Danish shock scenario, a few fail to meet these in 2010 and more than half of the banks don't meet them in 2011. In the long, deep recession scenario only a few banks meet the statutory requirements in 2010 and virtually none in 2011. When publishing these results, the central bank underlined that they highlighted the need for a number of banks to accept public capital injections (see below).

Effects of financial stress on the real economy

Deteriorating financial conditions adversely affect the economic outlook through a number of channels. Losses due to falling financial asset prices reduce consumers' ability to finance consumption from household wealth. Lower share and bond prices make it more expensive for firms to issue new capital or take out loans. The cost of finance (interest rates) can rise and/or there may be outright restrictions on access to finance even for profitable business opportunities. This limits the ability of firms to finance short-term operations (such as inventory management), which hurts sales, and new business opportunities, which curtails investment. Similarly, a number of households may be unable to find funding for consumption (consumer credit) or investment (including buying or building a new house).

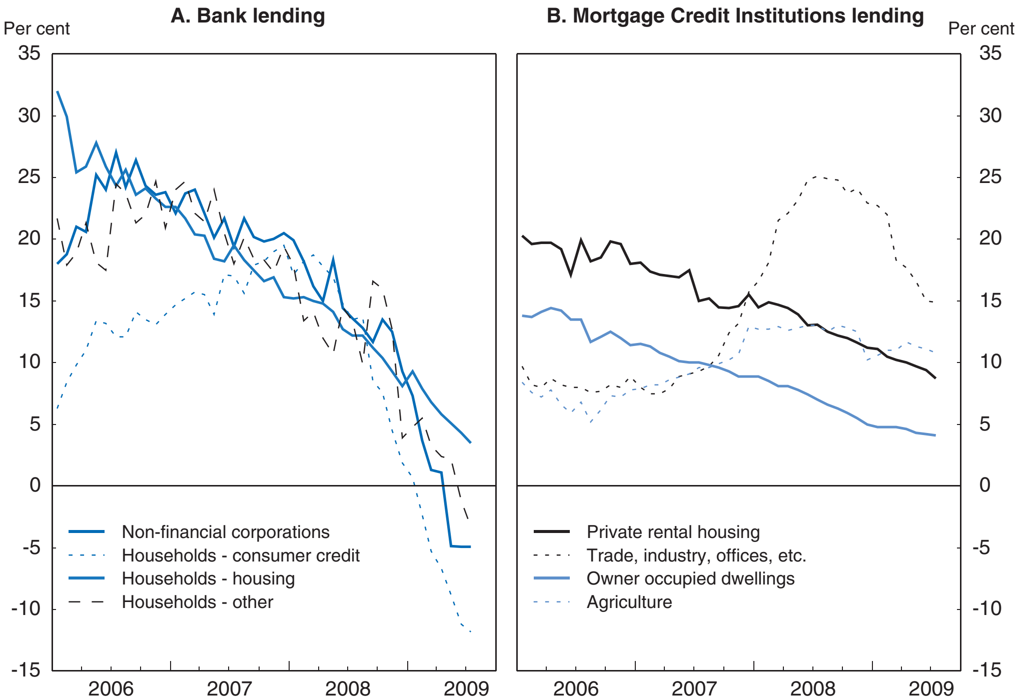
Households have suffered a major reduction in wealth over the past two years. Up to 2007-08, gains in household wealth had been driven by strong growth in asset prices and, to a lesser extent, household saving. Housing wealth accounts for more than half of household assets in Denmark. Direct and indirect holdings of shares and other equity account for about 15-20% of household assets while bonds and bank deposits account for 25-30% (Olesen, 2009). Total household wealth (including pension and housing assets) was about 4.6 times a year's household net disposable income in 2007 – a high level by historical standards. However, sharp falls in house and equity prices brought this ratio down to 3.6 in the course of 2008 – still fairly high in historical perspective. In the first half of 2009, equity prices recovered somewhat but house prices continued to fall.

Bank lending to non-financial corporations has contracted since early 2009 while growth in MCI lending to business (other than agriculture) has slowed but from high rates. Mortgage lending to households has been slowing gradually from the very high rates of a few years ago. Consumer credit is now falling (Figure 1.7). Lending growth has slowed more sharply in smaller banks. These may be more exposed to the small enterprise sector, which is likely to be more sensitive to the economic cycle (Danmarks Nationalbank, 2008). The slowdown in lending growth reflects the usual pattern in a cyclical downturn, including tighter credit conditions on the part of financial institutions and also a reduction in demand on the part of borrowers (Danmarks Nationalbank, 2009d).

From 2006 to 2008, interest rates on existing and new loans had trended up, in line with ECB policy tightening, and short-term rates spiked in late 2008 as the Danish central bank unilaterally raised interest rates in the face of foreign exchange market pressures (see above). Since the peak in October 2008, official interest rates have fallen by more than 4 percentage points. Meanwhile, interest rates on loans to businesses and households have fallen by less – between 0.8 and 3.2 percentage points (Figure 1.8). This probably reflects the unsettled nature of funding markets but also, to some extent, an attempt by financial institutions to rebuild their margins as loan losses erode profitability. Medium-size banks have raised deposit and lending rates more than large banks in order to try to

Figure 1.7. **Growth in lending by financial institutions by use of funds**

Year-on-year per cent change



Source: Danmarks Nationalbank.

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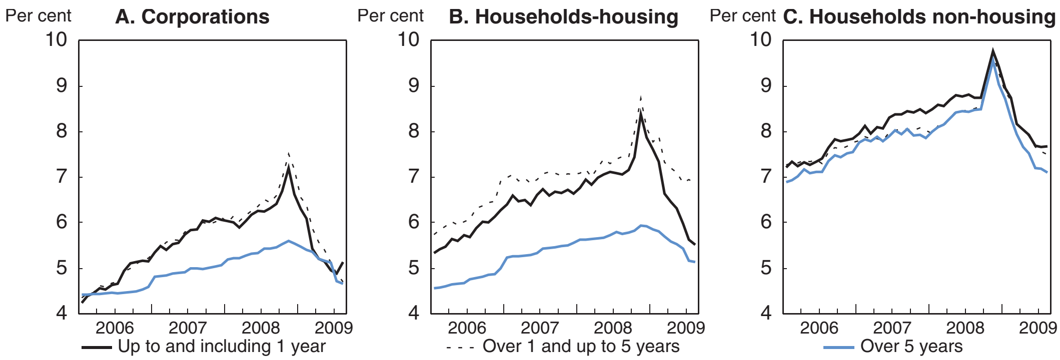
attract more deposits and reduce lending (Danmarks Nationalbank, 2008). The trend towards adjustable-rate mortgages has accelerated in response to the sharp fall in interest rates. This reduces the current strain on household budgets, which is helpful at this juncture, but also makes them more vulnerable to future interest rate hikes.

Figure 1.8. **Interest rates paid by corporations and households**[1]



1. The data are interest rates on the stock of outstanding loans. For banks, the rate of interest is calculated as the month's income from interest as a per cent of the month's average loans, including overdraft facilities. For MCIs the rate covers the interest rate on the cash value of the loan (coupon interest and the capital loss or gain on issue of the underlying bonds, on the assumption that the loan is held to maturity) and administration fees.

Source: Danmarks Nationalbank, Table DNRUM.

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Financial market stress has clearly contributed to the recession. Overall financial conditions tightened considerably late in 2008, with the effect of falling share and house prices compounded by higher policy and market interest rates. Real exchange rate appreciation, reflecting more rapid inflation in Denmark than in its trading partners, worked in the same direction. Since the beginning of 2009, financial conditions have eased somewhat, with significantly lower policy and market interest rates in the money and bond markets, and a rebound in share prices. However, house prices and the exchange rate continue to exert a negative influence on the economy.

Macroeconomic outlook

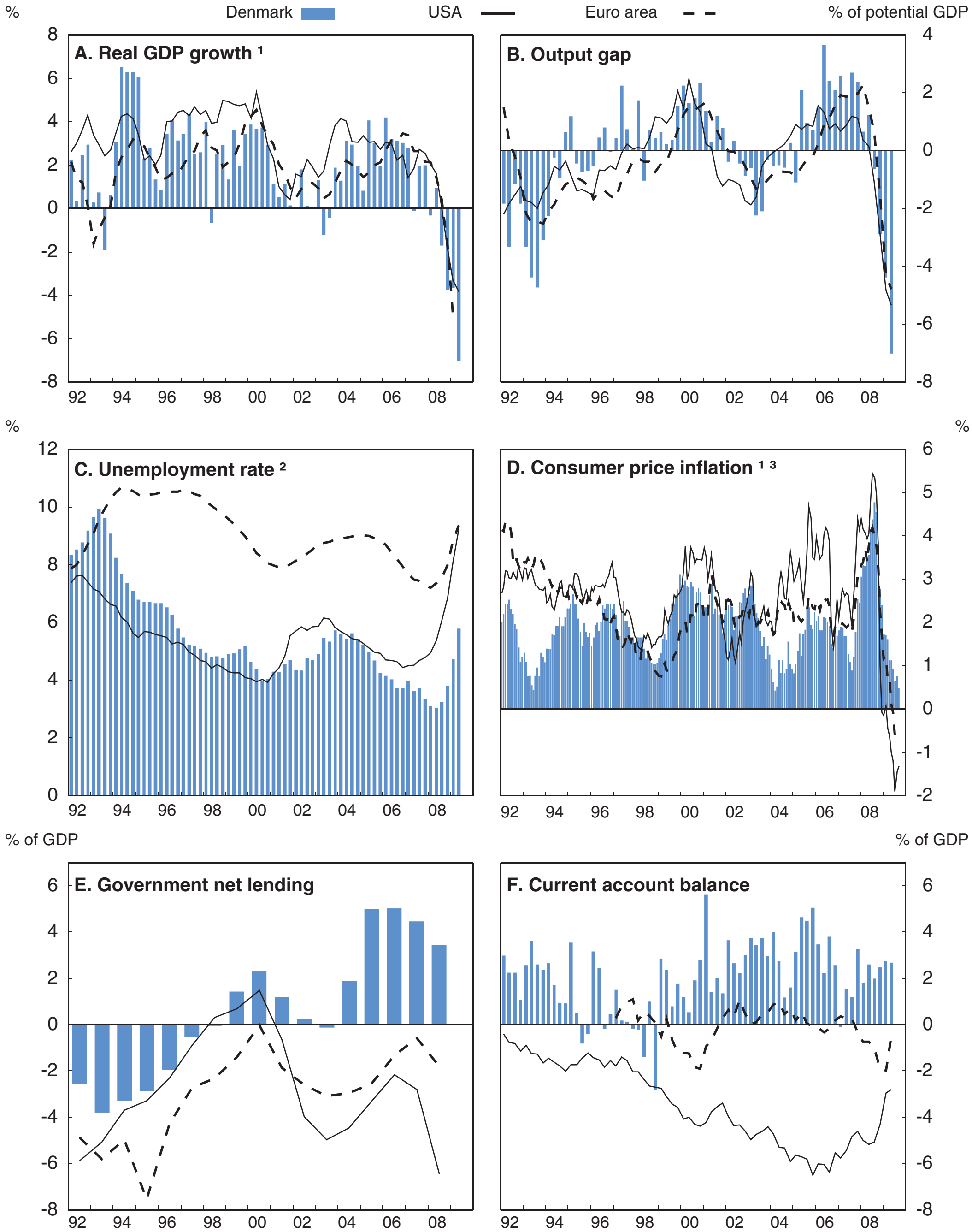
Globally, downturns following banking crises tend to be associated with output losses two to three times greater than other types of downturns and the recovery takes twice as long. Business and housing investment are disproportionately reduced. Fiscal balances tend to deteriorate more than in non-banking crisis downturns (Haugh *et al.*, 2009). The Danish economy is facing not only the impact of the global financial crisis and the collapse in global trade, but also the unwinding of the domestic 2004-06 property boom.

After growing by an average of 2.7% per year over 2004-06, the economy slowed sharply in 2007 and contracted by 1.2% in 2008. The property boom, which had been fuelling residential investment and consumption, turned around already in 2007, partly triggered by higher interest rates. Also contributing to slowing demand were the rise in oil prices in the first part of 2008, the weakening of export markets and sliding confidence. On top of that, the economy was experiencing severe labour shortages – manifested in mounting wage inflation – and falling productivity levels. Activity had therefore slowed sharply before the financial turmoil burst forth into full-blown crisis. The labour market, which had been extremely tight with unemployment reaching record lows, began to turn in the third quarter of 2008. Inflation rose sharply in the course of 2008, and over the past year core inflation has been somewhat higher than in the euro area. The budget surplus remained strong, buoyed by growth in North-Sea oil and gas revenues and the tax on unrealised capital gains in the pension system. The current account has remained in positive territory during the entire upswing but has been trending down until early 2008, as imports have grown more rapidly than exports (Figure 1.9). More recently, net exports have improved as household saving rose sharply.

GDP has now contracted for four consecutive quarters and by spring 2009, it was 7% lower than a year earlier. GDP fell more than expected in the second quarter of 2009. The contraction was driven mainly by plunging business and housing investment while private consumption decreased only slightly. Forward-looking indicators point to some improvement. Sentiment is up in manufacturing. Industrial production and new orders seem to have stabilised at a low level while the number of new bankruptcies is coming down. The outlook is more uncertain, however, for the construction sector. Early retail trade data suggest that household consumption is unlikely to deteriorate further and consumer confidence has improved substantially since the low-point in October last year, to around its long-run average.

The feed-through of the significant fiscal and monetary stimulus is key to the outlook, in particular whether the sharp drop in interest rates since last autumn and higher disposable incomes will be sufficient to stabilise house prices. National average prices for one-family houses were down 15% year-on-year in the first quarter of 2009 (Figure 1.10)

Figure 1.9. **Key macroeconomic indicators**



1. From same period of previous year.
2. For the United States, the unemployment rate is from the monthly Current Population Survey of persons aged 16 and over. For the euro area, it is derived from aggregating labour force data for individual countries. For Denmark, it is calculated using the Eurostat harmonised labour force survey level of unemployment and the level of employment from the national accounts.
3. Harmonised index of consumer prices for the euro area.

Source: OECD *Analytical Database.*

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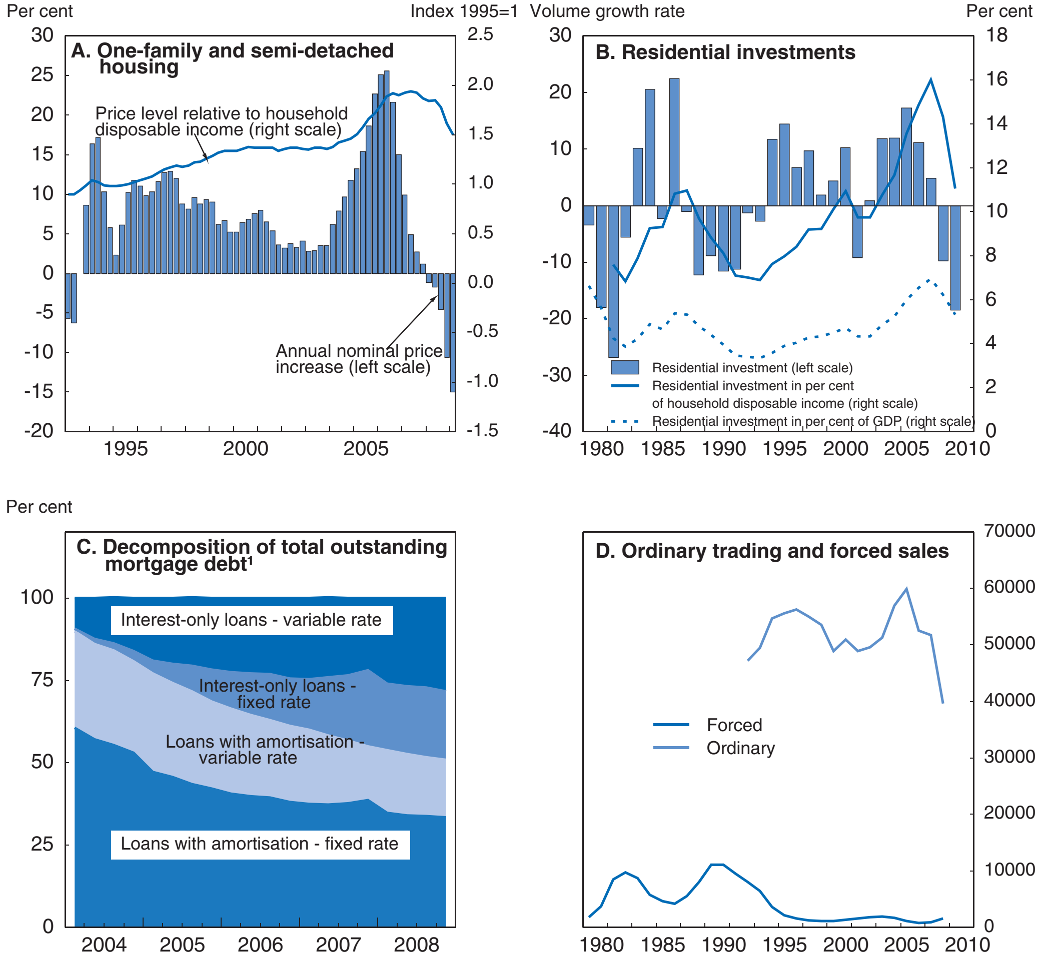
Figure 1.10. **Developments in the housing market**



1. Interest-only loans were first introduced in 2003.

Source: Statistics Denmark, Realkreditradet and *OECD Economic Outlook No. 85 Database.*

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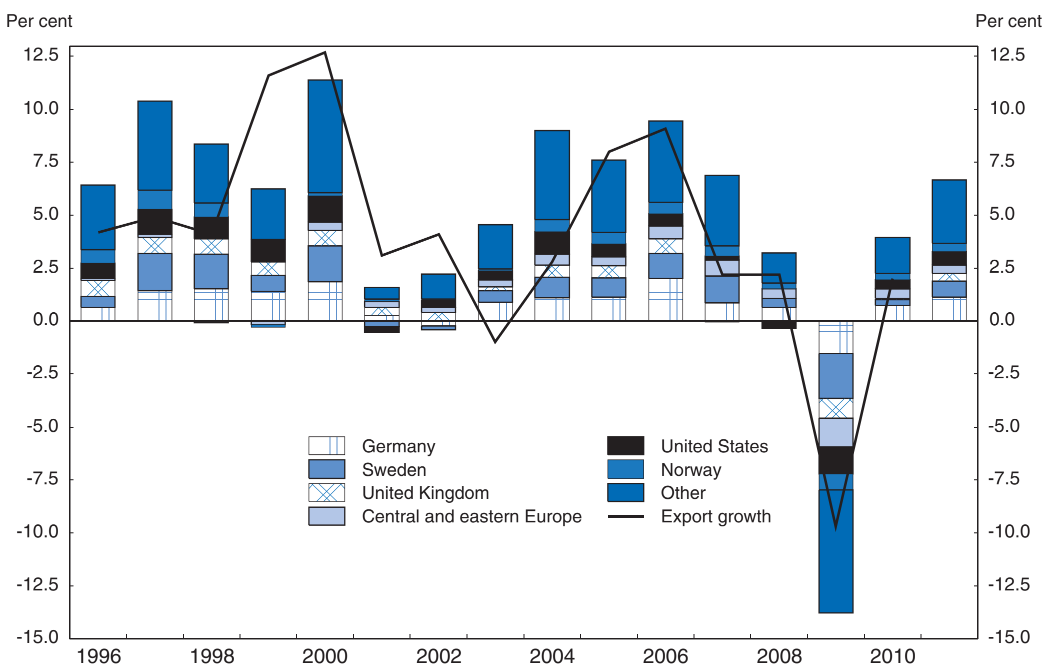
and according to the association of Danish Mortgage Banks, prices were still falling in the second quarter of 2009. The number of homes sold has been well below the long-term average in recent quarters. After a number of years of being well above the estimated equilibrium level, house prices have by now probably come down close to their equilibrium values, but often they undershoot after having overshot, depending *inter alia* on interest rate developments (Bødker and Skaarup, 2009). Young owner-occupiers in particular have increased their debt levels along with the rise in house prices, increasing their vulnerability to house price falls (Lunde, 2009). Combined with rising unemployment, lower house prices will also likely feed back into increased mortgage defaults and forced home sales, possibly putting further downward pressure on property prices. Lower house prices should dampen residential investment as prospective purchasers focus on existing homes. Alterations to existing buildings will be boosted by a government initiative providing grants to subsidise renovations with a focus on energy-saving modifications. Business property prices are now falling as well, compounding the effect of excess capacity on non-residential investment.

Exports are another key driver of GDP. Danish export volumes have fallen for four consecutive quarters and in the second quarter of 2009 were 13.5% below the level of a year ago. Denmark's export market is expected to contract by 14% in 2009, with about two-fifths of this contraction accounted for by Denmark's four top export destinations – Germany, Sweden, the United States and the United Kingdom (Figure 1.11). To some extent, the composition of Danish exports might cushion the impact of the fall in export market demand. Demand for food and pharmaceutical goods, which make up a high proportion of Danish goods exports (16% and 7% respectively), might not be very income-elastic. However, the real exchange rate has appreciated in recent years due to relatively strong wage growth, which will weigh on Denmark's market share going forward.

Figure 1.11. **Exports and contributions to growth in Denmark's export market**[1]



1. The country bars represent growth in imports of the country in question multiplied by the share of that country's imports that are sourced from Denmark. Figures for 2009 and 2010 are based on OECD Economic Outlook No. 86 projections for imports.

Source: *OECD Economic Outlook No. 86 Database* and OECD, Secretariat calculations.

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Following a sharp contraction in 2009, the economy is projected to recover gradually over the course of 2010 and more substantially in 2011 (Table 1.3). Exports are set to be one of the main drivers of the recovery, against the backdrop of an acceleration in world trade and a further deceleration in wages coupled with a pick-up in productivity. Business investment is also projected to gain momentum in the latter part of 2010 as financial conditions normalise and the uncertainty surrounding the recovery

Table 1.3. **Short-term economic outlook**

	2007	2007	2008	2009	2010	2011
	Current prices DKK billion	Percentage changes, volume (2000 prices)				
Private consumption	826.7	2.4	–0.2	–4.8	1.6	2.2
Government consumption	438.8	1.3	1.5	2.2	1.8	1.5
Gross fixed capital formation	374.3	3.1	–5.1	–12.4	–5.1	2.5
Final domestic demand	1 639.8	2.2	–0.9	–4.5	–0.4	2.0
Stockbuilding[1]	11.8	–0.3	0.2	–1.3	0.8	0.0
Total domestic demand	1 651.7	1.9	–0.7	–6.2	1.2	2.0
Exports of goods and services	882.8	2.2	2.2	–9.7	2.0	4.5
Imports of goods and services	846.6	2.8	3.4	–13.0	2.0	5.3
Net exports[1]	36.2	–0.2	–0.5	1.6	0.1	–0.3
GDP at market prices	1 687.9	1.6	–1.2	–4.5	1.2	1.7
GDP deflator		2.0	4.0	–0.5	1.2	2.1
Memorandum items						
Consumer price index		1.7	3.4	1.4	1.6	1.8
Private consumption deflator		1.8	3.1	1.4	1.2	1.4
Employment		2.6	0.9	–2.9	–1.8	0.9
Labour force participation rate[2]		83.5	83.5	83.0	82.2	82.1
Unemployment rate[2]		3.6	3.3	5.9	6.9	6.2
Household saving ratio[3]		–1.0	–0.3	7.9	6.8	5.2
General government financial balance[4]		4.5	3.4	–2.5	–5.4	–4.0
Current account balance[4]		0.7	2.0	1.0	1.3	1.5

Note: National accounts are based on official chain-link data. This introduces a discrepancy in the identity between real demand components and GDP. For further details, see *OECD Economic Outlook Sources and Methods* (*www.oecd.org/eco/sources-and-methods*).

1. Contributions to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.
2. Based on the Labour Force Survey, being ½-1 percentage point above the registered unemployment rate.
3. As a percentage of disposable income, net of household consumption of fixed capital.
4. As a percentage of GDP.

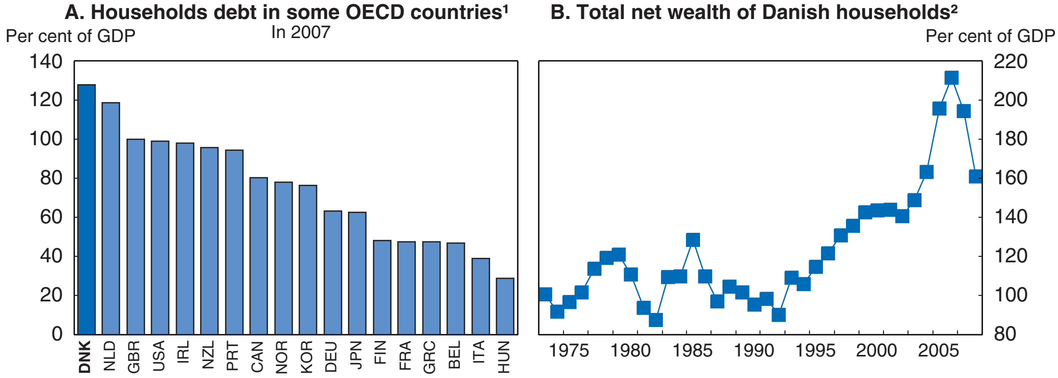
Source: October 2009 OECD projections.

fades. The unemployment rate had been exceptionally low (the lowest since the 1970s) but has risen to pass the structural rate during 2009 and will continue to rise until mid-2010, despite some reduction in labour supply due to withdrawals from the labour market. Rising unemployment and falling house prices in 2010 will restrain consumption, but on the other hand, it will get support from the boost to disposable income resulting from fiscal policy measures and lower interest rates. In 2011, consumption would benefit from a fall in unemployment and a turnaround in house prices. Inflation is expected to ease gradually due to the scale of slack in the economy, although it will be boosted in 2010 due to the indirect tax changes announced in the Spring Package 2.0 tax reforms (Box 1.4).

While overall economic prospects seem to have improved in recent months, some risks hang over the projected recovery. One is that the stabilisation of the housing market might be more drawn out than currently foreseen. Another is that, even though overall, households' net wealth position remains fairly strong, the burden of the high levels of mortgage debt built up in recent years by some households (Figure 1.12) might hold back consumption more than expected.

Figure 1.12. **Households debt and net wealth**

In per cent of GDP



1. Gross debt of households as share of GDP. The debt measure consists of short-term and long-term debt of the households.
2. The depicted measure shows the aggregate of households' housing assets and net financial assets after tax.

Source: OECD, Households' assets and Nationalbanken.

StatLink http://dx.doi.org/10.1787/734542874566

Potential medium-term implications of the recession

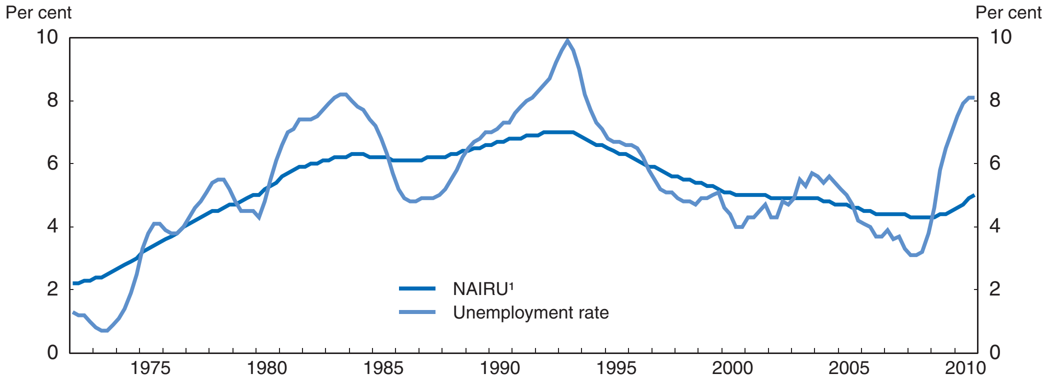
As in many other OECD countries, potential growth had long been expected to weaken in the coming years as a consequence of population ageing, but it will be adversely affected by the financial crisis as well. The two main channels through which the crisis is likely to drag down potential growth over the medium term are higher structural unemployment and reduced capital deepening due to heightened risk aversion. Studies suggest that full recovery of output to the earlier trend level following a banking crisis is rare. On the other hand, the pace of structural reform is often stepped up in the context of deep downturns (Haugh *et al.*, 2009).

Labour utilisation

While unemployment has fallen to very low levels in recent years, there is now a risk that the high cyclical unemployment rates projected for 2010 will turn structural to some extent in subsequent years (Figure 1.13). Hysteresis effects include ratcheting-up of structural unemployment due to insider-outsider dynamics, a loss of morale and skills by the unemployed, stigmatisation of the jobless reducing their employment prospects and lower regional labour mobility, especially where house prices are falling. Such effects were at work in Finland, Norway and Sweden in the aftermath of their past financial crises (Haugh *et al.*, 2009). Recent OECD analysis estimated the impact of higher unemployment on long-term unemployment, a key channel through which higher actual unemployment can lead to higher structural unemployment. This analysis suggested that a one unit increase in actual unemployment increases long-term unemployment by around 0.4 unit in Denmark. This figure is amongst the lowest in the OECD and is similar to Norway, Sweden and Finland. It is well below the Slovak Republic, Germany, Italy and Belgium, where a one unit rise in unemployment is estimated to increase long term unemployment by almost 0.9 unit (OECD, 2009f).

Figure 1.13. **Actual and structural unemployment**

Per cent of the labour force



1. The structural unemployment rate is the non-accelerating rate of unemployment (NAIRU), estimated according to the methodology outlined in Gianella *et al.* (2008).

Source: *OECD Economic Outlook No. 85 Database*.

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Productivity

Productivity will be affected over the medium term by a slowdown in capital deepening related to the recession. This comes on top of the trend deceleration in labour productivity since the mid-1990s. The financial crisis triggered an adjustment in attitudes to risk, which may last. It is now generally believed that the price of risk has been too low, along with the price of money, and that speculative bubbles in a number of different assets have contributed to the crisis. As a result, risk aversion has increased, translating into higher financing costs and more subdued investment growth. This may hold back capital deepening and so lower productivity growth in the medium term. Such effects have been noted in the United States and Sweden following previous financial crises (Haugh *et al.*, 2009).

At the same time, product market hysteresis effects could also have a persistent impact on potential growth by affecting the drivers of innovation and productivity growth. Globally, there are signs that the recession has begun to undercut innovation in the private sector. A downturn is already evident in R&D and venture capital spending, due to the procyclical nature of investment in innovation (OECD, 2009c). In the short term, firms may divert resources away from R&D in order to cut costs or to finance the short-run costs of layoffs. This cyclicality may not present problems for long-term growth if R&D spending bounces back quickly once the recovery takes hold. However, if risk aversion remains higher, firms will find it durably harder to obtain external finance for R&D.

On the other hand, the restructuring brought about by the current crisis will accelerate changes: new sectors will appear, old ones will fade away; new work organisations will be introduced with new rules and regulations; new skills will be needed while the demand for others will abate. Research-intensive firms might seek to gain market share by increasing spending on innovation and R&D. The rise in unemployment may prompt an increase in entrepreneurship, out of necessity. Entrepreneurial skills and attitudes, risk-taking behaviour and creativity will be crucial competencies in the economy that need to be nurtured by more adaptive and innovative education and training systems. These issues are discussed in more detail in Chapters 2 and 3.

Potential output growth

Potential output growth is expected to be particularly weak in Denmark over the next few years, due mainly to reduced capital deepening but also to an increase in structural unemployment (Table 1.4). Coming on top of weak growth in potential employment via a reduction in the working-age population, potential output growth is expected to decline from 1.7% on average over 2006-08 to 0.5% in 2009-10 and 1.1% in 2011-17.

Table 1.4. **Potential output growth and its components**

Annual average % growth

	Potential real GDP growth	Potential labour productivity growth	Potential employment growth	Components of potential employment[1]		
				Trend participation rate	Working-age population	Structural unemployment
2006-08	1.7	0.8	0.8	0.4	0.3	0.1
2009-10	0.5	0.7	–0.3	0.0	0.0	–0.3
2011-17	1.1	1.3	–0.2	0.0	–0.1	–0.1

Note: Potential real GDP is calculated using a production function approach with capital and labour inputs, as outlined in Beffy *et al.* (2006). In this table, growth in trend average hours worked is captured in potential labour productivity growth along with capital deepening and total factor productivity. Potential labour productivity growth is potential GDP per employee, so is not directly comparable to the productivity measures used in Chapter 2.
1. Percentage point contributions to potential employment growth.
Source: OECD (2009b).

Policies to overcome the crisis

Bringing the economy quickly out of recession requires a range of measures on a broad front. The government has already implemented many measures to ease pressures in the financial sector, along with significant fiscal stimulus. Further labour market reforms have been suggested to improve the efficiency of the labour market and boost labour supply in the long term.

Financial sector measures

The Danish government and central bank have taken a range of measures to help steer the financial system through the crisis. These are in line with the approach agreed by European leaders in late 2008. The most important elements of the government's response are a blanket guarantee on claims against banks by all depositors and senior debtors, a process for taking over and winding up insolvent banks, and state-funded capital injections to boost capital in solvent financial institutions (Box 1.2).

The measures taken by the government and the central bank have had a strong positive effect on the financial system. The government guarantee has been crucial to help maintain liquidity in some institutions. Interest rates on bonds maturing before the end of the guarantee have been lower than those maturing afterwards (Danmarks Nationalbank, 2009b). The measures to prevent widespread divestiture of mortgage bonds by pension funds significantly lowered mortgage bond interest rates. With the applications received by financial institutions for capital injections, virtually all institutions will have a tier-1 capital ratio of at least 12% (Danish Ministry of Economic and Business Affairs, 2009).

Danmarks Nationalbank recently assessed that the capital injections provided under Bank Rescue Package II would significantly reduce the solvency problems in the banking sector if the loans provided by the government are converted into share capital (Figure 1.14). This is because share capital is regarded as higher quality than hybrid core

Box 1.2. **Financial stability measures**

Agreement on Financial Stability – Bank Rescue Package I

In October 2008, the government announced a voluntary scheme whereby participating banks would receive a government guarantee over all domestic and foreign claims by depositors, debt holders (senior debt) and other simple creditors. The guarantee was initially intended to apply until 30 September 2010 but has partly been extended until 2013 by allowing individual credit institutions to apply for an individual guarantee on senior debt. The agreement covers all licensed banks in Denmark which are members of the deposit insurance scheme (*Det Private Beredskab*) and Danish branches of foreign banks where they are not covered by a similar arrangement in their home country. 133 banks, comprising the majority of the banking industry, decided to join the guarantee scheme. Banks that participate in the scheme will not be permitted to pay out dividends, initiate any new stock buy-back arrangements, initiate any stock-option arrangements, or undertake a significant expansion of their activities which would not have taken place in the absence of the new scheme. With effect from 1 October 2010, ordinary deposits will be covered by an increased deposit guarantee of DKK 750 000.

The government also established a "winding-up company", referred to as the Financial Stability Company, to facilitate the take-over and winding up of banks that do not fulfill the statutory solvency requirements, and for which no viable private solution is evident. This company will establish and provide capital to a new company to take over and wind up each failed bank, so that claims by depositors and senior debtors do not suffer any losses. The financial sector, via Det Private Beredskab, will provide up to DKK 35 billion to cover losses in the Financial Stability Company. Det Private Beredskab has decided how this contribution will be financed amongst its member institutions, based on their capital base and insured activities. Banks are allowed to pay their contribution to the financing of the guarantee scheme in their own shares.

The government also implemented a ban on short-selling of shares in Danish listed banks.

Mortgage market and pension funds

On 31 October 2008, the Ministry of Economic and Business Affairs and the Danish Insurance Association agreed to let pension funds, which hold about 27% of outstanding mortgage debt, raise the discount rates for calculating future obligations to partially incorporate the development in mortgage bond rates. This reduced the gap between developments in assets and liabilities and thereby the need to divest mortgage bonds, alleviating pressure on the mortgage bond market.

Credit Package Agreement – Bank Rescue Package II

The Danish parliament passed a law on 3 February 2009 under which all credit institutions in Denmark that comply with the statutory solvency requirements could apply for state-funded capital injections. The injection is in the form of hybrid core capital and will attract a rate of interest, calculated on the individual bank's rating, capital adequacy and liquidity risk, varying between 9% and 11¼ per cent. Applications for the capital injections closed on 30 June 2009. A total of 50 institutions applied for DKK 63 billion in total. Banks and MCIs may redeem the loans after three years, and there will be financial incentives to do so. In addition, institutions have the option to convert the injection from hybrid core capital to share capital under certain circumstances.

Box 1.2. **Financial stability measures** *(cont.)*

Danmarks Nationalbank's measures

Danmarks Nationalbank has taken a number of measures to ease liquidity restrictions, mainly focused on the types of securities that can be used as collateral in daily and weekly monetary policy operations. First, Danmarks Nationalbank established a temporary facility enabling banks and mortgage-credit institutes to borrow against a new type of loan bills issued in Denmark. Financial institutions can borrow by issuing these loan bills and the institutions that purchase them can use them as collateral for borrowing from Danmarks Nationalbank. Second, banks and mortgage-credit institutes may borrow at Danmarks Nationalbank on the basis of their excess capital adequacy (the difference between the base capital and the capital need), less a margin of 1 percentage point. Third, Danmarks Nationalbank further expanded the collateral base for borrowing by banks and mortgage-credit institutes to include quoted shares, investment fund shares, junior covered bonds and bank and junior covered bonds issued under the government guarantee scheme. The temporary credit facilities will run until 30 September 2010, but the arrangement for securities issued under the government guarantee scheme will last until 31 December 2013.

In addition to these measures, the central bank has taken a number of steps to improve liquidity in foreign exchange markets. Danmarks Nationalbank and the US Federal Reserve agreed on a swap facility of $15 billion, which expires on 1 February 2010. Danmarks Nationalbank has concluded a similar agreement with the ECB in order to improve the liquidity conditions in the euro short-term funding markets. This agreement totals € 12 billion and will be in force for as long as necessary.

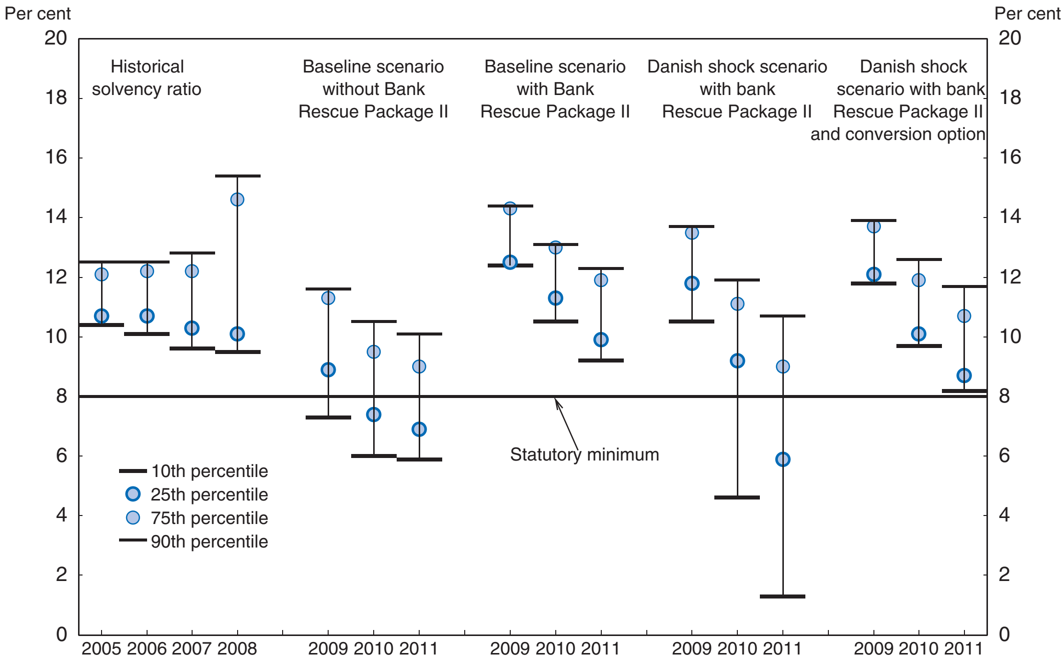
Other measures

In February 2009, it was decided that private firms can postpone payment of VAT and income taxes, in order to improve non-financial corporations' access to liquidity. Moreover, the possibility was granted to households in March 2009 to withdraw money from the compulsory private Special Pension savings scheme (see below) helps alleviate their liquidity constraints. In September 2009, a new initiative (*Erhvervspakken*) aimed at small and medium-sized enterprises was launched, setting aside DKK 4.2 billion to improve export credit facilities, the existing loan guarantee schemes and access to venture capital, and to promote public-private partnerships to develop new market-based solutions for the welfare sector.

Source: European Commission (2008a), Ministry of Economic and Business Affairs and Ministry of Finance (2008); Danmarks Nationalbank (2009b) and various press releases.

capital in the calculation of bank solvency. Also, banks earnings improve if the injections are converted to share capital, since they then no longer have to pay interest on the injection (Danmarks Nationalbank, 2009b). The FSA can forcibly convert the hybrid core capital injection from the government in the case of a financial institution in distress. Banks choosing an option to convert their capital injection will pay a fee to the government, which may then effectively become a common shareholder in the bank. If the full amount of hybrid core capital injections made by the government is converted to share capital, the Danish government would become a major shareholder in some banks. This comes on top of the ownership interest in financial institutions the government has acquired through the fact that some institutions may have paid for their contribution to the government guarantee fee with their own shares. There will be a need to clearly

Figure 1.14. **Impact of Bank Rescue Package II on bank's solvency ratios**[1]



1. Solvency ratio is core capital plus supplementary capital (total capital base less statutory deductions) as a percentage of risk-weighted assets. The statutory minimum is 8%. Figures for 2009 to 2011 are based on the scenarios described in Table 1.2. The analysis was undertaken prior to the closure of applications for capital injections, so is based on estimates of the amount offered. The analysis covers the 14 largest banks.

Source: Danmarks Nationalbank (2009b).

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articulate how these ownership interests will be managed. A timetable for their eventual divestiture will be important to send a clear message that the government does not intent to retain ongoing ownership after the crisis has passed.

In the meantime, the key question is to what extent the arrangements put in place by the government and central bank can alleviate credit constraints. The first bank package envisages a bank rescue arrangement whereby the state effectively takes over a bank that does not fulfil the statutory solvency requirements and has no possibility of reaching a viable private solution. It provides an incentive for distressed banks to seek pre-emptive private-sector solutions since shareholders of a wound-up bank lose control of it. Eligibility requirements are designed to reduce domestic and cross-country "beggar-thy-neighbour" effects (IMF, 2008). Since the industry bears the first tranche of losses, this should encourage banks to prudently manage their risks and provides for a type of moral suasion between banks. At the same time, the systematic blanket government guarantee increases market certainty but reduces incentives for institutions to manage recovery efficiently. It is also not focused on those assets which are distressed, but covers all creditors except in covered bonds and subordinated debt. Bank Rescue Package II reduces the likelihood of a bank's capital falling below statutory capital requirements, so reduces the likelihood of having to make further use of the first package's winding-up arrangements.

However, there is no guarantee that the existing arrangements are sufficient to deal with a situation where – in addition to the issues addressed in the two banking sector initiatives – impairment of asset values on banks' balance sheets significantly hampers a return to normal credit provision. In such a situation, separating good and bad assets is a possible solution, which has been adopted in some countries, To some extent, Denmark's Financial Stability Company, which is dealing with toxic assets in non-performing banks and the capital injections in performing banks, can be seen as a substitute for a specific toxic asset programme, especially in a context where asset prices have tended to stabilise or recover (as has been the case since Spring). Even so, it could be argued that the response put in place explicitly covers only two of the three steps required to deal with a bank solvency crisis (Blundell-Wignall *et al.*, 2008). The missing step is a process of separating good assets from bad assets and removing the latter from financial institutions' balance sheets (Box 1.3).[2] Government purchases of toxic assets raise some design issues and practical difficulties, with respect to the identification of eligible assets, their pricing and how to manage them efficiently up to and following the purchase. However, government purchases also have some merits, not least in that they can generate important externalities and reduce risk spreads in a number of different markets and could encourage private injection of capital by reducing uncertainty (Furceri and Mourougane, 2009).

Box 1.3. **Approaches to dealing with "toxic" assets**

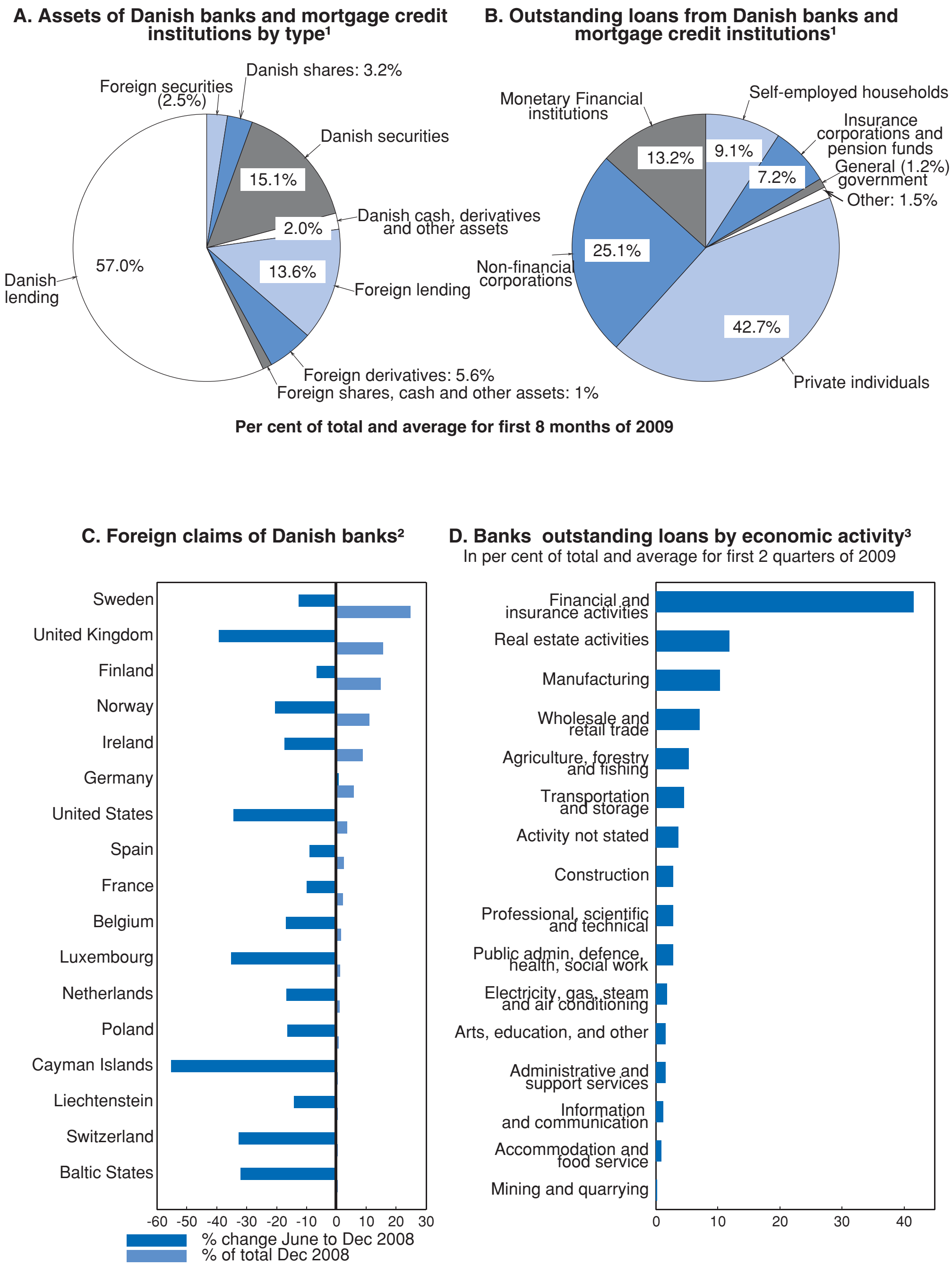
There are at least two broad approaches to dealing with toxic assets. One approach, followed in the United States and the United Kingdom, is to ring-fence troubled assets and provide a government guarantee for those assets. Separating bad assets allows the bank to continue to lend to creditworthy businesses and households. It has the advantage of not requiring upfront disbursement of public money. An argument for leaving assets on the bank balance sheet is that the bank has better knowledge of the borrower and might be in a better position to re-establish the credit relationship if the loan is eventually repaid. However, keeping government-guaranteed troubled assets on the balance sheet or in individual special purpose vehicles reduces the incentive for the parent company to maximise recovery rates and may undermine market confidence in the parent bank. If forced to manage the bad assets, the bank might become overly risk averse and refrain from lending in an attempt to rebuild capital.

The second approach is to create a bad bank with a centralised asset management company which would buy troubled assets from banks. The bad bank approach increases incentives to maximise recovery rates and can create economies of scale in the recovery process. However, this approach requires ample upfront capitalisation and pricing of hard-to-value toxic assets. The bad bank approach requires the restructuring entity to have the legal backing to exercise claims on assets and to recover the proceeds of asset sales. This can be achieved by purchasing the assets with government-guaranteed bonds, under the assumption that the entity will dispose of the assets before the bonds mature, at which point the proceeds of the sale can be used to retire the bonds. Another arrangement has been for the asset management company to be funded separately upfront, as in Sweden in the early 1990s, which then uses its capital to purchase non-performing loans.

Sources: OECD (2009d), Lumpkin (2008).

In order to determine whether there is a need for a specific strategy for dealing with impaired assets, a thorough assessment of financial institutions' balance sheets is required to gauge the scope of these assets and the extent to which asset quality is impaired (Figure 1.15). In both the United States and the European Union, bottom-up stress

Figure 1.15. **Assets of Danish financial institutions**



1. The figures for Danish banks and MCIs are simple additions of the two sectors and do not net the positions between the two sectors. Values shown are the averages for the first eight months of 2009.
2. The foreign claims data measures Danish banks' claims in the mentioned countries on an intermediate claims basis – that is, excluding the value of any collateral or guarantees.
3. Banks' outstanding loans by economic activity covers a sample of large institutions and not the whole sector. Arts, education and other includes Education, "Arts, entertainment and recreation", "water supply, sewerage and waste", "other service activities", "activities of households as employers", and "activities of extraterritorial organisations and bodies".

Source: Danmarks Nationalbank and Bank for International Settlements.

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tests have been conducted on individual financial institutions in order to assess their need for capital injections. In the United States, these results were published but those institutions that were assessed as needing additional capital received it immediately in order to avoid negative market reactions. In the European Union, the results of the stress tests will not be published. The stress tests carried out by Danmarks Nationalbank are based on a top-down approach, where the analysis considers aggregate exposures and other factors and the results are allocated to individual institutions (Danmarks Nationalbank, 2009b). Consideration should be given to whether a bottom-up stress test exercise, which was carried out in the context of the Financial Sector Assessment Programme in 2006 (IMF, 2007b), should be conducted to evaluate whether individual financial institutions are sufficiently capitalised to absorb losses arising from impaired loans.

While it may help as a temporary measure, a ban on short selling could reduce the efficiency of financial markets in the longer term. There are some signs that such bans imposed in the United States and United Kingdom have affected the efficiency of the stock market, although recent evidence for Germany suggests that there has been minimal negative impact there (ECB, 2009). The breadth of coverage may be important – in Germany the ban covered naked short selling (that is, where the seller did not own or had not borrowed the shares) of a limited number of institutions, while in the United States and United Kingdom, it applied to both naked and covered (where the seller has borrowed the shares) short sales. In Denmark, the ban applies to all banks and both naked and covered short sales. The Danish government has indicated that the ban will be lifted when market conditions have normalised.

Medium-term issues resulting from the crisis

The global financial crisis has led to considerable efforts to reshape financial sector regulation frameworks. Most important for Denmark, as a member of the European Union, is the work around and following from the "Larosière report" on EU financial supervision, but also of the Financial Stability Board, the Basel Committee on Banking Supervision and the G20. Key areas of focus are reducing the cyclicality of the financial system, increasing transparency and strengthening financial market regulation.

Avoiding procyclical regulation. Under the Basel I accord, minimum capital requirements on a given portfolio were fixed and became binding with a fall in a bank's capital following credit losses. Under the new Basel II system, they become binding through an increase in minimum requirements as loans become more risky. At the point in the cycle when banks are most likely to record losses, the minimum capital requirements can increase, which would accentuate any slowdown in credit growth brought about by capital losses and perceived declines in the creditworthiness of potential borrowers (Lawson *et al.*, 2009). Cushions should be built up in upswings to be relied on in rough times. This would enhance institutions' ability to weather deteriorating economic conditions when access to external financing becomes more costly and constrained. Moreover, it would reduce the amplitude of the financial cycle, limiting the risk of financial distress in the first place. Such an approach would help make it clearer that risk rises in booms, paving the way for the subsequent busts (Borio, 2008).

A specifically Danish issue that needs to be considered in the context of the cyclicality of capital requirements is the role of the new SDO mortgage bonds. As explained in Box 1.1, a key difference between SDOs and the previous mortgage bonds is the requirement that additional capital be posted to the cover pool when the value of the collateral falls relative to the value of the loan. Hence, financial institutions have to raise additional capital during downturns, adding to the cyclicality of capital requirements. As of the end of February 2009, MCIs had sufficient capital to provide additional top-up collateral to SDO cover pools equivalent to 6% of total outstanding SDO without issuing new debt. However, the requirement for top-up collateral is larger the more uneven the distribution of house price changes. The legislation for SDOs is currently under review. Danmarks Nationalbank has recommended lowering the LTV limit from 80% to 70% as a way to reduce the cyclicality in the SDO legislation (Danmarks Nationalbank, 2009b).

In Denmark, as in some other countries (Sweden, Finland, Netherlands), regulations designed to protect participants in pension plans may force asset sales on falling markets. The October 2008 agreement between the Ministry of Economic and Business Affairs and the Danish Insurance Association to adjust the discount rate used in liability calculations helped reduce the impact of falls in mortgage bond prices on pension funds' investment strategy by allowing the value of the liabilities to move more closely with the assets. However, as with capital-adequacy requirements for banks, more systematic ways should be sought to introduce more countercyclical capital requirement regulations and reduce the need for ad-hoc adjustments.

Enhancing transparency. In general, transparency of financial reporting of financial sector activities could be enhanced, with a focus on three types of information: estimates of current value, income, and cash flows; their statistical dispersion; and the uncertainty associated with the imperfect measurement of the first two types of information. This could remedy some of the shortcomings of reliance on rating scales (Borio, 2008). As part of the Credit Package, new regulation has been introduced, requiring all credit institutions to publish their internal capital adequacy assessment process (ICAAP). Furthermore, the crisis has put the spotlight on transparency of liquidity risks. In June 2008, the Basel Committee and the Committee for European Banking Supervisors published new principles and recommendations on liquidity risk management. The government is currently in the process of implementing the EC directive drawn up along those lines.

Efficient supervision. The significant number of smaller institutions that have been merged or taken over suggests that additional efforts are required on the part of financial supervisors to monitor medium- and small-sized institutions. This is important from the perspective of financial stability but also to ensure ongoing effective competition in the financial sector. Denmark already had high degree of banking and mortgage sector concentration before the crisis began. Higher concentration may increase the risk to financial stability via contagion and could potentially result in a reduction in competition, and a loss to welfare, via higher interest margins between bank borrowing and lending. Bank interest rate margins have been declining since 2003 and reached historically very low levels in 2008 (Danmarks Nationalbank, 2009c). In the short term, higher margins are to be expected, as banks seek to offset the fall in profits, but in the long term, margins should appropriately reflect the risks and costs borne by the institutions rather than higher mark-ups due to weaker competition. Cross-country studies on prudential regulation in banking shows a positive and statistically significant negative correlation with net interest margins, suggesting that stronger prudential regulatory supervision, particularly the ability to execute on-site visits, is consistent with more competition (OECD, 2009e). Currently, large institutions are subject to a comprehensive examination over a four-year cycle, medium-sized institutions are examined at least every fourth year and smaller low-risk institutions are examined every seventh year (IMF, 2007c).[3] A recent National Audit Office report called for the Danish FSA to supplement technical ratings of financial institutions based on annual reports with quarterly data to ensure that more up-to-date assessments can be prepared. The report also argued that the FSA generally has sufficient resources, but has had difficulty attracting and retaining qualified staff, which may be affecting its ability to carry out on-site visits (Rigsrevisionen, 2009). The resources of the FSA were increased both as part of Bank Rescue Package I and in the context of the Credit Package. Furthermore, the tools of the Danish FSA have been strengthened as part of the Credit Package.[4]

Fiscal policy

The fiscal position has been very strong in recent years, thanks to a forward-looking fiscal framework and to the buoyancy of the economy, increases in oil and gas tax revenue driven by high commodity prices, company tax and the pension yield tax on unrealised capital gains on pension fund earnings. The underlying balance corrected for temporary factors has also been strong. The government's *2015 Strategy*, announced in 2007, set targets for general government net lending of surpluses of ¾ to 1¾ per cent of GDP between 2008 and 2010 and at least balance between 2011 and 2015. Annual targets for real growth in public consumption have also been set, and the objective is for public consumption spending come down to 26½ per cent of cyclically-adjusted GDP in 2015. The targets were determined on the basis on an analysis of fiscal sustainability, using an indicator similar to the one used by the European Commission in monitoring of fiscal policy under the Stability and Growth Pact (European Commission, 2008b). With fiscal surpluses in recent years having been applied to reducing government debt, general government net financial assets were over 5% of GDP in 2008. However, the budget balance is now set to deteriorate sharply and the financial and economic crisis has led the Government to redefine the 2015 Strategy targets, with the most recent budget update indicating that the government intends for the structural fiscal balance to be zero by 2015 (Danish Ministry of Finance, 2009c). Spelling out targets for the intervening years and identifying some specific consolidation measures would help.

Stimulus

The fiscal policy response to the recession has been substantial, even though Danish automatic stabilisers are the largest in the OECD (Girouard and André, 2005), reducing the need for discretionary policy relative to countries with smaller automatic stabilisers. At the same time, discretionary fiscal policy measures are likely to be more effective than in some other countries because of the strong, credible and forward-looking fiscal policy framework. Measures taken so far in response to the crisis have focused on tax cuts and a sizeable frontloading of investment spending, while public consumption also rose substantially (Table 1.5). The increase in consumption spending may be problematic, since previous experience suggests that it has been very difficult to wind back increases in public consumption outlays (OECD, 2008a). Deliberate under-financing of a long-term-oriented tax reform package is an astute strategy. The tax cuts will be implemented in 2010 but financing measures to completely offset the budget impact of the tax cuts will be phased in so that the package is budget-neutral by 2013 (Box 1.4). If implemented efficiently,

Table 1.5. **Fiscal measures affecting 2009 and 2010**

% of GDP	2009	2010
Revenue measures	0.6	1.2
Spring Package 2.0 (including green cheque)		0.7
2007 Tax Package	0.3	0.4
Other revenue measures	0.3	0.1
Expenditure measures	1.3	1.9
Public consumption	0.7	1.0
Public investment, including transport and local governments	0.3	0.5
Public subsidies, including home repair incentives	0.2	0.1
Other expenditure measures	0.1	0.2
Net effect	1.9	3.1
Memorandum item		
Withdrawal from Special Pension scheme[1]	1.5	

Note: The items "2007 Tax Package" and "Other revenue measures" were not included in the tables indicating the size and timing of fiscal packages in either OECD *Economic Outlook* No. 85 nor the March 2009 *Interim Economic Outlook* since they were decided prior to mid-2008 and were not implemented specifically in response to the crisis. However, they do impact on net lending so need to be taken into account in assessing the overall stance of fiscal policy and the need for further discretionary measures.

1. Indicates the estimated post-tax value of the addition to disposable income from withdrawals of assets in the Special Pension scheme based on applications to mid-August 2009.

Source: Danish Ministry of Finance and *OECD Economic Outlook No. 85 Database*.

Box 1.4. **The Spring Package 2.0 tax reforms**

The Danish government reached an agreement with parliamentary partners in March 2009 on a major tax reform package. Its main elements were:

- A reduction in the bottom state income tax rate of 1.5 percentage points (the bottom tax bracket and the health care contribution have been merged, eliminating a difference in the tax bases applying to these two elements of the tax system).
- The abolition of the middle state (central government) income tax bracket (which currently contributes 6 percentage points to the overall marginal income tax rate).
- An increase in the income threshold for the top marginal tax rate. The combination of reduced bottom state tax rate and the abolition of the middle tax bracket results in a reduction of the top marginal tax rate of 7.5 percentage points. Positive net capital income less than DKK 40 000 per year will no longer be subject to the top tax rate.
- The tax rate on income from shares is reduced from 28 to 27% for people in the bottom tax bracket and from 45 to 42% for those in the top bracket.

Financing will come from a reduction in tax deductibility of interest (from about 33.5% to 25.5% above a certain threshold), a reduction in the tax value of employment-related deductions, the elimination of the tax deduction for employees whose home multimedia services are paid for by their employer, higher environmental taxes paid by businesses and health-promoting taxes (excise on ice-cream, chocolate, carbonated drinks, tobacco, etc.). In order to partly offset the impact on consumers of these higher taxes, a "green cheque" will be issued to everyone over 18 years old worth DKK 1 300 (about € 175) plus DKK 300 per child, with a 7.5% reduction applicable to people earning over DKK 360 000. Consumers who economise on consumption of the now more highly taxed items will gain as the compensation they receive will be greater than the additional tax they end up paying on environmentally harmful products.

The package also includes a measure to allow businesses to defer VAT and labour tax remittances within the current year to help ease credit constraints on business, as well as a repair and renovation scheme for private homes and an increase in municipal investments for 2009.

Source: Danish Ministry of Finance (2009a).

increased investment spending can also be beneficial, since the multipliers associated with infrastructure investments tend to be higher than for other fiscal measures (OECD, 2009a) and there is some evidence of an infrastructure backlog (Danish Infrastructure Commission, 2008). Chapter 2 discusses the slowdown in capital deepening as an explanation for weaker productivity growth over the last decade. The current recession will be associated with a significant fall in business investment, so it would take some time for private sector-led capital deepening alone to pick up the slack in productivity growth. Large-scale investment in infrastructure is also an opportunity to foster green growth, as recognised by the government (Box 1.5).

Box 1.5. **Green growth**

The OECD Strategic Response to the Financial and Economic Crisis highlighted the opportunity presented by the recession to implement structural reforms with long-lasting benefits, notably to improve energy efficiency and develop new green industries and businesses. This issue was recognized at the 2009 OECD Ministerial Meeting, with a declaration on Green Growth signed by all 30 OECD countries plus Chile, Estonia, Israel and Slovenia.

The Danish government has recently announced several new measures to promote a "green" recovery. In late January 2009, the government announced a "green transport" initiative to follow up on a transport policy framework announced in December 2008. It involves spending of DKK 94 billion (5.4% of 2008 GDP) on infrastructure over 2009-20, the near-term elements of which form part of the government's fiscal policy response to the financial crisis. The investment will be focused on upgrading rail transport infrastructure in an attempt to reduce car use; eliminating road congestion hot-spots; further investment in cycle ways; and investment in port infrastructure.

The government also reached agreement with its parliamentary partners in June 2009 on a "green growth" initiative with new measures focused on improving the environmental performance of the agriculture sector. Measures include introducing a new transferable quota system for nitrogen; creating more nature reserves, wetlands and buffer zones around farmland; additional investments in R&D in the agriculture sector; and measures to improve water quality and reduce the harmful effects of pesticides. In total, the initiative will involve spending of DKK 13.5 billion (0.8% of 2008 GDP) over 2010-15.

Furthermore, financing measures from the Spring Package 2.0 tax reforms are also designed to reduce consumption that is harmful to the environment. Key measures include increased taxes on electricity and energy for heating and cooling, increased pollution taxes on waste water and greenhouse gases, the introduction of green transport charges in road haulage, changes in vehicle ownership and registration taxes, and auctioning of CO2 quotas rather than giving them away for free.*

A home repair and renovation incentive was also introduced as part of the Spring Package 2.0. It provided up to DKK 1.5 billion to finance individual household investments in home renovation, with a focus on energy-saving modifications. For energy-saving investments, a subsidy of 20% of the cost of materials is added to the general 40% subsidy on labour expenses available under the programme.

* The tax increases in electricity consumption have been criticised. Production of electricity is included in the EU Emission Trading Scheme (ETS), thus the electricity tax might reduce Danish electricity consumption, but it will encourage households and corporations to substitute towards heating by other fuels, which are not included in the EU ETS. This will lead to more emissions at the European level and make it harder for Denmark to reach the greenhouse gas reduction goals for the part of the economy not included in the EU ETS (Danish Economic Council, 2009).

The Danish government has allowed firms to delay remittance of the VAT collected from customers and income tax paid by employees. With sales and business income falling and credit markets unsettled, even sound businesses can lack liquidity. In this context, deferring tax payments can help avoid the need for businesses to lay off staff. However, as with many temporary measures, there is a risk that the elimination of the measure may have negative impacts – hence it has already been deferred from mid to end-2009 and there have recently been calls for a further extension.

The measure allowing individuals to withdraw savings from the compulsory private Special Pension (SP) scheme could provide a significant boost to demand, if the withdrawn funds are spent.[5] They are most likely to be spent by credit-constrained households and survey evidence suggests that around half of these funds is indeed being used for consumption purposes.[6] The remainder is being shifted to other forms of savings. Tax is payable on withdrawals from the SP scheme, but deposits into another pension scheme are tax-deductible. Furthermore, the tax value of the deductibility of interest on debt will be reduced in the tax reforms coming into effect in 2010, so some households might use the SP funds to reduce debt levels. As a result, the magnitude of the net positive impact on the economy is uncertain. The impact on the government's fiscal balance will be positive and substantial in the short term but will weaken sustainability slightly.[7]

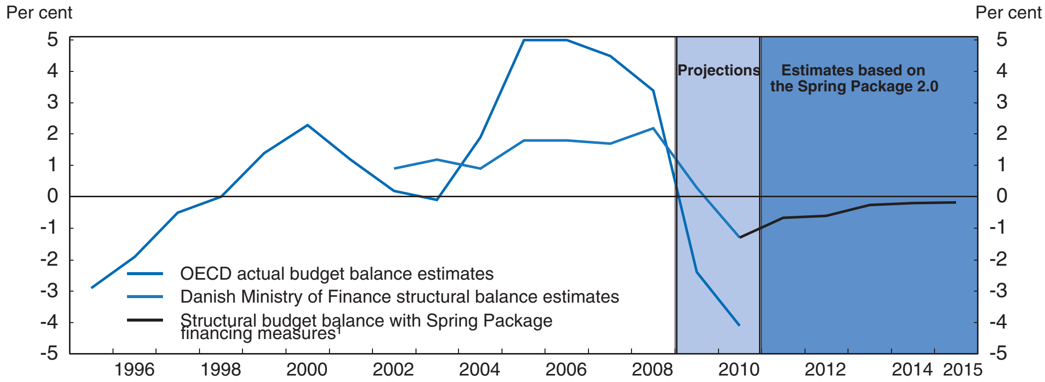
With unemployment on the rise, there is a risk that active labour market measures may not function as well as normal due to resource constraints in the public employment services (Danish Economic Council, 2009). While resources in local job centres were not cut back when labour market demand was strong, so that existing resources might be sufficient in the short term, there is a risk that they may not be sufficient to cope with the expected substantial rise in unemployment, or could be diverted to other uses by local governments facing budget pressures. Careful monitoring of performance of local job centres will be required.

Despite the uncertainty associated with some announced measures, further fiscal stimulus is probably not warranted at this stage. Substantial stimulus is already in the pipeline – whose impact should increase throughout the rest of this year and next – and the budget balance is expected to weaken considerably, although less than in some other OECD countries. A modest recovery is anticipated and some short-run indicators are already suggesting that the worst of the downturn has past. However, with a high degree of uncertainty persisting, further measures should not be categorically ruled out, although their limitations should be recognised. If the credible reputation of fiscal policy in Denmark were to be jeopardised, the cost in terms of rising borrowing costs could be significant and counter the stimulative effects of fiscal and monetary easing. In addition, it is important to bear in mind the impact of any further fiscal measures on wage inflation in view of the ongoing loss in wage competitiveness and on the necessary subsequent consolidation

Fiscal sustainability

The discretionary measures taken in recent years and other factors have reduced the structural budget balance so that in 2010 it is expected to be well below the bottom end of the target range enshrined in the *2015 Strategy*. The financing measures introduced in the tax reform package outlined in Box 1.4 mean that net lending improves already in 2011 and continues to do so up to 2015. However, reversal of the temporary increase in investment as part of the fiscal stimulus and implementation of the Spring Package 2.0 measures alone will not be sufficient to restore net lending zero by 2015 (Figure 1.16). In coming years, the

Figure 1.16. **Actual and structural budget balance and 2015 strategy targets**



1. The series "Structural budget balance with Spring Package 2.0 financing measures" projects forward the Danish Government's structural balance estimate assuming that the additional investment spending as part of the fiscal stimulus is reversed already in 2011 and that the financing initiatives included in the Spring Package 2.0 are fully implemented. No other policy or structural changes are accounted for.

Source: *OECD Economic Outlook No. 85 Database* and Danish Ministry of Finance (2009b).

StatLink http://dx.doi.org/10.1787/734631401637

structural balance may deteriorate even further as a consequence of demographic changes and declining North Sea oil and gas production, although dynamic effects from the recent tax policy changes might work in the opposite direction. Therefore, even with all of the consolidation measures built into the tax reform package, further fiscal consolidation will still be required.

Measures to cut public spending will have to be a key part of the consolidation effort. The share of public consumption in GDP is projected to reach 28.7% of GDP in 2010 (Danish Ministry of Finance, 2009b), above the target of 26½ per cent, which applies in 2015. There are no mechanisms built into the *2015 Strategy* to bring it back to target. As discussed in the previous *Survey*, public consumption grew twice as fast as had been planned in the *2010 Strategy*, which preceded the *2015 Strategy*. This growth in consumption was accommodated by relatively strong tax revenues, sustained by increasing working hours and high consumer spending, but also by the extremely large gains in revenue stemming from rising commodity and asset prices as well as changes to the North Sea tax regime (OECD, 2008a). Gains from rising commodity and asset prices cannot be relied upon in coming years.

A further option for improving the budget position in the long term, as well as improving the neutrality of the capital tax system, would be to raise property taxes. Currently, the effective central government real estate tax rate is merely around ½ per cent (OECD, 2006). Around 3.8% of total Danish tax revenue is collected from property taxes (including land, real property, estate and financial transaction taxes), compared to an OECD average of 5.7% (OECD, 2008b). Recurrent taxation of immovable property is thought to be the least harmful tax for economic growth. In fact, well-designed taxes on immovable property can even increase long-run growth by reallocating capital away from tax-subsidised housing towards more productive business activities (Johansson *et al.*, 2008). However, any such measures would need to wait until the property market is clearly recovering.

Labour market policies

In recent years, labour market policies have focused on boosting labour supply in order to contribute to long-run fiscal sustainability. With the very tight labour market in 2007-08, emphasis was also put on adding to the labour supply in the short term, such as through the 2008 Job Agreement, which included changes to supplementary unemployment benefits, tax relief for 64-year olds who stay in work and greater efforts towards international recruitment (Danish Government, 2008).

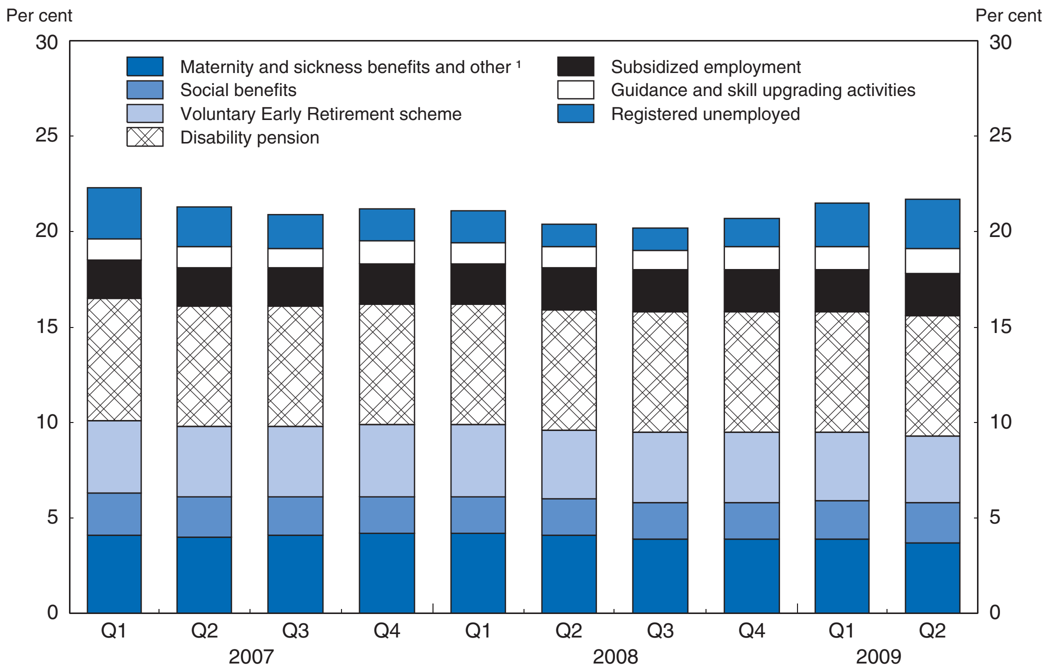
Despite the current recession and rising unemployment, continued focus on boosting labour supply in the medium term is crucial. The fiscal targets in the government's *2015 Strategy*, designed to ensure fiscal sustainability, are based on an increase in unsubsidised employment of 20 000 by 2015 and maintenance of the existing average hours worked. The tax reform package described in Box 1.4 is estimated to raise full-time employment by enough to add 0.3% of GDP to the budget balance – about two-fifths of the overall requirement of the *2015 Strategy*. However, the likely impact of the recession on structural unemployment will make achieving the *2015 Strategy* goals more difficult – further measures to enhance labour supply will be necessary once the economy begins to recover. Hence, the recommendations of the Labour Market Commission, established to provide recommendations for meeting the *2015 Strategy* employment goals, will be even more important now than when the Commission was first established.

Policies to cushion the rise in structural unemployment should focus both on limiting the rise in actual unemployment and on reducing the risk that actual unemployment turns structural. The combination of active labour market programmes (ALMPs) and benefit reforms has played a key role in the fall in structural unemployment observed over the past decade (OECD, 2008a). ALMPs have four distinct effects on the probability of unemployed people finding work: the threat effect, the locking-in effect, the post-programme effect and the wage effect.[8] Normally, the largest gains from ALMPs are thought to come from the threat effect and, to a lesser extent, the post-programme effect from participation in private-sector subsidised employment. With weak demand for labour, the threat effect is likely to be unusually feeble. This means that unemployment duration may be longer than normal and so more of the unemployed may end up participating in ALMPs. At the same time, the lock-in effect is not likely to be as much of a problem since there is less risk of participation in an ALMP resulting in missed employment opportunities. These factors raise the demands on job centres and heighten the need for careful consideration of the most effective programmes for each individual. While private sector job placements are normally thought to be effective, there is a risk that publicly-subsidised employment may hinder structural adjustment by reducing the employment costs of firms that are likely to be unprofitable even when the economy recovers. This calls for careful targeting of subsidised job placements.

Concerns have been raised about the likely impact of the decentralisation of job centres at the current juncture. From August 2009, employment policies will be implemented through local government employment services. This reduces the previous distinction between national offices, administering benefits for insured unemployed people, and local offices, administering benefits for social welfare recipients – all unemployed will now be dealt with by the same agency within a local government area. However, it raises the risk of increased diversity in the services offered between different municipalities, although arrangements have been put in place to monitor consistency with national employment policies. Municipalities will be funded according to how many unemployed people participate in ALMPs, raising the risk that some unemployed might be forced to participate in ALMPs too early or too often (Danish Economic Council, 2009). It may also lead to local employment offices focusing too narrowly on their own area to the detriment of labour mobility (OECD, 2008a).

Despite the tight labour market of recent years, there remain some 800 000 people, about 22% of the working-age population, who are not in ordinary employment – they are either unemployed, participating in an activation programme, on disability pension, on sickness benefits or in early retirement. So far, the downturn in the labour market has primarily resulted in higher registered unemployment. Since these people have not been unemployed very long, many of them would not yet have been referred to activation programmes (Figure 1.17).

Figure 1.17. **Proportion of the working-age population not in regular employment**



1. The category "Maternity and sickness benefit and other" includes people receiving holiday benefits (unemployment insurance fund members and people receiving municipal cash benefits for sickness or maternity leave earn entitlement to paid holidays while unemployed) and participating in integration (language training). The data on people not in regular employment covers the population aged 16-66 while the data on working age population covers people aged 15-66.

Source: Statistics Denmark Table AUK04 and AKU01.

StatLink http://dx.doi.org/10.1787/734652878670

There is a risk that the rise in actual unemployment could permanently reduce labour supply due to newly-unemployed people moving into voluntary early retirement or disability pension. People over 60 who become unemployed face a relatively small income reduction if they move into the voluntary early retirement pension (VERP, *Efterløn*) scheme and so could effectively permanently withdraw from the labour market. People in their late 50s who become unemployed might have less incentive to search for a new job and may rather simply move into the VERP once they reach 60. Over the current decade, on average, Danish unemployment rates have been below the OECD total for each 5-year age cohort from 15 to 64, except for 55-59 year olds. The share of the population aged 55 to 66 has risen from 17% in the late 1990s to almost 23% in 2008, so greater incidence of withdrawal from the labour market by older people would now have a larger effect on the overall labour supply. While the connection between the state of the labour market and disability benefit recipient numbers might be looser, the proportion of the working-age population receiving disability benefits has declined over the past decade, whilst the labour market was strong. It would be unfortunate if the downturn in the labour market increases the incentive for people with minor disabilities who are laid-off to seek permanent disability pension entitlement rather than staying attached to the labour market, or increases the incentives for firms to seek flexjob subsidies for people who have some disability but are currently coping with a regular job.

The Labour Market Commission, in its final report in August 2009, proposed a range of measures to boost labour supply (Box 1.6). Proposals include completely phasing out the VERP, reducing the period of unemployment benefit eligibility and introducing earlier compulsory activation. The Commission also recommended that local government funding be reformed to remove incentives to move the unemployed into the most expensive activation programmes and that resources for ALMPs be separated from local government administrative budgets to ensure that activation resources are not diverted to other uses in downturns. The Commission's recommendations, if adopted in full, are estimated to improve the budget balance by around DKK 27 billion per year, almost twice the amount required by the 2015 Strategy. The largest gains would come from encouraging older people to work longer and speeding up return to the labour market after unemployment (Labour Market Commission, 2009).

Box 1.6. **Recommendations of the Labour Market Commission**

The Labour Market Commission was established in 2007 to provide recommendations on how to achieve the employment goals required by the government's 2015 Plan for fiscal policy. The Commission's final report was released in August 2009 and included, amongst others, the following recommendations:

- The Voluntary Early Retirement Pension (VERP) scheme should be completely abolished *via* a gradual rise in the entry age until it is equal to the normal retirement age. A range of alternatives were proposed, including bringing forward, from 2019 to 2011, the start date of the existing agreement to raise the entry age to the VERP from 60 to 62.
- In order to raise working hours, new agreements between labour market participants should not include shorter working hours and should allow for the possibility to increase worked hours at unchanged hourly wages.
- To move the unemployed into employment faster, the unemployment benefit entitlement period should be cut from four to two years. However, the entitlement period could be extended during a recession to a maximum of three years. The arrangement whereby unemployed people under 25 receive reduced unemployment benefit rates should be extended to unemployed people between 25 and 29 without children. To ensure greater coverage of unemployment insurance, annual contributions to insurance funds should be reduced.

Box 1.6. **Recommendations of the Labour Market Commission** *(cont.)*

- To improve the effectiveness of active labour market policies, all unemployed people should be required to take a one-week job search training course within three months of becoming unemployed. There should be at least monthly contact between public employment offices and the unemployed during the first six months of unemployment.
- To help manage the inflow into disability pension entitlement, a new development path should be established for people who have negligible working capacity but whose working capacity can potentially be improved.
- The flex-job system, which subsidised firms who take people with reduced work capacity, should become more targeted and dynamic. Municipalities should receive reimbursement for the same proportion of the cost of a flexjob as for disability pension. People on disability pension should be given greater opportunities to participate in active labour market programmes.
- To better align funding with municipalities responsibilities for labour market programmes, municipalities should receive proportionally less reimbursement for the costs of public benefits the longer a person is receiving benefits.
- To encourage earlier completion of education, students who complete their first year of tertiary vocational study within three years after completing upper secondary school should be paid a tax-free bonus of DKK 10 000. The current practice of allowing students to receive study grants for one year longer than the specified duration of their course should be terminated for students starting tertiary studies two years after finishing upper secondary school. The voluntary 10th form in the secondary school system should be targeted more carefully at students who are not capable of completing further study without extra help.
- To encourage more foreign workers, the income threshold of the Pay Limit scheme, where immigrants who have been offered a job above a certain income threshold face easier entry requirements, should be reduced from DKK 375 000 to DKK 300 000. The Positive List scheme, which identifies professions with labour shortages to target immigrant workers, should be expanded to people with shorter education periods and apprenticeships.

Source: Labour Market Commission (2009).

Many of these measures are consistent with recommendations in previous OECD *Surveys*. Reducing the unemployment benefit rate over the period of unemployment and/or reducing the period of eligibility for unemployment benefits would encourage unemployed back to work as quickly as possible. Earlier activation could be considered but should be combined with statistical profiling techniques to ensure that the unemployed are matched with the most appropriate course of action. At the same time, activation training programmes should be structured to allow continued job search and reduce the risk that job seekers miss employment opportunities due to activation commitments. If the VERP is not abolished, the income paid under this scheme could be reduced to encourage older workers to stay in the labour market past 60 years. The maximum flexjob wage subsidy should be equal to or less than the disability pension. The salary under a flexjob should be less than for an unsubsidised job – for example, flexjobs could pay a wage for the hours worked and an unemployment benefit for the hours not worked. Such measures would help prevent overuse of the flexjob scheme and encourage employees and employers to seek viable solutions that are less costly to the public purse (OECD, 2008a). Some policy measures to improve active labour market policies and the administration of disability and sickness benefits have been introduced already 2009 (Annex 1.A2).

Measures such as these and the ones recommended by the Labour Market Commission will need to be introduced in the course of the projected economic recovery. However, planning and policy design need not wait until then and measures that will take time to produce noticeable results could be implemented already in the near term.

A key challenge ahead: reinvigorating productivity

The recession in Denmark is likely to be deep and have potentially long-lasting impacts on potential output. Significant efforts have been made since the mid-1990s to lower structural unemployment and the labour market policy framework should help minimise the long-term impact of the crisis on unemployment. Indeed, the expected transmission from unemployment into long-term unemployment, a key channel towards higher structural unemployment, is lower than in many other countries. However, further measures will be needed to offset the impact of the crisis on potential employment and help boost the fiscal position in the long term. The Labour Market Commission's final report provides numerous sound ideas, many of which are consistent with recommendations made in previous *Surveys* (Annex 1.A2 provides an update on progress of recommendations in previous *Surveys* and Annex 1.A3 lists the topics of focus in previous *Surveys*). The remainder of this *Survey* therefore focuses on productivity and how it can be raised:

- Chapter 2 analyses the possible reasons for the slowdown in labour productivity since the early 1990s. It also reviews the policy settings that are normally associated with strong productivity performance. These policy settings are generally sound, but some improvements can be made which should contribute to higher productivity growth in the medium term.
- Chapter 3 assesses developments in Denmark's human capital, focusing on educational attainment and developments in the demand for and supply of skills. The chapter then reviews the key stages of the education system and highlights areas for further progress. Key challenges remain in boosting educational attainment, reducing dropout rates in upper secondary and vocational education, and encouraging students to move into and through the tertiary education system faster.

Notes

1. This increase in leverage (defined as the ratio of total lending on equity in the sector) is similar to the one experienced in 1992.
2. The same can also be achieved by encouraging a larger institution to absorb a smaller one – this process has occurred extensively in Denmark.
3. In the large banking groups, at least one risk area is inspected each year and the FSA meets at least annually with their management.
4. Specifically, the Danish FSA can now publicize their supervisory actions against a particular institution, which should serve a disciplining purpose, and now undertakes a yearly investigation of each institution's ICAAP.
5. The measure is not likely to have a significant impact on retirement income policies, since it is a relatively small scheme and the pension system is generally well developed, with relatively high replacement rates expected in the future (OECD, 2008a).

6. See Alm. Brand (2009), ATP (2009) and Nykredit Markets (2009).
7. Considering the interest in withdrawing funds from the SP, there may be very little left in this scheme, which might lead to higher administrative costs for the remaining members. Hence, consideration could be given to rolling the remaining SP assets into the compulsory private Labour Market Supplementary Pension (*Arbejdsmarkedets Tillægspension,* ATP) scheme.
8. The threat effect is the increase in search effort brought about by the threat of having to participate in ALMPs. The locking-in effect comes about due to a reduction in the amount of time spent searching for a job due to participation in an ALMP. The post-programme effect is the expected positive implications for the chances of an unemployed person finding a job due to the training or experience they have received while participating in an ALMP. The wage effect is related to the threat effect – unemployed people may moderate their wage demands and take a lower paid job rather than participate in an ALMP. If this reduces economy-wide wages, it could lead to higher employment in general equilibrium.

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ANNEX 1.A1

Consolidation in the Danish banking sector during the financial crisis

The following is a list of the financial institutions that have been taken over, merged or wound-up since the start of 2008 (Danmarks Nationalbank, 2009a and 2009b):

January 2008: Sydbank acquires bank Trelleborg.

February 2008: Sparekassen Himmerland merges with St. Brøndum Sparekasse. Folkesparekassen acquires JAK Andelskasse Rødding.

March 2008: Sparekassen Sjælland acquires Haarslev Sparekasse.

July 2008: Danmarks Nationalbank provides a liquidity guarantee to Roskilde Bank, and Roskilde Bank is put up for sale.

August 2008: Danmarks Nationalbank and the Danish Contingency Association takeover the assets and liabilities of Roskilde Bank except subordinated loan capital and hybrid core capital.

September 2008: Danmarks Nationalbank and a number of private banks provide liquidity support to EBH Bank to enable it to continue its operations. Roskilde Bank's branch network is sold to Nordea (nine branches), Spar Nord Bank (seven branches) and Arbejdernes Landsbank (five branches). Nykredit Realkredit announces that it will acquire Forstædernes Bank but the latter continues to trade as an independent entity. Handelsbanken i Danmark (a subsidiary of the Swedish bank Svenska Handelsbanken) announces that it will acquire Lokalbanken i Nordsjælland. Vestjysk Bank acquires Bonusbanken. Vestjysk Bank merges with Ringkjøbing Bank on the same day. Sparekassen Vendsyssel acquires Ulsted Sparekasse. Frøslev-Mollerup Sparekasse acquires Sparekassen Nordmors.

October 2008: The Danish government announces "Bank Rescue Package I", creating the Financial Stability Company (Box 1.3).

November 2008: Morsø Bank takes over the activities, excluding the guarantee capital, of Sparekassen Spar Mors. EBH bank announces that its solvency is below the statutory requirement and its assets and liabilities (except share capital and other subordinated debt) are transferred to the government-established Financial Stability Company.

December 2008: Sparekassen Hobro announces that it will acquire Den Lille Sparekasse.

January 2009: the Danish government announces "Bank Rescue Package II" (Box 1.3).

February 2009: Den Jyske Sparekasse acquires Sparekassen Løgumkloster. Fionia Bank cedes control to the Danish state in return for a DKK 1bn capital injection that will keep the bank solvent. The agreement means that banking activities in the current Fionia Bank are transferred to a new company founded and owned by Fionia Bank but controlled by the State. The only assets of Fionia Bank (which is to be renamed Fionia Holding A/S) will be the shares in the new company which Fionia Bank will pledge (together with associated voting rights) to the State as collateral for the capital injection.

March 2009: Løkken Sparekasse's capital falls below statutory solvency requirements and it enters an agreement with the Financial Stability Company to transfer all assets and liabilities except guarantee capital to the Financial Stability Company. The Financial Stability Company subsequently sells Løkken's core activities to Nordyske Bank.

April 2009: Gudme Raashcou Bank enters an agreement with the Financial Stability Company and transfers all assets and liabilities to the latter. Handelsbanken i Danmark acquires Lokalbanken i Nordsjælland.

June 2009: Lån og Spar Bank acquires Gudme Raaschou Bank's assets and portfolio management activities as well as a small lending and deposit portfolio. The bank's mortgage activities are transferred to a newly established subsidiary of the Financial Stability Company.

July 2009: Andelskassen J.A.K. Slagelse merges with J.A.K. Andelskassen Brenderup and Thisted Andelskasse.

August 2009: Nordea announces the purchase of most of Fionia Bank, including 29 branches.

September 2009: The former mortgage activities of Gudme Raaschou Bank are acquired by Kiwi Deposit Holding A/S.

ANNEX 1.A2

Progress in structural reform

This table reviews action taken on recommendations made in previous *Surveys*. Recommendations made in this *Survey* are listed in the conclusion section of each chapter.

Past recommendations	Actions taken since the previous *Survey* (February 2008)
HEALTH (in-depth topic of the 2008 *Survey*)	
Promoting moderate and sensible use of alcohol, notably among youth, should also have higher priority in public health policy.	Municipalities received DKK 35 million to finance advisors for children and families with alcohol problems.
While tax-financed healthcare is relatively well-functioning, public funding must be prioritised for where it is most needed.	The government established a "quality fund" of DKK 50 billion to be spent until 2018 on improving services in the welfare sector. DKK 25 billion has been earmarked for modernising hospitals. The first DKK 15 billion was allocated based on advice from an expert panel.
Introduce co-payments for visits to general practitioners and specialists as in other Nordic countries.	No action.
Change regulations in dental care so that the current fixed-price setting is replaced by maximum prices.	A system of maximum prices has been introduced for dental hygienists.
Restrict public funding for long-term care to those elderly who have more substantial care needs, for example by making those people that currently received free practical home help for less than two hours a week pay for it themselves.	No action.
Increase average working hours of nurses.	No action.
Develop public health sector pay schemes with elements of team and individual pay flexibility.	No action.
Refine the activity-based funding model for hospitals by applying funding rates clearly motivated by marginal costs.	Hospitals using the full amount of the activity fund in 2010 are required to increase productivity by 2%.
Expand the role of private-sector healthcare providers to ensure contestability and spur innovation.	No action.
Ensure that municipalities fulfil their obligation to publish their hourly costs for long-term home care via *Fritvalgsdatabasen*.	Municipalities are by law obliged to publish their price and quality standards via *Fritvalgsdatabasen* at least once a year.
Expand the use of medical technology assessment to ensure that cost-saving innovations are implemented.	No action.
Implement the planned investments in new medical facilities gradually, to adjust to changing medical technologies. Avoid overly prestigious investment plans that risk cementing current organisational structures and treatment practices.	The government has allocated DKK 15 billion to prioritised hospital plans, with allocation taking into account effective use of the hospitals and on the uncertainty regarding future needs. This calls for more modest dimensions and more flexible buildings.
Encourage people to take more responsibility for managing their health condition. Involve the increased number of retirees in informal care provided in the community to supplement municipal long-term care provision.	The April 2009 *Forebyggelsekommissionen* recommended improving information about the symptoms of certain diseases (*e.g.* diabetes), raising awareness and facilitating early management. The government will present a national plan for health and prevention in the fall 2009.

Past recommendations	Actions taken since the previous *Survey* (February 2008)
Replace the fixed-price system with a set of maximum prices and allow free entry into the retail market for pharmaceuticals.	The government and the Association of the Pharmaceutical Industry (Lif) agreed to introduce maximum prices for medicines used in hospitals. The agreement, valid until end-2012, requires a 5% reduction in maximum prices from 1 January 2010. Prices of newly introduced medicines cannot exceed the average price charged in a group of nine European countries. A second agreement was reached covering maximum prices for other medicines, prolonging a 2006 agreement: maximum prices will be unchanged in 2009 but will increase by 2% in 2010. Pharmaceutical firms can apply for higher increases.
Establish a national strategy to identify and prioritise preventive and curative measures to help maintain labour market attachment. Give the new coordination committees, involving all municipalities, responsibility for co-operation between healthcare providers and municipal job centres administering benefits and activation for persons with sickness or disability. Develop the use of models – like the round table for dialogue between the employer, job-centre caseworkers, physicians and the employee – to ensure early action when sickness absence is prolonged and risks loss of labour market attachment.	In May 2009, the parliament passed a law aimed at keeping people who are on sick leave in contact with their workplace and helping them return to work as soon as possible. Employers can receive a medical assessment report to help tailor work for employees on sick leave and speed up the return to work. They are also obliged to offer talks with employees after four weeks of sickness absence. Job centres will promote part-time sick leave and reduced working hours for employed sickness benefit recipients to reduce the risk of labour market detachment. Job centres can also offer activation for sickness benefit recipients.
Let municipalities carry more of the costs for benefits and flexjob subsidies, and give municipalities clearer instruments to guide the availability of vocational health services.	Municipalities now receive reimbursement of 65% of sick pay if they actively help people return to work after eight weeks, otherwise the cover is 35%. Sick pay will be prolonged by 26 weeks for people who have applied for a flexjob or early retirement compensation but have not yet been notified of the outcome of their application.
Consider differentiated employer co-financing of sickness benefits depending on participation in roundtables or similar dialogue.	No action.
Reduce the maximum flexjob subsidy to be equal to the disability pension or lower. The salary under a flexjob should be a lower than for an unsubsidised job, for example, by paying a wage for hours worked and unemployment benefits for hours not worked.	No action.
Reduce the benefit received during rehabilitation to ensure that it pays for participants to accept jobs they might be offered.	No action.
Make a doctor's certificate compulsory for receipt of sickness benefits, *i.e.* after two weeks. Introduce a waiting period of a few days for the sickness benefit. Enforce the 12 months time limit.	Medical assessments now focus on work ability but are no longer required after eight weeks – it is up to the municipality when to require an assessment.
FISCAL AND TAX POLICY	
Action should be taken to redress excess spending upfront if actual and projected spending indicates that the 26½ per cent limit in 2015 may be breached.	There has been no change to the fiscal framework to require such measures.
Compliance of municipal and regional authorities with spending growth limits must be ensured. Transparency should be improved *via* more accurate and up-to-date statistics on budget execution coupled with clearer consequences for overspending.	In June 2008 two laws were passed aiming at ensuring the compliance of municipalities with the spending growth limits and tax restrictions. The municipal budgets for 2009 were in line with the agreed spending growth and tax limits.
The new Labour Market Commission should present specific measures going well beyond the labour supply requirements of the *2015 Strategy*.	The August 2009 recommendations of the Labour Market Commission would, if implemented in full, produce a significantly larger rise in employment that required by the *2015 Strategy*.
If government balance sheet analysis uncovers liabilities that are more costly than government debt, budget surpluses should serve to reducing these liabilities. Otherwise, debt reduction should continue unless there are reasons to maintain a government bond market. If such a decision is taken and financial asset accumulation becomes necessary, a clear legislative framework should be established to govern asset management. This would prevent the assets from creating pressure for lower fiscal surpluses and ensure that they are invested to maximise returns subject to risk rather than being used for other policy objectives.	In February 2008, Danmarks Nationalbank indicated that government debt would continue to be issued even in the absence of funding requirement, so as to maintain a liquid government bond market. Given the deterioration in the fiscal position associated with the current recession, there is no expectation of significant asset accumulation in the near term, other than as a result of measures to facilitate the smooth operation of the financial markets and raise capital adequacy of financial institutions.
Any further expansion of the in-work tax credit should be accompanied by reductions in benefits.	The 2009 Spring Package 2.0 tax reforms increased the in-work tax credit but only to ensure that its value is retained following decreases in the tax value of general deductions.

Past recommendations	Actions taken since the previous *Survey* (February 2008)
Reduce the high marginal tax rates which apply from incomes just above average full time earnings or, as a second best, move the thresholds from where the middle and top tax brackets apply.	The 2009 Spring Package 2.0 raised the threshold for the top state income tax bracket, abolished the middle state income tax bracket, and reduced the bottom tax rate. These changes have the effect of lowering the top tax rate by 7.5 percentage points.
Increase or improve the structure of user charges, and give municipalities more discretion in setting charges.	No action.
LABOUR SUPPLY AND EMPLOYMENT	
Phase out the five-year voluntary early retirement scheme (*efterløn*). Make it easier to retire gradually by working part-time before and after the official pension age, supported by increased actuarially neutral flexibility in the public age pension. Abolish mandatory retirement age clauses from collective agreements.	The 2006 Welfare Agreement raised the entry age to the voluntary early retirement scheme and the pension age, and indexed both to life expectancy from 2019. In 2008, a tax credit was introduced to encourage people to work continuously between 60 and 64 and the amount of income that can be earned before pension benefits are withdrawn was increased.
Consider whether the parental leave system is so generous that it hurts the employment prospects of women. Rebalance by putting more emphasis on child care relative to leave.	No action on maternity/parental leave, but child care charges have been reduced by increasing public subsidies.
Consider earlier assessment of unemployment benefit recipients' job readiness and immediate referral to job vacancies upon application for unemployment benefits. Further develop job search counselling. Introduce statistical profiling to better tailor active labour market programmes (ALMPs) to individuals' circumstances, but continue to use the judgment of job centre professionals to ensure programmes are well targeted. Make sure that training courses offered in ALMPs are structured to ensure continued job search and that job search requirements during participation in training courses are enforced. Introduce more intensive face-to-face contact and activation requirements (like those for unemployed youth) for older workers such as people in their late 50s, who have lower employment rates.	From the summer of 2009, implementation of (ALMPs) will be solely the responsibility of municipal governments. This could potentially increase the variation in practices across municipalities. However, a unified municipal employment system will strengthen state-regional monitoring and management. This will help to ensure that local efforts are working to meet the overall national employment policy objectives.
Where it is cost-effective, compulsory activation could be brought forward to speed up the transition back to employment.	From the summer of 2009, all unemployed below the age of 30 will be required to take their first job interview within one month of unemployment instead of after three months, and compulsory activation starts after 3 months. Formerly, compulsory activation set in after 6 months for those below 30 and who received unemployment benefits.
Consider gradually reducing the unemployment benefit replacement rate over the benefit entitlement period.	No action.
Reduce the length of time for which a person can receive part-time unemployment benefits while working in a part-time job.	The 2008 Job Plan Agreement reduces the length of time for which a person can receive part-time unemployment benefits to 30 weeks within a period of 2 years. Previously, part-time employees with terms of notice were eligible for part-time unemployment benefits for 50 weeks within a period of 70 weeks and those without terms of notice were eligible for part-time unemployment benefits for 4 years within a period of 6 years.
Ensure that all social assistance recipients without severe problems aside from unemployment are registered with the employment service. Extend the benefit rules applying for those below 25 to all below 30 years, supplementing the stronger activation approach already implemented for all below 30.	From the summer of 2009, rules regarding compulsory activation and first job interview are the same for all unemployed below 30 (see above).
Introduce competition to the public employment service for placement services and for educational activation programmes.	External providers are increasingly involved in placement activities and the regular contacts with the unemployed.
Speed up the administrative procedures to issue residence and working permits for persons seeking work in companies without a collective wage agreement. Public employment offices could be active helping firms connect to unemployed workers abroad.	In October 2008, three new international recruitment centres opened to help companies and job seekers. In May 2009, transitional rules for workers from new EU member states ended.

Past recommendations	Actions taken since the previous *Survey* (February 2008)
PENSIONS	
Consider, in the long run, phasing out special benefits that are provided to pensioners in addition to the public pension.	No action.
Continue to enhance flexibility and individual choice in the occupational pension system, particularly in terms of the time profile of pension contributions and the level and type of insurance coverage included in the pension contract.	From 2009, ATP pension benefits can be deferred to start at age 75, compared to the current 70 years maximum, and pension benefits rise by 8-10% for each year of deferral. This gives pensioners more flexibility in planning retirement income flows.
Consider allowing employees to choose the fund in which their collectively-agreed pension contributions are placed.	No action.
Continue public education campaigns on financial literacy and consumer information on pension products.	The Danish Insurance Association and providers have continued to improve information available to consumers, for example, via PensionInfo and Pension Statement websites.
Consider reducing the tax rates on capital income outside the pension system, including the tax value of negative capital income.	Due to the 2009 Spring Package 2.0, the tax value of negative capital income above DKK 50 000 (DKK 100 000 for married couples) will be reduced by 8 percentage points, the taxation of positive capital income will be reduced by the abolition of the middle tax bracket and the reduction of the bottom tax rate, and only positive capital income above DKK 40 000 (DKK 80 000 for married couples) will be included in the base for the top tax.
HUMAN CAPITAL	
Continue the efforts to improve compulsory education, including by strengthening the educational content of the introductory year for six-year olds and targeting or abolishing the voluntary 10th form. Have more frequent monitoring of students' and schools' outcomes in compulsory education. Allow teachers to become more specialised.	The introductory year for six-year olds has been made compulsory. The 10th form is now targeted at students who need additional academic qualifications and clarification of their further educational opportunities before embarking on upper secondary education. Three compulsory tests in Danish/reading, mathematics, and physics/chemistry were conducted for the first time in 2007. These tests were developed over 2008 and, in 2009, the ten compulsory tests were piloted on 100 schools. The ten national tests are expected to be made compulsory from the spring of 2010. Teacher training has been improved.
Make more apprenticeships available, possibly helped by increasing refunding for firms taking apprentices, based on higher contributions from all employers.	From 2003 to 2008, the number of apprenticeships increased 39%, but fell between mid 2008 and mid 2009 due to the financial crisis. Subsequently, enrolment in school-based practical training programmes has increased substantially. A number of measures have been taken to support apprenticeships, including improving financial incentives for employers and training colleges' capacity to find training places.
Adjust the study grant so that someone who completes secondary education and wishes to study has a clear incentive to do it without taking several sabbatical years. Adjustments should also encourage on-schedule completion of studies while continuing to make loans available for those being delayed. For the longer term, consider a combined tax and tuition charging reform with loans for tuition and living costs which would be repaid after graduation. This repayment would replace some of today's income tax, thereby reducing the incentives to work short hours and encouraging highly qualified people to work in Denmark. Continue giving more autonomy to universities.	Starting from the 2009 enrolment, students entering tertiary education within two years of completing secondary school will have their grade average scaled up 1.08 and thereby have easier access to studies with *numerus clausus*. From 2009, the bonus that universities receive when students complete a bachelor programme is conditional upon the duration of the study. The universities will receive a bachelor bonus when student complete a bachelor programme within the prescribed study period plus one year and master's bonus when students complete a master´s programme within the prescribed study period. The globalisation strategy gives universities more flexibility to attract top academics.
Strengthen quality and cost effectiveness in adult education. Introduce sizeable user charges on adult education and training for the employed and cut back on public funding for courses with firm-specific content.	Contributions to education funds for life-long learning were introduced in collective wage agreements in early 2007. User fees apply for some adult education courses and are usually paid by the employer.

Past recommendations	Actions taken since the previous *Survey* (February 2008)
HOUSING (in-depth topic of the 2006 *Survey*)	
Increase the real estate tax for owner-occupied housing to make it neutral *vis-à-vis* the tax value of interest deductibility. Ensure that regulation allows mortgage institutions to offer products whereby the real estate tax and the land tax are paid automatically *via* mortgage equity withdrawal. Make co-operative housing liable for the real estate tax (at least for the part of the flat's value that is not matched by borrowing in the co-operative) and remove other subsidies to bring co-operative housing at par with owner-occupied housing.	The real estate tax has not changed, but the tax value of interest deductibility was reduced in the 2009 Spring Package 2.0. No change to the taxation of co-operative housing.
Replace the general subsidies for housing associations with targeted support for those most in need of housing support. Reconsider the size and targeting of personal housing allowances. Link the allowance to appropriate rents in each region instead of actually paid rents. Funding of construction, ghetto alleviation and similar measures should be subject to normal public budgeting scrutiny. The cap on associations' construction costs should reflect best practice.	No action.
End the subsidies for pension funds' investments in newly constructed private rental housing, as well as the tax exemption for pension funds' return on property bought previously.	To comply with the EU ruling on taxation of pension savings, the current tax exemption for pension funds' investment in rental housing was ended in 2009.
Let rents in private rental housing be set on market terms by scaling back current rent regulation. As first step, lower the threshold for how much landlords must spend on renovating apartments to be covered by less strict rent regulation. Let tenants in social housing pay rents that better reflect differences in quality, location and demand.	No action.
Remove price regulation for shares in housing co-operatives. The part that reflects public construction or urban renewal subsidies might be returned to the state and municipality.	No action.
Give municipalities more room to borrow to finance infrastructure when new land plots are issued. Consider mechanisms like road pricing to ensure that infrastructure investment is closely linked to demand. Consider mergers in the municipal structure around Copenhagen to balance local and wider zoning perspectives.	The Government is currently preparing a legislative proposal regarding road pricing
Improve statistics on housing finance by linking household-level data from mortgage credit institutions with income and other individual data from Statistics Denmark.	No action.

ANNEX 1.A3

Topics covered in previous OECD Economic Surveys *of Denmark*

2008

Fiscal strategy: keeping with the targets

Promoting employment and inclusiveness

Tax reform, hours worked and growth

Health: a major fiscal challenge

Pension savings and capital taxation

2006

Raising labour supply to safeguard welfare

Human capital: Getting more and using it better

Housing: Less subsidy and more flexibility

2005

Ensuring fiscal sustainability

Boosting labour supply

Boosting growth through greater competition

Raising productivity growth

2003

Raising labour supply for the longer term

Migration and integration of immigrants

Refining the medium term fiscal framework

Some environmental aspects of sustainable development

2002

Renewing the momentum for structural reforms

Enhancing expenditure control with a decentralised public sector